Kansas Corporation Commission

Rate Study of KANSAS CITY POWER & LIGHT and WESTAR ENERGY *for the years 2008 to 2018*

DECEMBER 2018

We serve the people of Kansas...

Table of Contents

List of Exhibits:

I. Executive Summary

A. Background

This rate study is intended for a broad audience that includes all of Kansas City Power & Light Company's (KCP&L) and Westar Energy, Inc.'s (Westar) customers and shareholders, the Governor's office, the Kansas Legislature, as well as any other interested parties. Therefore, Kansas Corporation Commission Staff (KCC or Commission and Staff respectively) has attempted to make this study as explanatory as possible.

Current concerns regarding the competitiveness of Kansas electricity prices compared to other regional states began around 2015. A number of stakeholders started to express concerns to Staff through informal meetings or to the Commission and Staff explicitly through testimony in a rate case. For example, Kansas Industrial Consumers Group, Inc. (KIC) is an organization consisting of Westar's industrial customers. KIC is an active participant in Westar's rate cases and generally files extensive testimony. During Westar's 2015 rate case, KIC witness Michael Gorman raised the issue in his testimony by pointing out that Westar's residential and commercial customer rates are the fifth highest in the region, and requesting the Commission to direct Westar to be a more efficient and lower-cost provider.

KIC continued to address its concerns by supporting both legislation and concurrent resolutions in several variations during the 2018 Session.[1] Several iterations of the legislative proposals "urge[d] the State Corporation Commission to take any and all lawful action to promptly reduce Kansas retail electric rates to regionally competitive levels…and to take any and all lawful action to maintain Kansas retail electric rates at regionally competitive levels."[2] The concerns raised by KIC during the 2018 legislative session spilled over into the political races in the fall of 2018. Most comments made during the 2018 political races involved the notion that Kansas' electric rates are too high compared to surrounding states. However, a few comments implied the Commission is not protecting ratepayers.

For those not intimately familiar with the regulatory process used to set rates, it is understandable as to why a conclusion might be reached that Kansas's electric rates should be lowered in order to be regionally competitive. One reason is that electricity appears to be a fungible product.[3] And in fact, the end product available at a customer's

---

[1] *See*, Senate Bill 356, Senate Concurrent Resolution 1610, and Senate Concurrent Resolution 1612, 2018 Legislative Session.
[2] *See*, Senate Concurrent Resolution 1612, 2018 Legislative Session.
[3] Homogenous products are "[p]roducts that vie with each other in a market but which (from the consumer's viewpoint) have little or no differentiation in terms of features, benefits, or quality and are, therefore, forced to compete on price or availability." http://www.businessdictionary.com/definition/homogeneous-goods.html

electric panel is a fungible product. One can plug-in a laptop or flip a light switch in Kansas, Oklahoma, or Missouri and both will turn on instantaneously, which – from a consumers viewpoint – has no differentiation in terms of the service provided by the utility in each state. However, each electric utility has to build an integrated system to generate, transmit, and distribute electricity efficiently to its customers within its designated service territory. These integrated systems are far from homogenous as they may have a vastly different mix of generation assets, longer or shorter number of miles of transmission lines, and may have a higher concentration of distribution assets due to having a more urban service territory. These are only part of the reasons why different utilities have different cost structures, which translate into higher or lower rates.

In addition, during the public hearings for Westar's most recent rate case (Docket No. 18-WSEE-328-RTS), several members of the legislature spoke and urged the Commission to consider an "independent" rate study. For Staff's part, we see no need to hire an outside consulting firm to conduct an independent study for several reasons. First, Staff has the expertise to conduct a rate study. And Staff is charged by statute with balancing a variety of interests and so is necessarily independent. Therefore, the use of Staff would be a more judicious use of public funds as compared to incurring the expense of hiring a consultant.[4] Moreover, the data used is publically available and the analysis conducted is based on standard utility metrics. Thus, any entity interested in critiquing and/or verifying the conclusions reached should be able to do so by using the exhibits attached to this study. Second, bias concerns regarding any independent study can always be asserted by parties not associated with the hiring of the consultant conducting the study. Most assertions of bias are based on a claim that the entity hiring the consultant has instructed the consultant to reach a predetermined outcome or to slant results to reach a more favorable outcome.[5]

B. Purpose of Rate Study

During the 2018 Legislative Session, KCC Staff (Staff) was engaged in settlement negotiations with the parties to the KCP&L and Westar merger proceeding. In order to address the concerns about Westar and KCP&L's rates, the parties to the non-unanimous settlement included a settlement condition to require a rate study.[6]

The purpose of this rate study is to comply with the Commission-authorized settlement agreement by identifying, documenting, and explaining the major differences between surrounding states rates and the rates of Westar and KCP&L. This rate study also provides a detailed examination of the regulatory process so that the reader can better understand the role of the Commission, its Staff, intervening parties, the utility, and the respective legal rights each entity has in the rate setting process. From Staff's

[4] *See*, Section III. A. for an explanation of Staff's role.
[5] Staff is familiar with such claims due to the number of consultants hired by utilities, Staff, and other intervening parties that participate in cases filed with the KCC.
[6] Non-Unanimous Settlement Agreement, ¶ 9, Docket No. 18-KCPE-095-MER, (Mar. 7, 2018).

perspective, a critical component of understanding how Westar and KCP&L's rates have grown from 2008 to 2018 (Study Period) is the complex and detailed process by which rates are set.

The Commission's rate setting process ensures that any rate increase or decrease is thoroughly vetted through an extensive record developed by the utility, Staff, and intervening parties representing the various customer classes (*e.g.*, residential, commercial, and industrial). Moreover, the legal requirement for due process and the right for an appellate review of any Commission rate decision ensures that the rate setting process relies on the record and all applicable laws. Staff also notes that no singular rate case or event led to the increase in rates from 2008 to 2017. Westar and KCP&L's rate increases are generally due to the cumulative effect of prior capital investments during a period of declining volumetric sales.

For both KCP&L and Westar, these capital investments were driven by three factors:

1) Environmental regulations that required the retrofitting of existing coal-fired generating units, which required billions of dollars in new investment;

2) New fossil fuel generating facilities (Emporia Energy Center for Westar and Iatan 2 for KCP&L), which were determined necessary at the time to meet forecasts for growing demand and to provide needed reliability to the grid when renewable generation was not operating; and

3) New renewable generation facilities built to comply with renewable energy standards (historically) or to take advantage of the economics and long-term price stability offered by these investments (more recently).

Additionally, Westar has made significant investments in its transmission system to upgrade and replace an aging system, to better enable wholesale competitive markets, and to aid in the development of renewable energy in SPP—primarily wind-powered generation. Lastly, KCP&L has seen a significant increase in its net costs of energy production, primarily as a result of the loss of wholesale electricity margins that were once available as a benefit to customers to offset the higher capital costs associated with a coal-heavy generating fleet. These margins have largely disappeared, due to the precipitous decline of natural gas prices and the influx of significant amounts of wind energy in the SPP region. The end result being the significant decline in wholesale market prices seen in the SPP region over the study period.

As discussed in more detail in Section XI. A., which describes the rate history of KCP&L and Westar; 68.78% of Westar's rate increases during the study period can be attributed to increases that were driven by environmental retrofits, Federal Energy Regulatory Commission (FERC)-regulated transmission delivery charges (TDC), or fuel and purchased power increases. Similarly, 62.16% of KCP&L's increases can be attributed to the same three factors.

C. Method of Data Gathering and Analysis

As will be more fully developed later, the settlement agreement in the Westar and KCP&L merger included language requiring a rate study. The settlement language further stated that "To this end, Applicants and Staff have decided to conduct a review (*either jointly or individually*) to identify the major differences between surrounding states' rates and the Applicants' rates in order to better understand and document the major contributors to any differences…"[7] In discussing our respective plans to meet the merger conditions, Staff, Westar, and KCP&L decided to complete the rate study individually. However, Staff, Westar, and KCP&L did coordinate efforts so the peer companies, data sources, and standard utility industry metrics contained in each of our independent rate studies would be comparable.[8]

In developing the narrative describing the rate setting process, Staff cites from a number of utility industry specific sources, including *The Process of Ratemaking* by Leonard Saul Goodman and several reports issued by SNL Financial (SNL) and Regulatory Research Associates (RRA).[9] Staff also cites to specific Kansas statutes as well as relevant court cases.

With regards to the peer review, Staff, Westar, and KCP&L coordinated the selection of the utilities within Kansas' region (peer group) to include in the study. This study identified the peer group as all regulated investor-owned utilities (IOUs) in Kansas and the surrounding states of Colorado, Missouri, Oklahoma, Arkansas, Iowa, Minnesota, North Dakota, South Dakota, and Texas.[10] Nebraska is excluded from the surrounding states included in the rate study because it is served by public power and does not have any vertically integrated IOUs. The peer group included in the study includes every utility meeting the above characteristics in the states identified, totaling 23 companies including KCP&L and Westar. The peer group is as follows:

[7] Non-Unanimous Settlement Agreement, ¶ 9, Docket No. 18-KCPE-095-MER, (Mar. 7, 2018).
[8] Staff's Rate Study uses the period 2008-2018 (cost data through 2017), KCP&L and Westar's Rate Study uses the 2007-2018 period (cost data through 2017).
[9] S&P Global jointly owns SNL and RRA. SNL is sometimes referred to as S&P Global Market Intelligence. S&P Global is a subscription-based data service that covers the utility industry as well as banks, investors, and government agencies.
[10] The Empire District Electric Company (Empire) is a Kansas vertically-integrated utility. While Empire is a peer company, it is not included with Westar and KCP&L in a direct rate comparison to the other peer companies. This is primarily because Empire was not a party to the merger agreement and Kansas represents only approximately 5% of Empires service territory, which is primarily Missouri.

	Name of Company	SNL Institution Key	Ultimate Parent	Regulated States
1	ALLETE Minnesota Power	4061513	ALLETE Inc.	MN, ND
2	Black Hills Colorado Electric Utility Company, LP	4215172	Black Hills Corporation	CO
3	Black Hills Power	4058912	Black Hills Corporation	SD, WY
4	El Paso Electric	4056994	El Paso Electric	AZ, NM, TX
5	Empire District Electric Company	3005475	Algonquin Power and Utilities Corp.	KS, MO, AR, OK
6	Entergy Arkansas, Inc.	4056995	Entergy Corporation	AR, LA
7	Entergy Texas, Inc.	4199135	Entergy Corporation	LA, TX
8	Interstate Power and Light Company	4057087	Alliant Energy Corporation	IA
9	Kansas City Power & Light Company	4072456	Evergy, Inc.	KS, MO
10	KCP&L Greater Missouri Operations Company	4000843	Evergy, Inc.	MO
11	MDU Resources Group	4010692	MDU Resources Group	MT, SD, ND, WY
12	Mid American Energy Company	4057091	Berkshire Hathaway	IL, IA, SD
13	Northern States Power	4057754	Xcel Energy, Inc.	MN, SD, ND
14	Northwestern Wisconsin Electric Company	4061951	Northwestern Wisconsin Electric Company	MN, WI
15	NorthWestern Corporation	4057053	NorthWestern Corporation	IA, MT, ND, SD, WY
16	Oklahoma Gas and Electric Company	4057016	OGE Energy Corp.	OK, AR
17	Otter Tail Power Company	4147257	Otter Tail Corporation	MN, ND, SD
18	Public Service Company of Colorado	4057094	Xcel Energy Inc.	CO
19	Public Service Company of Oklahoma	4057023	American Electric Power Company, Inc.	OK, TX
20	Southwestern Electric Power Company	4057026	American Electric Power Company, Inc.	AR, LA, TX
21	Southwestern Public Service Company	4057027	Xcel Energy Inc.	NM, TX
22	Union Electric Company	4057102	Ameren Corporation	MO
23	Westar Energy, Inc.	4057066	Evergy, Inc.	KS, OK
States Covered: All Vertically Integrated IOUs in Kansas, Missouri, Texas, Oklahoma, Colorado, Iowa, Arkansas, South Dakota, North Dakota, Minnesota				

The data regarding Westar, KCP&L, and the peer group utilities used to support Staff's analysis comes from publically available sources. These sources include the FERC, U.S. Energy Information Administration (EIA), U.S. Department of Commerce Bureau of Economic Analysis (BEA), and SNL/RRA. The primary source of the data used included FERC Form 1 financial and operational results for each year as well as EIA data. Staff accessed that data using a data aggregation and analysis tool known as SNL Financial, an offering of S&P Global Market Intelligence. Additionally, the data used to compile detailed rate change histories for KCP&L and Westar was sourced from the record of the individual rate case dockets for each company, which is available on the Commission's public website.

Staff's analysis consisted of a comparison of every major facet of the peer group utilities' cost structures and sales profiles. The data is presented for each of the 23 companies in the peer group for 2008 and 2017 as well as the change between these years and rate of growth. Most of the cost comparisons in the Rate Study are performed using costs per MWh (Megawatt Hour) of electricity sales. This allows cost comparisons to be meaningful across different sized utilities. It also allows Staff to evaluate these cost drivers as a proportion of each utility's overall Retail Revenue per kWh (kilowatt hour) or MWh.[11] Staff also compared total Retail Revenue per kWh and the Change in Retail Revenue per kWh from 2008 to 2017 against several cost drivers found in the data. These comparisons allowed Staff to analyze and explain how other utilities in the region

[11] There are 1000 kWhs in a MWh, as such, conversion of cost data per MWh to a per kWh basis is as easy as dividing the number by 1000. For example, Westar's all in retail rate revenue was $.1032/kWh in 2017. Also, its net power production expense was $24.35/MWh at the same time. Accordingly, we can see that 23.59% of Westar's all in rate revenue was needed to cover its net power production expense (.02434/.1032=23.59%).

have been able to either: (1) reduce rates during the study period, or (2) increase rates slower than Westar and KCP&L during the study period.

It is also noteworthy that the analysis places more emphasis and focus on the revenue requirement components of each peer company rather than the actual rates. There are several reasons for this. First, the total amount of revenue necessary to recover capital investments, a return on capital investments, operating expenses, administrative and general expenses, and income taxes that affect the final rates of a utility is one of two drivers of rates. Volumetric sales of electricity is the second significant factor driving the level of rates. Therefore, understanding the differences in peer company's capital investments, depreciation, operating expenses, and administrative and general expenses will provide the most insight as to the identification of differences in rates. Second, volumetric sales of electricity is a significant factor driving the level of rates. And understanding changes in each peer company's volumetric sales over time as well as the differences in volumetric sales between each peer company will also provide insight into rate differences. Finally, direct rate comparisons between utilities is generally not meaningful. As this study will explain, there are a large number of considerations that go into the actual rate design of a specific utility. The end result is that the customer charges, demand charges, base rates, and number and types of riders and surcharges are different between every utility, making direct comparisons of tariffed rates meaningless.

D. Overview of Findings and Conclusions

The study finds that Westar has gone from a utility with the 4th lowest Retail Revenue per kWh ($.0662/kWh) in the study group in 2008, to a utility with the 9th highest overall retail rates in the group ($.1032/kWh) in 2017. This was the 4th largest increase in rates in the group. Staff found this rise in rates is almost entirely attributed to Westar's increase in Capital Investment (Net Plant per Retail MWh) —the 3rd largest increase in the group. In particular, Westar's transmission expense has increased significantly during this time frame. Westar has also experienced Declining Sales due to above average losses in total retail sales, particularly industrial sales.

Westar's capital investment can primarily be attributed to environmental retrofits and transmission investments. In fact, Staff's analysis shows that almost 60%[12] of Westar's rate increases granted in the last 10 years were driven by government-mandated environmental retrofits or FERC-regulated transmission investments.[13]

---

[12] See Staff's detailed analysis of Westar's rate history below, in which 59.87% of Westar's historical rate increases were driven by environmental projects or transmission-delivery charges, authorized pursuant to K.S.A 66-1237.

[13] Pursuant to K.S.A 66-1237, Westar's investments in transmission assets, and its other transmission expenses are to be "…conclusively presumed prudent…" and Westar is allowed to charge customers for these transmission costs 30-days after filing a report with the Commission.

Staff also found that KCP&L has gone from a utility with below average rates in 2008 (14th in the study group, $.0725/kwh), to a utility with the 2nd highest rates in the study group, at $.1198/kWh. This was the largest increase in rates in the study group from 2008 to 2017. Staff found this could be attributed to three main factors: (1) KCP&L's increase in capital investment (Net Plant per Retail MWh), which grew by the 4th largest margin during this time frame; (2) KCP&L's Net Power Production Expense per Retail MWh, which grew by the largest margin in the group during this period because of its generation mix; and (3) KCP&L's loss of retail sales, which was the 5th largest loss of these sales out of the 23-company study group.

KCP&L's capital investments are primarily the result of environmental retrofits at LaCygne and Iatan 1 coal-fired generating units and the construction of a new coal-fired generation unit, Iatan 2. KCP&L's increase in net fuel costs is attributed to increases in coal costs to run its generators, and the loss of profit from wholesale energy sales from excess coal production. Both coal costs and the profits from wholesale energy sales flowed through the energy cost adjustment (ECA). The increase in coal costs increased the ECA and, because the profits from wholesale energy sales reduced the ECA, the decline in wholesale energy profits also raised the ECA for retail customers. The profits from wholesale energy sales from excess coal production dried up because of the decline of natural gas prices and the rapid influx of zero marginal cost wind-powered energy in the Southwest Power Pool (SPP). Staff calculates that 62% of KCP&L's rate increases over the study period were driven by environmental investments, increases in net power production expenses, or FERC-regulated transmission charges authorized pursuant to K.S.A 66-1237.

Another important finding of the study is that the rate increases experienced by Westar and KCP&L over the last 10 years have not been due to mismanagement of overheads and discretionary expenses by these companies. Both Westar and KCP&L have managed to grow Administrative and General Expenses per MWh slower than the average company in the study group from 2008 to 2017, Westar ranking 16th highest and KCP&L 15th highest. The same goes for Total Salaries and Wages per MWh; Westar's change in this cost category ranks 14th highest in the study group (10th lowest) and KCP&L ranks 11th highest (13th lowest). Both were below the average rate of growth for this cost category.

Staff also found the three major drivers that have impacted Westar and KCP&L's rates during this time frame have worked to the benefit of several of the peer group utilities. For example, the three utilities with the largest rate declines from 2008 to 2017, are the three utilities with the highest percentage of natural gas-fired generation capacity of the study group. Another benefit for these three utilities with a high percentage of natural gas-fired capacity is the avoidance of capital investments in environmental retrofits such as those required of Westar and KCP&L. Lastly, there are some utilities in the group that have experienced significant growth in industrial or total retail sales, which directly contributes to lower rate levels.

E. The Future of Electric Rates for Westar and KCP&L in Kansas:

Staff's conclusions regarding the reasons for the increases in both Westar and KCP&L's rates are primarily due to 1) capital investments related to environmental improvements and additional fossil-fueled generation resources, the addition of renewable resources, and transmission system projects 2) declining volumetric sales, and (3) a generation portfolio mix heavily weighted to coal-fired generation rather than gas-fired generation, the latter of which is currently less expensive due to low natural gas prices.

The capital investments in environmental improvements, new generation sources, additional renewable resources, and transmission system projects have already been made and these investments are currently in rates. The inclusion of these investments in rates was evaluated through the rate setting process described in detail in this study. Additionally, in a number of cases, the predetermination statute (K.S.A. 66-1239) was used to establish the prudence of the capital investments. Because these investments have been evaluated and are now included in rates, subsequently removing them from rates runs afoul of numerous regulatory principals and legal protections.

The declining volumetric sales in the Residential, Commercial and Industrial rate classes are not within the control of either Westar or KCP&L. Rather, these declines appear to be a symptom of broader economic conditions in Kansas as well as organic energy efficiency.[14]

Both Westar and KCP&L's current generation capacity mix is heavily weighted to coal-fired generation. This effectively forecloses the companies from being able to take advantage of lower gas fuel prices. Thus, the only recourse for Westar and KCP&L is to continue to evaluate through an integrated resource process whether the current coal-fired units continue to be cost effective resources.

However, the recently completed merger between KCP&L and Westar will enable the newly formed parent company (evergy) to create savings that neither Westar nor KCP&L could create as stand-alone companies. The merger is forecast to achieve approximately $800 million in merger and non-merger related costs savings. These costs savings, coupled with the completion of both company's major capital plans, will bring price stability and may lead to further rate reductions. Moreover, Staff, Westar, and KCP&L are currently engaged in developing a capital expense reporting process as well as an integrated resource planning (IRP) model to provide greater transparency for capital investments budgeted in the near-term as well as longer-term resource planning. Staff also notes that any increase in volumetric sales during the next five years will place downward pressure on rates.

[14] Organic Energy Efficiency is energy efficiency implemented by homeowners and businesses outside of a formal energy efficiency program. For example, homeowners who purchase energy efficient appliances, HVAC systems, or LED light bulbs on their own and without any utility incentive through a formal program are creating organic energy efficiency.

Both Westar and KCP&L recently completed post-merger rate cases that resulted in rate reductions of $66 million and $10.7 million respectively.[15] These rate reductions were largely possible because of the cumulative effect of the guaranteed level of merger savings noted above as well as the reduction in income tax expense related to the Tax Cuts and Jobs Act.

Staff also notes that, because the Commission's approved merger conditions contain a five-year base rate moratorium, the 2018 rate reductions are the last rate changes for the next five years.

II. The Regulatory Compact

A. The Utility-Regulator Relationship

In the broadest context, the regulatory compact is a summary of the intent of the legal framework that establishes the relationship between a public utility and a regulatory body. This legal framework includes all of the statutory provisions, case law, rules and regulations, and Commission policies under which a utility is regulated.

SNL Financial and Regulatory Research Associates (SNL and RRA) have provided a concise and accurate description of the regulatory compact as follows:[16]

> The regulatory compact is an agreement codified by statute and case law that is unique to the utility space and calls for: the utility to provide safe, reliable and reasonably priced service; the commission to provide the utility with a reasonable opportunity to recover its costs and earn a return similar to that of other investments that have similar risk characteristics; the customer to pay the approved rates; and, the investor to supply the capital necessary to maintain or expand the utility system.[17]

SNL and RRA further explained the rational underlying the regulatory compact as follows:

> The utility sector is unlike any other sector of the economy. In a competitive industry, customers have numerous purchasing options. In the automotive

---

[15] Westar's $66 million reduction includes the assumed effect of rebasing the Ad Valorem Tax Rider, base rates were actually reduced by $50.3 million in this case. Likewise, KCP&L's $10.7 million reduction includes the assumed effect of rebasing the Ad Valorem Tax Rider, base rates were actually reduced $3.96 million in this case.

[16] SNL and RRA are two leading utility research and analysis firms that combined in 2005. Combined, SNL/RRA provide subscription-based expert analysis through commentary, articles, and research papers on various news events as well as critical regulatory issues to investment banks, investors, utilities, and government agencies.

[17] RRA Regulatory Focus, The rate case process: a conduit to enlightenment, p.1. (July 3, 2018). (RRA, The rate case process).

> or consumer products industry, customers can select from the product offerings of many different providers, and product quality and price have considerable influence on consumer purchasing decisions. If a seller's prices are too high or the quality of the product does not meet the customer's standards, the customer can select the wares offered by another seller. Prices in competitive industries are set by supply and demand in the marketplace.
>
> Utilities, on the other hand, cannot simply set up shop wherever they choose. Utilities are natural monopolies because their capital costs are enormous. Monopolies, by definition, also have high barriers to entry. However, a company with monopoly power cannot be allowed to operate without oversight. If they could, the price of the company's product could be exorbitant. Hence, the state utility commissions were created to regulate the rates charged by the utilities and together with the utilities themselves, investors and customers, comprise [the regulatory compact].[18]

B. Management Discretion

The need for a utility's management to use its discretion to make important business decisions is a critical component of understanding the relationship between a utility and its economic regulator. In Kansas, a utility is charged with a critically important responsibility to provide efficient and sufficient service at just and reasonable rates. It is therefore important that a utility's management is free to make business decisions as to how to meet its statutorily charged responsibility, while still being held accountable for its decisions by its economic regulator. This relationship has been defined as follows:

> It is, at best, an oversimplification that a just and reasonable rate is a question of sound business judgement. Regulatory agencies have only limited authority to interfere with discretionary power of utility management over legitimately internal affairs of a company subject to economic regulation. An agency is not a "super board of directors" for the regulated company.[19]
>
> Regulatory agencies do not have the responsibility to manage any company; their function is solely to regulate their activities in accordance with statutory standards and regulatory policy. An agency, therefore, does not order a company to acquire specific resources, but it may order that the company consider specific standards in formulating an integrated resource plan and that it submit such plan for commission review.[20]

---

[18] RRA, The rate case process, p. 1.

[19] Leonard Saul Goodman, *The Process of Ratemaking*, p. 132. Internal cites omitted. (Public Utility Reports, Inc., 1998). (Goodman, *The Process of Ratemaking*).

[20] Goodman, *The Process of Ratemaking,* pp. 134. Internal cites omitted.

While the definition and regulatory theory described above may seem to indicate that utility management is free to make its business decisions with little recourse, utility management is also keenly aware that its economic regulator will review its decisions after the fact and can disallow costs incurred by the utility. However, any cost disallowance by an economic regulator must be based on evidence, case specific facts, statutory guidelines, or prior precedent. For example, the *Process of Ratemaking* states the following:

> An agency will not defer to the utility's knowledge of the market, such as the market for gas supplies. "General knowledge and experience in the gas industry is insufficient, without more, to demonstrate the reasonableness of a utility's gas purchasing decision-making," whether the utility deals with affiliated or unaffiliated companies.[21]

In other words, a utility's management cannot rely solely on its business judgement as the singular source of evidence that its decision will result in a just and reasonable rate. Rather, the utility's management must provide sufficient evidence through its documentation and analysis that the business decision will result in a just and reasonable rate.

C. Reasonable Management Presumed

K.S.A. 66-101b requires a utility to provide "efficient" service. In doing so, reasonable management is presumed on the part of the utility unless specific findings of inefficient management can be documented. *The Process of Ratemaking* states:

> Unless there is direct evidence of mismanagement, regulatory agencies will presume that management has properly performed its duties. The presumption can be overturned with evidence of extravagance or of needless expenditures of money, waste, or enormous salaries. Actual cost may far exceed present value of the properties used and useful in the public service; or the company may simply have been unwisely built, in localities where there is insufficient business. In the absence of any satisfactory showing along one of these or similar lines, the company's evidence, that over a reasonable period earnings above operating expenses have been insufficient to pay capital charges on money invested in the enterprise, will sustain a finding that forced rate reductions are unjust and unreasonable.[22] [Internal cites omitted.]

However, a utility does have the burden to provide documentation through reports or other information that demonstrate its efficient operations.

---

[21] Goodman, *The Process of Ratemaking,* pp. 134. Internal cites omitted.
[22] Goodman, *The Process of Ratemaking,* p. 840.

The legal framework that encompasses the statutory provisions, case law, rules and regulations, and policies for Kansas' utilities in a rate setting context is addressed in more detail in the next section of this study.

III. Statutory Provisions, Case Law, and Policy Decisions

There are a large number of Kansas statutes, relevant case law, rules and regulations, and Commission precedential and policy decisions that encompass the legal framework under which the Commission's jurisdictional electric utilities are regulated. This study will not summarize or define each one. Rather, this section will attempt to reference and explain the most relevant statutes, case law, and Commission policies that affect the manner in which the Commission is legally required to establish rates.

A. Statutory Provisions

As noted in the discussion of the Regulatory Compact above, "The regulatory compact is an agreement codified by statute and case law that is unique to the utility space *and calls for the utility to provide safe, reliable and reasonably priced service; the commission to provide the utility with a reasonable opportunity to recover its costs and earn a return similar to that of other investments that have similar risk characteristics; the customer to pay the approved rates; and, the investor to supply the capital necessary to maintain or expand the utility system.*" [Emphasis added.] Another way to state the Regulatory Compact's requirement to provide "safe, reliable and reasonably priced service" is to say that a Kansas utility is required to provide "efficient and sufficient service" and to establish "just and reasonable rates". In Kansas, the utility is mandated to provide efficient and sufficient service and establish just and reasonable rates and the Commission is mandated to require such per K.S.A. 66-101b, which states:

> **66-101b. Electric public utilities; efficient and sufficient service; just and reasonable rates.** *Every electric public utility governed by this act shall be required to furnish reasonably efficient and sufficient service* and facilities for the use of any and all products or services rendered, furnished, supplied or produced by such electric public utility, *to establish just and reasonable rates,* charges and exactions and to make just and reasonable rules, classifications and regulations. Every unjust or unreasonably discriminatory or unduly preferential rule, regulation, classification, rate, charge or exaction is prohibited and is unlawful and void. *The commission shall have the power,* after notice and hearing in accordance with the provisions of the Kansas administrative procedure act, *to require all electric public utilities governed by this act to establish and maintain just and reasonable rates when the same are reasonably necessary in order to maintain reasonably sufficient and efficient service from such electric public utilities*. [Emphasis added.]

In establishing just and reasonable rates, the courts have mandated the Commission consider certain interests. These include the following:

> The Kansas Supreme Court mandates the Commission consider and balance *the interests of the utility's investors vs. the ratepayers, the present ratepayers vs. the future ratepayers, and the public interest*. "[C]ases in this area clearly indicate that the goal should be a rate fixed within the zone of reasonableness after the application of a balancing test in which *the interests of all concerned parties are considered*." [Emphasis added] [23]
>
> "The KCC is required to *balance* the public need for adequate, efficient, and reasonable service with the public utility's need for sufficient revenue to meet the cost of furnishing service and to earn a reasonable profit." [15-115 Order at ¶ 71, citing Danisco Ingredients USA, Inc. v. Kansas City Power & Light Co., 267 Kan. 760, 773 (1999)]. [Emphasis added].

There is also a constitutional basis for the just and reasonable standard. If the Commission were to set rates that specifically favor customers over investors by ignoring legitimate utility costs and investments, then the Commission will most likely have violated the Takings Clause of the Fifth Amendment as well as the Due Process Clause of the Fourteenth Amendment. The *Process of Ratemaking* describes this issue as follows:

> The Fifth Amendment provides that, "No person shall…be deprived of…property, without due process of law; nor shall private property be taken for public uses without just compensation." The Fourteenth Amendment provides that "No State …shall deprive any person of…property, without due process of law…"
>
> A just and reasonable rate is a constitutional rate, but, as we shall see, a rate need not pass every just and reasonable test, which indeed may vary from state to state, to pass muster as a constitutional rate.
>
> The judiciary at first attempted to formulate their own threshold test for a constitutionally approved rate of a regulated company. The experiment was eventually abandoned in deference to the emerging just and reasonable standard already applicable to those companies.[24]

i. Balancing of Interests

As noted previously, the Commission is charged with a balancing test in which the interests of all concerned parties are considered when setting rates. However, achieving a balanced approach to setting rates does not mean that the Commission must always adopt

---

[23] Order Approving Stipulation and Agreement, Docket No. 15-WSEE-115-RTS (September 24, 2015) (15-115 Order) at ¶ 71 citing Kansas Gas and Elec. Co. v. State Corp. Com 'n, 239 Kan. 488 (1986).

[24] Goodman, *The Process of Ratemaking,* p. 24

the midpoint of a particular issue in dispute when setting rates. The appropriate approach is described in the *Process of Ratemaking* as follows:

> An agency that is satisfied that opposing views are both well supported in the record may adopt the midpoint between the parties' positions as a reasonable resolution of the matter. A reviewing court well may be satisfied that the agency reached its decision by exercising a judgement to "split the difference" between opposing views.[25]
>
> There is a limit to an agency's resolving issues by striking a middle ground between opposing views. An exercise of discretion and judgement does not necessarily produce only a middle ground position between opposing views. An agency may indeed need to reject outright positions outrageously stated or unfounded in logic or the evidence. In such cases, it should substitute reasoned analysis of the issues, even when there are a seeming multitude of issues to be resolved.[26]
>
> …[If] an agency constantly assumes that it will attain a proper balance between opposing interests by striking a middle ground, it will merely encourage the parties before it to stake out outrageous positions. Each party will but reasonably assume than it will fare much better in such "balance," if it asks for far more that it should reasonably expect to obtain, and "on balance" still receives more than it might otherwise obtain by more discrete evidence.[27]
>
> The proper balance of interests may require, not the automatic acceptance of a middle ground, but rather, a) a full understanding and analysis of each party's position; and b) if necessary to reach a fair result, the full acceptance of a party's position on a given issue.[28]

In order to reach a balanced decision, the Commission typically accepts (or adopts) one party's position on a given issue after hearing all sides and weighing the evidence. The Commission rarely "splits the difference" and, when it does, it is generally because equal evidentiary weight can be given the opposing parties positions. Staff also notes that it is our role to balance the interests of the ratepayer with the interest of the shareholder in addressing every case before the Commission. Staff's role is required because all parties[29] to a rate case, or any other type of case, are advocating for their specific interests and are therefore not attempting to balance the interests of the ratepayer and the shareholder. Staff's role is unique to the rate setting process and requires a careful and diligent approach in developing positions that strike an appropriate balance.

[25] Goodman, *The Process of Ratemaking,* p. 128

[26] Goodman, *The Process of Ratemaking,* p. 128.

[27] Goodman, *The Process of Ratemaking,* p. 129.

[28] Goodman, *The Process of Ratemaking,* p. 129.

[29] "Parties" are discussed in more detail in Section IV., but generally consist of the utility and intervening parties such as industrial customers.

ii. Public Interest Standard

The "public interest" is derived from various statutory requirements throughout K.S.A. Chapter 66. When the Commission exercises its delegated administrative power, it is protecting and promoting the public interest (i.e., the welfare of the people). The State's police power exists to promote the health, safety, and welfare of the public.[30] Generally speaking, the public interest is served when ratepayer interests are carefully considered and protected.[31] In the context of a rate case, the public interest is served when ratepayers are protected from unnecessarily high prices, discriminatory prices, and/or unreliable service. The public interest standard can also vary based on the type of case and the decision required from the Commission. For example, mergers and acquisitions have a specific set of standards established that must be evaluated in order to determine whether the proposed transaction meets a public interest standard.

B. Case Law

The term "case law" refers to law that comes from previous decisions made by courts in previous cases. Case law provides a common contextual background for certain legal concepts, and how they are applied in certain types of cases.

Statutory laws are created by legislative bodies, such as the Kansas Legislature. While statutory laws provide rules and guidelines, it is impossible for any legislative body to anticipate all situations and legal issues. The court system is charged with interpreting the law when it is unclear or in dispute as to a case-specific issue. The courts decide cases based on the applicable law, precedent, and the fact-specific circumstances of the case at hand. These court decisions become a precedent for future cases with similar facts.

Case law is also specific to the jurisdiction in which the decision is made. Generally, case law from a different jurisdiction, such as a different state, it is not enforceable in Kansas. However, if there is no precedent in Kansas, the relevant case law from another state may be used as persuasive authority in Kansas.

Because of the complexity of the issues that arise in utility matters, Staff researches case law from other states in order to gain an insight into the rationale used to decide certain issues. Of course, case law from Kansas generally requires Staff to follow the guidelines stemming from the court's decision in a case.

---

[30] *See Manzanares v. Bell*, 214 Kan. 589, 606 (1974).
[31] *See Kansas City Power & Light Co. v. State Corp. Comm'n*, 238 Kan. 842,846 (1986).

C. Commission Precedential Orders and Policy Decisions

The Commission designates precedential orders as such. The Commission's website lists its precedential orders and states the following:

> Precedential orders may bind parties, establish policies, or interpret statutes or regulations in a way that applies against a person or company that was not a party to the original order. The KCC cannot treat an order as precedential unless the agency designates the order as precedential and makes the order available to the public…

On the other hand, policy decisions generally are guidelines established by the Commission through an order for a certain issue or issues. While Commission policies may not be binding on parties in the same manner as a precedential order, any party that wishes to take an approach contrary to a Commission policy will have to make a compelling argument that the facts and circumstances specific to their issue(s) warrant a different approach.

The rationale behind establishing Commission precedent and policy has been described as follows:

> The administrative agencies, like the courts, cite and rely on their prior decisions to maintain consistency and fairness in their administration of their enabling statutes. Decisions from other jurisdictions can be instructive and useful; statutory and decisional law from other jurisdictions provide "persuasive authority by analogy."[32]
>
> Precedent is relevant on the basis of the broader legal principal that "the starting point" for just and reasonable rates is any long-standing business practice that has arisen with respect to such rates. "A change cannot be made without either a reasoned explanation or a finding that such a practice is unjust and unreasonable."[33]
>
> The binding effect of precedent is also manifest in the principle that all similarly situated regulated utilities should be treated alike. An agency will attempt to apply its cost terms and definitions uniformly to the various utilities that are subject to its rules, whether or not the rules and practices are formally codified.[34]
>
> There are limits on an agency's resting on precedent. It cannot rely on precedent to the exclusion of the evidence on the record before it for

[32] Goodman, *The Process of Ratemaking*, pp. 129-130. Internal cites omitted.
[33] Goodman, *The Process of Ratemaking*, p. 130. Internal cites omitted.
[34] Goodman, *The Process of Ratemaking*, p. 130. Internal cites omitted.

> decision. An agency's failure to base its findings on the evidence of record is reversible error on appeal to the courts.[35]
>
> The courts are not concerned with the consistency or inconsistency of agency decisions, as such, but they will require agencies to explain their departures from current precedent. The judicial role here is less to enforce consistency than to require each agency decision to contain a rational basis before it will pass judicial scrutiny. Its primary role is to require regulatory even-handedness in the agency's dealing with the company and its customers.[36]

D. Basics of Ratemaking

A. Just and Reasonable Rates

As noted previously, in establishing just and reasonable rates, the Commission has used Kansas Supreme Court case law and has described its mandate as follows:

> The Kansas Supreme Court mandates the Commission consider and balance *the interests of the utility's investors vs. the ratepayers, the present ratepayers vs. the future ratepayers, and the public interest*. "[C]ases in this area clearly indicate that the goal should be a rate fixed within the zone of reasonableness after the application of a balancing test in which *the interests of all concerned parties are considered*." [Order Approving Stipulation and Agreement, Docket No. 15-WSEE-115-RTS (September 24, 2015) (15-115 Order) at ¶ 71 citing Kansas Gas and Elec. Co. v. State Corp. Com 'n, 239 Kan. 488 (1986)]. [Emphasis added.]

In order to meet the Kanas Supreme Court's mandate and follow the Commission's statutory obligations, the KCC follows a quasi-judicial process in determining a revenue requirement and the resulting rate design. This section discusses the rate case process as well as the pertinent aspects of determining the revenue requirement and rate design. Much of this section also relies on the RRA Topical Special Report *The Rate Case Process: A Conduit to Enlightenment* (RRA Special Report) for the narrative describing the ratemaking process because RRA has done an excellent job of distilling a complex discussion into a clear and concise narrative.

---

[35] Goodman, *The Process of Ratemaking,* p. 131. Internal cites omitted.
[36] Goodman, *The Process of Ratemaking,* p. 132. Internal cites omitted.

B. The Rate Case Process

RRA's Special Report describes the rate case process as follows:

> A rate case is a quasi-judicial process, although there is no jury and the final outcome is determined by the commission. In some jurisdictions, the commission presides over the hearings and all aspects of a case, but in most instances the commissioners get involved at the end of the proceeding, and make their decision after reviewing the entire case record. The process is complicated and costly, sometimes taking as long as two years to be completed. So utilities do not enter into a rate case lightly.
>
> The process begins with the utility's filing, which includes the testimony of several witnesses. The company quantifies the additional revenue it believes it needs to recover its operating costs, depreciation expense and taxes, and allow its shareholders to earn a reasonable return. Each witness supports a specific aspect of the company's filing, e.g., depreciation, rate of return or pension costs. The commission will schedule a series of local public hearings that offer ratepayers an opportunity to speak their mind about whatever it is the utility is proposing. Technically speaking, the commission is not supposed to let the comments from these hearings factor into their decisions on case-specific issues because the comments are not part of the case record. [Note: This statement is not correct for Kansas because the Commission does enter public comments into the record of a rate case.] However, commissioners are not immune to the public outcry that generally accompanies a rate case.
>
> At some point during the process, after the intervenors have had a chance to digest the company's application, they will file their direct testimony, in which they outline their recommendations and their respective positions on various proposals put forth by the company. These parties will critique nearly every aspect of the utility's request, with the recommendations tailored to suit the needs of the relevant constituent group. Usually it is the commission's staff, a state attorney general and/or another state agency that represents the public interest, primarily as it relates to residential customers, and their stance on rate case matters tends to be very different from that of the company. [Note: In Kansas, CURB represents residential and small business ratepayers while Staff represents the public generally]. Every jurisdiction is different, but intervening entities can also include an individual large commercial or industrial customer or a consortium of such customers that may have a rather limited focus, a municipality or group of municipalities in which the utility operates, a group seeking to advance an environmental agenda and/or an organization that advocates for the needs of a particular segment of the population, such as retired ratepayers. [Note:

In Kansas, interveners in electric investor-owned utility rate cases typically consist of the Citizen's Utility Ratepayer Board and large industrial customers, significantly affected school districts, consortiums of industrial consumers (examples include the Kansas Industrial Consumers Group, Inc. and Midwest Energy Consumers Group), large commercial customers (examples include Walmart, Inc. and Kroger Company), and other interested parties. It is not uncommon for fifteen to twenty individual interveners to be involved in a single Westar or KCP&L rate case. In the most recent Westar rate case, Docket No. 18-WSEE-328-RTS, there were 21 interveners].

After this initial round of testimony, more testimony is filed in which the parties address their concerns with the positions laid out in earlier rounds of testimony, and sometimes they will hold firm on their positions. But more often than not, the parties will begin settlement discussions to see if they can arrive at some sort of middle-of-the-road position, either on certain issues or on all of the outstanding issues in the proceeding. At the very least, this will narrow the gap between the parties' respective revenue requirement positions. If a consensus can be reached with respect to a stipulated rate increase, then the parties — at least some of them — will sign a settlement and file it with the commission. A settlement will generally shorten the timeframe required to complete a rate case, since some of the other steps in the process can be eliminated.

If the parties are unable to reach a comprehensive agreement on the outstanding issues, the case will proceed on a litigated track. What that means is that the commission will need to rely on the evidence in the case as it develops a final decision on these issues. Frequently, a commission administrative law judge will issue a proposed order, effectively a recommendation, for the commissioners to consider for approval. At this point, the commissioners will hold a meeting and vote on a final order, and some commissions allow the public to listen in on their dialogue. The public may still not know what's included in the order, but at least they can feel that they're informed. Other commissions will simply issue their order with little advance notice. [Note: In Kansas, the Commission does not use administrative law judges. The Commission deliberates and votes on order during regularly scheduled business meetings.]

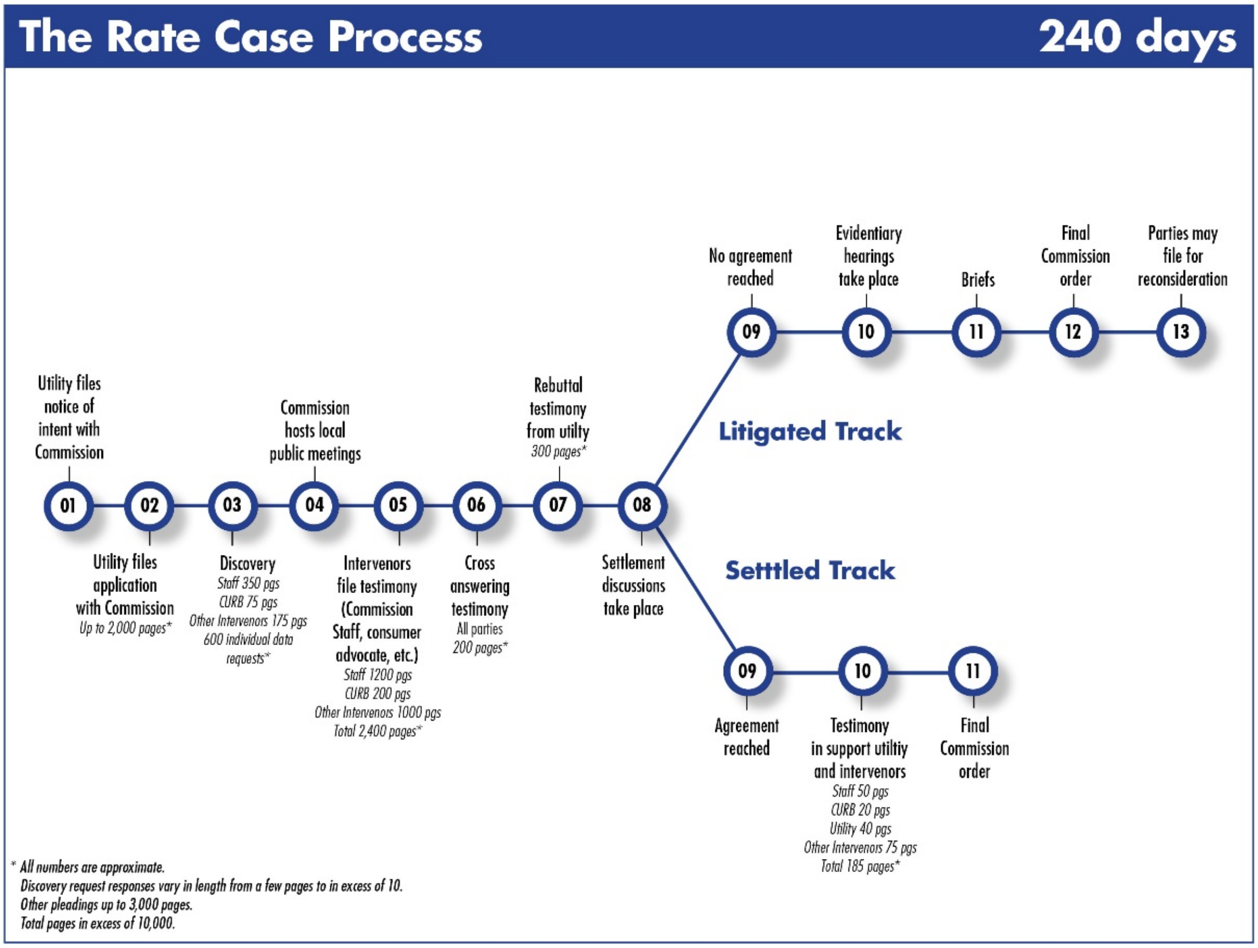
Although the commission may have issued a final order, the case may not be completed, especially litigated cases, as the utility and some of the intervenors may not agree with aspects of the commission's order. The company may feel that the authorized ROE is out of line with prevailing industry returns, or the consumer advocate or attorney general may contend that the commission had no legal justification for allowing implementation of a rate rider.

For parties with objections to the final outcome, the initial remedy would be in the form of a request for reconsideration, and the parties can attempt to substantiate their claims. From that point, the commission could simply affirm its earlier order, or amend that order in light of a new or compelling argument presented during the reconsideration process.

Once the commission acts on the requests for reconsideration, any further amendatory requests would need to be made in the form of a legal appeal to a court with jurisdiction over the commission's orders. The appeals process can be drawn out, and it's not uncommon to see utility rate matters get tied up in court for several years. But just because a commission's order is on appeal doesn't mean that the utility is prohibited from filing a new rate case. The appeals process does not have to play out in its entirety before another case can be filed. By and large, most commission decisions typically have been upheld by the courts. However, the court may remand or reverse a decision if the commission's ruling is determined to be in violation of law.[37]

A graphical representation of the rate case process is provide below that outlines the major steps involved in the process as well as the overall time line (240 days by statute) and an approximation of the number of pages of documents that make up the official record for a rate case.

[37] RRA, The rate case process, pp. 2-3.



C. The Test Year

RRA's Special Report describes the importance of the test year as follows:

> An analysis of a utility's revenue requirement begins with the selection of a test year, which is simply a 12-month period of time to use as a base line in examining the utility's actual revenues and expenses, if an historical test year is chosen, or a forecast of the utility's revenues and expenses for a future 12-month period if a fully forecasted test year is selected. A hybrid approach can also be used that is essentially a blend of both methods. [Note: Historical test years are used in Kansas.]
>
> Using its test year financial data as the starting point, the utility proceeds to make adjustments for items that may not be representative of its operations going forward. For example, the utility may have filed a rate case on Jan. 1, 2018, and chosen a test year that ended on June 30, 2017. A wage increase for the company's unionized employees may have become effective in

September 2017, but is not reflected in the financial results for the 12 months ended June 30, 2017. The approved rate change will not be implemented until late-2018, at which point the wage increase has long since been in place, so the utility will adjust its per books labor expense level upward to reflect this in the new case.

Alternatively, the summer cooling season for an electric utility during the test year could have been abnormally hot, and the company's kilowatt-hour sales could have been abnormally high. In that situation, an adjustment to the utility's test year revenues could be warranted, which all else being equal, would have the effect of showing a greater need for a rate increase. Ideally, the utility will seek to select a test year and make appropriate adjustments to provide a representative picture of what its financial performance will be like during the first year that the new rates are in effect.[38]

D. Revenue Requirement Calculation

RRA's Special Report describes calculating the revenue requirement and rate change as follows: [39]

Revenue Requirement = ROR (Rate Base) + Operating Expenses + Depreciation + Taxes

The above equation gives rise to the company's total revenue requirement. However, the process must shift to the determination of the *rate change* that is required, so that the company can achieve its total revenue requirement. In simple terms, the commission reviews the utility's revenue and prudent costs for the selected test year, and considers the resulting earnings for that period of time. If the company's earnings are determined to be inadequate,

[38] RRA, The rate case process,, p. 5

[39] Since the traditional utility regulation formula is based on costs, the process used to determine a utility's revenue requirement begins with the expression below. At this point, this is pure accounting and not unique to the utility space (Revenue - Operating Expenses - Depreciation - Taxes = Net Operating Income). In the next equation, revenue has been isolated on the left side and has been renamed "revenue requirement" (Revenue Requirement = NOI + Operating Expenses + Depreciation + Taxes).
In the third iteration of the formula, net operating income, or NOI, has been replaced with the product of the utility's rate of return and its net assets. Since NOI includes the funds necessary to service all of the utility's securities, e.g., debt, preferred stock and common stock, NOI must equal the product of the overall rate of return, or cost of capital, and the asset base. It is essentially the pool of money left over for investors after all of the direct costs of doing business have been satisfied (Revenue Requirement = ROR (Net Assets) + Operating Expenses + Depreciation + Taxes). In the fourth version shown above, net assets has been renamed "rate base," which is a regulatory term that refers to the company's net utility assets, as determined by the commission, that are "used and useful" in the provision of service to ratepayers.

a rate increase is authorized. Conversely, if earnings are found to be too high, a rate reduction can be ordered.

The following expression is the common formula for calculating a rate change, which in industry speak means the additional revenue the utility is proposing, or that an intervenor is recommending or that the commission is authorizing. The equation has three variables — or four, if you count the tax factor — and these variables are shown in bold, and everything else is the result of plugging the appropriate variable into the equation.

	Rate of Return*
x	**Rate Base***
	Required NOI
-	**NOI Under Current Rates***
	NOI Deficiency
x	**Tax Factor**
	Revenue Adjustment

* Rate Case Variable

Rate of Return — The first variable in the expression is rate of return, which is the result of a weighted average cost of capital calculation, and includes the cost of debt and the cost of equity. [Note: For illustration purposes, an example of the weighted average cost of capital calculation from a recent Kansas rate case is inserted below.]

	Staff Adjusted	Capitalization Ratios	Cost of Capital	Weighted Cost of Capital
Long-Term Debt	2,549,380	50.9113%	4.9253%	2.5075%
Preferred Stock	0	0.0000%	0.0000%	0.0000%
Common Equity	2,458,112	49.0887%	9.3000%	4.5652%
Total	5,007,492	100.0000%		7.0727%

Example from KCP&L Rate Case, Docket No. 18-KCPE-480-RTS

While the cost of a company's debt securities can be gleaned by reviewing the stated cost rates for each particular debt issue, there is no such stated return for common equity. If an investor were to buy a utility stock, he or she would not be promised any specific return on their investment. There is no coupon rate for common equity and the return will simply be the sum of any dividend income the investor will receive over time and the price appreciation or price reduction experienced during the holding term.

What does this mean in terms of calculating the ROE? It means that informed individuals can disagree markedly on what the appropriate return should be, even though they rely on established financial theory to arrive at an estimate for the "cost" of equity. In utility rate cases, the estimated ROE is very subjective and even slight variations to the inputs in the formulas commonly used for estimating it can produce significant differences between what each party thinks is an acceptable equity return for the company.[40]

Estimating the ROE – There are several methodologies for estimating an ROE for a utility in a rate case, although there are a select few that are consistently recognized by utility commissions.

Discounted cash flow, or DCF — The DCF model calculates ROE by dividing the company's dividend, in dollars, by its observable market price, and then adding an assumed growth rate, as shown below.

Dividend/Market Price + Growth Rate = Required return on equity

If a company's dividend is expected to grow at different rates over a period of time, then a multi-stage DCF approach can account for this. The DCF model is one of the standard formulas for estimating ROE in rate cases, but as is the case with any formula or model, the output is only as good as the inputs, so it is important to make reasonable assumptions regarding the growth rate.

Capital Asset Pricing Model, or CAPM — The CAPM is also given significant weight by the commissions and is depicted below.

Risk-free rate + [Expected market return premium x Utility stock's beta]

= Required return on equity

The CAPM uses, as the starting point for determining the ROE, the yield on a long-term U.S. Treasury bond. This rate is the risk-free rate of return in the formula. Since all securities are, by definition, riskier than the riskless government bond, an ROE for those securities will need to reflect some sort

[40] RRA, The rate case process, p. 6.

of premium over the risk-free return. The CAPM approach adds the product of the utility stock's beta —the systematic risk factor for the company, calculated by looking at the relationship of the stock's historical price movements versus those of the broader market — and a market return premium. The market return premium is simply the expected "excess" return for the stock market over the risk-free rate, and it's also calculated with historical price movements in mind. The sum of the risk-free rate and the product of the stock's beta and the market return premium will give you an estimate of an appropriate ROE for a utility.[41]

Comparable Earnings – Many commissions consider the results of a comparable earnings analysis when establishing an authorized ROE. This approach assumes that a given investment should earn a return similar to that of investments with similar risk characteristics. Generally speaking, utility commissions have a preference for the DCF and CAPM methodologies, and instead of relying on one or the other, they'll often take an average of the ROE estimates these two models produce.

Certain factors may impact the ROE ultimately authorized. For example, if the utility is an electric distribution company with no regulated generation, the commission may consider this company to be a lower-risk entity, and authorize a slightly lower ROE than it would for a fully integrated electric company. In addition, commissions may authorize a slightly lower ROE for companies that utilize several adjustment clauses that allow for timely recognition of changes in certain expenses outside of a general rate case. Over the years, there have also been ROE authorizations that reflected incentive awards for superior management performance or less-than-stellar service quality.

The bottom line is that there is no "correct" way to calculate an appropriate ROE. As is the case with most financial models, the output is only as good as the input, which means that estimating the variables in any ROE formula is an important undertaking.[42]

Rate Base — The second variable in the calculation shown above is the rate base value. At a very basic level, rate base is a utility's prudent capital investment, as authorized by the commission, net of accumulated depreciation. Rate base may include other items such as commission approved deferred costs, known as regulatory assets, employee pension accruals and items that may be used to offset the value of rate base, such as accumulated deferred income taxes, or ADIT, and customer deposits. But in its simplest form it is the "used-and-useful" net asset base from which

[41] RRA, The rate case process, pp. 9-10.
[42] RRA, The rate case process, p. 10.

the utility provides service to customers and upon which it is allowed to earn a rate of return.

For electric utilities doing business in non-restructured jurisdictions, rate base includes the net value of its investments in generation, transmission and distribution infrastructure. [Note: Kansas has not restructured.] In states that have restructured their electric markets and where the generation supply is now competitively procured, the generation assets are no longer included in the rate base calculation. In restructured jurisdictions, legacy utility generation plants have either been divested entirely to a merchant generation company or transferred to an affiliate of the utility and these plants are no longer economically regulated.

Calculating rate base can be complicated due to certain policy considerations. For example, what period of time should the commission use to measure rate base? Should it be a specific historical date, with "known-and-measurable changes" recognized? Should it be a date in the future that contains projections? Using projections generally produces a higher rate base. Should rate base be determined as of the end of the rate case test year — a year-end valuation — or should it be based on the average of the monthly rate base values over the course of the test year? Does the commission include construction work in progress, or CWIP, in rate base?

Including CWIP in rate base allows the utility to collect a cash return on the asset under construction prior to completion. If CWIP is not included in rate base, accounting standards dictate that the utility is to record a non-cash adder, known as allowance for funds used during construction, or AFUDC, which represents the accrued financing charges associated with CWIP that is not yet included in rate base. AFUDC is equal to the assumed rate of return on the CWIP balance, with the amount included on the utility's income statement during the period in question. With AFUDC, during construction, earnings remain whole but there's no impact on the company's cash flows. Once the plant is completed, the accumulated AFUDC is generally included in rate base as plant-in-service. Several states have statutes that prohibit the inclusion of CWIP in rate base…[43]

NOI Under Current Rates — The third variable in the equation is what's known as NOI under current rates, which is basically the NOI the utility would be expected to achieve if its rates were to be left untouched. This figure is pulled from one of the financial exhibits the utility submitted in its rate case application and it includes adjustments such as employee wage increases. It's another variable that can vary considerably in a rate case.

[43] RRA, The rate case process, pp. 7.

As an example, an increased executive incentive compensation expense, all else being equal, would lead to a lower NOI under current rates, and, working through the rate change formula shown on page 4, a greater need for a rate increase. But this variable cuts both ways. The intervenors in a rate case might recommend that a portion of the company's executive incentive compensation expense be disallowed, and excluded from the calculation of this variable, if it's demonstrated that the cost was tied to a financial metric that only benefitted shareholders. Disallowing recovery of these costs would result in a higher NOI under current rates, and would lead to less of a need for a rate increase. The list of potential NOI adjustments is extensive, but there is ample opportunity for the company and the parties to propose adjustments that can significantly impact the revenue requirement in the case.

The required NOI will be compared to the NOI under current rates and the difference is referred to as the NOI deficiency, indicating a need for a rate increase, or the NOI sufficiency, suggesting that rates should be reduced. This amount is a net amount that needs to be grossed up for taxes, since the utility is permitted to collect amounts that will be remitted to the taxing authorities. Generally speaking, corporate taxes will take a 20-30% bite out of pretax income, so multiplying the NOI deficiency or sufficiency by about 1.4 — the reciprocal of 70% — will give you the top-line revenue change number.[44]

Authorized vs. Earned ROEs

A utility's authorized ROE is that which has been specified by the commission in a rate case for the company, and it is used to calculate the overall return that is applied to the utility's rate base and reflected in the rates that customers are charged. By contrast, the earned ROE reflects actual results achieved by the company over a period of time. The two numbers don't have to be equivalent, and they're usually not.

Commissions are required by the regulatory compact to provide the utility with a "reasonable opportunity" to earn the authorized ROE, but that is by no means a guarantee. Utilities are not guaranteed any sort of return by their regulators, although for some regulatory frameworks that are based on a formulaic or performance-based ratemaking structure, this isn't necessarily true. But those circumstances are not the norm.

Assuming the commission did not adopt any meaningful disallowances in the utility's most recent rate case and the test year that was used in the case was not too old, the company may be able to earn that return if it operates the business efficiently. However, for those utilities that are continually

[44] RRA, The rate case process, p. 8.

> subject to "regulatory lag" — meaning that their authorized revenue requirement does not reflect the full value of the investments that are currently being used to provide service — they may never be able to earn their authorized ROEs.[45]

Operating and Maintenance Expenses – Operating expenses included in a rate case are from the test period selected, which in Kansas is a historic test year. Operating and maintenance expenses can be adjusted from historical levels in order to include an annualized level of expense or to update the test period with known and measurable changes. Many of the more complicated and controverted adjustments that are involved in a rate case proceeding are adjustments involving the proper level of O&M expenses. Examples include the proper level of payroll expense to include in the adjusted test year and whether incentive compensation paid to executives should be born be ratepayers. It is not uncommon for 50 adjustments to be proposed to the utility's proposed level of O&M expense during a major rate case.

Depreciation and Amortization Expenses – Depreciation and amortization expenses are also based on a historical test year and include adjustments to recognize changes in depreciation and amortization rates or changes in test year depreciable plant (e.g., recognition of depreciation requirements on year-end plant balances added to the rate base through CWIP).

Taxes – Tax expenses included in the revenue requirement include property taxes, payroll taxes, franchise taxes, as well as income taxes.

E. Determining the Rate Structure

The last stage in the rate making process is translating the utility's revenue requirement into customer rates that will recover the revenue requirement—the creation of the rate structure. The two steps in the creation of the rate structure are (1) the allocation of the revenue requirement among rate classes, and (2) the development of customer rates for each class.

The two foundations needed to translate the revenue requirement into customer rates are (1) the billing determinants—the data necessary to generate existing and proposed revenue from customers, and (2) the class cost of service (CCOS)—a full allocation of the utility's cost to serve customers allocated among all the customer classes.

[45] RRA, The rate case process, p. 11.

i. Billing Determinants

Billing determinants consist of all the data necessary to create a proof of revenue: number of customers by season and by class, the energy used in each rate block by season and class, customer demand[46] for each demand block by season and class, and the customer rates by block, season, and class. By multiplying the number of customers, energy used, and customer demand by the appropriate customer rates the amount of revenue the customer rates can generate will be determined, which is the proof of revenue.

The proof of revenue serves two purposes: (1) it demonstrates that the company's revenue requirement can be recovered with the rate structure proposed, and (2) provides a means of comparing the change in revenue caused by moving from existing rates to the proposed rates.

ii. Class Cost of Service

Class revenue allocation and rate design need to begin with the concept of cost causation: the cost causer should be the cost payer. Thus, the rate analysts allocating revenue to classes and creating the class rate designs, and the Commissioners who must evaluate the work of the rate analysts, need a class allocation of utility costs. This is the purpose of a CCOS study—the allocation of a utility's costs to serve customers among the different customer classes.

The CCOS study can then be used as a starting point and guide for class allocation of the revenue requirement. By starting with a CCOS study, the rate analyst is tying revenue allocation and customer rates to cost causation. The link between the CCOS study and cost causation is the strength of using a CCOS study for revenue allocation.

However, CCOS studies do have limitations. (1) CCOS studies are an art; they are not a science. A substantial number of subjective judgments must go into the production of any CCOS study. (2) Because all CCOS studies are based on allocation mechanisms that are approximations of structural relationships, the CCOS studies must, themselves, be viewed as approximations. (3) The approximations of the structural relationships are not based on statistical theory (for the most part) so determining a confidence interval using statistical techniques is not possible. Further, because of the size and complexity, only crude sensitivity analysis is possible. Therefore, it is difficult to get a handle on the accuracy of the approximation using sensitivity analysis. Thus, we are left knowing that

[46] Customer demand and the amount of energy used are different. In rate design demand does not mean what it means in economics. Energy usage is what economists would think of as customer demand, but in rate design language, demand refers to the peak usage for a particular time period by the customer. Customer demand is actually a capacity requirement concept—the maximal amount of capacity the customer will require for a particular period of time.

the cost allocation from a CCOS study is an approximation, but we cannot know precisely the numerical bounds of the approximation. (4) A CCOS is a static snapshot of a dynamic process. Over time, the structural cost relationships have changed and are expected to change in the future.

Thus, a rate analyst should be cautious when using a CCOS study to help determine class revenue allocations.

The allocation process used to develop a CCOS follows a standard method outlined in the NARUC manual titled *Electric Utility Cost Allocation Manual*. The five basic steps to the CCOS process are:

1. Direct assignment of costs where possible;

Where direct assignment is not possible, joint and common costs are assigned by:

2. Functionalizing costs;

3. Classifying costs;

4. Allocating costs across classes;

After all the costs have been allocated across customer classes, then the question of whether cross-subsidization exists in the current rate design can be investigated using:

5. Rate of return analysis;

From the NARUC manual, Table 1 below shows the basic categories for each step in the process of allocation.

Functionalization	Classification	Allocation
Production	Demand	Residential
Transmission	Energy	Commercial
Distribution	Customer	Industrial
Customer Service		Other
Administrative and General		

The process of moving from functionalization to classification is illustrated below:

Cost Function		Cost Classification
Production	⇒	Demand Related Energy Related
Transmission	⇒	Demand Related Energy Related
Distribution	⇒	Demand Related Energy Related Customer Related
Customer Service	⇒	Customer Related Demand Related
Administrative and General	⇒	Whatever is appropriate

The table below illustrates a simple model of CCOS. The model contains the three steps (Functionalization, Classification, and Allocation) that together produce an allocation of costs across classes of electric customers.

The final step in cost allocation is illustrated in the last section of table labeled "Total Cost of Service." This section shows customer class total expenses, total revenue, and net operating income—net operating income is the subtraction of total expenses from total revenue. The next two lines show rate base and rate of return, where the class rate of return is found by dividing net operating income by the rate base.

Functionalization and Classification of Costs	Total	Allocation Factor	Customer Classes				
			Residential	Small General	Medium General	Large General	Large Power
Production							
Production Demand related							
Base Load	40,414,517	Base Allocator	16,138,286	2,133,137	5,059,391	15,967,568	1,116,135
Intermediate	67,265,899	Intermediate Allocator	44,654,485	3,300,514	5,803,680	12,507,570	999,651
Peaking	25,920,652	Peaking Allocator	18,960,135	1,160,948	2,191,034	3,587,450	21,085
Production Energy related							
Fuel & PP	133,303,282	kWh Sales	60,092,099	6,800,129	15,565,988	47,473,639	3,371,426
Variable O&M	4,590,939	kWh Sales	2,069,560	234,195	536,090	1,634,983	116,111
Wind	14,055,123	kWh Sales	6,335,942	716,986	1,641,234	5,005,487	355,474
Total Production	285,550,413		148,250,507	14,345,909	30,797,417	86,176,698	5,979,882
Transmission							
Demand Related	21,861,733	12 CP	11,364,649	1,116,893	2,349,277	6,554,210	476,704
Distribution							
Demand Related	40,792,669	1 NCP	21,859,185	2,386,990	4,078,848	11,230,408	1,237,239
Customer Related	36,714,947	No. Cust	32,649,626	3,272,313	622,896	169,652	460
Total Distribution	77,507,616		54,508,811	5,659,303	4,701,744	11,400,060	1,237,699
Customer							
Total Customer	17,187,685	No. Cust	15,284,551	1,531,896	291,602	79,421	215
Total Cost of Service	402,107,447		229,408,518	22,654,001	38,140,039	104,210,388	7,694,500
Expenses	205,851,976		116,431,778	12,555,520	18,657,809	54,363,182	3,843,686
Revenue	225,477,523		116,953,509	15,573,337	27,783,396	61,636,398	3,530,883
Net Operating Income	19,625,547		521,730	3,017,817	9,125,587	7,273,217	(312,804)
Rate Base	196,255,471		112,976,740	10,098,481	19,482,230	49,847,206	3,850,814
Rate of Return	**10.0%**		**0.5%**	**29.9%**	**46.8%**	**14.6%**	**-8.1%**

> Because the CCOS represents cost causation it can also be used to test for cross-subsidization across classes. The test begins by comparing the rates of return for each of the classes. If the rates of return are close, then that means that each class is providing proportionally about the same net operating income given the rate base that has been allocated to it. If the rates are not close, then the CCOS results indicate that cross-subsidization in the current rate design is present. There are two cautionary comments about the equalized rates of return test for cross-subsidization that are important.
>
> (1) The equalized rates of return test assumes that the cost allocation is correct and the test determines only whether the rate design is in line with the cost allocation. Thus, the equalized rates of return test is completely dependent on the cost allocation techniques used to allocate shared costs. This raises the second issue.
>
> (2) Shared costs make up a large portion of a vertically integrated electric utility's total cost. In particular, most of the rate base is comprised of allocated shared costs; and because rate base is the denominator of the class rate of return calculation, small changes in the allocation method could have a significant effect on the results of this test. Additionally, since there are multiple methods for allocating costs for a CCOS study, any particular allocation is not unique; and since the test is dependent upon the specific cost allocation method used, the results of equalized rates of return tests are not necessarily unique.[47]

iii. Rate Design

Once the overall revenue requirement and the relative costs of serving the different rate classes has been determined, the final rates can be determined with various non-cost considerations in mind. The types of non-cost considerations generally considered by Staff are as follows:

1. Gradualism;
2. Cost of a competitive service (Industrial customers only);
3. Comparable rates in surrounding states(Industrial customers only);
4. Design of rates currently in effect;
5. Political impact of changes;
6. Types of customers and nature of service area;
7. Public policy;
8. Impact on customer usage characteristics;

[47] Staff Direct Testimony of Robert H. Glass, Exhibit 1, pp. 4-6, Docket No. 12-KCPE-764-RTS (Aug. 12, 2012).

9. Simplicity and ease of understanding and administering rates; and
10. Stability of revenues.

A few of the non-cost considerations noted above warrant additional discussion for clarity. These non-cost issues are gradualism and the types of customers and nature of service area.

> Gradualism entails moving various classes towards an equalized rate of return in a graduated fashion. The principle of gradualism recognizes the limitations of a CCOS study: the imprecision created by the extensive use of approximations. Because of the imprecision of a CCOS, gradualism suggests that small steps rather than large leaps should be taken. But gradualism does not imply that no change in the class allocation should occur.
>
> The Commission Staff implements gradualism by using two basic rules of thumb. (1) If the relative rate of return for a class is between 0.95 and 1.05 then that class should receive an increase in revenue requirement approximately equal to the system-wide percentage increase in revenue requirement. For example, if a class has a relative rate of return of 0.96 and the system-wide increase in revenue was 5%, then that class should receive about a 5% increase in revenue. (2) If a class is outside of the 10% range, then any increase in revenue requirement for the class should not move the class more than halfway toward the 1.0 relative rate of return. For example, if a class has a relative rate of return of 0.8, then this rule of thumb suggests that the increase in revenue requirement should not increase the relative rate of return to more than 0.9, which is halfway to 1.0. These two rules of thumb moderate action, but do not prevent action. They also prevent attempts to use relative rates of return to fine tune a rate design.[48]

Because rate design is effectively the pricing of a utility's product, the rate structure must be developed based on a comprehensive understanding of the utility's types of customers and the nature of the service area. The rate structure is defined as the number of rate classes as well as the various components of a rate, such as the customer charge, demand charge, base rate charge, types of block rates, etc. Examples of issues to be considered when designing the rate structure are:

1. Is the service area mostly residential and commercial, or is there a large number of industrial customers?
2. What are the industrial competitive factors that are in the utility's service area?
3. What and how many complaints do current customers have with the current rates?
4. Do customer complaints or other factors indicate issues with the utility's ability to properly and easily administer the rates?

[48] Staff Direct Testimony Prepared by Robert H. Glass, pp. 23-24, (June 13, 2018).

5. Does the public understand and accept the current rates?

Utility personnel are obviously the best suited to have a comprehensive understanding of their customer base and the nature of the service area. Therefore, utility personnel originate the rate structure and propose modifications to it in subsequent rate cases. Staff and other intervening parties review the rate structures proposed by the utility and then propose any changes deemed necessary.

iv. Rate Comparisons among Utilities

Rate comparisons among utilities – particularly utilities in different states – are an approximation and can only realistically be completed by developing an "all-in" rate for each utility. An all-in rate is the product of dividing total retail revenues by total retail volumetric sales. The reason that rate comparisons among utilities is complex is due to the extensive number differences that can significantly affect a revenue requirement as well as the development and application of rates. State statutes, rules and regulations, and the regulatory environment primarily drive the basis of the differences. Some of the specific differences are:

- Differences in customer bases;
- Types of riders/surcharges allowed;
- Timing of when costs for construction projects may be reflected in rates;
- Methodologies used to allocate costs between state jurisdictions for multi-state utilities;
- Methodologies used to allocate costs between wholesale and retail jurisdictions;
- Methodologies used to allocate costs between customer classes to design rates;
- Differences in rate case processes and timing of procedural schedules;
- Commission policies and decisions with regard to items such as return on equity, depreciable life of assets, and types of costs disallowed;
- Differences in customer demographics in each jurisdiction affect billing determinants;
- Differences in billing determinants affect rate levels;
- Differences in renewable energy standards (*eg*., voluntary vs. mandatory, calculation of renewable energy, amount of required, and timing of incremental requirements);
- Differences in how data is collected and reported by both Edison Electric Institute (EEI) and Energy Information Agency (EIA) require caution when making comparisons.

Due to the myriad of differences affecting development of the rates for any single utility service territory, it is difficult to compare rates between electric utilities within the same state or in other states.

E. Impacts of State and Federal Mandates on Electric Utility Capital Investment

This section of the rate study will describe the impacts of State and Federal mandates requiring significant Capital Investments during the study period.

A. Capital Investments

Large rate increases are primarily driven by large increases in capital investments and Kansas's electric investor-owned utilities have made significant investments in plant over the last ten plus years. The major generation related capital investments incurred by each Kansas electric investor-owned utility are as follows:

- Kansas City Power & Light
  - KCP&L constructed Iatan 2, an 850 MW Supercritical Coal-Fired generating unit with all modern environmental controls, at a cost of $1.655 billion (KCPL-KS share-$760 million), which came online in 2010 and entered rates in the 10-KCPE-415-RTS Rate Case;
  - KCP&L retrofitted the Iatan 1 Coal-Fired generating unit, which cost approximately $335 million for KCP&L's share of the plant (KCPL-KS share-$155 million);
  - KCP&L retrofitted the LaCygne 1 and 2 Coal-Fired generating units, at a total cost of $1.23 billion (KCPL-KS share-$286 million)[49]; and
  - KCP&L constructed the Spearville 2 wind farm for $123 million (KCPL-KS share of $57 million).
- Westar
  - Westar performed environmental retrofits at Lawrence Energy Center, Jeffrey Energy Center, and Tecumseh Energy Center; at a total cost of $1.217 billion. These investments entered rates through the Environmental Cost Recovery Rider (ECRR) from years 2008 through 2015;

[49] The LaCygne Environmental Retrofit was the subject of a predetermination proceeding under K.S.A. 66-1239, in Docket No. 11-KCPE-581-PRE.

- Westar's share of the LaCygne Environmental Retrofit project was $615 million. This investment entered rates in base rate cases from 2012 through 2017;
- Westar constructed the Central Plains Wind Farm and Flat Ridge Wind Farm, at a cost of $273 million. These investments came into rates in the 08-WSEE-1041-RTS Rate Case and the 09-WSEE-925-RTS Rate Case;[50]
- Westar constructed the Emporia Energy Center, at a cost of $305 million.[51] This investment came into rates in the 08-1041 and 09-925 Dockets with the wind farms discussed above; and
- Westar constructed the Western Plains Wind Farm, at a capital cost of $417 million. This wind farm came into rates in the 18-WSEE-328-RTS rate case.

B. State and Federal Mandates Impacts on Utility Capital Investment

State and Federal mandates that require additional capital investment represent additional costs outside the control of a utility. The discussion below notes the mandates that have affected Westar and KCP&L over the course of the study period.

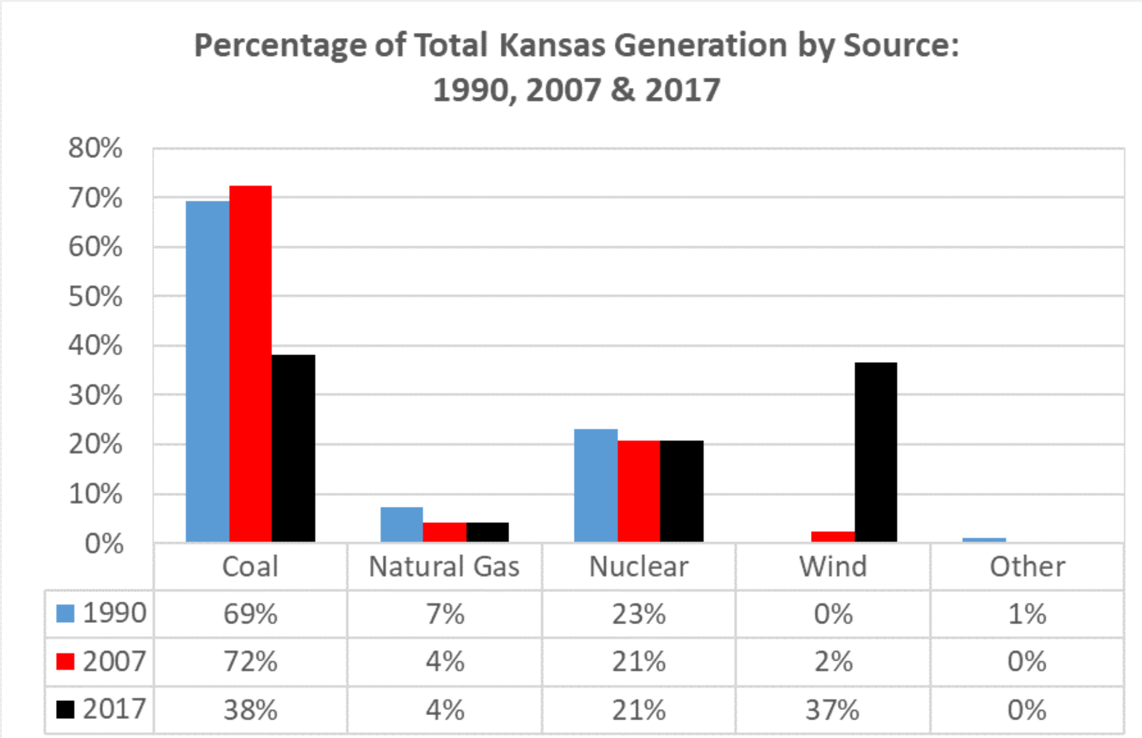
i. United States Environmental Protection Agency Environmental Mandates

Beginning in the mid-2000s, the EPA began applying more stringent air quality standards to coal-fired generation plants. The electric generation portfolio in Kansas has historically been heavily weighted toward coal-fired generation. And this heavy reliance on coal provided stable and low rates for 20 plus years prior to 2007.

The graph below show the changes in generation by source from 1990 to 2017.

[50] These wind farms were the subject of a predetermination proceeding, pursuant to K.S.A 66-1239, in Docket No. 08-WSEE-309-PRE.

[51] The Emporia Energy Center was the subject of a predetermination proceeding, pursuant to K.S.A 66-129, in Docket No. 07-WSEE-616-PRE.



As a result, Kansas's electric investor-owned utilities spent approximately $2.46 billion in environmental retrofits in order to achieve EPA mandated air quality standards.[52] Each electric investor-owned utility's capital investments are detailed later in this study in the sections detailing each utility's rate histories. Staff also notes that the decisions to retrofit coal-fired generation units by Westar and KCP&L were made during a period of expensive and volatile natural gas prices, which played a key role in deciding the retrofits were the lowest-cost option.

ii. Renewable Energy Standard – K.S.A. 66-1258

K.S.A. 66-1258 was passed in 2009 and mandated that each electric public utility, with the exception of municipal utilities, have the equivalent of 20% of its peak demand in nameplate renewable capacity by 2020. K.S.A. 66-1258 was repealed in 2016 and replaced with a voluntary goal of 20% by 2020. The 20% renewable capacity mandate has been accomplished through both purchased power agreements, in which the utility acquires the capacity and energy on a contract basis, and through direct utility ownership.

It should be noted that the state mandated additional generation in the form of renewables was not – in most instances – needed for capacity or energy requirements at the time the contracts or investments were made. Moreover, other incremental investments were

[52] Includes $1.85 billion for Westar and $617 million for KCP&L.

needed to support the renewable energy, such as additional gas-fired generation (Emporia Energy Center) to regulate the wind intermittency and variability as well as additional transmission assets to relieve congestion points and in order to move the renewable energy to the population and to provide additional transmission capacity for the additional renewable energy.

VI. Impact of Capital Costs on Rates

This section of the rate study will describe the regulatory treatment of capital investment as well as the statutory provisions regarding the valuation of investments and predetermining the ratemaking treatment of investments.

A. Regulatory Treatment of Capital Investment

The primary reason large increases in capital investments have a significant impact on increases a utility's revenue requirement is due to the "return on and return of" plant investments that are found to be prudent investments. As noted previously, an ROR is applied to a utility's rate base, which provides the shareholders "return on" its investment in capital. The "return of" a shareholder's investment is provided through depreciation expense. These two costs are generally two of the largest costs included in determining a utility's revenue requirement, and they are required to produce a just and reasonable rate, barring a finding of imprudence due to excessive or unnecessary investment.

The following example uses the cost of capital (ROR) example previously provided to demonstrate the revenue requirement impact of a $100 million capital investment:

	Capital Investment in Plant	100,000,000
X	ROR	7.0727%
	Return on Investment	7,072,700

	Capital Investment in Plant	100,000,000
X	Depreciation Rate (Over 50-Years)	2.00%
	Return of investment	2,000,000
	Subtotal Before Income Taxes	$9,072,700
X	Income Tax Gross Up	1.3610
=	Total Increase to Revenue Requirement	$12,347,944

As can be seen from the example, a large capital investment has a significant impact on a utility's revenue requirement. As will be further discussed below, Kansas's electric investor-owned utilities have effectively doubled their rate bases over the last ten years. These investments have been reviewed by Staff and other intervening parties through various processes that will be described below.[53]

B. Statutory Provisions Regarding Valuation and Predetermining the ratemaking treatment of investments.

When a utility undertakes a significant capital investment – such as building a new or retrofitting as existing generation facility – there are two methods of including the investments in rates. One method is to include the new investment(s) in a rate case, while the other method is to seek a predetermination of the need and ratemaking principles that will be applied to the new facility prior to undertaking construction. These two methods and the review process associated with each are discussed below.

i. Valuation of Property and Determination of Prudence – K.S.A. 66-128 et. seq.

The Commission is authorized by K.S.A. 66-128 *et. seq.* to determine the reasonable value of public utility assets used and required to be used in its services to the public whenever the Commission determines the ascertainment of such value is necessary to set

[53] Westar's filed Rate Base request in the 18-WSEE-328-RTS Docket was 182% of the amount it requested in the 08-WSEE-1041-RTS Docket. KCP&L's filed Rate Base request in the 18-KCPE-480-RTS Docket was 210% of the amount it requested in the 07-KCPE-905-RTS Docket.

just and reasonable rates. This statute also allows the Commission to evaluate whether the expenditures for public utility property were efficient and prudent. In determining whether expenditures for public utility property were efficient and prudent, K.S.A. 66-128c grants the Commission the power to evaluate the efficiency or prudence of acquisition, construction or operating practices of a utility. And in the event the Commission determines that a portion of the costs of acquisition, construction or operation were incurred due to a lack of efficiency or prudence, or were incurred in the acquisition or construction of excess capacity[54], the Commission has the authority to exclude all or a portion of the costs from the revenue requested by the utility. However, in order to exclude any portion of the value of public utility property, the Commission must consider a substantial amount of evidence in order to address the 12 separate factors outlined in K.S.A. 66-128g.

While Kansas statutes provide the Commission with the authority to disallow cost of public utility plant, the burden of proof rests with the party recommending any disallowance. As stated in *The Process of Ratemaking*, surrounding a utility's investment decisions is a legal presumption that the utility's management has acted prudently.[55] In addressing this issue further, *The Process of Ratemaking* states:

> Once the presumption of prudent management has been overcome with a *prima facie* case of imprudence, then the burden shifts to the utility. The utility must set forth appropriate evidence that management acted with care and diligence in controlling the project. Agencies here often employ outside consultants to provide an objective evaluation of management's control and direction of the project.[56]

ii. Determination of Rate-Making Principles and Treatment for Electric Generating or Transmission Facilities – K.S.A. 66-1239

K.S.A. 66-1239 allows a public utility to file a petition with the Commission prior to undertaking the construction of a generation or transmission facility in order to determine the ratemaking principles and treatment that will apply to the recovery in retail rates of the costs to be incurred to acquire such facility. K.S.A. 66-1239 (c)(2) also requires the public utility to submit the following information: (a) A description of the public utility's conservation measures; (b) a description of the public utility's demand side management efforts; (c) the public utility's ten-year generation and load forecasts; and (d) a description of all power supply alternatives considered to meet the public utility's load requirements.

K.S.A. 66-1239 is referred to as the "Predetermination Statute" because it allows a public utility to seek a predetermination of the ratemaking treatment it will receive during the

[54] Excess capacity means any capacity in excess of the amount used and required to be used to provide adequate and reliable service to the public.
[55] Goodman, *The Process of Ratemaking*, p. 860.
[56] Goodman, *The Process of Ratemaking*, p. 861.

course of the useful life of the asset to be acquired. The Predetermination Statute has been used approximately seven times and generally the ratemaking treatment determined by the Commission has been limited to whether: (1) the generation or transmission asset to be acquired is prudent, (2) the generation or transmission will be considered used and required to be used for the provision of service, and (3) the generation or transmission asset will be included in rate base along with the value of such assets. The projects filed under the predetermination statute include wind farms, the construction of the Emporia Energy Center gas-fired generation facility, and the LaCygne coal-fired generation environmental retrofit project. It should also be noted that predetermination cases are complex due to the forecasts necessary to determine whether a generation or transmission asset is needed and whether such investment is prudent. Some of the forecasts that go into such a predetermination are future customer load, alternative generation sources, future fuel costs, and the impact of demand-side management programs.

Utility generation investments are made under conditions of considerable uncertainty. Generation assets have long life expectancy, thus determining the best investment option requires forecasting ability about future demand for electricity, the future prices of multiple fuels, an estimation of the future environmental regulatory atmosphere, and an anticipation of future structural changes in the retail and wholesale electric market. All of these factors must be taken into consideration while implementing policy requirements such as a renewable energy standard. And finally, the utility is expected to make the least cost investment choice.

Evaluating generation investment decisions in hindsight requires recognizing what was the best available information at the time the investment decision was made. To illustrate the problems faced by decision makers, the uncertainty around the best future fuel choice and the expected future demand for electricity will be examined from an early 2000s perspective.

In the early 2000s, there was significant concern about the future availability of natural gas resources. Because of the declining availability of natural gas, the price for natural gas had become extremely volatile, and in particular, subject to wild swings due to Gulf of Mexico hurricanes. Fracking had been used since 1860s, but the fracking boom came in the late 2000s. Even as late as 2012, the Energy Information Agency (EIA) was osculating between fracking was going to change the market and fracking might be oversold.[57] Coal, on the other hand, did not have price volatility and was plentifully available. In 2004 and 2005 coal looked superior. By 2015, natural gas was the future and coal plants were being shuttered.

---

[57] A comparison of EIA's 2011 and 2012 Annual Energy Outlook (AEO) reveals a reduction in the technically recoverable resource (TTR) of the Marcellus Shale Play of 67% and overall the AEO2012 cut TTR by 42%. And from the *Oil Drum* "A painful adjustment is underway in the natural gas exploration and production industry. Fewer jobs will be created and projects may develop more slowly. This development may expose the notion of long-term natural gas abundance and cheap gas as an illusion. The good news is that this adjustment will lead to higher gas prices in a future less distant than most believe." http://www.theoildrum.com/node/8914

Average customer Residential electric usage had been growing in Kansas since the 1990s at an annual rate of one to three percent until 2010. Since 2010, average Residential electric usage has declined in Kansas more than one percent per year. In 2004 and 2005 when generation investment decisions were made by Westar and KCP&L, anticipating the dramatic change in average customer usage would have required incredible foresight, and to make that foresight meaningful, an unrealistically forceful persuasive ability.

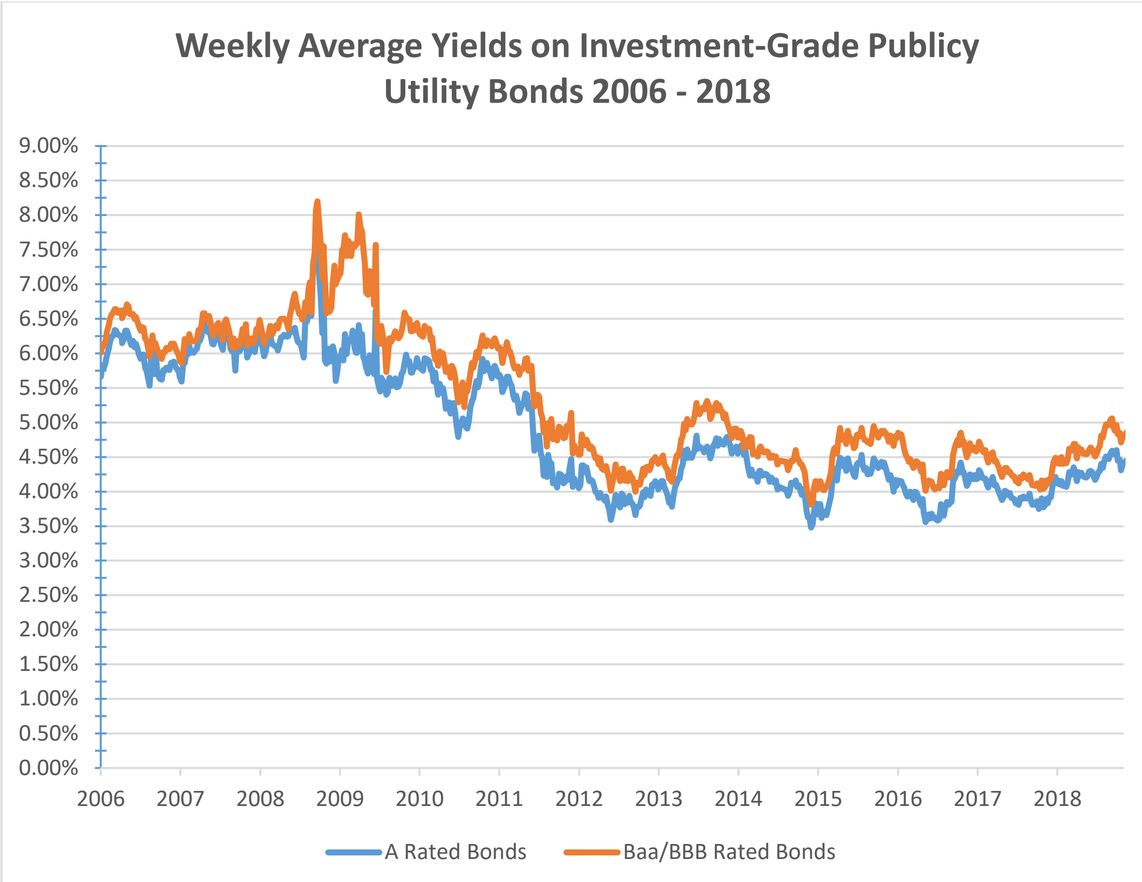
C. Mitigating Factors Offsetting the Impact of Capital Investment Costs

With the exception of the years 2008 and 2009, declining costs of debt and equity has helped offset the increasing level of capital investment incurred by Kansas' electric investor-owned utilities. And, as noted previously, the overall weighted cost of capital (ROR) can have a significant impact on a revenue requirement calculation.

As will be described in more detail below, once it became apparent that the movement of equity costs was not an anomaly, Staff began to lower its recommended ROEs downward. This movement was highly contested by the utilities. The Commission accepted Staff's ROE recommendations, which led one utility to appeal the Commission's decision. The Commission prevailed in the appeal case, however, the Commission's position on lower ROEs ultimately led to a downgrading of the Commission's investor supportiveness ranking by SNL and RRA. Nonetheless, the Commission has been a national leader on the issue of recognizing the true lower cost of equity capital necessary to induce investors to finance public utility assets, and many states surrounding Kansas eventually followed suit with lower authorized ROEs. These lower ROEs have significantly offset the impact of increased capital investment by Kansas utilities during the study period.

i. Declining Cost of Debt

As noted previously, a utility's debt costs can be determined by reviewing the stated rates for each particular debt issue. As such, determining a weighted average cost of debt is not controversial in rate case proceedings and any benefit of lower cost of debt is passed through to customers through a lower overall weighted cost of capital (ROR). The history of debt costs over the study period is provided below.



ii. Declining Return on Equity

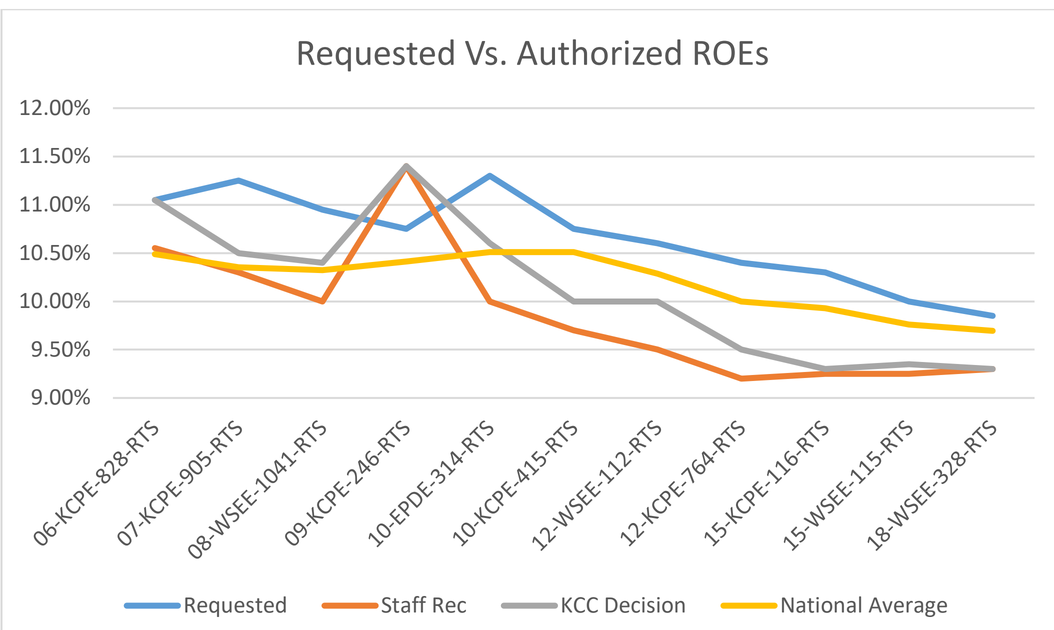
As was discussed previously, there are several methods to estimate an ROE. Because there are several methods, cost of capital witnesses usually provide a range of ROEs. In selecting the ROE to authorize out of the ranges provided by cost of capital witnesses, the Commission relies on the "Zone of Reasonableness" standard. The Commission has specifically stated:

> As a specialized decision making body, the statutory authorization to establish "just and reasonable" rates implies flexibility in exercising our complicated regulatory function. That same statutory authorization was not intended to confine the boundary of our regulatory discretion to an absolute or mathematical formula, but rather it was intended to confer power to make and apply policy concerning the appropriate prices charged to utility customers and returns on capital to utility investors in accord with constitutional protections applicable to both interests. Thus, the Kansas courts have always held that our goal is to fix rates within a "zone of reasonableness," after we balance the interests of the utility's investors, ratepayers, and the public.

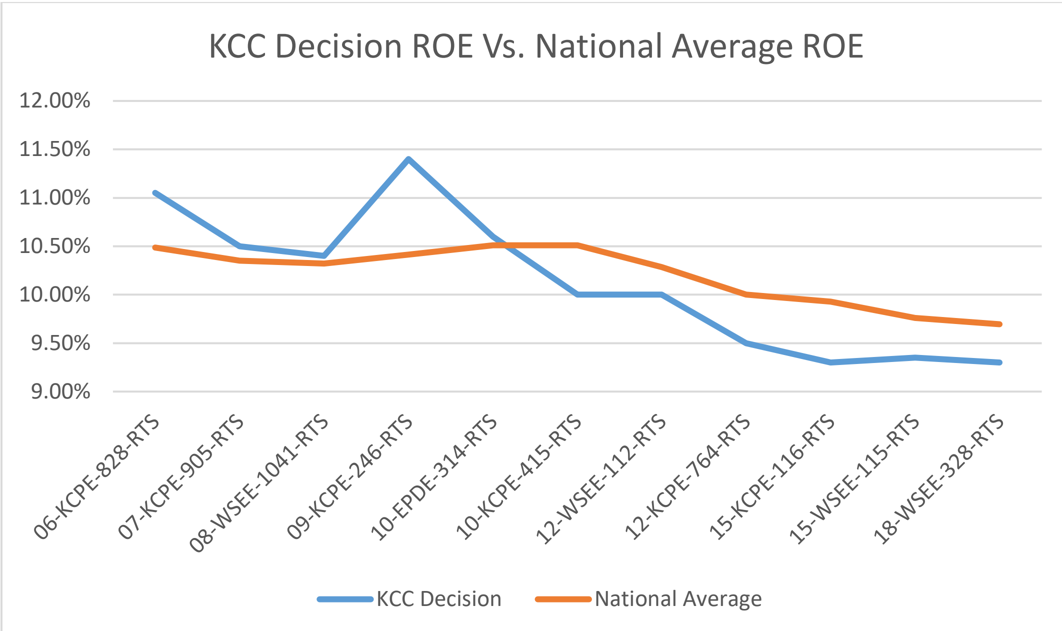
> The cost of capital is the minimum rate of return necessary to attract capital to an investment. There is no formula for making a determination of what rate of return will attract capital, most especially a return on equity invested, nor can there be, as what is fair is not an economic determination. "What annual rate will constitute just compensation depends upon many circumstances, and must be determined by the exercise of fair and enlightened judgment, having regard to all relevant facts." Justice Oliver Wendell Holmes succinctly observed that setting an allowed return "... is not a matter of economic theory, but of a fair interpretation of a bargain." "What the company is entitled to ask is *a fair return* upon that which it employs for the public convenience." [58] [Internal cites omitted.]

iii. Kansas ROE Decisions Compared to National Average

While the "Great Recession" that began in 2008 created difficulties in determining the zone of reasonableness for ROEs, beginning in 2010, the methodologies used to determine ROEs began a significant downward trend and Kansas was one of the few states to recommend much lower ROEs. The Commission has agreed with Staff's positions and, as a result, Kansas' recent ROEs have been well below the national average of Commission authorized ROEs as tracked by RRA. The chart below compares Kansas' authorized ROEs to the national average over the study period.



[58] Order: 1) Addressing Prudence; 2) Approving Application, in Part; and 3) Ruling on Pending Requests, pp. 37-38, Docket No. 10-KCPE-415-RTS (Nov. 22, 2010).



VII. Legislatively Mandated and Commission Authorized Adjustment Clauses

RRA has defined the use and prevalence of adjustment clauses as follows:

> Utility industry stakeholders have developed innovative techniques to achieve timely rate recognition of investments in certain projects and increases in key expenses. One such technique is the adjustment clause, which effectively shifts the risk associated with recovery of the expense in question from shareholders to customers, because, if the clause operates as designed, the company is able to change its rates to recover its costs on a current basis, without any negative effect on the bottom line and without the expense and delay that accompanies a rate case filing.
>
> The electric and natural gas utilities' use of adjustment clauses to recover variations in certain costs outside of the traditional rate case process has its origins in the 1973 Arab oil embargo, when fuel costs skyrocketed, leaving the utilities with no way to recover the increased costs in a timely manner. During these years, utility earnings were under considerable pressure, a situation that prompted certain jurisdictions to establish a more constructive framework to allow more timely recovery of cost increases that were beyond the control of the utilities. The result was the creation of the fuel adjustment clause.

Over the ensuing years, the use of adjustment clauses expanded to include other expenses that are outside the control of the utility or are required by law or rule, such as environment compliance costs, conservation program costs, pension costs, municipal taxes and franchise fees, the pass-through of transmission-related costs allocated to the utility by the Federal Energy Regulatory Commission and storm cost recovery, to name a few.

More recently, the use of adjustment clauses has been expanded further to include certain types of new generation and T&D investment, and to mitigate the impacts of fluctuations in sales due to weather, energy conservation and/or economic conditions, also known as decoupling. For a discussion of the most prominent adjustment clauses in place for the electric and natural gas utilities in the U.S., refer to the 9/12/17 Topical Special Report entitled Adjustment Clauses: A State-by-State Overview.

Although not adjustment clauses per se, some jurisdictions have approved the use of surcharges to recover specific one-time items, such as excess storm restoration costs, while expense trackers have also been widely adopted. Expense trackers provide for the deferral of variations in certain costs for potential recovery at a future time, when the commission will consider the accumulated balance for inclusion in rates. Although an expense tracker is designed to keep the utility's earnings whole, rates, and accordingly cash flows, do not change on a current basis.[59]

A. Legislatively Mandated Adjustment Clauses

i. Transmission Delivery Charge – K.S.A. 66-1237

K.S.A. 66-1237(c) states:

that "[a]ll transmission-related costs incurred by an electric utility and resulting from any order of a regulatory authority having legal jurisdiction over transmission matters, including orders setting rates on a subject-to-refund basis, *shall be conclusively presumed prudent for purposes of the transmission delivery charge and an electric utility may change its transmission delivery charge whenever there is a change in transmission-related costs resulting from such an order*. The commission may also order such a change if the utility fails to do so. An electric utility shall submit a report to the commission at least 30 business days before changing the utility's transmission delivery charge. If the commission subsequently determines that all or part of such charge did not result from an order

[59] RRA Topical Special Report *The Rate Case Process: A Conduit to Enlightenment*, p. 14 (July 3, 2018).

> described by the subsection, the commission may require changes in the transmission delivery charge and impose appropriate remedies, including refunds." [Emphasis added.]

The Transmission Delivery Charge (TDC) is effectively a tariff established to recover charges the Southwest Power Pool (SPP) assesses for service to a public utility's retail load. In other words, the approved TDC tariffs are designed to recover the public utility's retail transmission service cost. TDC rates approved under the tariff are based on the public utility's SPP Annual Transmission Revenue Requirement derived from a public utility's annual SPP Transmission Formula Rate, which is approved by FERC. In addition to the retail portion of that amount, the TDC tariff recovers the retail-allocated portion of other SPP charges associated with transmission service.

It should also be noted that the FERC approved Annual Transmission Revenue Requirement (ATRR) includes significantly higher ROEs and the TDC is one of the major drivers of the increase in rates for Westar because it has a most extensive transmission network than KCP&L. As of 2018, the TDC is more than 2 cents per kWh for Westar's residential customers. The individual TDC filings for each Kansas investor-owned utility will be discussed later in this study.

Because the TDC reflects the FERC-approved Transmission Formula Rate (TFR), and its higher ROE (10.3% inclusive of the .50% adder for SPP membership), Staff calculates that Westar's current TDC charge is $7.38 million higher (2.89%) than would be the case if the KCC-regulated ROE was used to set this rate. This higher ROE, however, is $7.38 million lower on an annual basis than would be the case if the KCC had not filed a complaint under Section 206 of the Federal Power Act requesting FERC lower the ROE used in Westar's TFR, in Docket No. EL14-93. Ultimately the KCC and Westar settled the complaint before FERC, which resulted in a reduction of Westar's TDC by $18.26 million on July 1, 2017.[60]

ii. Ad Valorem Property Taxes – K.S.A. 66-117(f)

The Commission derives its authority to review Ad Valorem tariffs from K.S.A. 66-117(f), which states in pertinent part:

> Whenever, after the effective date of this act, an electric public utility, a natural gas public utility or a combination thereof, files tariffs reflecting a surcharge on the utility's bills for utility service designed to collect the annual increase in expense charged on its books and records for ad valorem taxes, such utility shall report annually to the state corporation commission the changes in

[60] At the time the KCC filed its complaint, Westar's authorized ROE was 11.3% (inclusive of the .50% adder for SPP membership). This consisted of approximately $8 million in one-time refunds from previous charges in excess of the settled 10.3% ROE, and an approximate $10 million reduction to the TDC going forward. The annual savings calculation is now approximately $7.3 million annually, given that Westar has reduced its TDC to account for the impact of lower federal income tax expense effectuated by the passage of the Tax Cuts and Jobs Act of 2017 (the new lower FERC-ROE has less impact because the tax gross up of the ROE is lower).

> expense charged for ad valorem taxes ... Upon a showing that the surcharge is applied to bills in a reasonable manner and is calculated to substantially collect the increase in ad valorem tax expense charged on the books and records of the utility, or reduce any existing surcharge based upon a decrease in advalorem tax expense incurred on the books and records of the utility, the [C]omission shall approve such tariffs within 30 days of the filing.

Ad Valorem tax riders effectively allow a utility to increase or decrease the incremental amount of property taxes that are not currently included in its rates during "lag years". Once the utility files a rate case, the property tax rider will be "rebased" through the inclusion of all property taxes in the new base rates created by the rate case. The individual property tax filings for each Kansas investor-owned utility will be discussed later in this study.

iii. Energy Efficiency Surcharge and Kansas Energy Efficiency and Investment Act – K.S.A. 66-1283

K.S.A. 66-1283, The Kansas Energy Efficiency Investment Act (KEEIA), was passed in 2014. To-date, there have been no energy efficiency programs implemented under the act, so no costs associated with this act are included in rates today. However, KEEIA did codify the pre-existing Energy Efficiency Surcharge by inclusion of K.S.A. 66-1283(e)(1), which states "To achieve the goals of this act, the Commission shall: Provide timely cost recovery for electric public utilities."

Prior to the implementation of K.S.A. 66-1283, the Commission developed its policy framework for energy efficiency programs through several general investigations. Docket No. 08-GIMX-441-GIV (441 Docket) examined cost-recovery methods for energy efficiency programs and established Docket No. 08-GIMX-442-GIV (442 Docket) to study cost-benefit analysis for energy efficiency programs. These Dockets were further clarified in Docket No. 12-GIMX-337-GIV (337 Docket).

In approving energy efficiency riders, the Commission stated its rationale as follows:

> A rider reduces risk from the utility's point of view because it will provide utilities with a relative rapid and assured recovery of their program costs. Staff Report, 5. A rider may also reduce potential rate shocks for consumers if costs were deferred to the next rate case. Staff Report, 5. This promotes stability of customer rates.
>
> Because a rider offers nearly contemporaneous recovery of program costs for utilities, the need for carrying costs, creation of regulatory assets, and a return on such deferred accounts is reduced. See Staff Report, 26. This also serves to lower costs for customers.
>
> The Commission believes a rider should be implemented in a manner that maintains the Commission's responsibility to review costs for prudence.

> The Commission believes a rider, due to the relative speed of cost recovery, the greater certainty of cost recovery, and the absence of regulatory lag, provides an advantage over traditional rate case recovery of costs for utilities. A rider cost-recovery mechanism provides a balanced approach between the positions of simply treating program costs in a traditional manner in a rate case without full cost capitalization, as favored by AARP, for example, and capitalizing all program costs, as favored by KCP&L.[61]

While energy efficiency program costs are not a major driver of the increases in rates for Kansas' electric investor-owned utilities, each energy efficiency rider filing is detailed in the rate history section of each utility. We also note that on a combined basis, there has been approximately $95.9 million spent on energy efficiency programs during the study period by KCP&L and Westar.

	Westar EER Recovery	KCP&L EER Recovery
2007	$ -	$ -
2008	$ -	$ 6,609,731.00
2009	$ -	$ 9,091,522.00
2010	$ 5,830,491.17	$ 8,568,754.00
2011	$ 10,731,209.00	$ 6,191,469.00
2012	$ 11,869,456.00	$ 2,007,597.00
2013	$ 10,522,147.00	$ 827,410.00
2014	$ 5,515,148.00	$ -
2015	$ 4,700,962.00	$ -
2016	$ 3,944,733.00	$ -
2017	$ 4,536,437.00	$ -
2018	$ 4,987,852.00	$ -
Total	$ 62,638,435.17	$ 33,296,483.00
NOTE: Data was pulled from Commission Orders		

B. Commission Authorized Adjustment Clauses

i. Energy Cost Adjustment

As stated previously, energy cost adjustment clauses began around the time of the 1973 Arab oil embargo as way for public utilities to recover the rapidly increasing costs of fuel costs in a timely manner. Because of the significant amount of costs associated with generating electricity, large price increases in fuel costs could drive rate cases based solely on the increased cost of fuel. Kansas' fuel and purchased power clauses originated in the mid-1980s and are audited on an annual basis. It should be noted that only fuel and purchased power costs were originally flowed through an ECA and no profit or carrying

[61] Final Order, p. 11, Docket No. 08-GIMX-441-GIV (Nov. 14, 2008).

costs are allowed. However, with the advent of the SPP Integrated Market (IM), electric utility fuel clauses became much more complicated. Staff now evaluates each jurisdictional utility's performance in the SPP IM and more cost categories, such as some transmission related expenses, are included in the fuel clause calculations.

It should be noted that fuel costs are one of the major reasons that Kansas's rates have risen faster than the peer companies in this study. As will be detailed later, electric utilities whose generation portfolios are primarily gas-fired generation have achieved a significant advantage over electric utilities that are primarily coal-fired due to the extended period of very low natural gas prices. Specifically, with regard to the change in the Kansas utilities' rates, 9% of Westar's total rate changes during the study period and 18.5% of KCP&L's total rate changes during the study period was the result of changes in revenue collected through the ECA mechanisms of these utilities.

ii. Environmental Cost Recovery Rider

In Docket No. 05-WSEE-981-RTS, Westar requested a rider mechanism that allowed for a surcharge on its customers' bills to recover the costs associated with installing pollution control equipment on its generating facilities. In authorizing the Environmental Cost Recovery Rider (ECRR), the Commission states the following:

> The Commission finds that the ECRR is a reasonable mechanism for funding the extraordinary costs mandated by such federal legislation as required by the Clean Air Act -- costs related to equipment which will not generate additional electricity, but will hopefully benefit society as a whole. The process for implementing the charge as proposed by Westar and modified by Staff will ensure the prudence of these investments. Low, 27-28. Further, the inclusion of a specific charge on their bills will alert ratepayers to the costs necessary to meet mandated environmental requirements. Last, prompt recovery of ECRR costs, like AFUDC costs, results in lower retail cost of service for ratepayers. With the safeguards provided herein, ratepayers will be protected from premature, excessive, or inappropriate costs. Accordingly, the Commission approves Westar's proposal as modified by Staff. See Low, 23-28.[62]

Westar was the only utility to request such a rider and Staff notes that the rate history section for Westar will indicate that the costs associated with this rider were a major driver of Westar's rate increases. Staff also notes that the ECRR was eliminated in Docket No. 15-WSEE-115-RTS as a result of Staff's recommendation to the Commission.

[62] Order on Rate Applications, pp. 29-30, Docket No. 05-WSEE-981-RTS (Dec. 28, 2005).

VIII. Overview of Litigated vs. Settled Rate Case History in Kansas

The end result of every rate case must be just and reasonable rates, regardless of whether a particular rate case is fully litigated, non-unanimously settled, or unanimously settled.

The Kansas Supreme Court has stated:

> The leading cases in this area clearly indicate that the goal should be a rate fixed within the "zone of reasonableness" after the application of a balancing test in which the interests of all concerned parties are considered. In rate-making cases, the parties whose interests must be considered and balanced are these: (1) the utility's investors vs. the ratepayers; (2) the present ratepayers vs. the future ratepayers; and (3) the public interest.[63]

In order to establish a "zone of reasonableness" within which a rate can be fixed, the Commission relies on the record established in a particular rate case. Generally, the record consists of:

- The utility's application, direct, and rebuttal testimony;
- The direct and cross-answering testimony of Staff and other intervening parties;
- Discovery requests issued by all parties (which generally exceeds 500 requests for large electric investor-owned utilities) filed as exhibits in testimony;
- Legal pleadings filed for various reasons; and
- Public comments.

As noted previously, very few rate case adjustments are black and white. Most adjustments are subjective and based on professional experience and judgement. Therefore, reasonable differences of opinions as to the correct position can and often occur. However, the presence of professional expert witnesses and attorneys help ensure that any unreasonable position(s) taken by any party are discussed and either are litigated or discarded in settlement negotiations.

A. Litigated Rate Cases

Fully litigated cases are a minority of the total large investor-owned rate cases to appear before the Commission. Fully litigated rate cases generally are caused by disagreements among the parties over a number of adjustments that have a large dollar value associated with them. The sections covering each Kanas electric investor-owned utility will note whether each rate during the study period was litigated or settled.

[63] *Kan. Gas and Electric Co. v. State Corp Comm'n*, 239 Kan. 483, 488 (1986).

B. Rate Case Settlement Agreements

The majority of rate cases are settled in Kansas. And, as the remainder of this section discusses, there is case law and guidelines for ensuring that settlements among the parties to a rate case results in just and reasonable rates.

i. Kansas Law Favors Settlements

The Commission has noted in its rate case orders that "[i]t is an elemental rule that the law favors compromise and settlement of disputes."[64] Whether a settlement is unanimous or non-unanimous, it must be supported by substantial and competent evidence contained within the record and it must establish just and reasonable rates.

ii. Commission Five Factor Test for Settlements

The Commission recently described its five factor test as follows:

> The Commission has established a five-part test to determine the reasonableness of proposed settlement agreements. The five parts are rooted in the Commission's organic statutes, the Kansas Administrative Procedure Act (KAPA), and the Kansas Judicial Review Act (KJRA). The five parts are:
>
> 1. Was there an opportunity for the opposing party to be heard on the reasons for opposition to the Stipulation and Agreement?
> 2. Is the Stipulation and Agreement supported by substantial competent evidence in the record as a whole?
> 3. Does the Stipulation and Agreement conform with applicable law?
> 4. Does the Stipulation and Agreement result in just and reasonable rates?
> 5. Are the results of the Stipulation and Agreement in the public interest, including the interest of customers represented by any party not consenting to the Agreement?[65] [Internal cites omitted.]

These guidelines must be addressed in every settlement agreement in order to ensure that the rates resulting from an agreement meet the just and reasonable rate and public interest standards.

[64] Order Approving Non-Unanimous Stipulation and Agreement, p. 22, Docket No. 18-WSEE-328-RTS (Sept. 27, 2018), citing *In the Matter of Thompson's Estates*, 226 Kan. at 440. *See Bright v. LSI Corp.* 254 Kan. 853, 858 (1994).

[65] Order Approving Non-Unanimous Stipulation and Agreement, p. 12, Docket No. 18-WSEE-328-RTS (Sept. 27, 2018).

iii. Authorized Revenue Requirement Increase Versus Utility Revenue Request

For abbreviated rate cases[66], which are generally limited to plant investment updates filed within 12 months of a general rate case, the percentage of revenue requirement increases authorized by the Commission versus the requested revenue requirement increase requested by a utility is approximately 90%. For general rate cases, the percentage of revenue requirement increases authorized by the Commission versus the requested revenue requirement increase by Kansas' electric investor-owned utilities ranges from 45% to 60% for full rate cases. This disparity between the amount requested by the public utility and the revenue requirement increase authorized by the Commission is primarily due to the subjective nature of of utility ratemaking and the complexity of the issues involved. Regarding the complexity of ratemaking, the Commission has stated:

> Based on the above discussion, the Parties to the NS&A have provided testimony and evidence, both prior to and after settlement negotiations, that is substantial, relevant, and furnishes a substantial basis of fact by which the Commission may consider and approve the terms of the NS&A. *The Parties to the NS&A, who represent multiple and diverse interests, engaged in vigorous settlement discussions and relied on the evidence in this docket to strike a reasonable compromise. It is undisputed that the witnesses who testified and submitted evidence are experts in their respective fields, and therefore, the Commission finds they provided competent information for the Parties in support to use in settlement negotiations and for the Commission to rely on in determining the reasonableness of the NS&A.*
>
> Moreover, the Commission "*of necessity, must be afforded a wide discretion in the methodology to be utilized in approaching the complex problems involved. The field of public utility regulation is a highly complex field and requires a great amount of expertise in arriving at a result which is fair and just to all interested parties."* Whether another trier of fact, or another party, could have reached a different conclusion given the same facts is irrelevant. Further, the Commission finds that "black box" components of rate case settlements do not lack substantial competent evidence *per se,* and that the Parties to the NS&A have shown the black box component of the NS&A is supported by substantial competent evidence. The Commission relies on the expert testimony of the Parties in support of the NS&A as a whole, and therefore, the Commission finds the NS&A and its specific terms are supported by substantial, competent evidence in light of the entire record. [Emphasis added.]

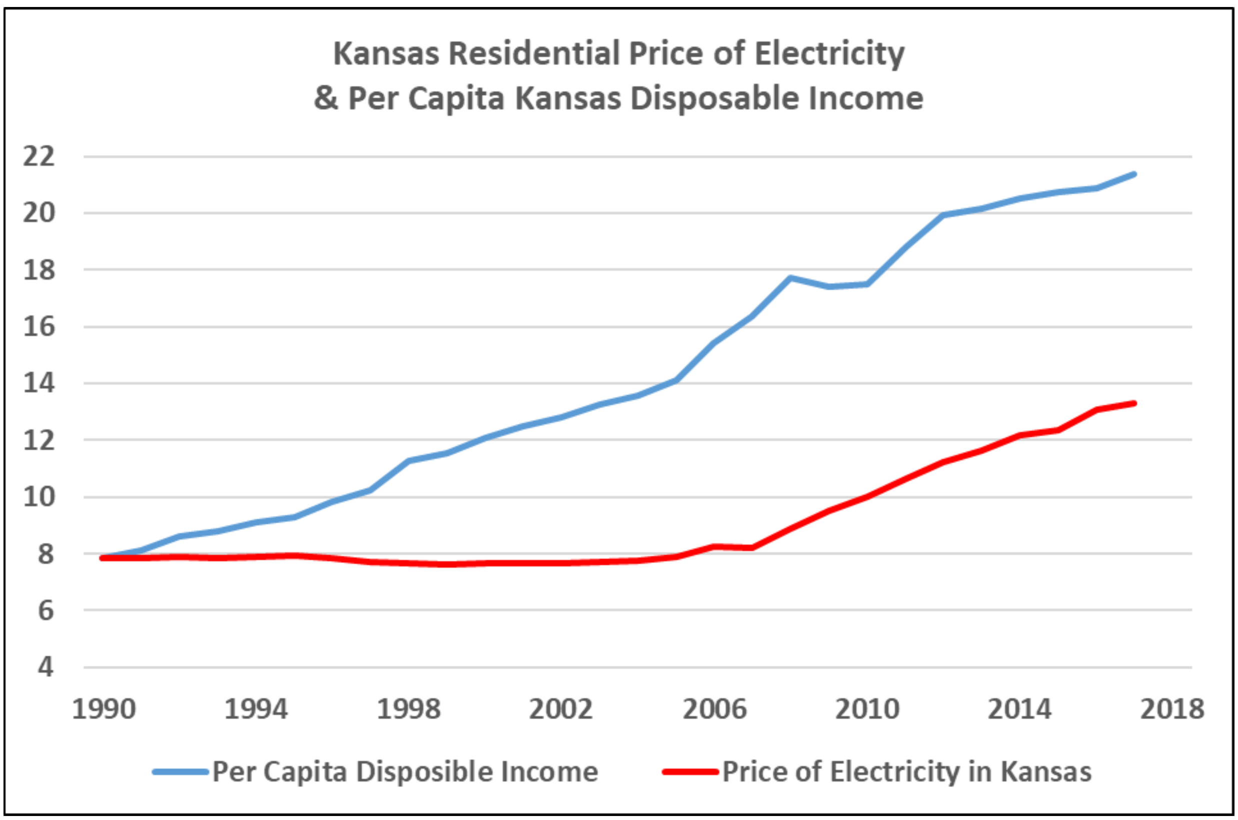
[66] Authorized under K.A.R. 82-1-231(b)(3)(A).

IX. Economic Factors Impacting Public Perception of Electric Utility Rates

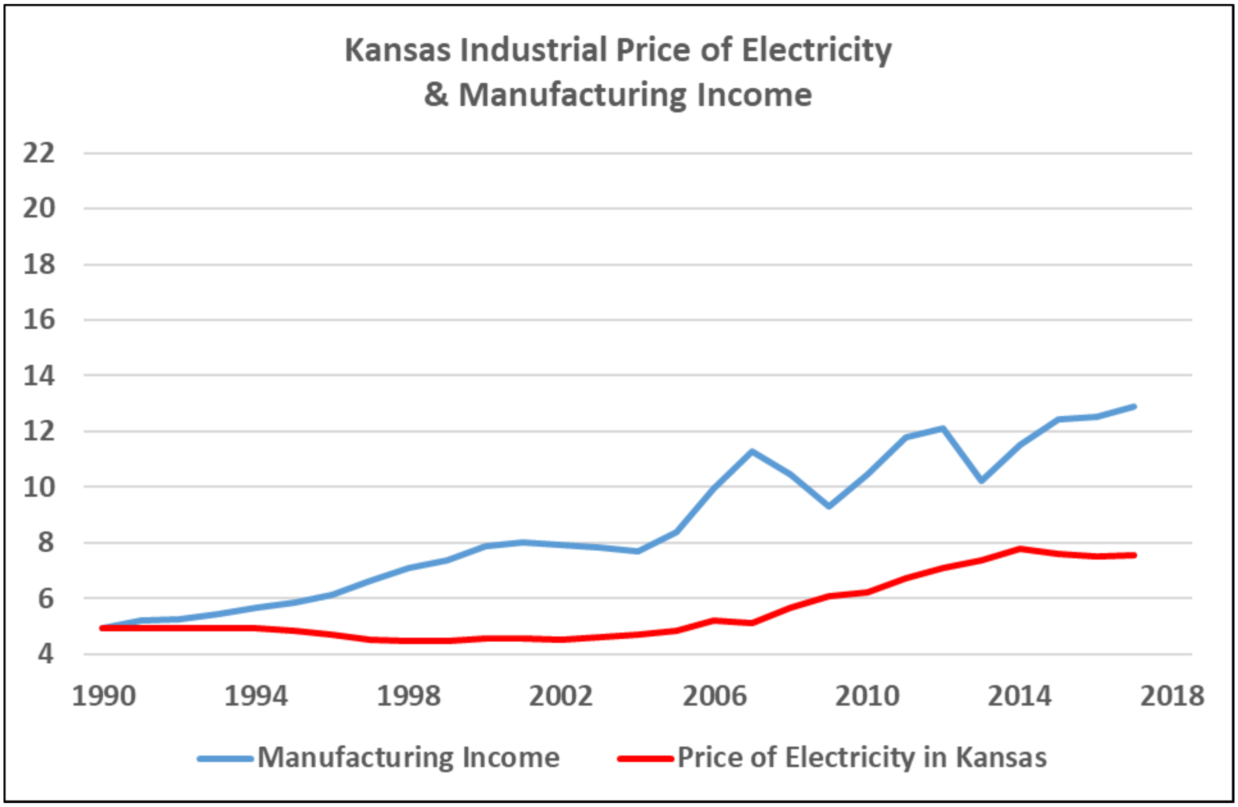
The price of Kansas' electricity remains competitive when considered in the context of the increase in disposable income over the past several decades. As the charts below indicate, Kansas' nominal electric rates have grown slower than the relevant income measure for Residential, Commercial, and Industrial customers.

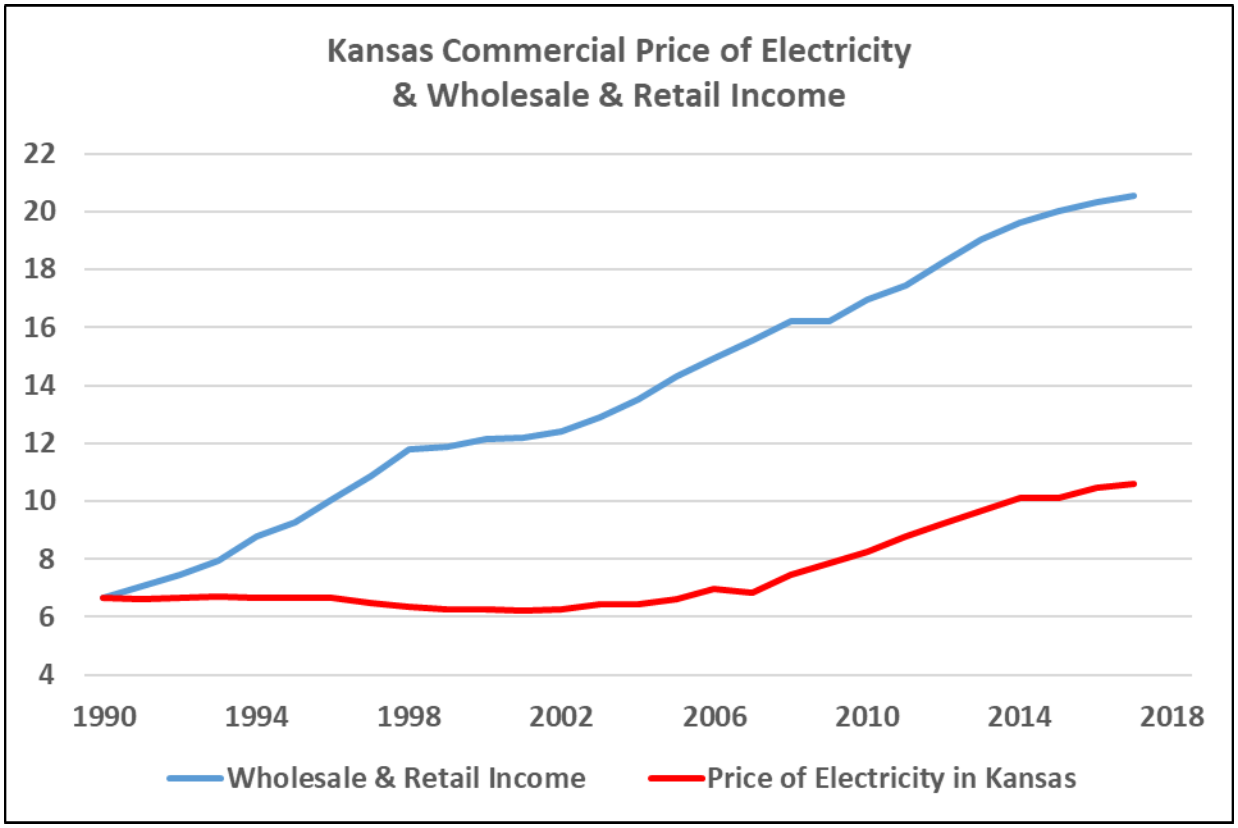
In order to show the impact of the different growth rates for electricity prices and income, the sector income variable was calibrated so as to equal the sector price of electricity in 1990. The widening gap between electricity prices and income shows that income's growth rate was significantly higher than the growth rate for electricity prices. For example, disposable income was divided by 2,039.719 so as to equal the 1990 Residential price of electricity: 7.83 cents per kWh, and then every year after 1990 disposable income was divided by 2,039,719.

A. Kansas Electric Rates Compared to Disposable Income



B. Kansas Electric Rates Compared to Business Income





Below is a table that has the 1990 sector price of electricity and the sector income, the 2017 sector price of electricity and the sector income, and the percentage change from 1990 to 2017. The Residential price of electricity has grown faster in Kansas than either the Industrial or Commercial price of electricity.

The Kansas Sector Price of Electricity and Sector Income: Residential, Industrial & Commercial		
Sector	**Price of Electricity**	**Per Capita Disposable Income**
Residential	**¢ per kWh**	**$**
1990	7.83	15,971
2017	13.31	43,579
% Change	70%	173%
Sector	**Price of Electricity**	**Manufacturing Income**
Industrial	**¢ per kWh**	**$1,000,000s**
1990	4.94	9,362
2017	7.54	24,400
% Change	53%	161%
Sector	**Price of Electricity**	**Commercial Income**
Commerce	**¢ per kWh**	**$1,000,000s**
1990	6.64	6,645
2017	10.59	20,554
% Change	59%	209%

C. Ratepayer Perception of Rate Increases Versus Additional Value Provided

As discussed in the executive summary above, electricity is a homogeneous product, but the production of electricity is far from a homogeneous process. While Westar and KCP&L have experienced significant rate increases over the past decade, the result of these rate increases has been significant reductions in harmful pollutants produced as a byproduct of coal-fired electricity generation. Additionally, Westar and KCP&L are now leaders in emission free energy production, with half of their energy produced utilities now coming from emission free energy sources. These elements of energy production tend to create value, which is recognized in the minds of some energy consumers.

X. Regulatory Research Associates Views Kansas as Having a Less Constructive, Higher-risk Regulatory Climate

RRA ranks each public utility regulator on an ongoing basis from a public utility investor's point of view. The KCC has been ranked below average 1 (BA1) since approximately 2016. RRA describes its process as follows:

> Regulatory Research Associates, or RRA, evaluates the regulatory climate for energy utilities in each of the jurisdictions within the 50 states and the District of Columbia, a total of 53 jurisdictions, on an ongoing basis. *The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's electric and gas utilities*.
>
> Each evaluation is based upon consideration of the numerous factors affecting the regulatory process in the state and may be adjusted as events occur that cause RRA to modify its view of the regulatory risk accruing to the ownership of utility securities in that individual jurisdiction.
>
> RRA also reviews evaluations when updating Commission Profiles and when publishing this quarterly comparative report. The issues considered are discussed in RRA Research Notes, Commission Profiles, Rate Case Final Reports and Topical Special Reports. RRA also considers information obtained from contacts with commission, company and government personnel in the course of its research. *The final evaluation is an assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative and court actions*.
>
> An Above Average designation indicates that, in RRA's view, the regulatory climate in the jurisdiction is relatively more constructive than average, representing lower risk for investors that hold or are considering acquiring the securities issued by the utilities operating in that jurisdiction.
>
> At the opposite end of the spectrum, *a Below Average ranking would indicate a less constructive, higher-risk regulatory climate from an investor viewpoint*.
>
> A rating in the Average category would imply a relatively balanced approach on the part of the governor, the legislature, the courts and the commission when it comes to adopting policies that impact investor and consumer interests.
>
> Within the three principal rating categories, the designations 1, 2 and 3 indicate relative position, with a 1 implying a more constructive relative ranking within the category, a 2 indicating a mid-range ranking within the category and a 3 indicating a less constructive ranking within the category.[67] [Emphasis added.]

As noted in RRA's description, the KCC's below average ranking indicates a less constructive, higher-risk regulatory climate from an investor viewpoint. And, as can be

[67] RRA Regulatory Focus *State Regulatory Evaluations – Energy*, pp. 1-2 (Nov. 26, 2018). (RRA, State Regulatory Evaluations – Energy).

seen in the RRA chart below, Kansas is among the lowest nine regulatory commissions in the county in terms of how supportive Kansas's rate decisions are to a public utility's investors.

RRA state regulatory evaluations — Energy

Above average/1	Above average/2	Above average/3	Average/1	Average/2	Average/3	Below average/1	Below average/2	Below average/3
Alabama	Georgia	California	Arkansas	Colorado	Arizona	Alaska	New Mexico	Dist. of Columbia
	Florida	Michigan	Indiana	Hawaii	Delaware	Connecticut	West Virginia	Maryland
	Virginia	Pennsylvania	Iowa	Idaho	Missouri	Kansas		
	Wisconsin	Tennessee	Kentucky	Illinois	New Hampshire	Montana		
			Mississippi	Louisiana — NOCC	Oklahoma	New Jersey		
			Nebraska	Louisiana — PSC	South Carolina			
			New York	Maine	Texas — PUC			
			North Carolina	Massachusetts	Vermont			
			North Dakota	Minnesota	Washington			
			Utah	Nevada	Wyoming			
				Ohio				
				Oregon				
				Texas — RRC				
				Rhode Island				
				South Dakota				

As of Nov. 26, 2018.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

In providing an overview of its ranking process, RRA states:

> The rankings are subjective and are intended to be comparative in nature. RRA endeavors to maintain an approximate normal distribution with an approximately equal number of rankings above and below the average. The variables that RRA considers in determining each state's ranking are largely the broad issues addressed in our State Regulatory Reviews/Commission Profiles and those that arise in the context of rate cases and are discussed in RRA Rate Case Final Reports.
>
> *The rankings not only reflect the decisions rendered by the state regulatory commission, but also take into account the impact of the actions taken by the governor, the legislature, the courts, and the consumer advocacy groups. The policies examined pertain largely to rate cases and the ratemaking process, but issues such as industry restructuring, corporate governance and approach to proposed mergers are also considere*d.
>
> *The rankings are designed to reflect the interests of both equity and fixed-income investors across more than 30 individual metrics*. The individual scores are assigned based on the covering analysts' subjective judgement. The scores are then aggregated to create a single score for each state, with certain categories weighted more heavily than others.

> The states are then ranked from lowest to highest and distributed among the nine ratings categories to create an approximation of a normal distribution. The distribution is then reviewed by the team as a whole and individual state rankings may be adjusted based on the covering analysts' recommendation, subject to review by a designated panel of senior analysts.
>
> The summaries below provide an overview of these variables and how each can impact a given regulatory environment…[68]

Of the summaries of the variables RRA notes in the quotation above, the return on equity variable is heavily weighted by RRA. RRA states the following regarding ROE:

> ROE is perhaps the single most litigated issue in any rate case. *There are two aspects RRA considers when evaluating an individual rate case and the overall regulatory environment: (1) how the authorized ROE compares to the average of returns authorized for energy utilities nationwide over the 12 months, or so, immediately preceding the decision; and, (2) whether the company has been accorded a reasonable opportunity to earn the authorized return in the first year of the new rates*.
>
> With regard to the first criterion, RRA looks at the ROEs historically authorized utilities in a given state and compares them to utility industry averages, as calculated in RRA's Major Rate Case Decisions Quarterly Updates.
>
> As the chart shows, ROEs have been de[c]lining over the last three decades, falling below 10% in recent years. When referring to these "averages," RRA means the average ROE approved in cases decided in a particular year; returns carried over from prior years are not included in the averages.
>
> Intuitively, authorized ROEs that meet or exceed the prevailing averages at the time established are viewed as more constructive than those that fall short of these averages.
>
> With regard to the second consideration, in the context of a rate case, a utility may be authorized a relatively high ROE, but factors, such as capital structure changes, the age or "staleness" of the test period, rate base and expense disallowances, the manner in which the commission chooses to calculate test year revenue, and other adjustments, may render it unlikely that the company will earn the authorized return on a financial basis.
>
> *Even if a utility is accorded a "reasonable opportunity" to earn its authorized ROE, there is no guarantee that the utility will do so. The revenue requirement and ROE established in a rate case are targets that the commission believes the established rates will allow the utility to attain*.

[68] RRA, State Regulatory Evaluations – Energy, p. 8.

> Various factors such as weather, management efficiency, unexpected events, demographic shifts, fluctuations in economic activity and customer participation in energy conservation programs may cause revenue and earnings to vary from the targets set.
>
> Hence, the overall decision may be restrictive from an investor viewpoint even though the authorized ROE is equal to or above the average…[69] [Emphasis added.]

As was noted in Section VI. of this report, the KCC's authorized ROEs have been below the national average and, from RRA's perspective, the KCC has moved to a more "consumerist" oriented approach to ratemaking. In its latest specific review of the KCC, RRA's evaluation states the following:

> Kansas regulation of energy utilities is relatively restrictive from an investor perspective. Although base rate proceedings in Kansas are typically resolved via "black box" settlements that do not specify any rate-of-return parameters, the KCC's most recent equity return authorization, a 9.3% ROE approved in a 2015 electric rate case decision, was significantly below prevailing industry averages at the time established. The KCC generally relies on historical test periods, a situation that can lead to regulatory lag, even with updates for certain known and measurable changes, making it challenging for the utilities to earn their authorized returns. However, state law allows the utilities to file "abbreviated" rate cases within 12 months of a KCC rate order, and abbreviated rate proceedings have been filed on several occasions in recent years. Cost recovery mechanisms are in place for the electric utilities that allow them to timely recover certain costs, as well as energy-efficiency-related lost revenues. For several years, the gas utilities have been allowed to request KCC approval of mechanisms to recover certain costs associated with infrastructure replacement projects. However, a statutory cap that precluded recovery of a portion of the related costs had been an issue for the utilities, and this led the KCC to undertake an investigation of the merits of expanding cost recovery beyond this rider. In September 2017, the commission concluded its review of the matter and permitted the utilities to seek approval for a new mechanism to recover amounts associated with an expanded array of infrastructure investments; however, the provisions for the new rider included an existing $0.40 per-residential-customer monthly cap on recoverable amounts. The cap was subsequently doubled in the 2018 legislative session, thereby easing the cost recovery limitation for the utilities. On a constructive note, in a proceeding resolved earlier in 2018, the KCC approved the proposed "merger of equals" involving the state's two largest investor-owned electric utility holding companies, Great Plains Energy Inc. and Westar Energy Inc.,

[69] RRA, State Regulatory Evaluations – Energy, pp. 11-12.

> despite rejecting an earlier version of the deal. *RRA accords Kansas a Below Average/1 ranking, reflecting the state's gradual shift toward a more "consumerist" approach to ratemaking.*[70] [Emphasis added.]

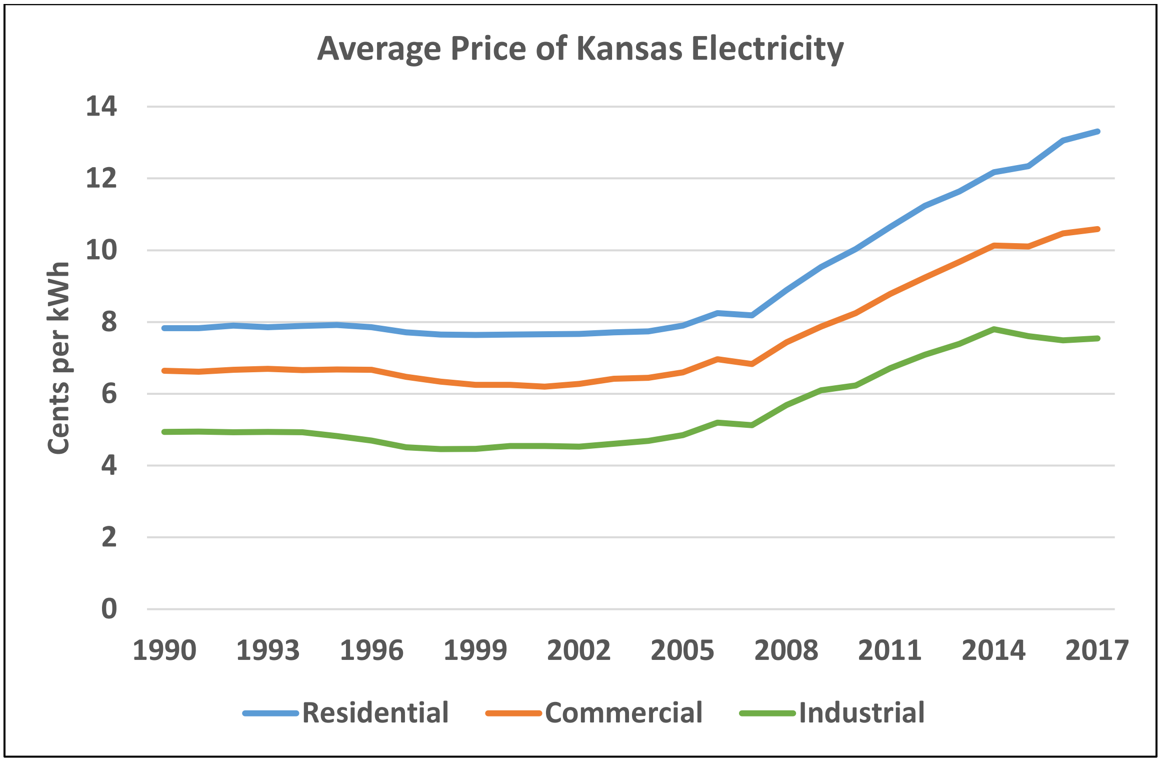
XI. History of Kansas City Power & Light and Westar Rates 2008 to 2018

The recent history of electric rates in Kansas is the basic topic of this section. First, a brief overview of the changes in the average rates for Kansas, KCP&L, and Westar is provided segregated by Residential, Commercial, and Industrial customers. Then a review of KCP&L and Westar requests for rate changes follows. This section ends with an overview of the rate cases in Kansas since 2008.

A. Historical Rates 2008 to 2018

i. Kansas Average Price of Electricity

The graph below shows the all-in Kansas electric prices for the Residential, Commercial, and Industrial customers from 1990 to 2017.



[70] RRA Regulatory Focus, *Kansas Regulatory Review*, p. 1 (Aug. 21, 2018).

The graph illustrates two broad phenomena:

1) Over the 28-year period, the relationship between Residential, Commercial, and Industrial electric prices is nearly constant. In 1990, Residential prices are 59% higher than Industrial and Commercial prices are 34% higher than Industrial. The percentages are nearly the same in 2007—60% higher for Residential and 33% for Commercial. By 2017, the gaps had expanded: Residential was 77% higher and Commercial was 40% higher.

2) From 1990 to 2007, Kansas electric prices were either steady or slightly declining. Then in 2008, Kansas electricity rates turned upward: technical statistical analysis confirms the period 2007-2008 constituted a regime change in Kansas electricity prices.

There were two major factors in the 2007-2008 electric price regime change—increased costs due to environmental retrofits for coal plants and a decline in the average usage by Residential customers. As noted above, the 2000s was when EPA began its more aggressive enforcement of coal plant pollution resulting in an increase in the cost of electricity generated by coal plants.

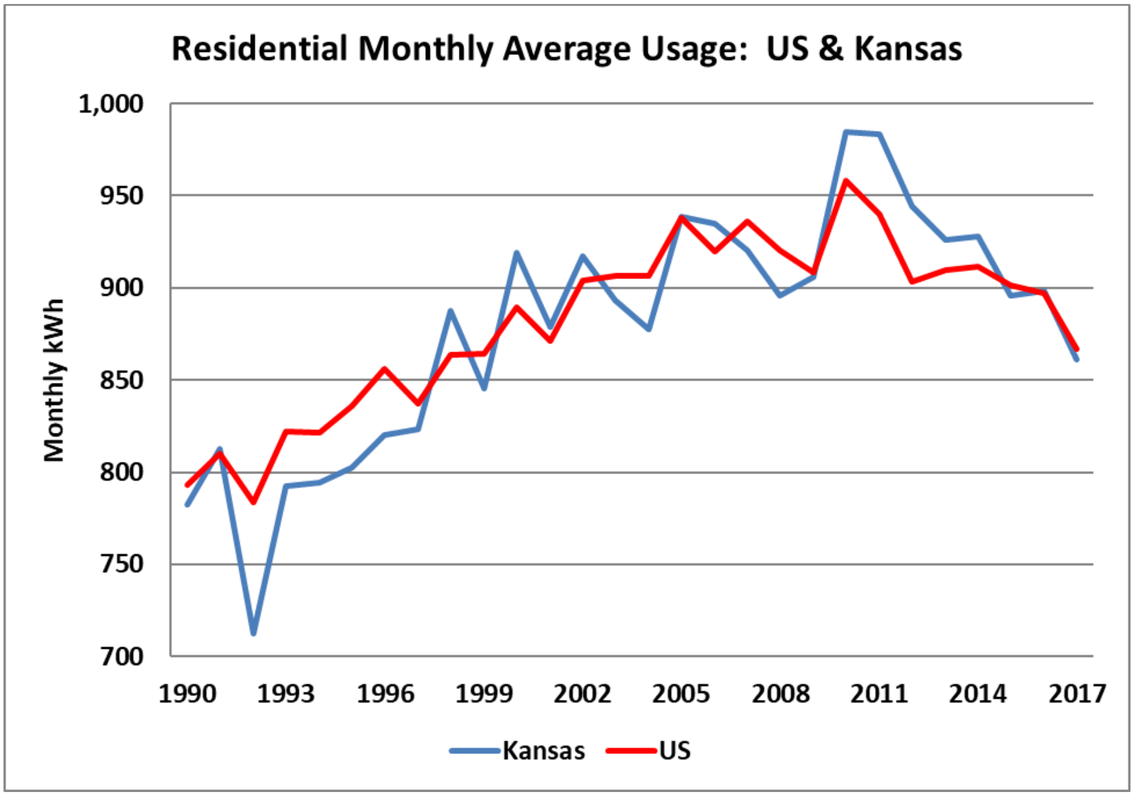
The decline in Residential customer's average usage resulted in higher rates because most electric utility costs are fixed, and a decline in sales of electricity meant there were fewer kilowatts of electricity to spread utility costs over.

The two basic causes of the decline in Residential average usage were:

1) The Great Recession of December 2007 to June 2009 and the slow economic growth during the initial recovery phase after the recession, and

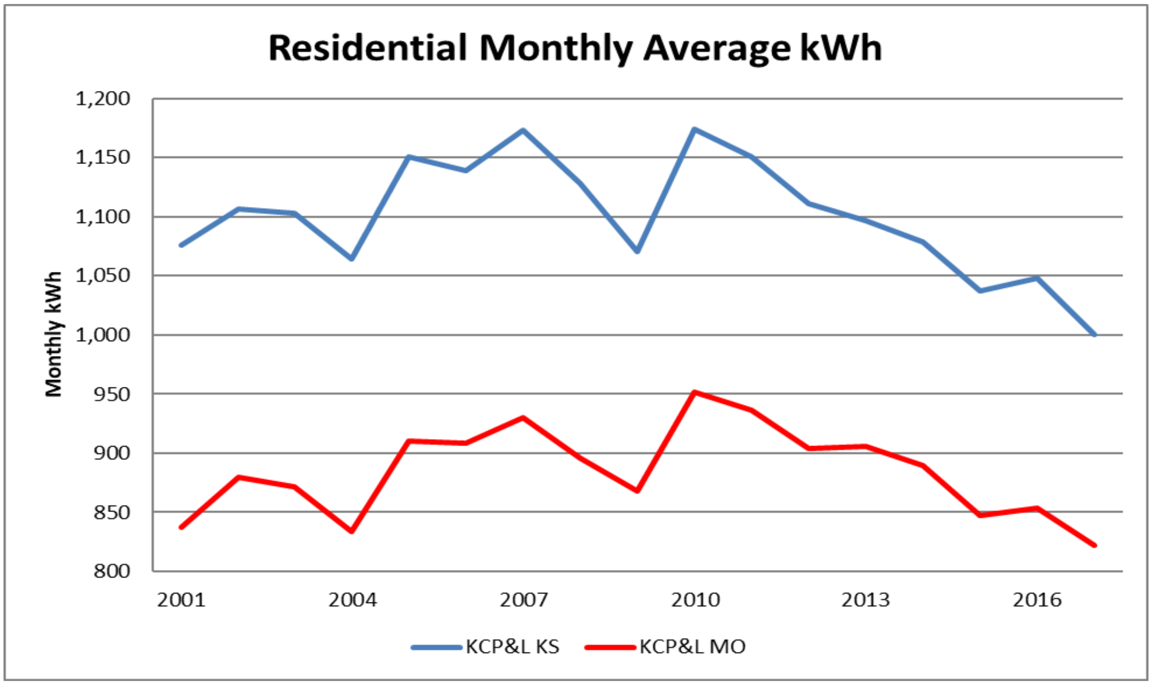
2) The increased engineering efficiency of home appliances, which reduce demand for electricity.

The Great Recession reduced customer income and increased unemployment, which both reduced the demand for electricity. The increase in engineering efficiency of home appliances further reduced the demand for electricity. The graph below illustrates the average electric usage decline in both Kansas and the United States as a whole.

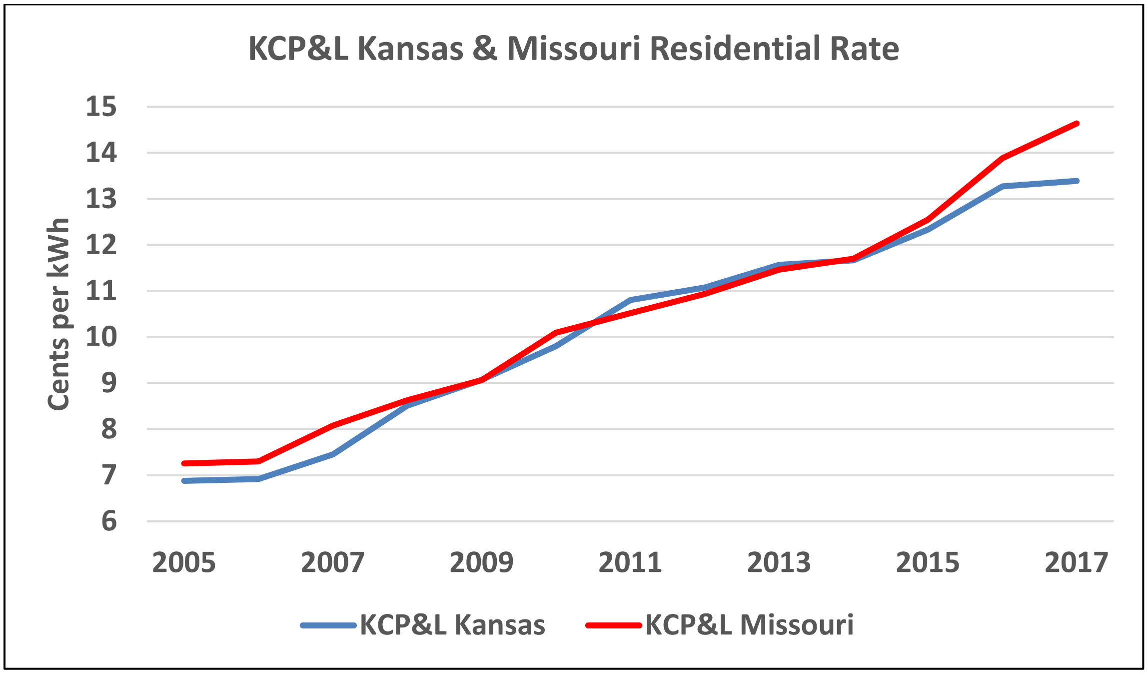


To show that the decline in Residential average usage was due solely to the engineering efficiency of appliances and not energy efficiency programs, two graphs below compare KCP&L Kansas and Missouri.

The first graph shows that Residential average monthly usage peaked in 2010 in both KCP&L Kansas and Missouri and then declined through 2017, the last year that Energy Information Administration (EIA) data exists. For KCP&L Missouri, Residential electric usage dropped 13.6%, while in KCP&L Kansas Residential electric usage dropped 14.7%. In 2014, KCP&L Missouri began cycle one of its MEEIA energy efficiency programs. However, in Kansas, the programs were not implemented. Still electric usage fell more in Kansas than Missouri. The conclusion is therefore that energy efficiency is embedded in household appliances, including HVAC systems, and energy efficiency programs simply add to the cost of electricity.

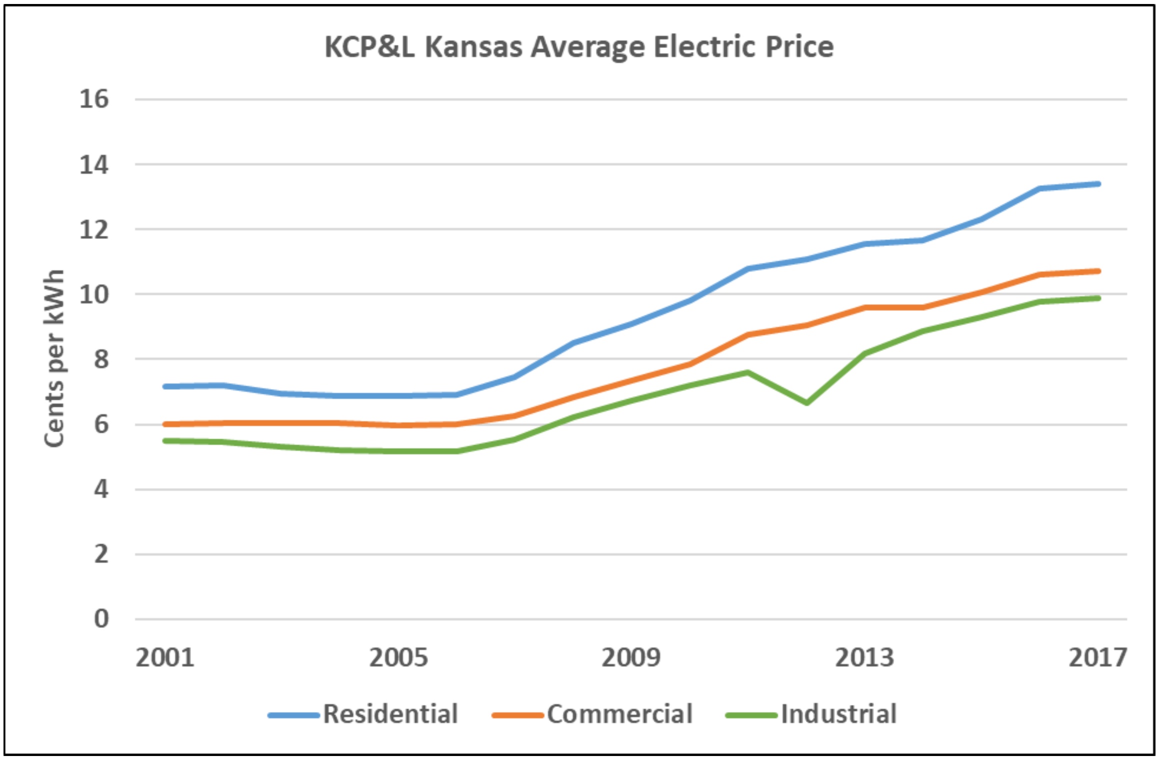


The second graph below shows the Residential all-in price of electricity for KCP&L Kansas and Missouri with the Missouri rate jumping more than a cent above the Kansas rate from 2014 (the implementation year of MEEIA) to 2017. Energy efficiency programs seem to have only increased the price of electricity and not reduced the usage of electricity.

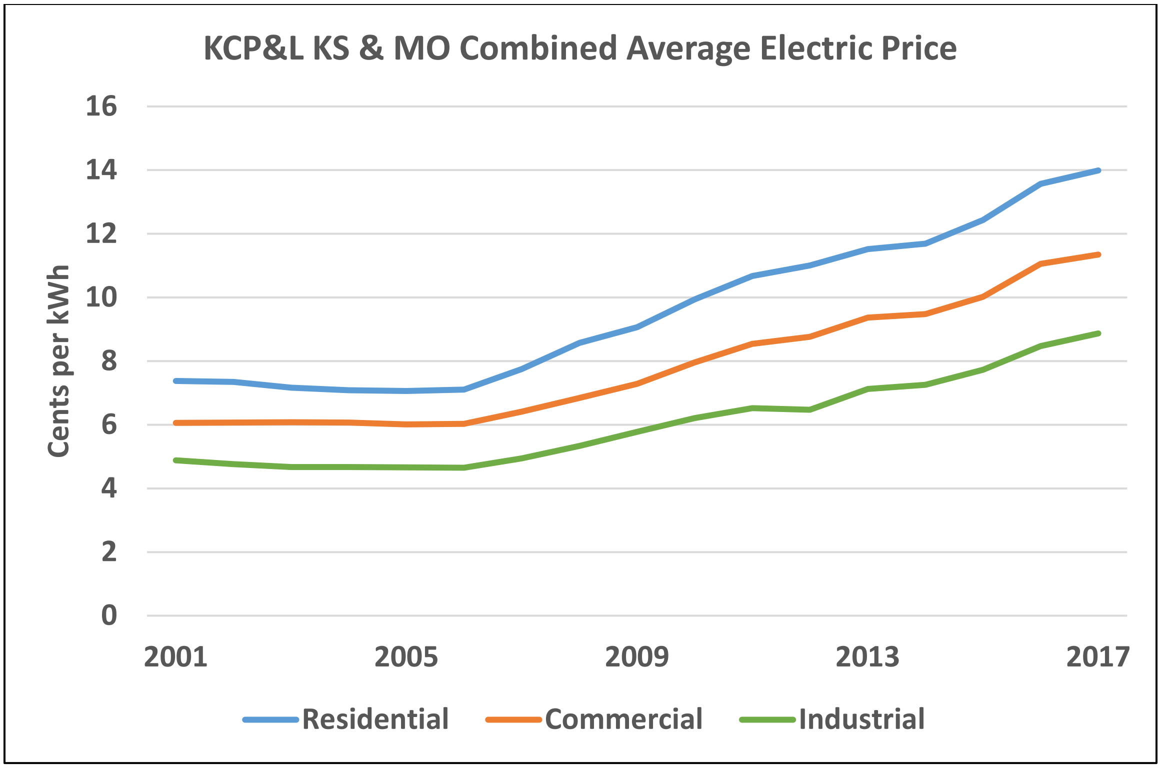


ii. KCP&L Average Prices

The graph below shows the all-in KCP&L average electric price for Residential, Commercial, and Industrial customers. The price pattern for Residential and Commercial looks similar to the average electric prices for Kansas. However, the Industrial prices are higher relative to all of Kansas. The explanation lies in the fact that nearly all of KCP&L large industrial customers are in KCP&L Missouri. The KCP&L industrial customers in Kansas are relatively small and, as such, are not able to take advantage of KCP&L industrial rate structure, which favors large users.

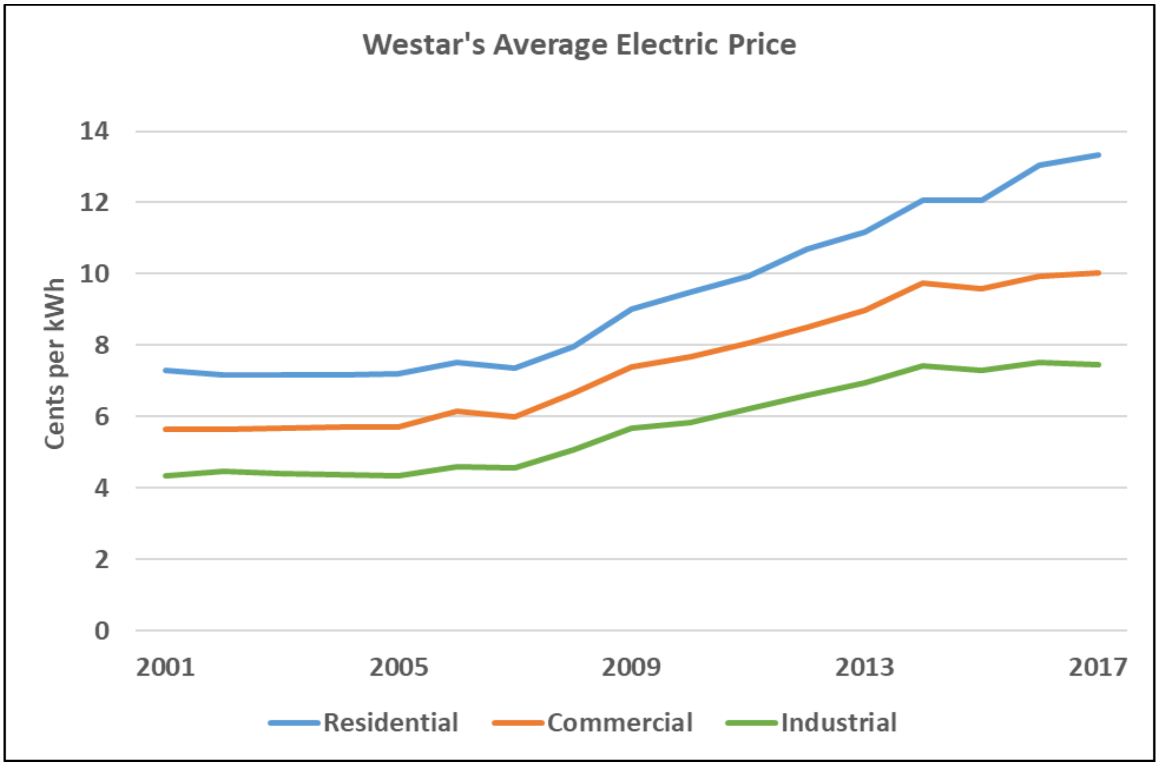


The graph below has KCP&L Kansas and Missouri combined average prices for Residential, Commercial, and Industrial customers. Because KCP&L large industrial customers in Missouri are included in the graph below, the price patterns for each of the rate classes looks very much like the overall Kansas prices.



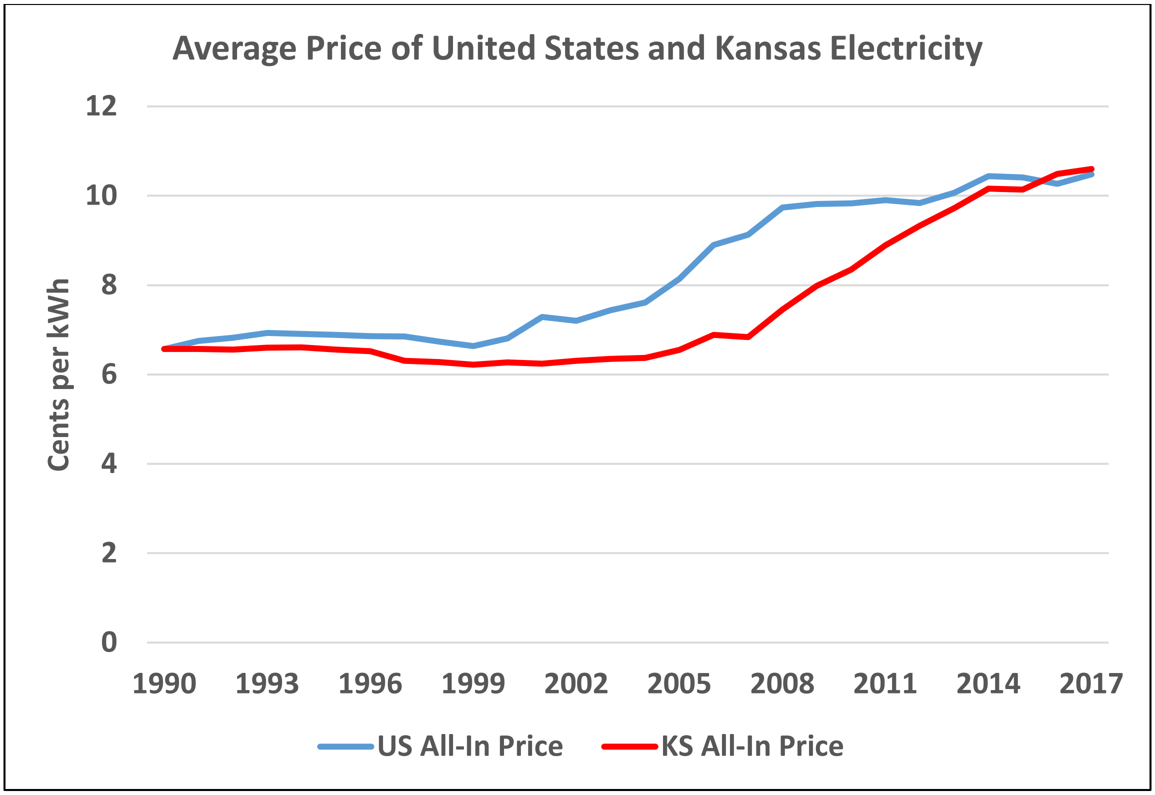
iii. Westar Average Prices

The pattern of Westar average prices for rate classes looks very similar to the pattern for Kansas average prices. This is true even for the spreads between rate class prices. In 2017, Residential all-in price is 79% higher than the Industrial price and the Commercial all-in price is 35% higher than the Industrial price. In addition, there is clearly a break in the price pattern in 2008—a regime change—just like the regime change in the overall Kansas price pattern.



iv. Comparing Kansas, KCP&L, and Westar Average Rates with the US Average Rates

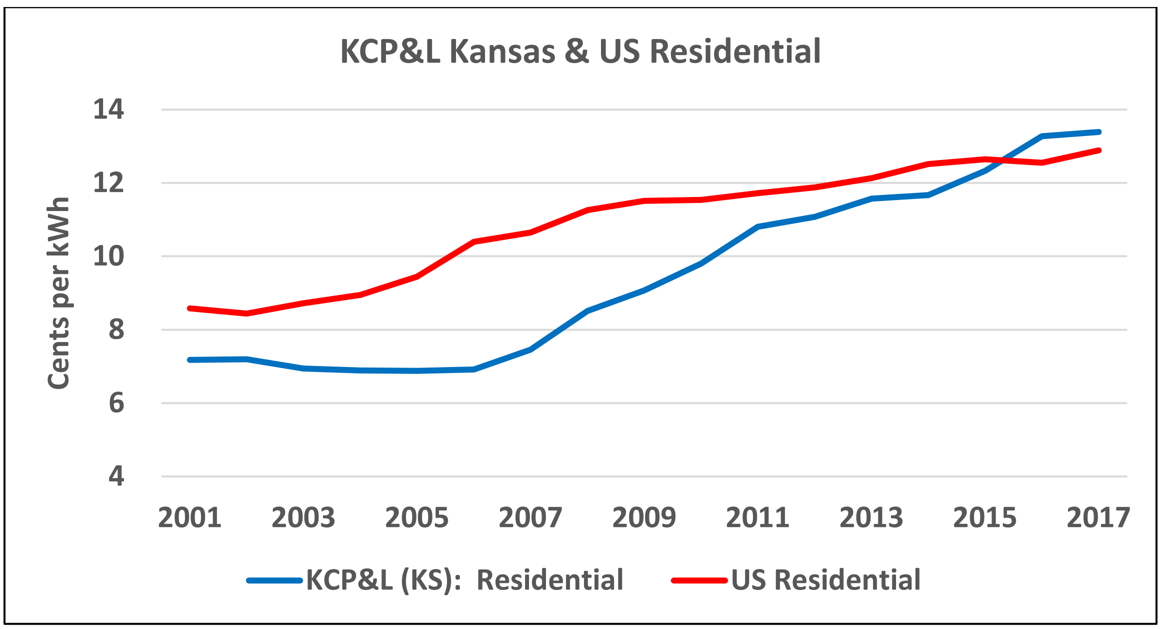
It is difficult to efficiently graph a comparison of Kansas, KCP&L, and Westar average prices with the US average prices because the lines tend to overlap each other in 1990 and 2017. However, in between 1990 and 2017 the price patterns are different as the graph below shows.

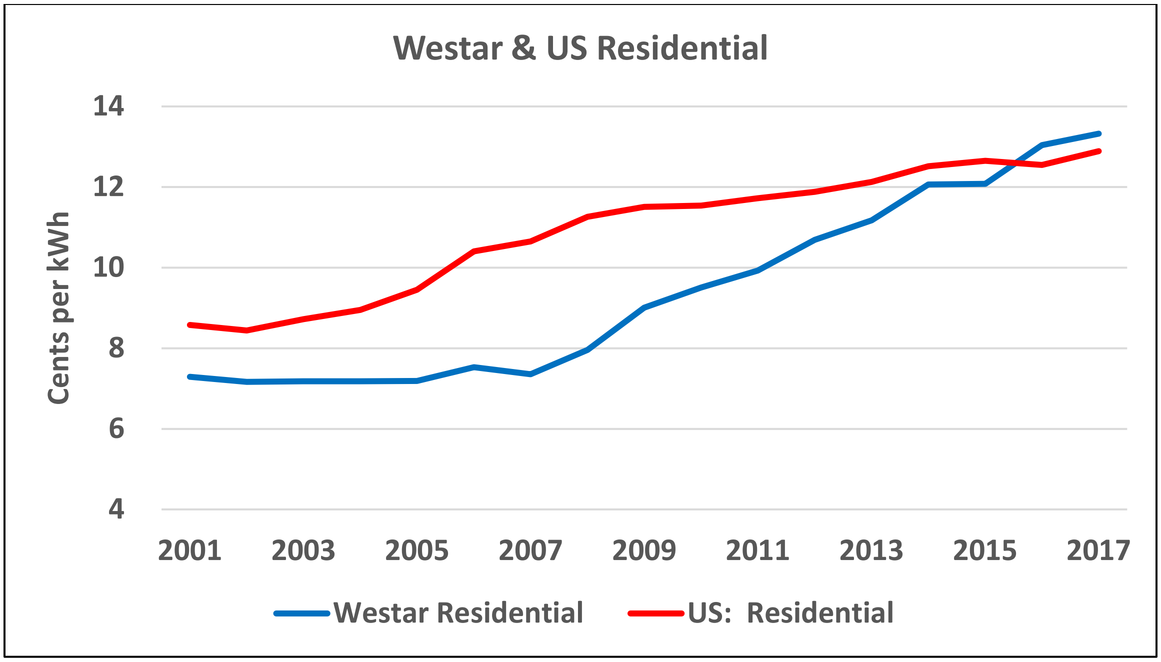


The effect of EPA's increased enforcement of coal generated electricity can be seen in the change in Kansas's and the United States' generation mix. The table below illustrates how the United State generation mix and then the Kansas generation mix responded to EPA's increased enforcement of coal plant pollution. By 2001, there was a gap between the United States average price and the Kansas average price. This gap grew through the 2000s until 2008 when Kansan began paying for retrofitting coal plants. The table below shows that by 2007 United States coal generation had begun declining and natural gas generation was increasing, even though 2007 was before the fracking natural gas boom was stabilizing natural gas prices. By 2017, both Kansas and United States coal generation had declined dramatically. But in the United States as a whole natural gas was the main substitute, while in Kansas wind was the major substitute. And by 2017, United States and Kansas all-in prices of electricity were nearly equal.

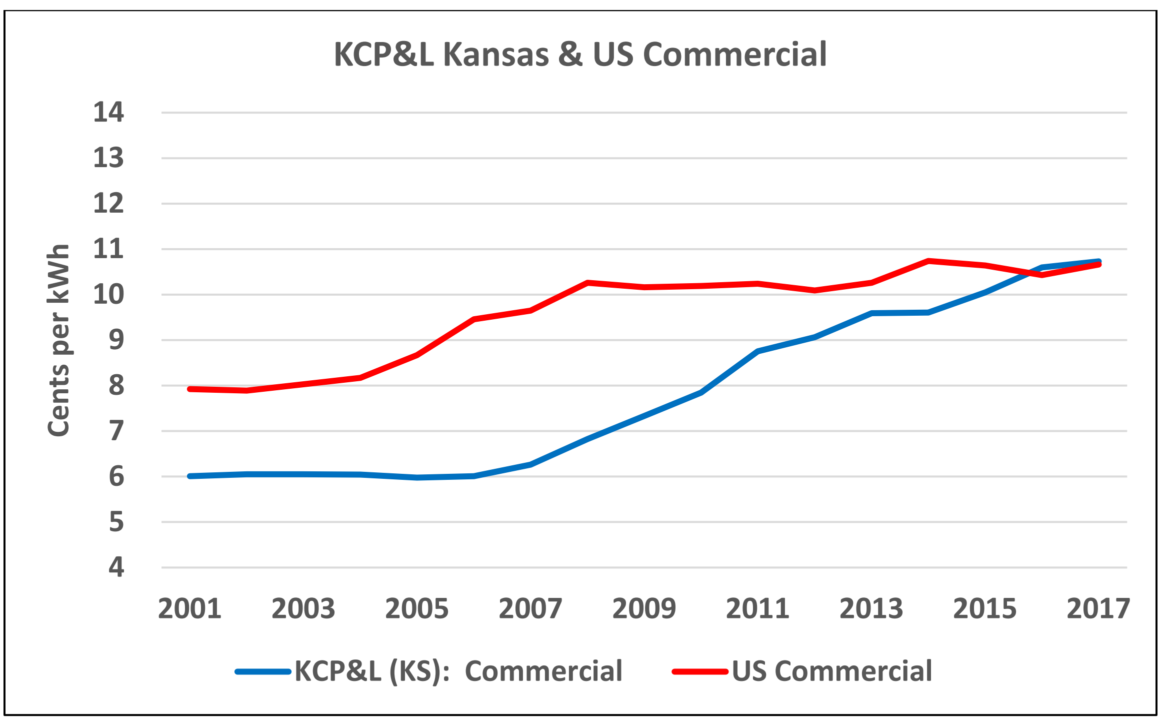
Electric Generation Mix: Kansas and the United Stats						
ENERGY SOURCE	Generation Mix (Percentage of Total)					
	1990		2007		2017	
	KS	US	KS	US	KS	US
Coal	69%	52%	72%	49%	38%	30%
Natural Gas	7%	12%	4%	22%	4%	32%
Nuclear	23%	19%	21%	19%	21%	20%
Wind	0%	0%	2%	1%	37%	6%
Other	1%	16%	0%	10%	0%	12%

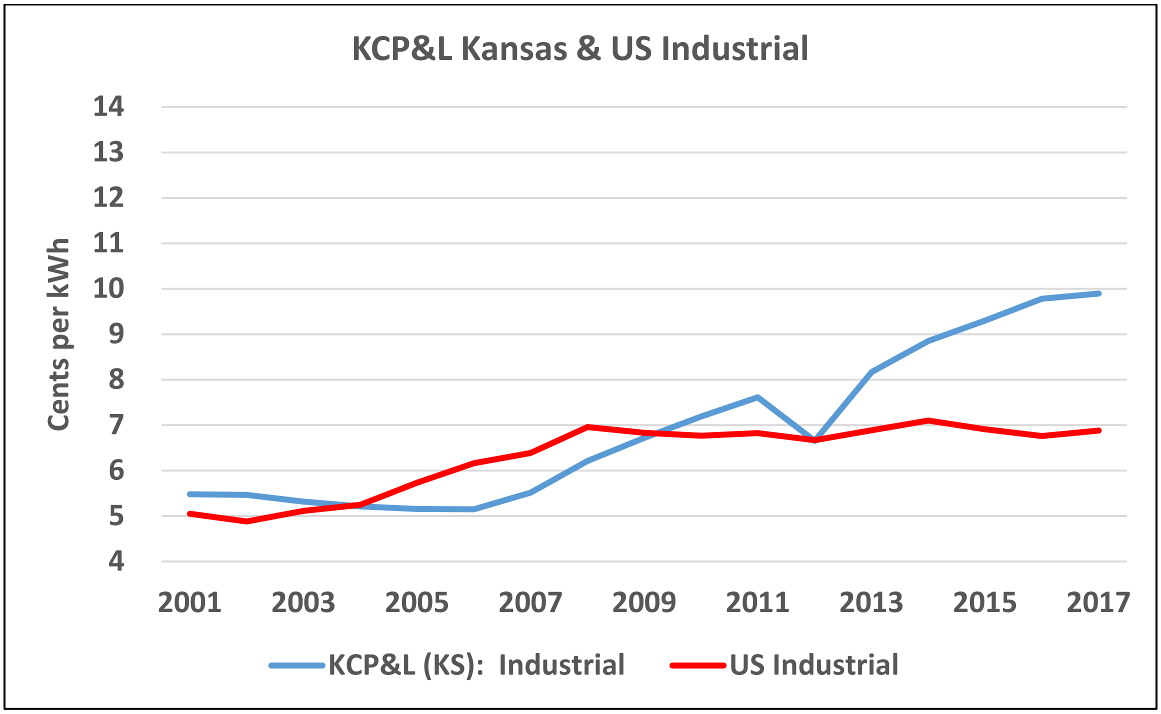
The two graphs below illustrate the similarity of the Residential average price of electricity for KCP&L Kansas and Westar. In both cases, the 2015 rate cases pushed the Residential average price above the national average. With the moratorium on base rate changes stretching out to January 2023, the Residential average prices of KCP&L and Westar should fall below the national average.

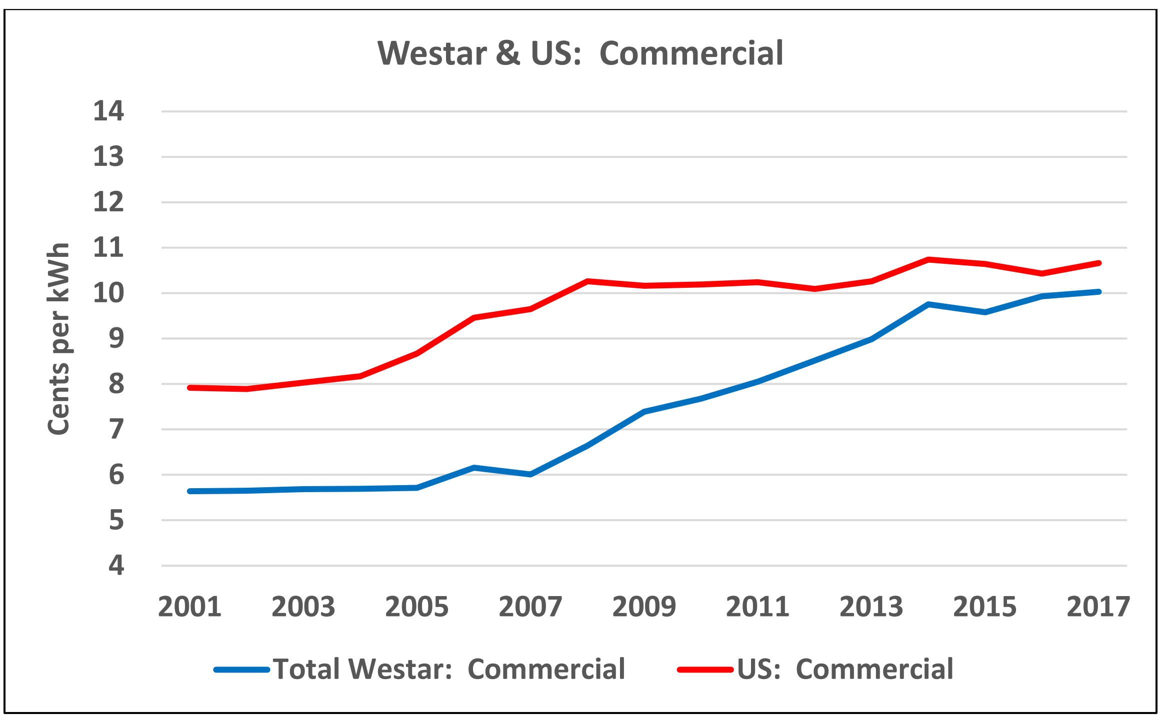


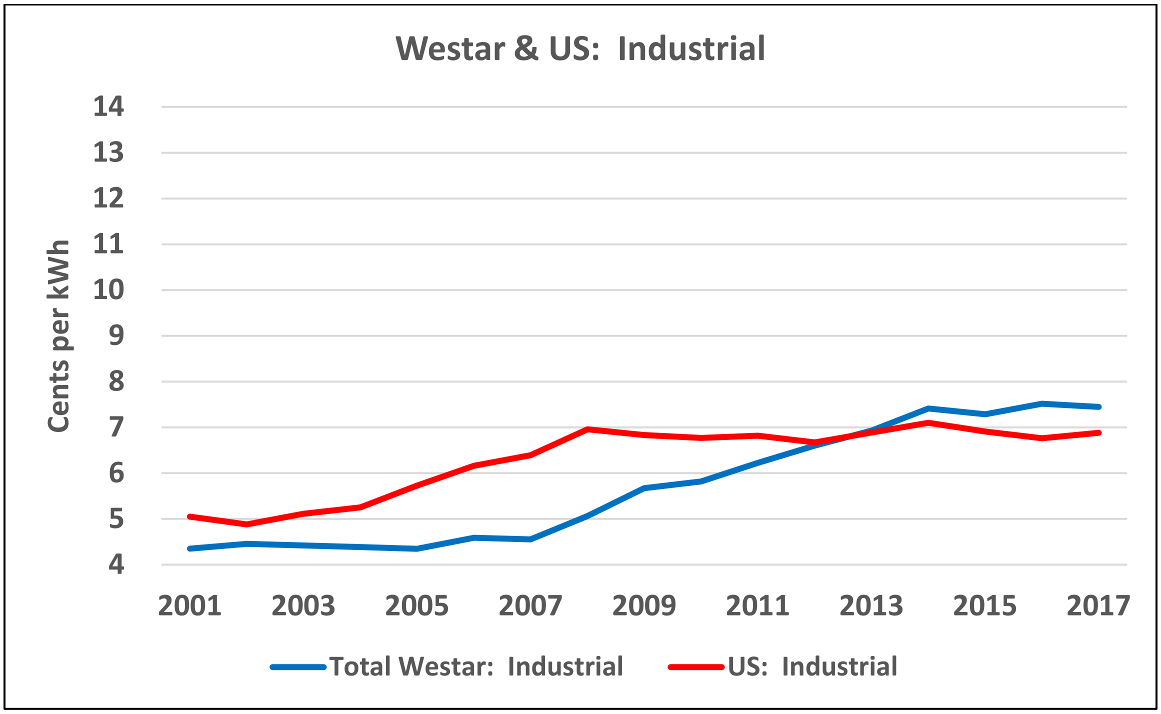


The same basic price pattern of lower than United States average prices until around 2016 and then slightly higher than United States average prices afterward is true of KCP&L and Westar Commercial and Industrial average prices.




KCP&L Kansas & US Industrial
Cents per kWh
14
13
12
11
10
9
8
7
6
5
4
2001
2003
2005
2007
2009
2011
2013
2015
2017
KCP&L (KS): Industrial
US Industrial


Westar & US: Commercial
Cents per kWh
14
13
12
11
10
9
8
7
6
5
4
2001
2003
2005
2007
2009
2011
2013
2015
2017
Total Westar: Commercial
US: Commercial



B. History of Rate Change Requests and Approvals 2008 to 2018

The tables below present the history of requested and approved rate changes, by surcharge mechanism or general rate case, during the study period. During this period Westar has been granted 43 rate increases, 23 of those from legislatively-authorized mechanisms.[71] Westar has also been granted 17 rate reductions, 12 of them in legislatively-authorized mechanisms. KCP&L has been granted 25 increases, 12 of them in legislatively authorized mechanisms. KCP&L has also been granted 11 rate reductions, 6 of them in legislatively-authorized mechanisms.

[71] The Energy Efficiency Surcharge (K.S.A. 66-1283 (e)(1), Transmission Delivery Charge (66-1237), and Ad Valorem Tax Surcharge (66-117(f) are all allowed by legislation in Kansas.

KANSAS CITY POWER & LIGHT

History of Rate Change Requests & Approvals For 2008 - Current

General Rate Cases**	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***
07-KCPE-905-RTS	$47,060,873	$28,000,000
09-KCPE-246-RTS	$71,630,000	$59,000,000
10-KCPE-415-RTS	$55,225,000	$21,846,202
12-KCPE-764-RTS	$63,550,528	$33,156,017
14-KCPE-272-RTS	$12,113,071	$11,535,857
15-KCPE-116-RTS	$56,278,815	$40,125,968
17-KCPE-201-RTS	$(2,829,191)	$(3,557,588)
18-KCPE-480-RTS	$32,948,941	$(3,916,417)

Energy Efficiency Rider	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***

To recover the cost of Commission-Approved Energy Efficiency Programs.

08-KCPE-802-TAR	$4,096,185	$4,096,185
09-KCPE-770-TAR	$2,513,546	$2,513,546
10-KCPE-636-TAR	$2,602,933	$2,481,791
11-KCPE-665-TAR	$(643,910)	$(522,768)
12-KCPE-729-TAR	$(2,377,285)	$(2,377,285)
13-KCPE-584-TAR	$(3,196,566)	$(4,183,872)
14-KCPE-442-TAR	$(2,167,493)	$(1,180,187)
15-KCPE-448-TAR*	$-	$-
16-KCPE-439-TAR*	$-	$-
17-KCPE-446-TAR*	$-	$-
18-KCPE-420-TAR*	$-	$-

Ad Valorem Tax Rider	**Requested Increase (Decrease)**	**Approved Increase (Decrease)**

To recover the cost of Ad Valorem Taxes pursuant to 66-117(f).

12-KCPE-452-TAR	$3,686,584	$3,682,007
13-KCPE-415-TAR	$1,304,615	$1,309,192
14-KCPE-288-TAR	$(1,420,113)	$(1,420,097)
15-KCPE-260-TAR	$2,250,947	$2,250,931
16-KCPE-296-TAR	$455,248	$455,248
17-KCPE-259-TAR	$(3,252,099)	$(3,252,099)
18-KCPE-258-TAR	$3,266,283	$3,266,283

Transmission Delivery Charge	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***

To recover the cost of investments in transmission assets and FERC-approved regional transmission expenses pursuant to K.S.A. 66-1237.

15-KCPE-116-RTS	$14,924,412	$14,924,412
17-KCPE-116-TAR	$918,382	$662,080
17-KPCE-440-TAR	$6,986,630	$6,954,579
18-KCPE-403-TAR	$8,973,936	$7,853,648

(continued on back)

Energy Cost Adjustment	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***
To recover the cost of fuel, purchased power, and net SPP expenses necessary to serve retail customers.		
09-KCPE-689-ACA	$2,142,338	$2,142,338
10-KCPE-548-ACA	$1,132,719	$1,132,719
11-KCPE-607-ACA	$(160,017)	$(160,017)
12-KCPE-664-ACA	$38,193,766	$38,193,766
13-KCPE-540-ACA	$3,688,434	$3,688,434
14-KCPE-405-ACA	$6,891,918	$6,891,918
15-KCPE-381-ACA	$83,848	$83,848
16-KCPE-388-ACA	$8,602,984	$8,602,984
17-KCPE-400-ACA	$(8,866,722)	$(8,866,722)
18-KCPE-372-ACA	$(1,115,405)	$(1,115,405)

		% of Total
Environmental Retrofit Increases	$89,525,775	32.64%
Transmission Delivery Charge Increases	$30,394,719	11.08%
Energy Cost Adjustment Filings	$50,593,863	18.44%
Energy Efficiency Rider	$827,410	0.30%
Ad Valorem Tax Surcharge	$6,291,465	2.29%
Non Environmental General Rate Increases	$96,664,264	35.24%
Total	$274,297,496	

* *Recovery Deferred. Totals $785,822 for the four years.*
** *Includes $89,525,775 of Increases Associated with Environmental Retrofits.*
For other details behind the Base Rate Cases, see Exhibit 65.

WESTAR ENERGY, INC.

History of Rate Change Requests & Approvals for 2008 - Current

General Rate Cases*	Requested Increase *(Decrease)*	Approved Increase *(Decrease)*
08-WSEE-1041-RTS**	$177,623,377	$130,000,000
09-WSEE-925-RTS	$19,700,000	$17,116,219
12-WSEE-112-RTS **	$90,832,779	$50,000,000
13-WSEE-629-RTS	$31,700,000	$30,687,487
15-WSEE-115-RTS**	$184,915,071	$119,115,227
17-WSEE-147-RTS	$17,445,707	$16,366,511
18-WSEE-328-RTS	$68,200,652	$(50,311,893)

Energy Efficiency Rider — Requested Increase *(Decrease)* — Approved Increase *(Decrease)*

To recover the cost of Commission-Approved Energy Efficiency Programs.

Energy Efficiency Rider	Requested Increase *(Decrease)*	Approved Increase *(Decrease)*
11-WSEE-032-TAR	$5,832,635	$5,830,491
12-WSEE-063-TAR	$4,938,954	$4,900,718
13-WSEE-033-TAR	$1,138,247	$1,138,247
14-WSEE-030-TAR	$(1,347,309)	$(1,347,309)
15-WSEE-021-TAR	$(4,979,035)	$(5,006,999)
16-WSEE-021-TAR	$672,052	$(814,186)
17-WSEE-014-TAR	$(756,229)	$(756,229)
18-WSEE-024-TAR	$591,704	$591,704
19-WSEE-013-TAR	$462,251	$451,415

Ad Valorem Tax Rider

To recover the cost of Ad Valorem Taxes pursuant to 66-117(f).

Ad Valorem Tax Rider	Requested Increase *(Decrease)*	Approved Increase *(Decrease)*
08-WSEE-510-TAR	$(3,817,594)	$(3,845,984)
09-WSEE-461-TAR	$(4,314,250)	$(7,309,297)
10-WSEE-362-TAR	$(4,783,674)	$(4,407,775)
11-WSEE-415-TAR	$190,302	$746,312
12-WSEE-407-TAR	$6,643,522	$6,622,206
13-WSEE-382-TAR	$21,893,561	$21,812,232
14-WSEE-267-TAR	$12,679,470	$12,679,470
15-WSEE-227-TAR	$6,916,376	$4,936,010
16-WSEE-268-TAR	$5,009,738	$5,026,824
17-WSEE-228-TAR	$(27,015,302)	$(26,817,308)
18-WSEE-234-TAR	$(226,009)	$(248,409)
19-WSEE-217-TAR	$6,067,980	$6,264,802

Environmental Cost Recovery Rider

To recover the cost of governmentally-mandated environmental improvement projects.

Environmental Cost Recovery Rider	Requested Increase *(Decrease)*	Approved Increase *(Decrease)*
08-WSEE-849-TAR	$21,924,064	$22,010,509
09-WSEE-737-TAR	$33,725,746	$32,453,180
09-WSEE-737-TAR (2010)	$17,221,040	$13,836,675
09-WSEE-737-TAR (2011)	$9,688,384	$10,439,281
09-WSEE-737-TAR (2012)	$19,459,267	$19,459,267
09-WSEE-737-TAR (2013)	$27,261,642	$27,475,678
09-WSEE-737-TAR (2014)	$12,268,706	$11,025,963
09-WSEE-737-TAR (2015)	$10,812,840	$10,819,176

(continued on back)

Transmission Delivery Charge	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***
To recover the cost of investments in transmission assets and FERC-approved regional transmission expenses pursuant to K.S.A. 66-1237.		
08-WSEE-511-TAR	$(7,316,035)	$(7,316,035)
09-WSEE-008-TAR	$6,132,929	$6,132,929
09-WSEE-598-TAR	$31,764,530	$31,764,530
10-WSEE-507-TAR	$6,417,044	$6,401,496
11-WSEE-599-TAR	$17,352,206	$17,352,206
12-WSEE-651-TAR	$36,724,491	$36,724,491
13-WSEE-507-TAR	$9,132,896	$11,751,527
14-WSEE-393-TAR	$43,581,221	$43,581,221
15-WSEE-366-TAR	$7,224,212	$7,224,212
16-WSEE-375-TAR	$25,349,548	$25,349,548
16-WSEE-375-TAR	$(18,263,254)	$(18,263,254)
17-WSEE-377-TAR	$12,673,550	$12,739,494
18-WSEE-355-TAR	$31,456,832	$31,456,832
18-WSEE-355-TAR	$(20,178,144)	$(20,178,144)

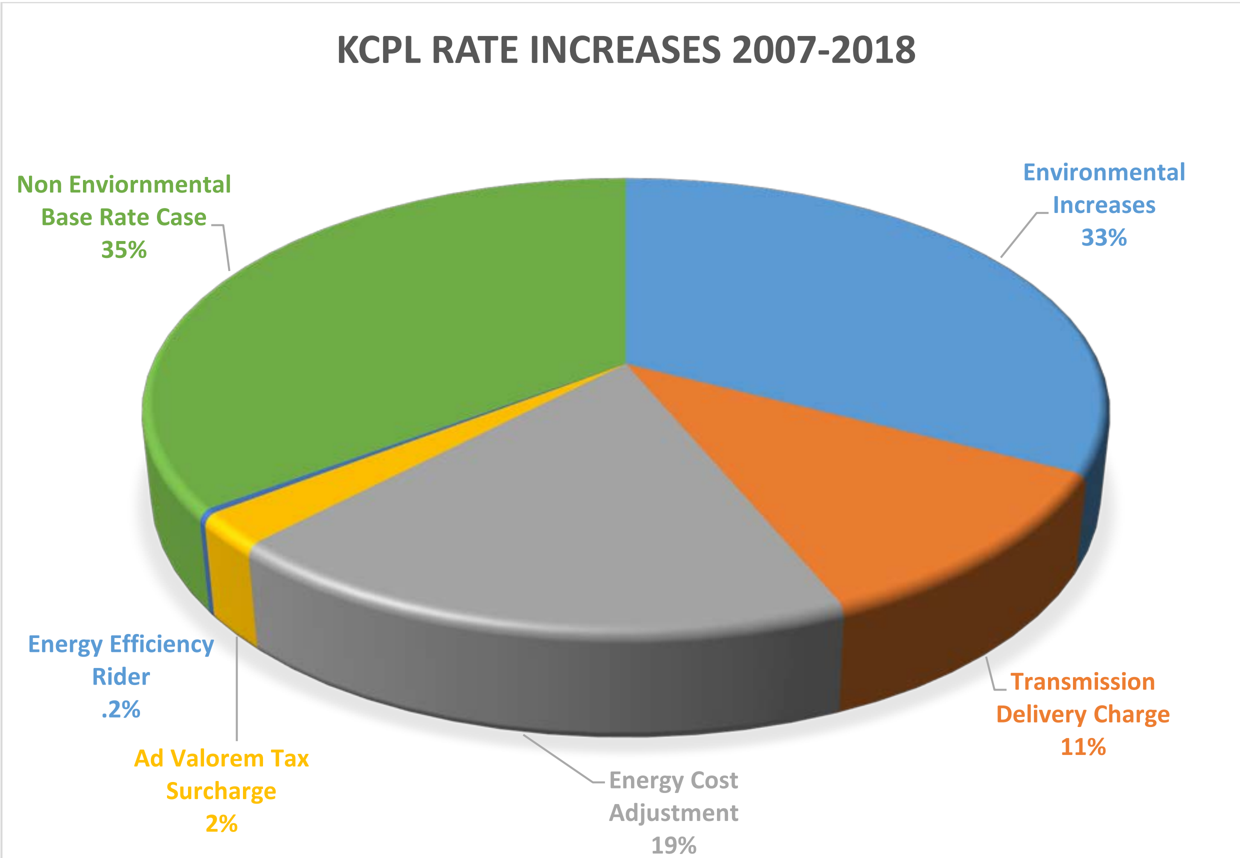
Retail Energy Cost Adjustment	**Requested Increase *(Decrease)***	**Approved Increase *(Decrease)***
To recover the cost of Fuel, Purchased Power, and Net SPP Expenses necessary to serve retail electric customers.		
09-WSEE-736-ACA	$33,130,726	$33,130,726
10-WSEE-604-ACA	$(53,089,688)	$(53,089,688)
11-WSEE-653-ACA	$53,893,100	$53,893,100
12-WSEE-696-ACA	$57,005,237	$57,005,237
13-WSEE-576-ACA	$(7,701,293)	$(7,701,293)
14-WSEE-428-ACA	$34,657,477	$34,657,477
15-WSEE-421-ACA	$(400,453)	$(400,453)
16-WSEE-421-ACA	$(51,499,602)	$(51,499,602)
17-WSEE-425-ACA	$17,813,983	$17,813,983
18-WSEE-404-ACA	$(18,692,377)	$(18,692,377)

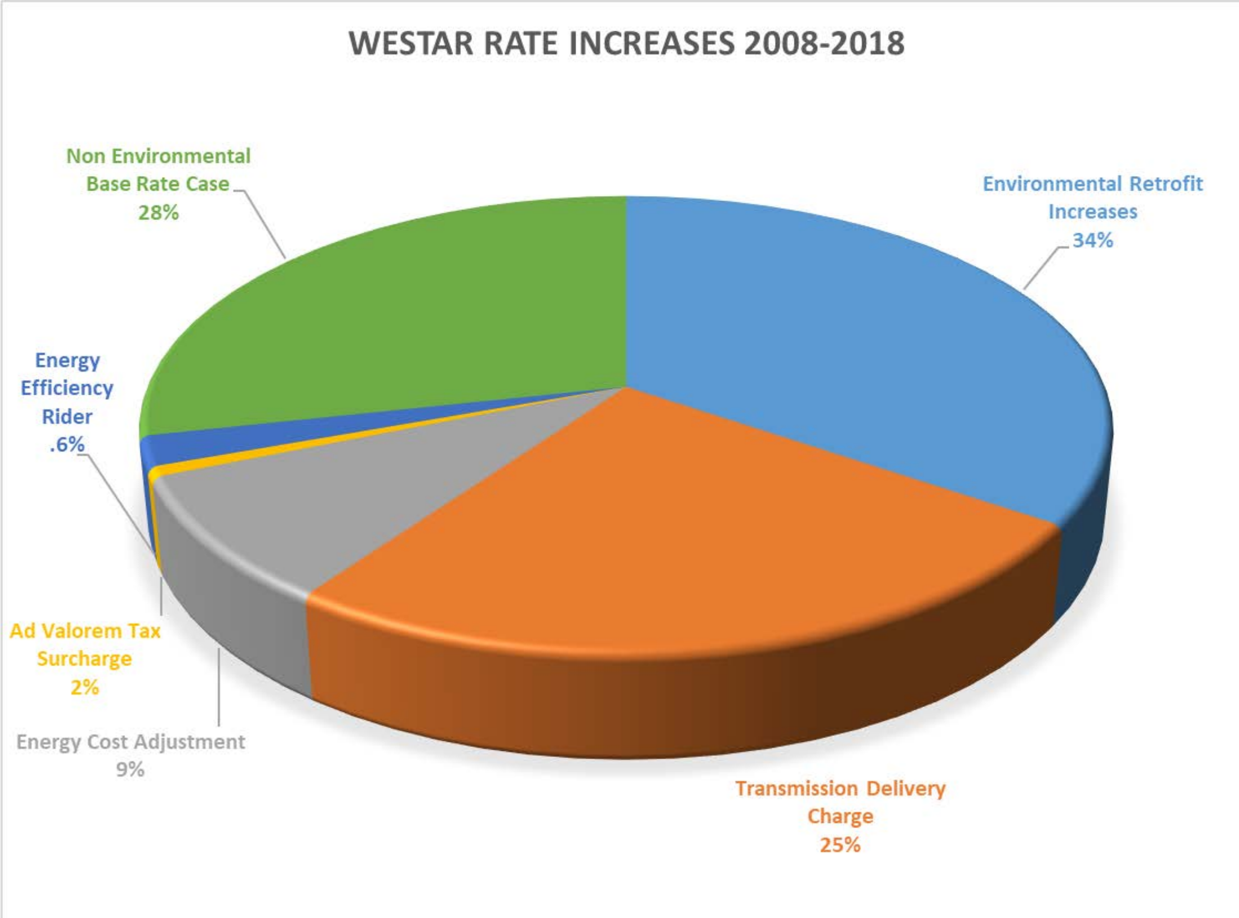
		% of Total
Environmental Retrofit Increases	$252,779,247	34.59%
Transmission Delivery Charge Increases	$184,721,054	25.28%
Energy Cost Adjustment Filings	$65,117,110	8.91%
Energy Efficiency Rider	$4,987,852	0.68%
Ad Valorem Tax Surcharge	$15,459,083	2.12%
Non Environmental General Rate Increases	$207,714,033	28.42%
Total	$730,778,380	

* *Staff calculates that these General Rate Increases contain $105,259,518 worth of Environmental Retrofit Increases.*
For other details associated with Base Rate Cases, see Exhibit 64.

** *This excludes revenue associated with rebasing the Environmental Cost Recovery Rider because those revenues are included above.*

The percentage increase attributable to each rate change request noted above is provided for KCP&L and Westar in the following two charts.





C. General Rate Case Overviews

The graphics below provide the details of each general rate case decided by the KCC during the study period (2007-2018). Each graphic provides the following:

- Docket Number,
- The date the case was filed and the date the rates were effective,
- The requested total change in base rates and the actual rate change allowed,
- Each of the interveners in the case and their recommended revenue increase/decrease for the utility, and
- The major drivers of each rate case.

Where possible, Staff has quantified the impact of major rate case drivers on the requested or granted revenue requirement change. For all other requested changes in cost components, by rate case, please see Exhibits 64 and 65 attached to the study.

GENERAL RATE CASE OVERVIEW

KCP&L • 2007

DOCKET NO: 07-KCPE-905-RTS **DATE FILED:** 05/01/2007 **RATES EFFECTIVE:** 01/01/2008

REQUESTED REVENUE REQUIREMENT INCREASE: $47,060,873

KCP&L's rate request included $12,840,873 for Contribution in Aid of Construction (CIAC) a financial support mechanism approved by the Commission in the 04-1025 Docket to assist KCP&L in maintaining investment grade credit ratings. This CIAC, while collected from customers, is used to offset KCP&L's rate base during the life of the assets that it supported at the time.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $28,000,000

$11 million of the $28 million in new revenues was considered CIAC. This amount was calculated by comparing the results of a traditional revenue requirement analysis against several pre-determined credit ratios used by credit rating agencies to determine whether a utility would be rated as investment grade. The CIAC amount was determined as the cash flow amount necessary to support the utility's investment grade credit ratings. Ultimately, this led to lower borrowing costs and rates than would have otherwise been possible.

Percentage of Requested Increase Granted: 59.50%

Settled or Litigated: Unanimous Settlement Agreement. All parties actively supported the settlement agreement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Shawnee Mission Unified School District No. 512
- Danisco USA Inc.
- City of Overland Park, Kansas
- City of Mission, Kansas
- Midwest Utility Users Group

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $4.6 million, with no additional CIAC. CURB recommended a rate decrease of $3 million, but $16.4 million of additional CIAC, for a net increase of $13.4 million.

MAJOR RATE CASE DRIVERS

This case was the second annual rate case under KCP&L's Comprehensive Energy Plan (CEP), approved by the Commission in the 04-KCPE-1025-GIE Docket. The CEP called for KCP&L to file a series of four annual rate cases to reflect in rates major environmental retrofits (LaCygne 1 Selective Catalytic Reduction (SCR), full back-end Air Quality Control System (AQCS) at Iatan 1), the construction of a new, environmentally compliant, super-critical 850 MW Coal Fired-Generating Facility (Iatan 2), a new 100 MW of wind generation facility, enhanced distribution automation and smart grid investments, energy efficiency investments and low-income affordability programs. The primary capital investment that was the focus of this rate case was the SCR installed on LaCygne Unit 1, for a Kansas Jurisdictional Rate Base increase of $19.5 million, for a total revenue requirement impact of $3.170 million. This rate case also included additional distribution and transmission investments since KCP&L's last rate case in Docket No. 06-KCPE-828-RTS. Lastly, KCP&L reported increased operating costs generally and approximately $18 million increase in fuel and purchased power expenses (at this time KCP&L still collected fuel and purchased power expense through base rates, although KCP&L did file for an Energy Cost Adjustment (ECA) during this rate case).

GENERAL RATE CASE OVERVIEW

KCP&L • 2009

DOCKET NO: 09-KCPE-246-RTS DATE FILED: 09/05/2008 RATES EFFECTIVE: 08/01/2009

REQUESTED REVENUE REQUIREMENT INCREASE: $71,630,000

KCP&L's rate request included $11.2 million for Contribution in Aid of Construction (CIAC) a financial support mechanism approved by the Commission in the 04-1025 Docket to assist KCP&L in maintaining investment grade credit ratings. This CIAC, while collected from customers, is used to offset KCP&L's rate base during the life of the assets that it supported at the time.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $59,000,000

$18 million of the $59 million in new revenues was considered CIAC. This amount was calculated by comparing the results of a traditional revenue requirement analysis against several pre-determined credit ratios used by credit rating agencies to determine whether a utility would be rated as investment grade. The CIAC amount was determined as the cash flow amount necessary to support the utility's investment grade credit ratings. Ultimately, this led to lower borrowing costs and rates than would have otherwise been possible.

Percentage of Requested Increase Granted: 82.37%

Settled or Litigated: Unanimous Settlement Agreement. All parties actively supported or expressly did not oppose the settlement agreement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Electric Power Cooperative, Inc.
- Shawnee Mission Unified School District No. 512
- Danisco USA, Inc.
- Amcor Pet Packaging USA, Inc.
- City of Mission, Kansas
- Walmart Stores, Inc.
- Danisco USA Inc.
- City of Overland Park, Kansas
- International Brotherhood of Electrical Workers
- Local Unions No. 412, 1464, and 1613
- Children's Mercy South
- Menorah Medical Center
- Overland Park Regional Medical Center/HCA Midwest Health System
- Shawnee Mission Medical Center
- St. Luke's Hospital/St. Luke's Health System
- The Empire District Electric Company
- Kansas Gas Service
- City of Overland Park, Kansas
- City of Mission Hills, Kansas
- Midwest Utility Users Group

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $54 million, of which, $11.2 million was recommended as CIAC. CURB recommended a rate increase of $48 million, with $24 million of that representing CIAC.

MAJOR RATE CASE DRIVERS

This case was the third annual rate case under KCP&L's Comprehensive Energy Plan (CEP), approved by the Commission in the 04-KCPE-1025-GIE Docket. The CEP called for KCP&L to file a series of four annual rate cases to reflect in rates major environmental retrofits (LaCygne 1 Selective Catalytic Reduction (SCR), full back-end Air Quality Control System (AQCS) at Iatan 1), the construction of a new, environmentally compliant, super-critical 850 MW Coal Fired-Generating Facility (Iatan 2), a new 100 MW of wind generation facility, enhanced distribution automation and smart grid investments, energy efficiency investments and low-income affordability programs. The primary capital investment that was the focus of this rate case was the Air Quality Control System (AQCS) for Iatan Unit 1. The AQCS consisted of a pulse jet fabric filter (bag house), an SCR, a wet flue gas desulfurization unit (FGD or Scrubber) and a new dual-flue chimney, accounting for an increase in KCP&L's Kansas Jurisdictional Rate Base of $178 million. This investment accounted for approximately $30.3 million of the revenue requirement increase in this case. This rate case also included additional distribution and transmission investments since KCP&L's last rate case in Docket No. 07-KCPE-905-RTS. Lastly, KCP&L reported increased operating costs generally.

GENERAL RATE CASE OVERVIEW

KCP&L • 2010

DOCKET NO: 10-KCPE-415-RTS **DATE FILED:** 12/17/2008 **RATES EFFECTIVE:** 12/01/2010

REQUESTED REVENUE REQUIREMENT INCREASE: $55,225,000

AUTHORIZED REVENUE REQUIREMENT INCREASE: $21,930,575

Percentage of Requested Increase Granted: 39.71%

Settled or Litigated: Partial Settlement/Mostly Litigated. A partial unanimous settlement was offered that resolved a few minor issues. The result of this rate case was determined by the Commission after a full evidentiary hearing on several issues. The hearing lasted three weeks.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Midwest Utility Users Group
- Shawnee Mission Unified School District No. 512
- Danisco USA, Inc.
- Amcor Rigid Plastics USA , Inc.
- Sprint Communications Company, L.P.
- Sprint Nextel Corporation
- Sprint United Management Company
- Sprint Corporation
- Walmart Stores, Inc.
- International Brotherhood of Electrical Workers
- Local Unions No. 412, 1464, and 1613
- Menorah Medical Center
- Overland Park Regional Medical Center/HCA Midwest Health System
- Shawnee Mission Medical Center
- St. Luke's Hospital/St. Luke's Health System
- The Empire District Electric Company
- Kansas Gas Service
- Atmos Energy
- International Dark Sky Association

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

At the time of hearing, Staff recommended a revenue requirement decrease of $7.299 million and CURB recommended an increase of $9.632 million.

MAJOR RATE CASE DRIVERS

This case was the fourth and final rate case under KCP&L's Comprehensive Energy Plan (CEP), approved by the Commission in the 04-KCPE-1025-GIE Docket. The CEP called for KCP&L to file a series of four annual rate cases to reflect in rates major environmental retrofits (LaCygne 1 Selective Catalytic Reduction (SCR), full back-end Air Quality Control System (AQCS) at Iatan 1), the construction of a new, environmentally compliant, super-critical 850 MW Coal Fired-Generating Facility (Iatan 2), a new 100 MW of wind generation facility, enhanced distribution automation and smart grid investments, energy efficiency investments and low-income affordability programs. The primary capital investment that was the focus of this rate case was the new 850 MW Super-Critical Coal-Fired Generating Plant (Iatan 2). This plant was constructed with the most modern Air Quality Control System (AQCS) available, the same equipment as was constructed for Iatan Unit 1. The AQCS consisted of a pulse jet fabric filter (bag house), an Selective Catalytic Reduction (SCR), a wet flue gas desulfurization unit (FGD or Scrubber) and a new dual-flue chimney. Based on the cost of the environmental equipment on a stand alone basis for Iatan Unit 1, Staff estimates the Kansas Jurisdictional increase to KCP&L's rate base for this equipment was $151 million. This environmental investment accounted for approximately $20.8 million of the revenue requirement increase in this case. This rate case also included the non-environmental investment of the Iatan 2 Coal-Fired Generating Unit. Staff and CURB argued in this case that KCP&L was imprudent in managing the construction of this power plant, which led to cost overruns and schedule delays. Staff argued that $231 million ($57.7 million on a Kansas Jurisdictional basis) of KCP&L's investments should be disallowed from ratepayer recovery. The Commission's Order disagreed with Staff's claim of imprudence. The inclusion of the full value of Iatan 2 in the revenue requirement accounted for approximately $14 million in revenue requirement in this case.

GENERAL RATE CASE OVERVIEW

KCP&L • 2012

DOCKET NO: 12-KCPE-764-RTS DATE FILED: 04/20/2012 RATES EFFECTIVE: 12/16/2012

REQUESTED REVENUE REQUIREMENT INCREASE: $63,550,528

AUTHORIZED REVENUE REQUIREMENT INCREASE: $33,156,017

Percentage of Requested Increase Granted: 52.17%

Settled or Litigated: Mostly Settled/Partially Litigated. A partial unanimous settlement was offered that resolved most issues in the case. After the settlement agreement, nine revenue requirement issues remained disputed, as did all rate design, class cost of service, and the appropriate Return on Equity (ROE). The remaining issues were determined by the Commission after a full evidentiary hearing.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Midwest Energy Consumers Group (MECG)
- Walmart, Stores, Inc.
- DoubleTree by Hilton, Kansas City-Overland Park
- Sprint Communications Company, L.P.
- Sprint Nextel Corporation
- Sprint United Management Company
- Sprint Corporation

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $27.495 million. CURB recommended an increase of $4.9 million. A partial settlement was agreed to before the hearing, which resulted in KCP&L revising its revenue requirement request to $56.4 million, Staff revising its recommendation to $29.3 million, and CURB revising its recommendation to $14.3 million.

MAJOR RATE CASE DRIVERS

Among the major drivers for this rate case were significant investments in generating facilities to allow KCP&L to meet state and federal emissions control mandates and state renewable energy standards, including: (1) capital investment costs associated with the LaCygne environmental project that was the subject of a predetermination docket in Docket No. 11-KCPE-581-PRE; and (2) capital costs to construct KCP&L's Spearville 2 Wind Facility, a 48 MW renewable energy project that was placed into service in December 2010. Additionally, KCP&L proposed changes to its depreciation rates, and had experienced other cost increases since its last rate case. This case included an increase to Rate Base of $65.5 million for the Kansas-jurisdictional portion of KCP&L's full environmental retrofit to the LaCygne Generating Station. Additionally, this case included an increase in Rate Base of $56.6 million for the Kansas-Jurisdictional portion of KCP&L's investment in Spearville 2. Staff calculates that the increase in revenue requirement in this case associated with the LaCygne investment was approximately $9.187 million for the LaCygne investment, and $9.191 million for the Spearville 2 wind farm. Notably, the 9.5% Return on Equity (ROE) granted to KCP&L in this proceeding was amongst the lowest ROEs ever granted to any Investor Owned Utility in the last 30 years. At the time of this decision, KCP&L pointed out that only one state had decided a lower ROE in 2012, a South Dakota decision at 9.25%.

GENERAL RATE CASE OVERVIEW

KCP&L • 2014

DOCKET NO: 14-KCPE-272-RTS **DATE FILED:** 12/09/2013 **RATES EFFECTIVE:** 08/06/2014

REQUESTED REVENUE REQUIREMENT INCREASE: $12,113,071

AUTHORIZED REVENUE REQUIREMENT INCREASE: $11,535,857

Percentage of Requested Increase Granted: 95.23%

Settled or Litigated: Unanimous Settlement Agreement. There was little to no difference between the parties' revenue requirement recommendations in this case. Ultimately, a unanimous settlement agreement was entered into and approved by the Commission.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $11.549 million. CURB recommended an increase of $11.538 million.

MAJOR RATE CASE DRIVERS

This was an abbreviated case filed under K.A.R 82-1-231(b)(3)(A), to recover increased capital investment associated with KCP&L's investment in the full environmental retrofit of the LaCygne Generating Station. This environmental retrofit, which contained a pulse jet fabric filter (baghouse) to control particular matter; a Selective Catalytic Reduction (SCR) unit to control nitrous oxides; a wet flue gas desulphurization (FGD) unit to control sulphur dioxides; activated carbon injection to control mercury; and a new dual-flue chimney, was predetermined as reasonable up to $1.23 billion ($281 million Kansas Jurisdictional) by the Commission in Docket No. 11-KCPE-581-PRE. With this docket approximately two-thirds of KCP&L's total investment was reflected in its Kansas rates. Staff calculates that $13.417 million of the total revenue requirement increase in this case was due to this environmental investment, with other miscellaneous cost decreases offsetting this impact.

GENERAL RATE CASE OVERVIEW

KCP&L • 2015

DOCKET NO: 15-KCPE-116-RTS **DATE FILED:** 01/02/2015 **RATES EFFECTIVE:** 08/30/2015

REQUESTED REVENUE REQUIREMENT INCREASE: $56,278,815

Of the $56.278 million increase KCP&L requested, $3.927 million was due to rebasing KCP&L's Property Tax Surcharge, which is revenue neutral to KCP&L and its customers. Accordingly, KCP&L's request was for a net increase in new revenues of $52,350,957. Note, these amounts do not include the impact of KCP&L's decision to establish a Transmission Delivery Charge (TDC) as authorized by K.S.A. 66-1237, which was estimated at $14.92 million.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $40,125,968

Of the $40.125 million revenue requirement increase granted to KCP&L, $6.378 million was found to be due to rebasing KCPL's Property Tax Surcharge, therefore, the net increase in new revenues granted by the Commission equaled $33,747,858. Note, this does not include the impact of KCP&L's approval to establish a TDC pursuant to K.S.A. 66-1237, which was estimated at $14.92 million.

Percentage of Requested Increase Granted: 71.30%

Settled or Litigated: Mostly Settled/Partially Litigated. A unanimous settlement was offered that resolved almost all issues in the case. After the settlement agreement, the only remaining issues were the proper Return on Equity (ROE) for KCP&L, the treatment of unrecovered costs associated with the early retirement of KCP&L's analog meters (when KCP&L replaced them with smart meters), and the proper amount of fuel inventory to assume for KCP&L's coal plants in the ratemaking process. Those issues were determined by the Commission after a full evidentiary hearing.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Midwest Energy Consumers Group (MECG)
- Walmart, Stores, Inc.
- East Kansas Agri-Energy, LLC
- Shawnee Mission Medical Center, Inc.
- OPRMC LLC d/b/a/ Overland Park Regional Medical Center
- Atmos Energy
- Kansas Gas Service
- Brightergy, LLC
- Climate and Energy Project

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $35.454 million. CURB recommended an increase of $16.889 million.

MAJOR RATE CASE DRIVERS

Among the major drivers for this rate case were the completion of KCP&L's investment in the full environmental retrofit of the LaCygne Generating Station. This environmental retrofit, which contained a pulse jet fabric filter (baghouse) to control particular matter; a Selective Catalytic Reduction (SCR) unit to control nitrous oxides; a wet flue gas desulphurization (FGD) unit to control sulphur dioxides; activated carbon injection to control mercury; and a new dual-flue chimney, was predetermined as reasonable up to $1.23 billion ($281 million Kansas Jurisdictional) by the Commission in Docket No. 11-KCPE-581-PRE. KCP&L also reported significant increased capital investments to extend the life of Wolf Creek and other information technology cost increases. Staff calculates that approximately $15.993 million of this revenue requirement increase was due to the completion of the Environmental Retrofit at LaCygne. Additionally, $24 million of KCP&L's rate increase request was attributable to the cost increases and upgrades to the critical service water systems at Wolf Creek. The Commission established KCP&L's Return on Equity (ROE) at 9.3% in this proceeding, an ROE which was the second lowest ROE granted to any investor owned electric utility in the country at the time of the decision.

GENERAL RATE CASE OVERVIEW

KCP&L • 2017

DOCKET NO: 17-KCPE-201-RTS **DATE FILED:** 11/09/2016 **RATES EFFECTIVE:** 07/07/2017

REQUESTED REVENUE REQUIREMENT INCREASE: $-2,829,191

AUTHORIZED REVENUE REQUIREMENT INCREASE: $-3,557,588

Percentage of Requested Increase Granted: -125.75%

Settled or Litigated: Unanimous Settlement Agreement. There was very little difference between the parties' revenue requirement recommendations in this case. Ultimately, a unanimous settlement agreement was entered into and approved by the Commission.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a revenue increase of $4,192,681. CURB recommended an increase of $3,792,805.

MAJOR RATE CASE DRIVERS

This was an abbreviated case filed under K.A.R 82-1-231(b)(3)(A), to true up the final costs of the environmental upgrades and Wolf Creek capital additions included in base rates in the 15-KCPE-116-RTS Docket. These capital costs were included in base rates at budgeted levels in the 15-116 Docket to allow for the separation of Westar and KCP&L's rate cases, and to allow KCP&L more timely recovery of its necessary capital investments than would have otherwise been the case under strict historical test year ratemaking. Because the actual costs of these investments came in less than projected in the previous case, this was a rate reduction.

GENERAL RATE CASE OVERVIEW

KCP&L • 2018

DOCKET NO: 18-KCPE-480-RTS **DATE FILED:** 05/01/2018 **RATES EFFECTIVE:** 12/27/2018

REQUESTED REVENUE REQUIREMENT INCREASE: $32,948,941

Of KCP&L's $32.948 million request, $6.783 million accounted for the effect of rebasing the amount of KCP&L's Property Tax Surcharge, which is revenue neutral to KCP&L and its customers. Therefore, KCP&L's net requested increase in revenues was $26,165,358.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $-3,916,417

While KCP&L's rates were decreased by $3.916 million, $6.783 million of this revenue requirement was due to the impact of rebasing KCP&L's Property Tax Surcharge. Accordingly, the net reduction to KCP&L's revenues was actually $10.7 million.

Percentage of Requested Increase Granted: -111.89%

Settled or Litigated: Unanimous Settlement Agreement. A unanimous settlement agreement was supported by all parties to the docket and approved by the Commission.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Walmart, Inc.
- Midwest Division – OPRMC, LLC d/b/a Overland Park Regional Medical Center
- American Fuel & Petrochemical Manufacturers
- Magellan Pipeline Company, L.P.
- Kansas Gas Service
- Petroleum Marketers and Convenience Association of Kansas, Inc.
- Olathe Unified School District 233
- Spring Hill Unified School District 230
- Blue Valley Unified School District 229
- Johnson County Community College

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended an increase in revenues of $5,551,739. CURB recommended a reduction in revenues of $5,416,417.

MAJOR RATE CASE DRIVERS

The major drivers of this case included KCP&L's completion of its Customer Information System (CIS) billing system, and other capital investments which accounted for $33.6 million of KCP&L's rate request; a depreciation study which recommended increased depreciation rates for KCP&L's assets, which increased KCP&L's revenue requirement request by $24 million; and the need to change KCP&L's permanent rates to reflect the effects of the Tax Cuts and Jobs Act of 2017, which reduced KCP&L's revenue requirement by $34.5 million. Additionally, KCP&L included the results of $7.5 million of guaranteed merger savings in this rate case, as contemplated by the settlement agreement approved by the Commission in Docket No. 18-KCPE-095-MER.

GENERAL RATE CASE OVERVIEW

WESTAR • 2008

DOCKET NO: 08-WSEE-1041-RTS DATE FILED: 05/28/2008 RATES EFFECTIVE: 01/23/2009

REQUESTED REVENUE REQUIREMENT INCREASE: $177,623,377

Note: This excludes the revenue neutral impact of rebasing the Environmental Cost Recovery Rider (ECRR), which was requested to continue being collected in the ECRR. Ultimately, the ECRR ended up being rebased, which amounted to an additional $27.2 million being recovered in base rates, as opposed to the ECRR. Accounting for the ECRR rebasing, Westar's request was $204,822,106.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $130,000,000

As noted above, the net increase to revenues granted by the Commission in this proceeding was $130 million. Accounting for the impact of rebasing the ECRR, base rates increased as a result of this proceeding by $157,198,729.

Percentage of Requested Increase Granted: 73.19%

Settled or Litigated: Partial Unanimous Settlement. All but one paragraph (treatment of off-system sales) settled unanimously by all parties. Kansas Industrial Consumers opposed this one paragraph, but supported the remainder of the agreement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- Wal-Mart Stores, Inc.
- Kaw Valley Electric Cooperative
- Doniphan Electric Cooperative
- Nemaha-Marshall Electric Cooperative
- Kansas Electric Power Cooperative
- United States Department of Defense
- Midwest Energy, Inc.
- Protection One, Inc.
- Coffeyville Resources and Marketing, LLC
- Cessna Aircraft Company
- Occidental Chemical Corporation
- Hawker Beechcraft Corporation
- Spirit AeroSystems, Inc.
- Cargill, Inc.
- The Goodyear Tire & Rubber Company

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended $95 million increase. CURB recommended $75 million increase. KIC recommended $79 million increase.

MAJOR RATE CASE DRIVERS

The major drivers behind this rate case were the need to update rates to include capital investment associated with Emporia Energy Center (EEC), and the Central Plains and Flat Ridge Wind Farms (Wind Farms). These capital investments were the subject of predetermination proceedings as authorized by K.S.A. 66-1239. EEC was approved as a reasonable and prudent capital expenditure up to the amount of $318 million in Docket No. 07-WSEE-616-PRE. The Wind Farms were approved in Docket No. 08-WSEE-309-PRE up to $282 million. This rate case included an increase to rate base of $277,883,168 for EEC and $202,216,102 for the Wind Farms. All of the Wind Farm investment and $78 million of EEC were considered Construction Work in Progress (CWIP) at the time which is allowed in rate base pursuant to K.S.A. 66-128, despite not being in service. Additionally, Westar had experienced a significant ice storm and increases in its operating and maintenance expenses since the last rate review concluded, in Docket No. 05-WSEE-981-RTS. The ice storm alone accounted for $9.4 million of this rate increase. Staff calculates that approximately $64.8 million of this rate increase was driven by the return on and of the EEC and Wind Farms. This rate case also contained a depreciation study which accounted for approximately $7.6 million of the rate increase.

GENERAL RATE CASE OVERVIEW

WESTAR • 2009

DOCKET NO: 09-WSEE-925-RTS **DATE FILED:** 06/02/2009 **RATES EFFECTIVE:** 02/01/2010

REQUESTED REVENUE REQUIREMENT INCREASE: $19,719,270

AUTHORIZED REVENUE REQUIREMENT INCREASE: $17,116,219

Percentage of Requested Increase Granted: 86.80%

Settled or Litigated: Unanimous Settlement. All interveners actively supported the settlement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- City of Lawrence, Kansas
- City of Wichita, Kansas
- Hawker Beechcraft Corporation
- Spirit AeroSystems, Inc.
- Cargill, Inc.
- Coffeyville Resources and Marketing, LLC
- Cessna Aircraft Company
- The Goodyear Tire & Rubber Company

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Kroger, and USD 259 took no position on Revenue Requirement in this docket. CURB recommended an increase of $17.116 million. Staff recommended an increase of $17.112 million. KIC's testimony indicated it would support the position taken by Staff.

MAJOR RATE CASE DRIVERS

This rate case was an abbreviated rate case, pursuant to K.A.R. 82-1-231(b)(3)(A). As such, only a few major ratemaking elements were updated following Westar's full rate case Docket 08-WSEE-1041-RTS. Those elements were updating final capital costs and depreciation expense associated with the Emporia Energy Center (EEC), and the Central Plains and Flat Ridge Wind Farms (Wind Farms). Essentially this case included capital expenditures and depreciation expense on these large capital investments that hadn't been included in the 08-1041 Docket, without the need for a full rate case proceeding. This case included an increase to rate base of $71 million associated with Westar's Wind Farms (for a total capital investment of $273 million), and $35 associated with the final stages of the EEC (for a total capital investment of $305 million).

GENERAL RATE CASE OVERVIEW

WESTAR • 2012

DOCKET NO: 12-WSEE-112-RTS **DATE FILED:** 08/25/2011 **RATES EFFECTIVE:** 04/21/2012

REQUESTED REVENUE REQUIREMENT INCREASE: $90,832,776

Note: This excludes the revenue neutral impact of rebasing the Environmental Cost Recovery Rider (ECRR), which was requested to continue being collected in the ECRR. Ultimately, the ECRR ended up being rebased, which amounted to an additional $56.7 million being recovered in base rates, as opposed to the ECRR. Accounting for the ECRR rebasing, Westar's request was $147,532,776.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $50,000,000

As noted above, the net increase to revenues granted by the Commission in this proceeding was $50 million. Accounting for the impact of rebasing the ECRR, base rates increased as a result of this proceeding by $106.7 million.

Percentage of Requested Increase Granted: 55.05%

Settled or Litigated: Non-Unanimous Settlement. The settlement agreement was either actively supported or explicitly non-opposed by all parties to the docket with the exception of CURB.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- Wal-Mart Stores, Inc.
- International Brotherhood of Electrical Workers (Local Union No. 304)
- Occidental Chemical Corporation
- Hawker Beechcraft Corporation
- Spirit AeroSystems, Inc.
- Cargill, Inc.
- Coffeyville Resources and Marketing, LLC
- The Boeing Company
- Kansas Association of School Boards
- Tyson Foods
- United States Department of Defense

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a $33.7 million increase. CURB recommended a $44.8 million increase, which includes rebasing $56.7 million of ECRR revenue. Therefore, CURB's recommendation was in reality a net revenue decrease of $11.8 million. USD 259 recommended a $52.7 million increase while noting it may make further recommendations as the case progresses. KIC recommended a $30.3 million increase.

MAJOR RATE CASE DRIVERS

This case included the first effects of the environmental retrofits to the LaCygne Generating Station, predetermined to be reasonable and prudent in the 11-KCPE-581-PRE docket. Additionally, Westar filed a new depreciation study and a request for a new vegetation management proposal entitled Reliabilitree. Westar's request included an increase of $20 million a year for vegetation management to support and improve reliability, $37 million a year for increased employee benefits and pensions expenses, $30 million a year for increased depreciation rates, and $6 million a year for an ice storm amortization.

GENERAL RATE CASE OVERVIEW

WESTAR • 2013

DOCKET NO: 13-WSEE-629-RTS **DATE FILED:** 04/15/2013 **RATES EFFECTIVE:** 12/11/2013

REQUESTED REVENUE REQUIREMENT INCREASE: $31,748,245

AUTHORIZED REVENUE REQUIREMENT INCREASE: $30,687,487

Percentage of Requested Increase Granted: 96.66%

Settled or Litigated: Unanimous Settlement. The settlement was supported or explicitly not opposed by all parties to the docket.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- Wal-Mart Stores, Inc.
- Frontier El Dorado Refining, LLC
- Occidental Chemical Corporation
- Kansas City Power and Light Company
- Spirit AeroSystems, Inc.
- Cargill, Inc.
- CVR Refining, LP
- Kansas Association of School Boards
- Tyson Foods
- CCPS Transportation, LLC

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended $30.13 million increase. CURB Recommended $30.62 million increase.

MAJOR RATE CASE DRIVERS

This case was an abbreviated rate case, filed pursuant to K.A.R. 82-1-231(b)(3)(A), which allows a utility to file a limited issue rate proceeding within 12 months of a previous full rate proceeding. The primary purpose behind this case was to update capital costs associated with the environmental retrofits at LaCygne Generating Station. These environmental upgrades were predetermined to be prudent up to a cost of $615 million (Westar Share) in Docket No. 11-KCPE-581-PRE. The capital costs associated with this project accounted for $41.3 million of Westar's request. This amount was offset by the expiration of amortization expense included in rates from a previous ice storm.

GENERAL RATE CASE OVERVIEW

WESTAR • 2015

DOCKET NO: 15-WSEE-115-RTS **DATE FILED:** 03/02/2015 **RATES EFFECTIVE:** 10/28/2015

REQUESTED REVENUE REQUIREMENT INCREASE: $143,799,840

Westar requested $250,895,257 in new revenues. Of this amount, $41,115,227 was associated with rebasing the Property Tax Surcharge, which is revenue neutral to Westar and its customers. Of this amount, $65,980,190 was associated with rebasing the Environmental Cost Recovery Rider, which was also revenue neutral to Westar customers. The result is a requested net increase in new revenues of $143.8 million.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $78,000,000

The Final Order approved an increase in rates of $185,320,681. Of this total base rate increase, $107,095,417 was due to rebasing revenue neutral riders, for a net new revenue increase of $78 million.

Percentage of Requested Increase Granted: 54.24%

Settled or Litigated: Unanimous Settlement Agreement. All parties to the docket were actively supportive or explicitly unopposed to the agreement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- Wal-Mart Stores, Inc.
- United States Department of Defense
- Occidental Chemical Corporation
- Frontier El Dorado Refining, LLC
- Cargill, Inc.
- Kansas Association of School Boards (KASB)
- Tyson Foods
- Tallgrass Pony Express Pipeline, LLC
- Spirit AeroSystems, Inc.
- Coffeyville Resources & Marketing, LLC
- CCPS Transportation, LLC
- Goodyear Tire & Rubber Company

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a $55.03 million increase in revenues. CURB recommended a $50.8 million increase in revenues. KIC, USD 259, and the KASB recommended an $85.6 million increase in revenues.

MAJOR RATE CASE DRIVERS

The major drivers of this rate case include the completion of the LaCygne environmental retrofit project, the completion of life extension projects at the 30-year old Wolf Creek Nuclear Generating Station, and general cost increases since the previous full rate case, the 12-WSEE-112-RTS Docket. Staff calculates that $54.2 million of the total revenue requirement increase in this Docket was attributable to the LaCygne environmental retrofit going into service.

GENERAL RATE CASE OVERVIEW

WESTAR • 2017

DOCKET NO: 17-WSEE-147-RTS DATE FILED: 10/26/2016 RATES EFFECTIVE: 06/23/2017

REQUESTED REVENUE REQUIREMENT INCREASE: $17,437,270

AUTHORIZED REVENUE REQUIREMENT INCREASE: $16,366,511

Percentage of Requested Increase Granted: 93.86%

Settled or Litigated: Unanimous Settlement Agreement. All parties to the docket were actively supportive or explicitly unopposed to the agreement.

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Unified School District No. 259
- International Brotherhood of Electrical Workers (Local Union No. 304)
- United States Department of Defense

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a $16.317 million increase in revenues. CURB recommended a $16.464 million increase in revenues.

MAJOR RATE CASE DRIVERS

This case was an abbreviated rate case, filed pursuant to K.A.R. 82-1-231(b)(3)(A), which allows a utility to file a limited issue rate proceeding within 12 months of a previous full rate proceeding. This case was the final rate case to update final costs associated with the LaCygne environmental retrofit project, which was predetermined to be prudent and reasonable up to a Westar cost of $615 million. Additionally, Westar included the revenue requirements associated with $50 million of capital expenditures for the Electric Distribution Grid Resiliency (EDGR) pilot program that was approved in the Unanimous Settlement Agreement in the rate case Docket 15-WSEE-115-RTS. Staff calculates that $9.9 million of this revenue requirement increase was due to the final roll-in of LaCygne costs and the termination and transfer to base rates of the Environmental Cost Recovery Rider (ECRR). The remaining portions of the revenue requirement increase were due to Wolf Creek upgrades and the EDGR project upgrades.

GENERAL RATE CASE OVERVIEW

WESTAR • 2018

DOCKET NO: 18-WSEE-328-RTS **DATE FILED:** 02/01/2018 **RATES EFFECTIVE:** 09/29/2018

REQUESTED REVENUE REQUIREMENT INCREASE: $52,512,545

Westar's actual request was for $68,200,652 in total revenue increases, however, $15,688,107 of this increase was due to a rebasing of amounts previously collected from the Property Tax Surcharge (PTS). This effect is revenue neutral once Westar's PTS is fully revised, therefore the net increase in new revenues sought by Westar was $52.5 million.

AUTHORIZED REVENUE REQUIREMENT INCREASE: $-66,000,000

Westar's rates were reduced by $50,311,893, but that reflects the PTS rebasing, as discussed above. This is actually a net reduction of new revenue to Westar of $66 million. The $-66 million number is directly comparable to the $52.512 million requested by Westar.

Percentage of Requested Increase Granted: -225.68%

Settled or Litigated: Non-Unanimous Settlement Agreement. All parties to the docket supported the settlement agreement, with the exception of the solar parties (Sierra Club, Vote Solar, Climate and Energy Project).

INTERVENERS

- Citizens Utility Ratepayer Board (CURB)
- Kansas Industrial Consumers (KIC)
- Unified School District No. 259
- Kroger Co.
- Spirit AeroSystems, Inc.
- CCPS Transportation, LLC
- Coffeyville Resources Refining & Marketing, LLC
- Wal-Mart Stores, Inc.
- United States Department of Defense
- HollyFrontier El Dorado Refining, LLC
- Occidental Chemical Corporation
- Goodyear Tire & Rubber Company
- Learjet, Inc.
- Climate and Energy Project
- Cargill, Inc.
- Kansas State Board of Regents
- Topeka Metropolitan Transit Authority
- Tyson Foods
- Sierra Club
- Vote Solar
- Midwest Power Company

STAFF AND INTERVENER DIRECT TESTIMONY ON REVENUE REQUIREMENT

Staff recommended a $69 million revenue reduction. CURB recommended a $138.4 million revenue reduction. KIC recommended a $54 million reduction.

MAJOR RATE CASE DRIVERS

There are several major drivers behind this rate case. First, Westar sought to update its rates to reflect the investment in its new wind farm, the Western Plains Wind Farm, which was responsible for approximately $31.8 million of Westar's request. This reflects the addition to rate base of approximately $417 million of capital investment associated with this 281 MW wind farm. Westar also sought to increase revenues to account for the expiration of Production Tax Credits associated with its Flat Ridge and Central Plains Wind Farms, which were the subject of the 08-1041 and 09-925 Rate Cases. Additionally, Westar sought to revise rates to reflect the fact that it was losing $40 million in wholesale sales margins which previously benefitted retail customer rates. Lastly, Westar was seeking to update rates to reflect merger savings associated with the recently completed merger between Westar and KCP&L, and to reflect the new lower federal income tax rate of 21%, which produced ratepayer savings of approximately $74 million per year.

XII. Peer Review—Benchmarking, Evaluation of Factors Contributing to 2017 Rate Levels, and Change in Rates from 2008-2017

A. Purpose of the Peer Review

One of the goals of the rate study is to identify the major differences between surrounding states' rates and Westar and KCP&L's rates in order to better understand and document the major contributors to any differences. Staff has undertaken such a review, and the results of that analysis are presented below.

B. Scope of the Peer Review

In undertaking this evaluation, Staff first identified a list of every investor-owned, regulated electric utility operating in each of the following states: Colorado, Oklahoma, Missouri, Texas, Arkansas, Iowa, South Dakota, North Dakota, and Minnesota. This list comprises 23 utilities, listed below:

	Name of Company	SNL Institution Key	Ultimate Parent	Regulated States
1	ALLETE Minnesota Power	4061513	ALLETE Inc.	MN, ND
2	Black Hills Colorado Electric Utility Company, LP	4215172	Black Hills Corporation	CO
3	Black Hills Power	4058912	Black Hills Corporation	SD, WY
4	El Paso Electric	4056994	El Paso Electric	AZ, NM, TX
5	Empire District Electric Company	3005475	Algonquin Power and Utilities Corp.	KS, MO, AR, OK
6	Entergy Arkansas, Inc.	4056995	Entergy Corporation	AR, LA
7	Entergy Texas, Inc.	4199135	Entergy Corporation	LA, TX
8	Interstate Power and Light Company	4057087	Alliant Energy Corporation	IA
9	Kansas City Power & Light Company	4072456	Evergy, Inc.	KS, MO
10	KCP&L Greater Missouri Operations Company	4000843	Evergy, Inc.	MO
11	MDU Resources Group	4010692	MDU Resources Group	MT, SD, ND, WY
12	Mid American Energy Company	4057091	Berkshire Hathaway	IL, IA, SD
13	Northern States Power	4057754	Xcel Energy, Inc.	MN, SD, ND
14	Northwestern Wisconsin Electric Company	4061951	Northwestern Wisconsin Electric Company	MN, WI
15	NorthWestern Corporation	4057053	NorthWestern Corporation	IA, MT, ND, SD, WY
16	Oklahoma Gas and Electric Company	4057016	OGE Energy Corp.	OK, AR
17	Otter Tail Power Company	4147257	Otter Tail Corporation	MN, ND, SD
18	Public Service Company of Colorado	4057094	Xcel Energy Inc.	CO
19	Public Service Company of Oklahoma	4057023	American Electric Power Company, Inc.	OK, TX
20	Southwestern Electric Power Company	4057026	American Electric Power Company, Inc.	AR, LA, TX
21	Southwestern Public Service Company	4057027	Xcel Energy Inc.	NM, TX
22	Union Electric Company	4057102	Ameren Corporation	MO
23	Westar Energy, Inc.	4057066	Evergy, Inc.	KS, OK
States Covered: All Vertically Integrated IOUs in Kansas, Missouri, Texas, Oklahoma, Colorado, Iowa, Arkansas, South Dakota, North Dakota, Minnesota				

Next, Staff downloaded, sorted, and analyzed every major facet of these 23 companies' cost structure and operating characteristics. The following is a list of each of the tables or charts that were created from the data. Each of these is available either in the body of the report or as an exhibit attached hereto:

- A waterfall graph that presents graphically the major drivers behind Westar and KCP&L's respective change in rates from 2008-2017. The graphs were created by analyzing the change in major cost categories as reported in each utilities' FERC FORM 1 during the study period.[72]

- For each of the factors identified below, there is a table in the report that provides the following: 2008 level, 2017 level, nominal change from 08-17, percentage change from 08-17, and the Compound Annual Growth Rate (CAGR) of change from 08-17. Additionally, each of the 23 utilities is ranked for each of these figures listed and a high, low, and average value for each variable has been calculated, along with the comparison between Westar and KCP&L to each of these computed figures.

    - Retail Revenue/kWh (Exhibit 3)
    - Net Plant[73]/Retail MWh (Exhibit 22)
    - Depreciation Expense/Retail MWh (Exhibit 25)
    - Net Production Plant/Retail MWh (Exhibit 27)
    - Net Transmission Plant/Retail MWh (Exhibit 29)
    - Net Distribution Plant/Retail MWh (Exhibit 30)
    - Net Power Production Expense/Retail MWh[74] (Exhibit 14)
    - Total O&M Expense/MWh (Exhibit 19)
    - Total Retail Sales MWhs (Exhibit 37)
    - Industrial Sales MWhs (Exhibit 43)

---

[72] These graphs are not meant to be a substitute for the detailed analysis above that describes in detail each of the rate changes Westar and KCP&L have received in Kansas during the study period, and the drivers behind those rate changes. The biggest reason for this is that both the Westar and KCP&L data includes cost drivers that would be non-jurisdictional to the KCC, including costs that would be allocated to KCP&L's Missouri Jurisdictional customers, as well as FERC-jurisdictional cost drivers for both Westar and KCPL. The graphs are helpful though in discerning the major categories in which KCP&L and Westar have experienced increased costs during this time frame.

[73] Net Plant is Gross Plant, Property and Equipment less Accumulated Depreciation. This is often the most significant contribution to a utility's Rate Base.

[74] Net Power Production Expense is defined as Total Power Production Expense (inclusive of Fuel, Purchased Power, Other Power Production Expenses), less Sales for Resale. Sales for Resale are subtracted from "Gross" Power Production Expense in recognition of the fact that Sales for Resale margins are often credited to retail ratepayers in the ratemaking process, whether through direct credits, or via an allocation process.

- Commercial Sales MWhs (Exhibit 41)
- Residential Sales MWhs (Exhibit 39)
- Total Customers (Exhibit 45)
- Total Salaries and Wages/MWh (Exhibit 53)
- Customer, Sales, and A&G Expenses[75]/MWh (Exhibit 49)
- Distribution Expense/MWh (Exhibit 56)
- Transmission Expense/MWh. (Exhibit 60)

➢ Graphs that compare the 2017 values for each of the factors discussed above against the 2017 Retail Revenue/kWh. Additionally, we created a similar graph but compared the change in each of the above factors from 08-17 to the change in Retail Revenue/kWh from 08-17. These graphs make it possible to observe how each member of the study group compares versus their peers on each of the factors, but more importantly, they make it possible to identify which factors tend to be more explanatory in terms of absolute rate levels or rate level changes.

➢ Graphs that present, on a single graph, the 2008 levels of each factor, the 2017 levels of each factor, and the change in the factor, for all 23 utilities in the study group. These graphs allow at-a-glance determinations of how each of the utilities in the study group compares against its peers for each of the factors discussed above.

➢ Tables that present, on a single table, the 2017 Retail Revenue/kWh compared to several factors determined to be the most relevant, and how those factors compare between the 23 utilities in the study group and the average, high, and low observation in the group. For example, one table compares 2017 Retail Revenue/kWh to the following factors: 2017 Net Plant/Retail MWh, 2017 Industrial MWhs, 2017 Total Retail Sales MWhs, 2017 Net Power Production Expenses/Retail MWh, and 2017 Total Electric O&M/MWh (Exhibit 4). Another table compares 2017 Retail Revenue/kWh to the following factors: 2017 Transmission Expense/MWh, 2017 Distribution Expense/MWh, 2017 A&G Expense/MWh, 2017 Salaries and Wages/MWh, and 2017 Number of Customers (Exhibit 5). These tables are instrumental in determining, at-a-glance, what the most significant factors are for each utility that explains their relative rate levels.

[75] This category of costs includes all costs reported under the FERC Form 1 in the following categories: Customer Accounts, Customer Service and Informational, Sales Expenses, and Administrative and General Expenses; throughout the report and tables as “A&G Expense.”

- The same table as described in the previous bullet point, but comparing the rate change from 2008-2017/kWh to the change in each of the most relevant cost drivers/factors during this same time frame in Exhibits 6 and 7.
- A graph that compares coal and gas-fired generation capacity to the change in Net Power Production Expense/MWh during the study period (Exhibit 8).
- Lastly, A graph that compares coal and gas-fired generation capacity to the change in Total Revenue/KWh from 2008-2017 (Exhibit 9).

C. Data Sources and Methodology

The data evaluated for purposes of the peer review is all publicly available financial data, sourced from the companies' Federal Energy Regulatory Commission (FERC) Form 1. The study period covers the ten years from 2008 to 2017 (the latest data available at the time the study was prepared). In order to download, sort, and categorize the data, Staff utilized a subscription service to SNL Financial, an offering of S&P Global Market Intelligence.

While reviewing the cost, operating characteristics, rate levels, and other data used in the peer review, it is important to remember that all of the data used in the study comes from FERC Form 1 data (or other public data sourced through SNL Financial) and it is therefore presented on a utility-wide basis. This means that all sales, cost, rate, and other data is presented at the consolidated company level, without distinction for the state-by-state differences that are certain to exist within the data. For example, Kansas City Power and Light's usage characteristics, rates, costs, and other information are not separated out by Kansas and Missouri in the study. Likewise, Southwestern Public Service Company's data is not separated out to identify the different costs and rate levels between New Mexico and Texas. This is a necessary shortfall of the study in order to use FERC FORM 1 as the source of the cost and operating data to do the analysis. However, the use of FERC FORM 1 data provides relative assurance of the consistency with which the utility data is presented over time, it allows all of the data to be publicly available, and accessible by anyone who wishes to analyze or verify the data used in the study. Also, the fact that this information is presented on a utility-wide basis captures the reality that many of the cost drivers that affect a revenue requirement are common costs that affect more than one state, or rate jurisdiction. This is a reality of ratemaking in the utility industry, and the rate study accounts for this.

D. Discussion of Findings

The data reveals that there are often three major factors that explain the reason for a utility's relative rate levels, either in the year 2017, or expressed as the amount of rate change over the last ten years. These three factors include: levels of Net Plant (expressed as Net Plant/Retail MWh in the study), Net Power Production Expense (expressed as Net Power Production Expense/Retail MWh in the study), and Industrial Sales levels (expressed as both the absolute level of Industrial Sales and as a percentage of Total Retail Sales in the study). While there are certainly exceptions to this, some combination of these three factors are usually implicated if a utility has high or low rate levels, or high or low levels of rate change. Throughout the peer review section that follows, the reader will notice that these factors are repeatedly the most impactful of all the factors evaluated in this study.

One common theme that affects two of these factors is the percentage of natural gas-fired generation capacity a utility has (versus coal, nuclear, or wind). We found that utilities that have a high percentage of natural gas-fired generation capacity have experienced both the beneficial impact of significant declines in natural gas prices (and thus Net Power Production Expense) and also have avoided the significant capital investments that came along with the requirement to retrofit coal-fired generating units in order to comply with state and federal environmental mandates.[76] The opposite has held true for utilities with heavy coal-fired generation capacity.

The reduction in natural gas prices and the influx of renewable energy (primarily wind-powered) in the Southwest Power Pool (SPP) had led to significant declines in wholesale market prices in SPP and thus Sales for Resale margins. These Sales for Resale margins used to be a significant source of benefit for the retail customers of some of these utilities, keeping Net Power Production Expenses low. For example, KCP&L had the 4th lowest Net Power Production Expense/Retail MWh in 2008, but now has the 12th highest, and KCP&L has experienced the largest increase in Net Power Production Expenses/Retail MWh in the study group.

Below we examine graphs of each of these major factors and how each relates to 2017 rate levels and rate changes between 2008 and 2017. What stands out as one reviews the data is the interrelationship between the three factors. That is, if there is an exception in which one of the three factors is not consistent with the general trend exhibited by the other utilities, it can usually be explained by one of the other three factors being significantly high or low as the case may be. For example, a utility may have high Net Plant but low rates, which seems a contradiction. But a review of all three major factors provides an explanation in that the utility has high Industrial Sales MWhs. Conversely, a utility may have low Net Power Production Expenses, but high rates. A review of the three major factors provides an explanation that it is because the utility has invested significantly in its Net Plant/Retail MWh. Repeatedly, when there is an exception to

[76] Coal-fired generating units are also just generally more capital intensive per MW of capacity than natural gas-fired units. Historically the trade-off for this higher cost construction was the stability and predictability of coal versus natural gas. In recent years, natural gas costs have both declined and become more predictable. Time will tell whether this relatively-recent phenomenon will persist in the years to come.

these three factors, it can be explained by significant variation (either positive or negative) in one of the other two.

After presenting a discussion of how Net Plant, Net Power Production Expense, and Industrial Sales contribute to absolute and relative rate levels, we discuss in detail our findings as it relates to the cost drivers of Westar and KCP&L during the study period.

As discussed in more detail below, Westar's change in rates from 2008-2017 can almost entirely be attributed to increases in Net Plant/Retail MWh (and the necessary increases in rates to support these investments). These investments were predominantly in the areas of Production Plant and Transmission Plant. The driving factor behind Westar's increased Production Plant was environmental retrofits to coal-fired generating units mandated by state and federal environmental regulations.[77] Westar's Transmission Plant investments are driven by the need to replace aging infrastructure to maintain reliability, the desire of state and federal policy makers to expand the transmission grid to enhance the development of renewable energy and competitive power markets, and investor-supportive cost recovery mechanisms and ratemaking incentives available at the FERC for these investments.

In addition, Westar experienced significantly above average reduction in Industrial and Retail Sales MWhs, ranking 8th lowest and 6th lowest in the categories, respectively. Last, Westar's Transmission Expense/MWh, related in part to its increased Transmission Plant investment, has increased faster than the average of the study group.

Westar's Net Power Production Expense was basically flat during this time frame, decreasing $(.71)/MWh, however, this is significantly below the average reduction of the study group, at $(5.51)/MWh. In an industry that has been dominated by reductions in natural gas prices and wholesale power prices, a utility that keeps its Net Power Production Expense flat will fall behind on a relative basis to its peers. Staff calculates that 23.5% of the difference in rate growth between Westar and the study group can be attributed to the fact that the average Net Power Production Expense fell faster than Westar's during this time frame.[78] Lastly, the data shows that Westar's relative rate changes during this period of time have not been driven by increases in A&G Expense or Total Salaries and Wages. In fact, Westar managed these expenses better than the average of the study group over this time period, ranking 8th and 10th lowest, respectively in these two categories.

---

[77] Another option was to shut these units down and convert them to natural gas or build new units. A review of the records of the KCC proceedings which evaluated the decisions to retrofit these units will show that these options were considered costlier and or riskier at the time.

[78] Westar's Retail Revenue/kWh grew by $.0371/kWh during this period, but the average company in the study group grew by $.0167/kWh, for a difference of $.0204/kWh (or $20.40/MWh). Westar's Net Power Production Expense declined $(.71)/MWh during this period, but the average of the study group declined by $(5.51)/MWh, making Westar's relative change, $4.80/MWh higher than the group. $4.80/MWh is 23.52% of $20.40/MWh.

For KCP&L, the major drivers explaining its rate change from 2008 to 2017 can be attributed to increases in Net Plant/Retail MWh, driven by environmental retrofit projects and the construction of a new coal-fired generation unit, Iatan 2. Additionally, KCP&L has experienced the largest increase in Net Power Production Expense/Retail MWh of any other utility in the study group. This expense increased by $13.14/MWh for KCP&L, versus the average reduction of $(5.51)/MWh experienced by the group. Staff calculates the overall increase of $18.65/MWh is responsible for 61% of KCP&L's above-average (versus the study group) growth in Retail Revenue/kWh from 2008-2017.[79]

Additionally, KCP&L experienced the 5th largest reduction in Industrial Sales MWhs sold and Total Retail Sales. KCP&L's relatively higher rate increases during this period have not been as a result of mismanagement of A&G Expense or Total Salaries and Wages/MWh. In fact, KCP&L's rate of change in each of these categories is below the average of the study group, ranking 15th highest and 11th highest, respectively.

i. Net Plant/Retail MWh

All other things being equal, Net Plant/Retail MWh was a significant driver behind a utility's rate levels in 2017, and the change in a utility's rates during 2008-2017. This relationship is obvious in both graphs below. For both graphs, Net Plant/Retail MWh is presented on the right axis, while the rate levels and changes are presented on the left axis.

[79] While KCP&L's Retail Rate Revenue/kWh grew by $.0473/kWh during this period, the average company in the study group grew by $.0167/kWh, for a difference of $.0306/kWh (or $30.60/MWh). KCP&L's Net Power Production Expense/MWh grew by $18.65/MWh more than the average of the study group. $18.65/MWh divided by $30.60/MWh is 60.94%.

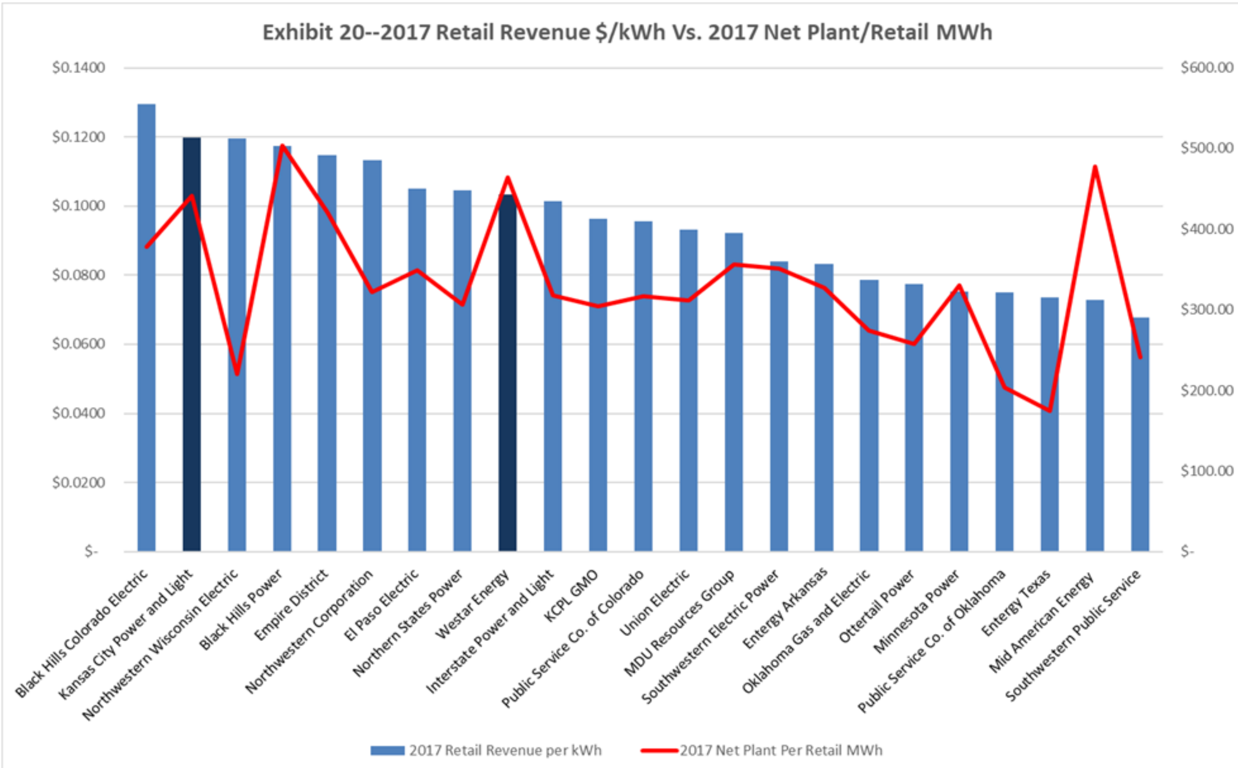


Exhibit 20--2017 Retail Revenue $/kWh Vs. 2017 Net Plant/Retail MWh
$0.1400
$0.1200
$0.1000
$0.0800
$0.0600
$0.0400
$0.0200
$-
$600.00
$500.00
$400.00
$300.00
$200.00
$100.00
$-
Black Hills Colorado Electric
Kansas City Power and Light
Northwestern Wisconsin Electric
Black Hills Power
Empire District
Northwestern Corporation
El Paso Electric
Northern States Power
Westar Energy
Interstate Power and Light
KCPL GMO
Public Service Co. of Colorado
Union Electric
MDU Resources Group
Southwestern Electric Power
Entergy Arkansas
Oklahoma Gas and Electric
Ottertail Power
Minnesota Power
Public Service Co. of Oklahoma
Entergy Texas
Mid American Energy
Southwestern Public Service
2017 Retail Revenue per kWh
2017 Net Plant Per Retail MWh

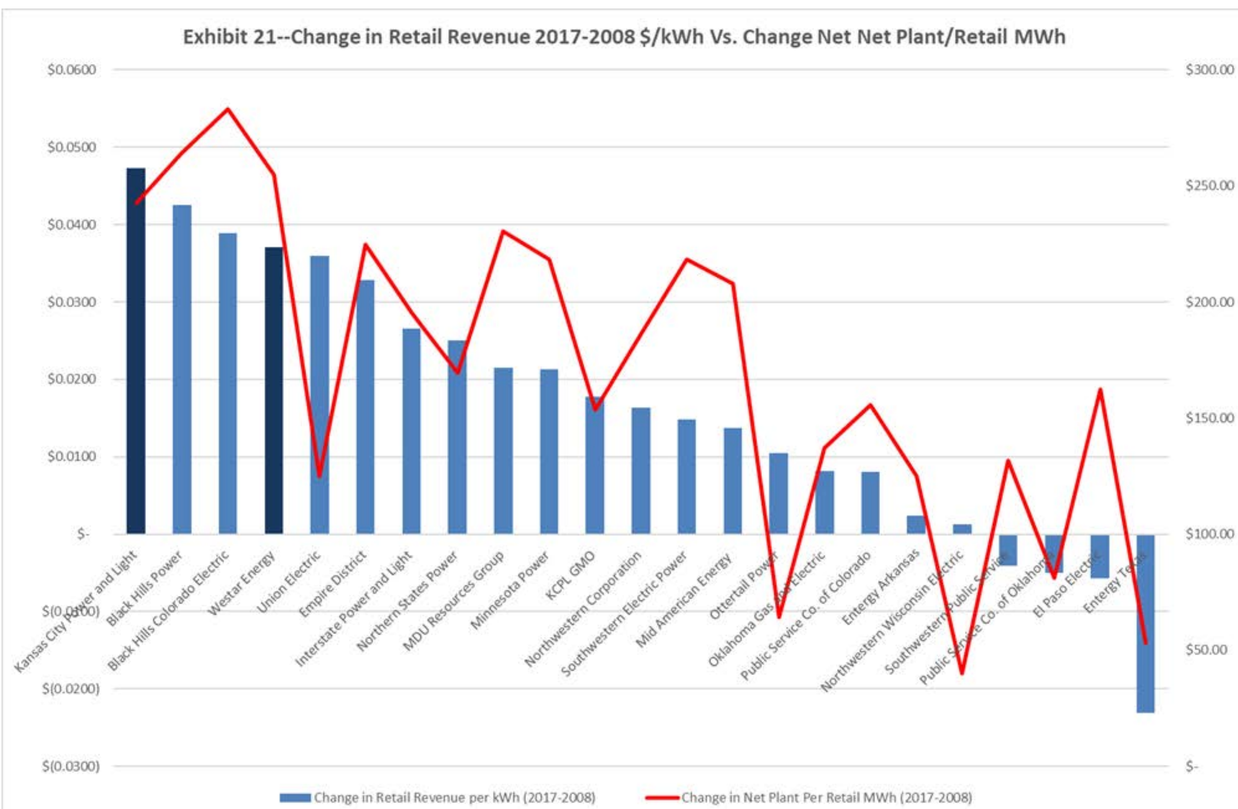


Exhibit 21--Change in Retail Revenue 2017-2008 $/kWh Vs. Change Net Net Plant/Retail MWh
$0.0600
$0.0500
$0.0400
$0.0300
$0.0200
$0.0100
$-
$(0.0200)
$(0.0300)
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
Black Hills Power
Black Hills Colorado Electric
Westar Energy
Union Electric
Empire District
Interstate Power and Light
Northern States Power
MDU Resources Group
Minnesota Power
KCPL GMO
Northwestern Corporation
Southwestern Electric Power
Mid American Energy
Public Service Co. of Colorado
Entergy Arkansas
Northwestern Wisconsin Electric
Change in Retail Revenue per kWh (2017-2008)
Change in Net Plant Per Retail MWh (2017-2008)

While there are a few exceptions, the underlying data can help explain why. For instance, looking at Exhibit 20, 2017 Retail Revenue/kWh versus 2017 Net Plant/Retail MWh, Northwestern Wisconsin Electric Company (NWEC) has low Net Plant/Retail MWh but high rates. Also, MidAmerican Energy has high Net Plant/Retail MWh but low rates, so what explains these apparent contradictions? NWEC has the highest Net Power Production Expense/Retail MWh of the study group in 2017, at $60.48/MWh. Also, NWEC is by far the smallest utility of the group, with the smallest Industrial Sales load and below average Industrial Sales Mix[80]. MidAmerican, on the other hand, had the highest Industrial Sales Volume of the study group, and the 3rd largest Industrial Sales Mix, at 52.78% of Total Retail Sales. MidAmerican also has the absolute lowest Net Power Production Expense/Retail MWh and Total O&M Expense/MWh of the group.

Looking at Exhibit 20, which presents the change in Retail Revenue /kWh from 2008 to 2017 (left axis) versus the change in Net Plant/Retail MWh (right axis) over the same time frame, one company that had relatively large rate increases during this time frame, but significantly below average increases in net plant (5th lowest) is Union Electric (Ameren Missouri). This can be explained by the fact that Ameren Missouri had the absolute largest reduction in Industrial Sales load during this period, and the 3rd highest increase in Net Power Production Expense/Retail MWh. On the other hand, El Paso Electric had average increase in Net Plant/Retail MWh, but significantly below average rate change. This can be explained by the fact that El Paso Electric had the 4th largest decline in Net Power Production Expenses during this period.

A more detailed review of the specific drivers affecting each of these companies' rates can be found in the detailed peer review section below.

ii. Net Power Production Expense/Retail MWh

All other things being equal, Net Power Production Expense/Retail MWh was a significant driver behind a utility's rate changes between 2008 and 2017, though there was a less distinct relationship between the 2017 level of Net Power Production Expense and Retail Revenue/kWh in 2017. This relationship is presented in Exhibits 10 and 11 below. For both graphs, Net Power Production Expense/Retail MWh is presented on the right axis, while the Retail Revenue/kWh and the change in Retail Revenue/kWh is presented on the left axis.

[80] As a percentage of Total Retail Sales.

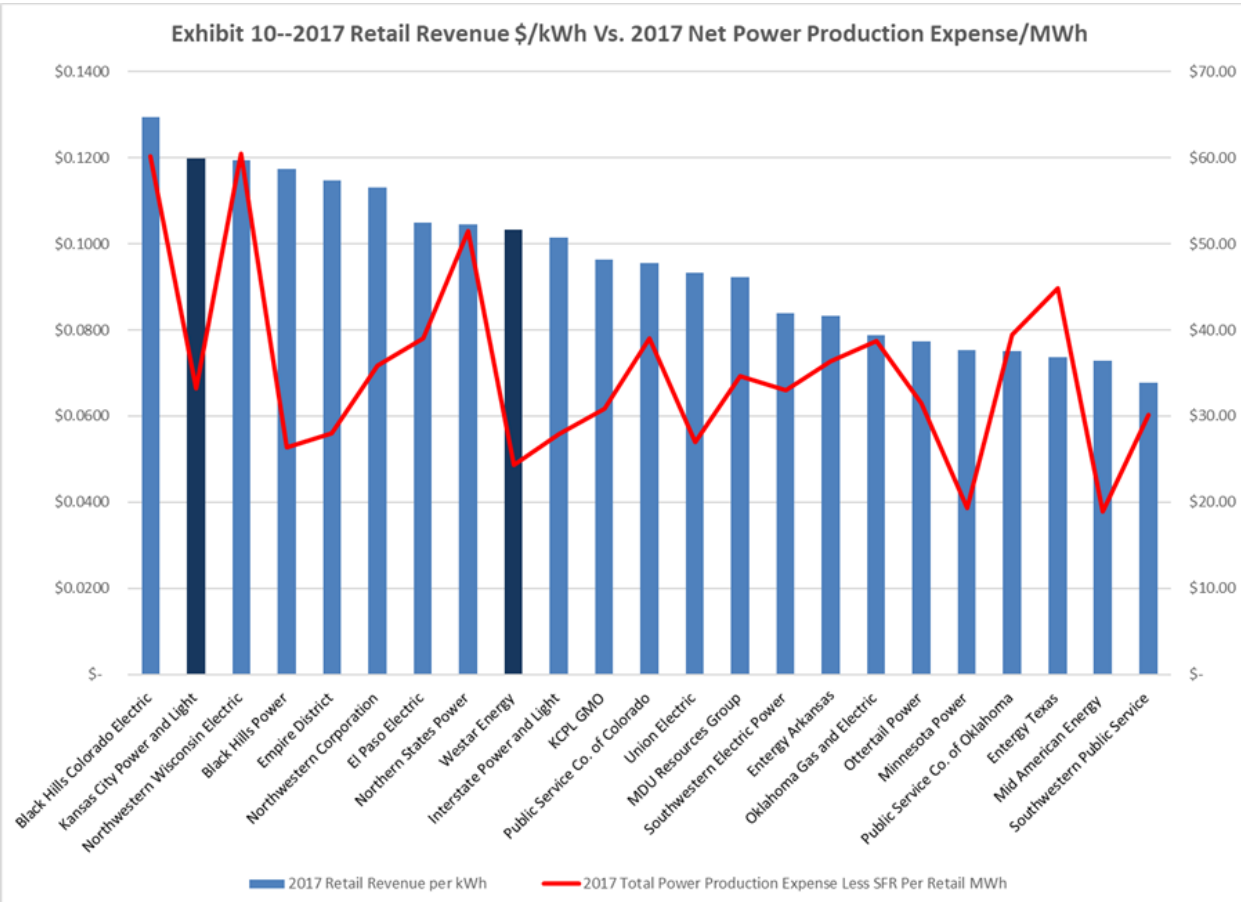


Exhibit 10--2017 Retail Revenue $/kWh Vs. 2017 Net Power Production Expense/MWh
$0.1400
$0.1200
$0.1000
$0.0800
$0.0600
$0.0400
$0.0200
$-
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$-
Black Hills Colorado Electric
Kansas City Power and Light
Northwestern Wisconsin Electric
Black Hills Power
Empire District
Northwestern Corporation
El Paso Electric
Northern States Power
Westar Energy
Interstate Power and Light
KCPL GMO
Public Service Co. of Colorado
Union Electric
MDU Resources Group
Southwestern Electric Power
Entergy Arkansas
Oklahoma Gas and Electric
Ottertail Power
Minnesota Power
Public Service Co. of Oklahoma
Entergy Texas
Mid American Energy
Southwestern Public Service
2017 Retail Revenue per kWh
2017 Total Power Production Expense Less SFR Per Retail MWh

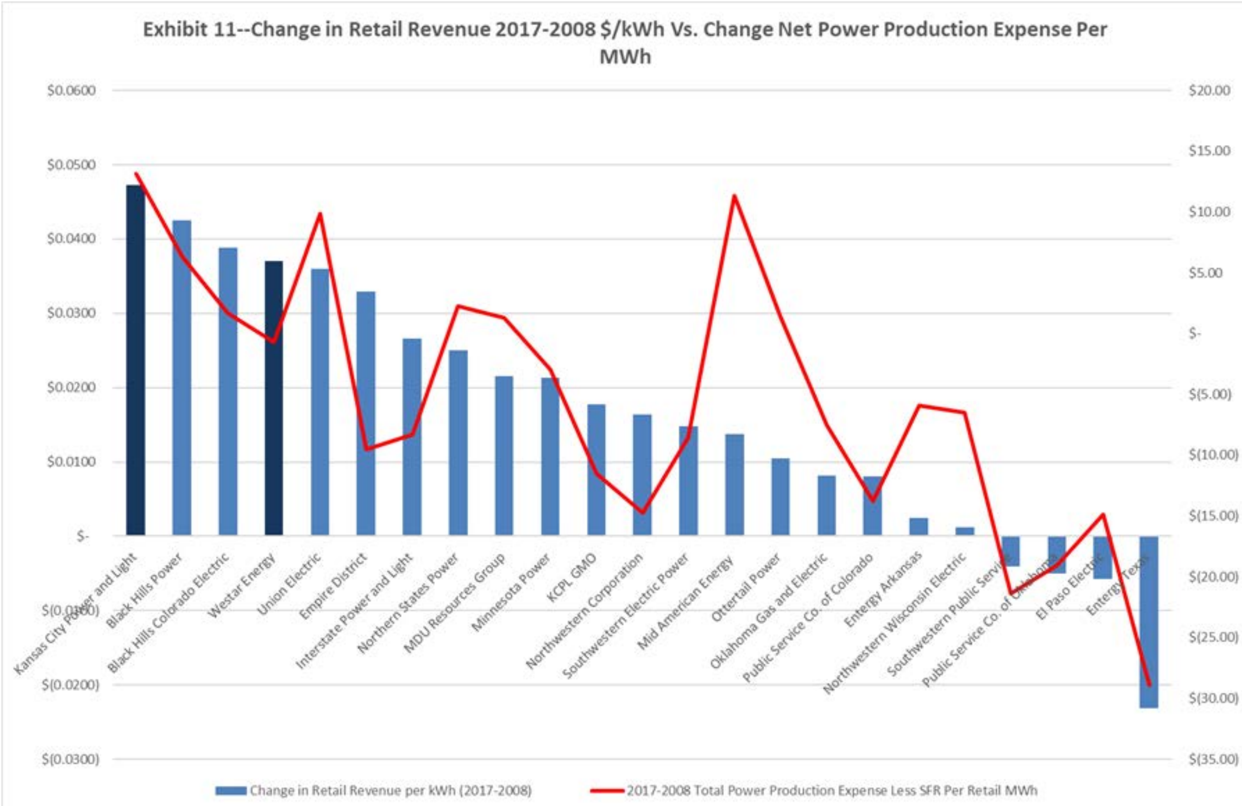


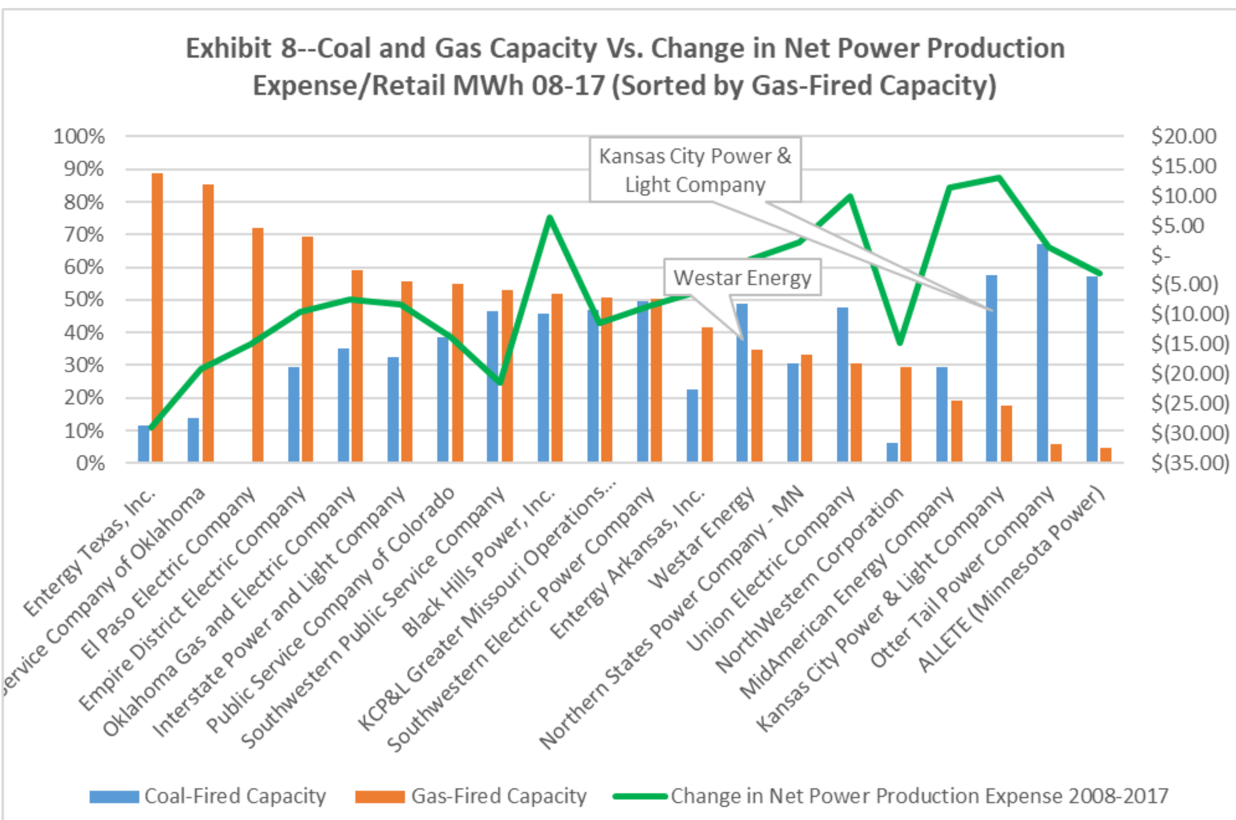
Exhibit 10 demonstrates that with just a few exceptions, lower Net Power Production Expense/Retail MWh does tend to be accompanied by lower retail rates, though as noted there are exceptions. For example, KCP&L has below average and Westar has well below average Net Power Production Expense/Retail MWh, but both have above average rates in 2017. This is because, as discussed above, both utilities have significantly high amounts of Net Plant/Retail MWh. Also, KCPL has the 2nd lowest Industrial Sales Mix in the study group in 2017. Westar has low, and KCP&L has average Net Power Production Expense/Retail MWh, but each has spent billions of dollars in Net Plant additions during this period in order to maintain those Net Power Production Expenses/Retail MWh.

Still on Exhibit 10, while Entergy Texas has relatively high Net Power Production Expenses/Retail MWh (4th), it has the 3rd lowest rates in 2017. This is because Entergy Texas' Net Plant/Retail MWh is by far the lowest of the study group, at just 52% of the average. Contributing to this assessment is also the fact that Entergy Texas has the 5th highest Industrial Sales Mix of the group.

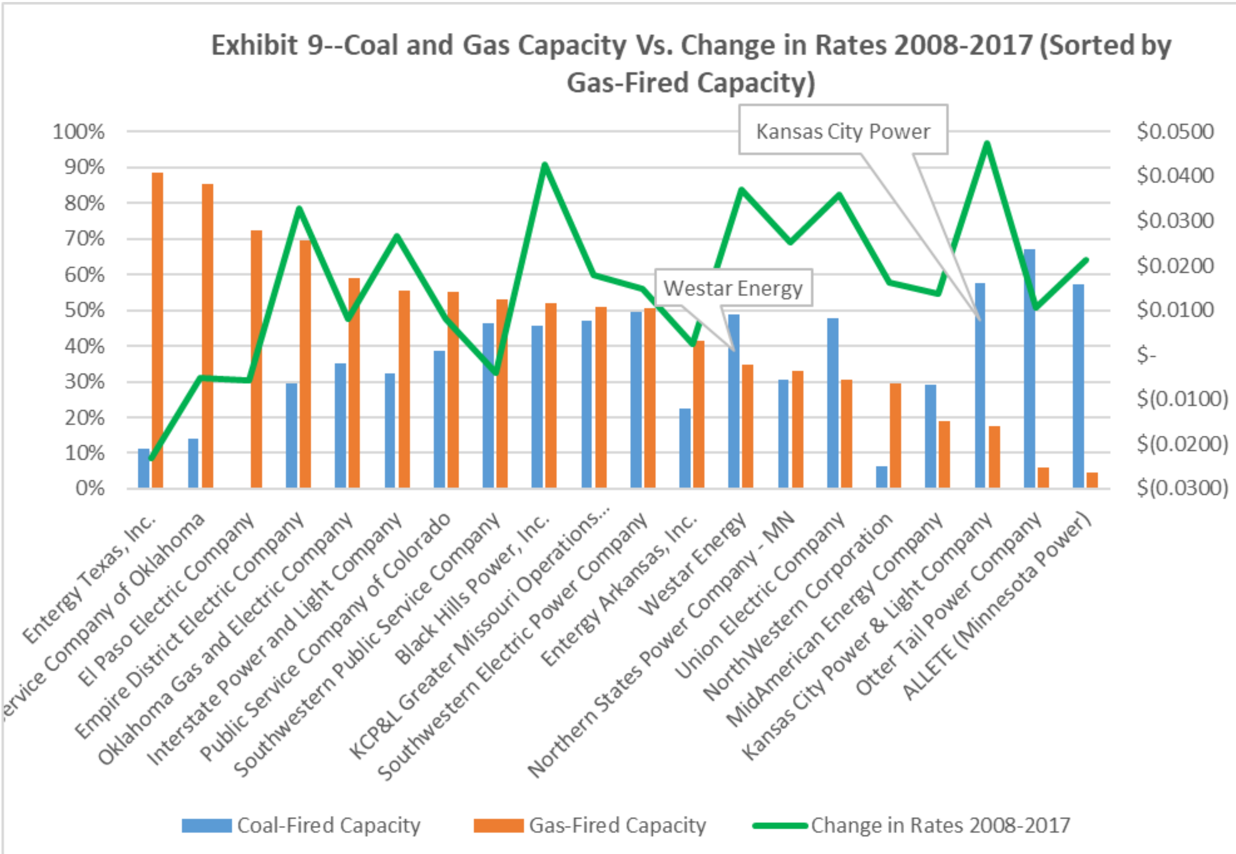
Exhibit 11 demonstrates that with only minor exceptions, a large change in Net Power Production Expense/Retail MWh was likely to result in significant rate changes from 2008-2017. The utility experiencing the largest increase in Net Power Production expense, KCP&L, also had the largest increase in Total Retail Rate Revenue/kWh.

Likewise, the largest reduction in Retail Rate Revenue/kWh was Entergy Texas, which had the largest reduction in Net Power Production Expense/Retail MWh. One notable exception in this graph is MidAmerican. Despite the 2nd highest increase in Net Power Production expense, MidAmerican's rates increased at a rate below the study group average. As previously discussed, this is likely the result of significant increases in Industrial MWhs sold during this time frame, amongst other explanations discussed in more detail below.

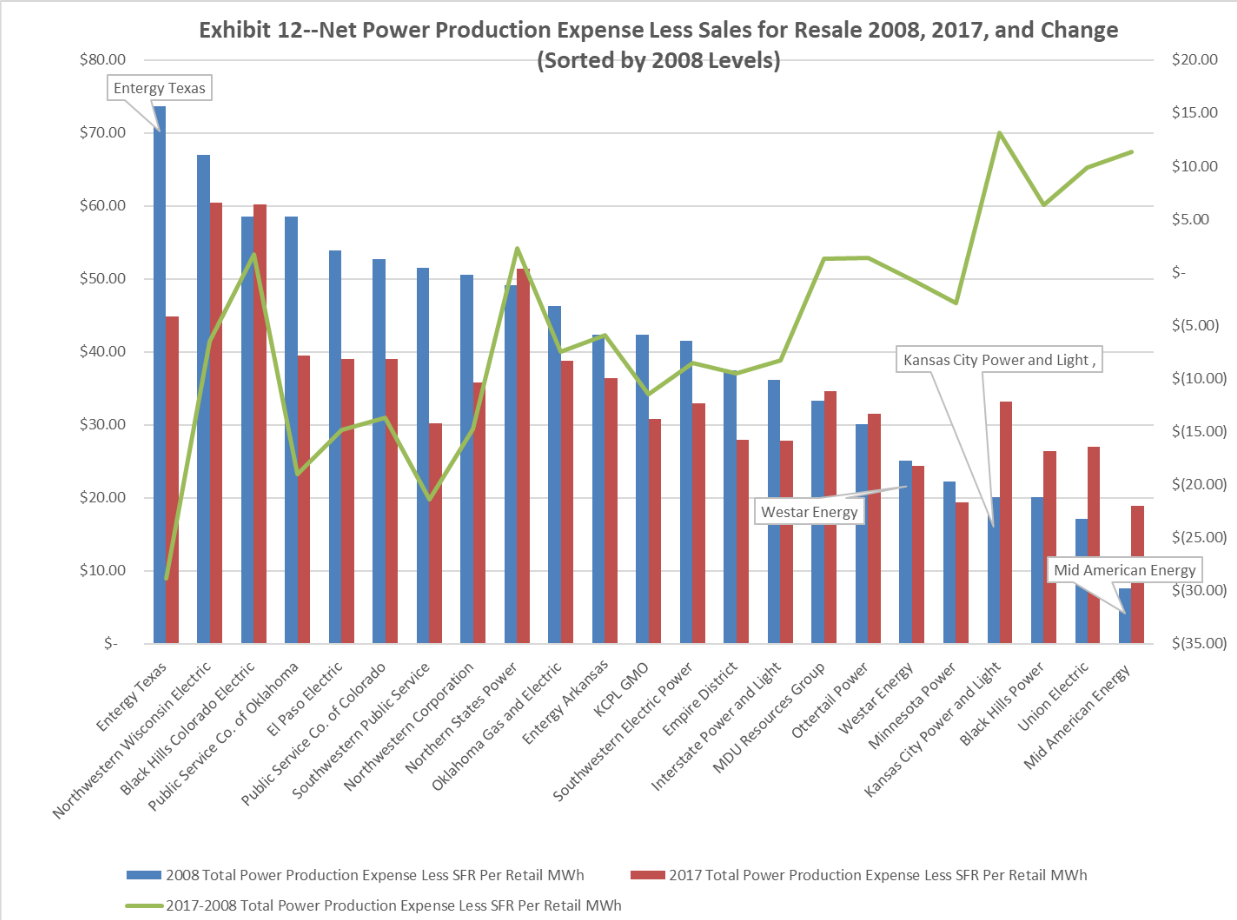
The change in Net Power Production Expense/Retail MWh has largely been driven by major structural changes in the market for natural gas and wholesale power markets. Dramatic reductions in natural gas during the study period have driven wholesale power prices down, as have the influx of renewable energy, primarily wind-powered generation. The utilities in the group that have experienced significant reductions in Net Power Production Expense/MWh, are predominantly utilities with heavy concentrations of natural gas-fired generation capacity. In fact, the three utilities in the study group with the largest rate reductions from 2008-2017 (Entergy Texas, El Paso Electric, and Public Service Company of Oklahoma) are the three highest utilities in terms of gas-fired generation capacity mix in the study group. This can be viewed on Exhibit 8 below, presenting change in Net Power Production Expense/Retail MWh on the right axis, and coal-fired and natural gas-fired capacity on the left axis (sorted by gas-fired capacity).



A similar relationship is exhibited when coal-fired and gas-fired generation capacity is plotted against the change in Total Rate Revenue/kWh from 2008-2017 as well:



Another relationship that can be viewed from the data is the fact that utilities experiencing large reductions in Net Power Production Expense/Retail MWh during this period tended to have high levels of Net Power Production Expense in 2008, when natural gas prices and wholesale power market prices were much higher. Likewise, utilities that had low Net Power Production Expenses/Retail MWh (coal heavy utilities that were likely benefitting from low exposure to natural gas prices and large off-system sales margins) are not faring so well in 2017. In Exhibit 12 below, blue bars represent 2008 Net Power Production Expenses, red bars represent 2017 Net Power Production Expenses (both on the left axis), and the green line is the change between the two periods (presented on the right axis).

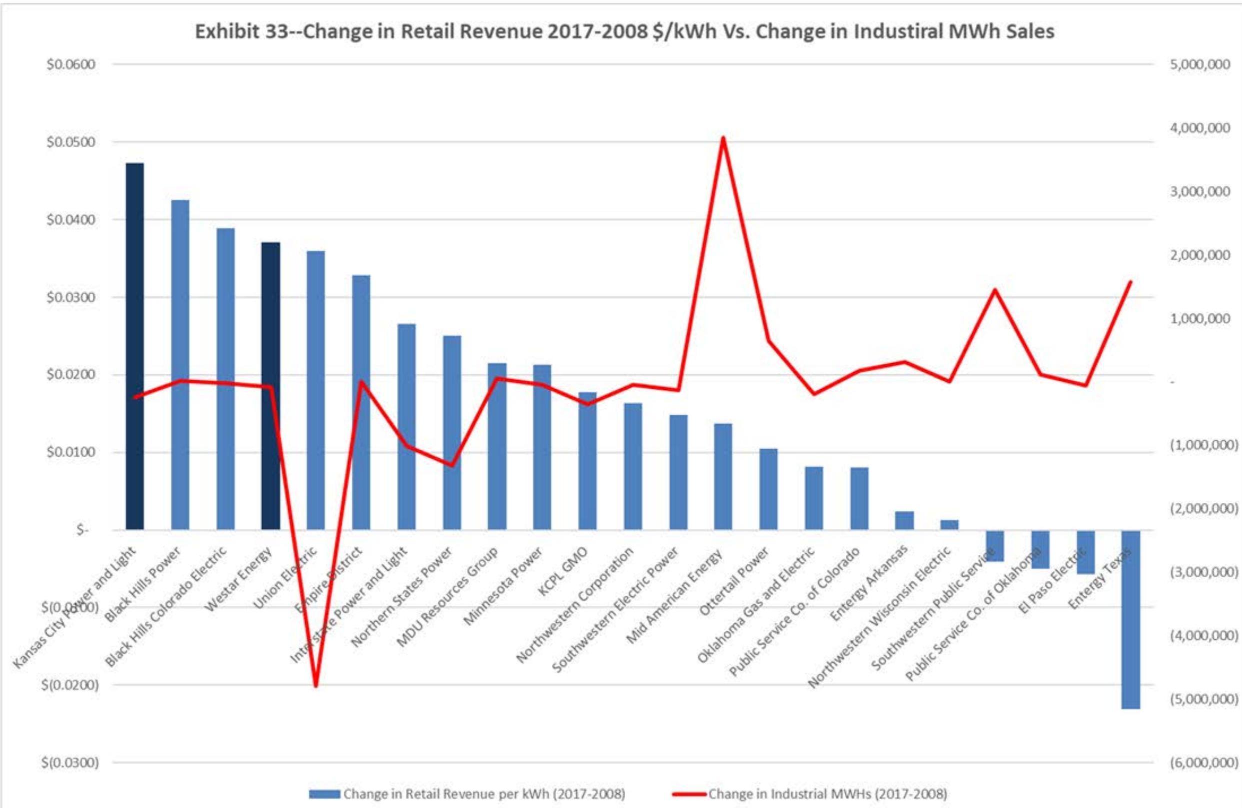


iii. Industrial Sales Levels Vs. Retail Rates

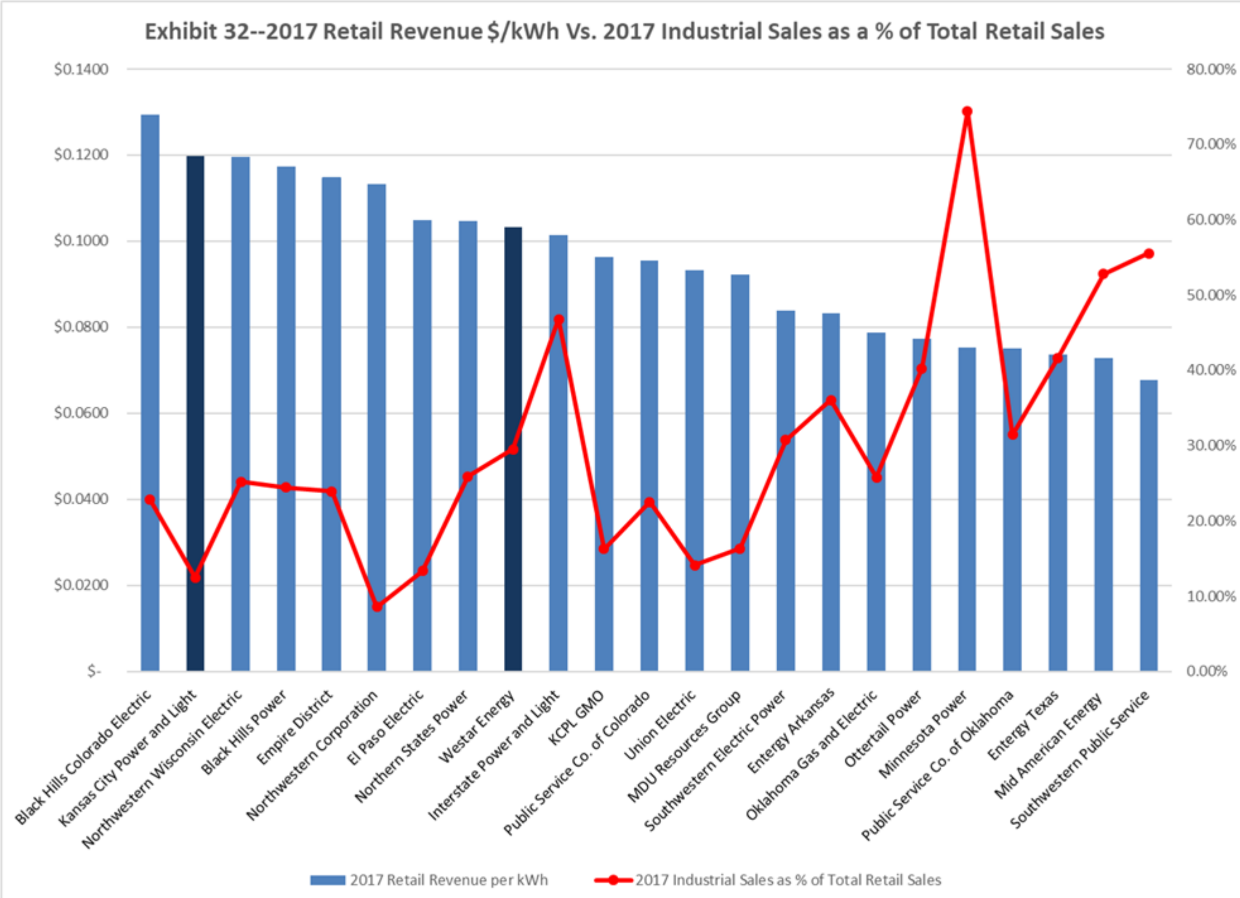
The last major driver of Total Retail Revenue/KWh and change in Retail Revenue/kWh from 2008 to 2017, is Industrial Sales MWhs. We evaluate this statistic using both Industrial Sales in MWhs, and Industrial Sales Mix, as a percentage of Total Retail Sales MWhs. What can be observed from the graphs below is that, all other things being equal, higher industrial MWhs sold tends to be correlated with lower Retail Rate Revenue/kWh, and vice versa. This is the case with changes in Industrial load and Retail Revenue/kWh changes as well. All three graphs present Retail Revenue/kWh or change in Retail Revenue/kWh on the left axis and Industrial Sales MWhs or Industrial Sales Mix on the right axis.

What is evident from Exhibit 33 below is that a significant change in Industrial Sales load is likely to be accompanied by a significant change in Total Retail Revenue/kWh. This factor is often significant enough to reverse the course of what would be expected to result from another of the three factors we've discussed, like Net Plant/Retail MWh or Net Power Production Expense/Retail MWh. For instance, MidAmerican's growth in

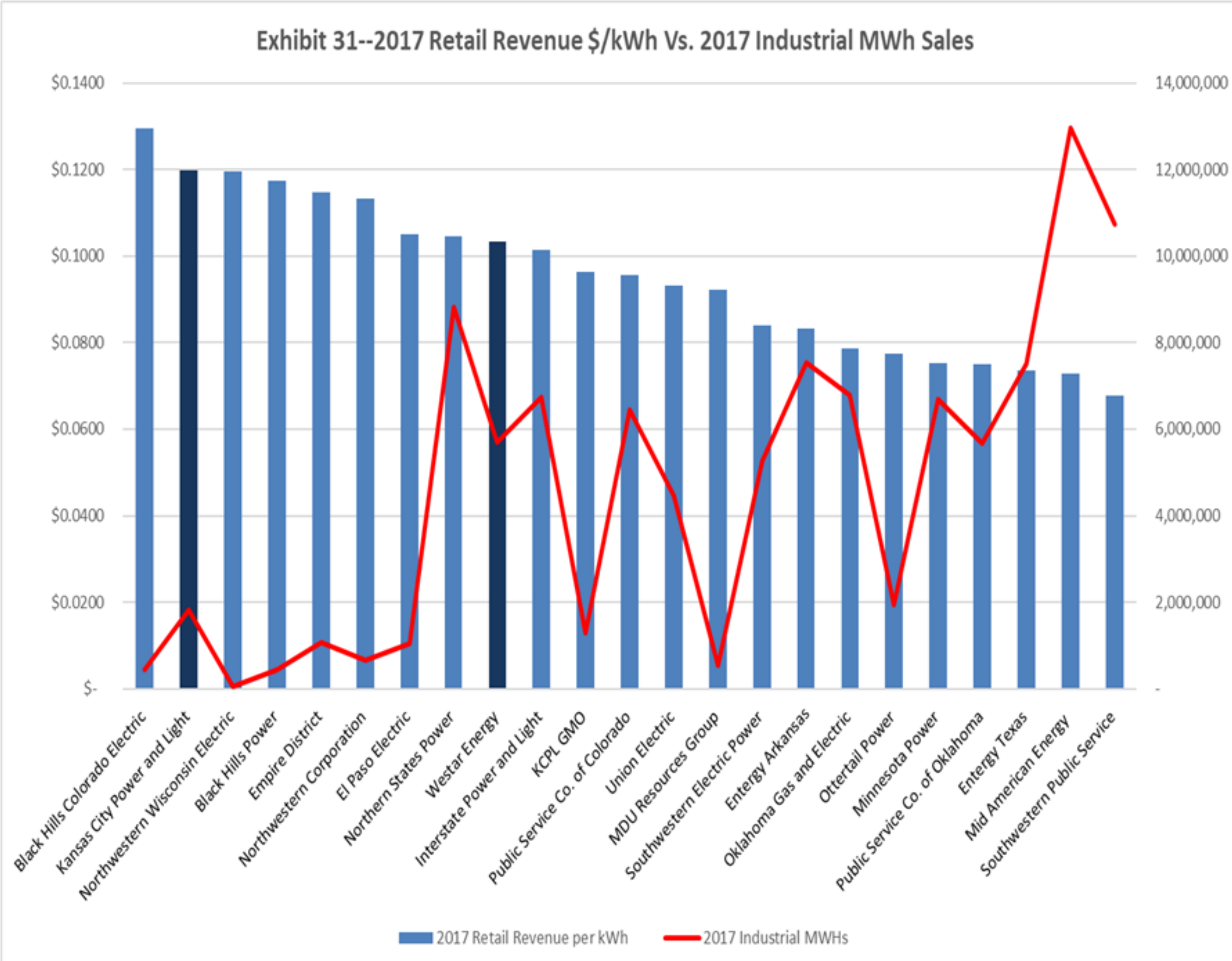
Industrial Sales MWhs from 2008-2017 has overshadowed the fact that it experienced the second largest increase in Net Power Production Expense/Retail MWh over the same time frame. Likewise, Ameren Missouri has experienced the 5th largest increase in rates over the study period, but its Net Plant/Retail MWh grew at the 5th lowest pace (just 49% of Westar's growth over this time frame).



In Exhibit 32 below, Staff presents 2017 Retail Revenue/kWh versus Industrial Sales Mix (the percentage of Total Retail Sales represented by Industrial Retail Sales MWhs). As you can see from this graph, the higher a utility's Industrial Sales Mix, the lower its rates are likely to be, and vice versa. For example, nearly 75% of Minnesota Power's total Retail Sales are from Industrial customers (compared to 30.04% on average for the study group). This allows them to maintain the 5th lowest rates of the study group, despite having average levels of Net Plant/Retail MWh and Total Retail Sales MWhs that are just 61.6% of the average. Another example that stands out from the graph is Northwestern Corporation. Northwestern has the lowest Industrial Sales Mix of the study group, at 8.56% of Total Retail Sales. Northwestern also has the 6th highest rates of the study group in 2017, despite having Net Plant/Retail MWh that is below the average of the group (ranked 12th), and nearly average Net Power Production Expense/Retail MWh and Total O&M Expense/MWh, ranked 10th and 9th, respectively.



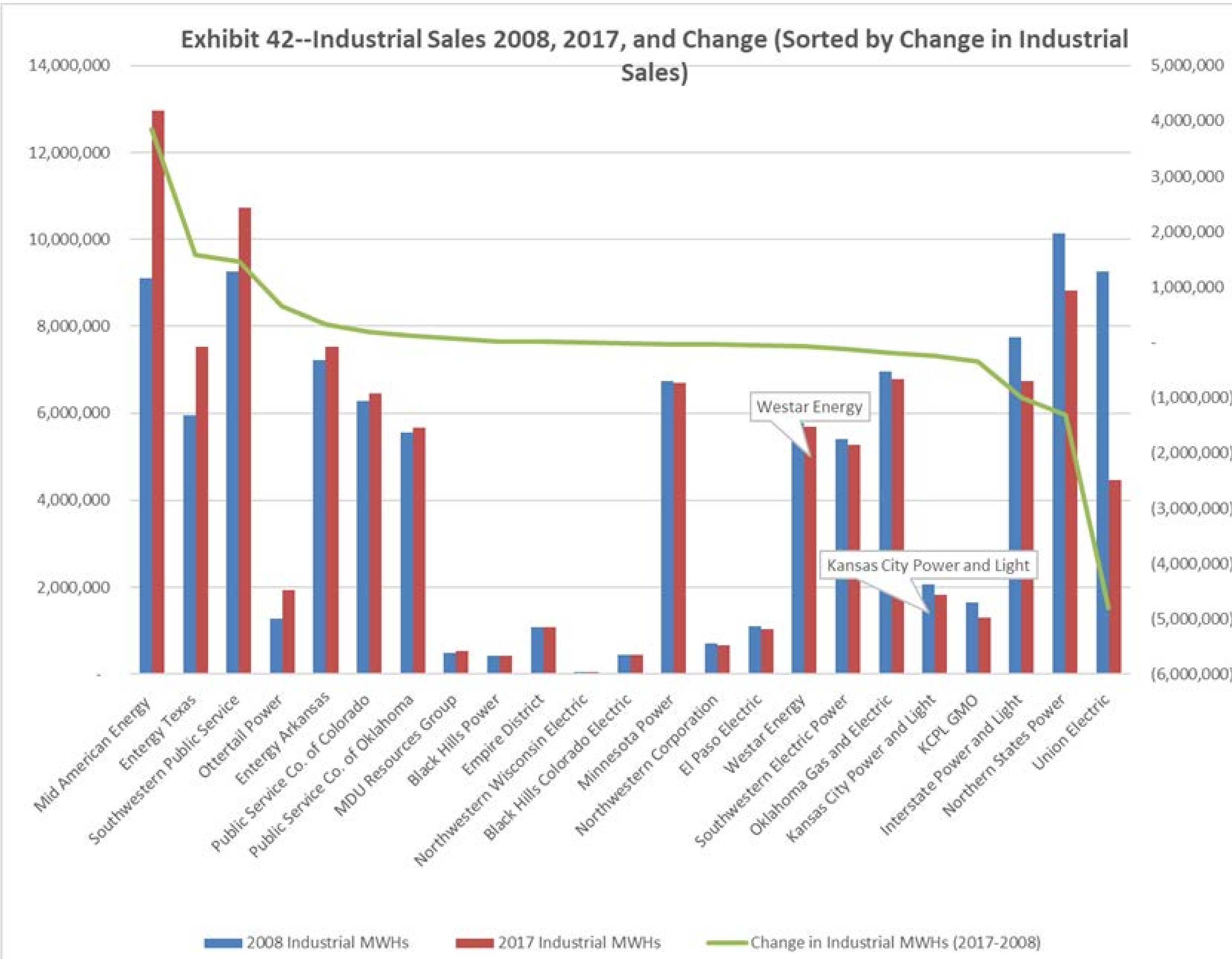
On the last graph below, Exhibit 31, comparing 2017 Retail Rate Revenue/kWh to 2017 Industrial Sales MWhs, it's easy to see that very low Industrial Sales levels are likely to be accompanied by high rates, and vice versa. There are a few exceptions to this relationship though, one being Northern States Power (NSP). While NSP has the 3rd highest Industrial Sales Load of the study group, it has the 8th highest rates. Staff attributes this to the fact that NSP has the 3rd highest Net Power Production Expense/Retail MWh and Total O&M Expense/MWh of the group.



So, are changes in Industrial Sales MWhs a cause of rate changes, or are they a symptom of rate changes? Probably a little of both, but one example suggests that significant changes in Industrial sales load can have a significant impact on rate levels. Ameren Missouri, for example, has experienced a dramatic reduction in its Industrial Sales MWh profile, losing 51% of its Industrial Sales MWhs since 2008. During this time, Ameren Missouri went from having the 3rd highest Industrial Sales Load in 2008, to the 13th highest in 2017. This loss of load does not appear to have been the result of high rates, as Ameren Missouri's rates were the 2nd lowest in the group in 2008, and they are still below average at $.0932/kWh (ranked 13th in the group). However, with this loss of Industrial Load, Ameren Missouri has experienced the 5th largest increase in rates of the group, at $.0360/kWh, right below Westar's rate increases during this time. This is despite the fact that Ameren Missouri's Net Plant/Retail MWh has grown at just 73% of the average growth in Net Plant of the study group (5th lowest growth in Net Plant/Retail MWh).

The last graph of this section illustrates how there have been significant winners of Industrial Sales MWhs and significant losers of Industrial Sales MWhs between 2008-

2017, but for most of the members of the study group, there has not been that much change in Industrial Sales MWhs. On Exhibit 42 below, the blue bars represent 2008 Industrial Sales MWhs, the red bars represent 2017 Industrial Sales MWhs (both presented on the left axis) and the green line represents the change between the two (presented on the right axis).



For comparison purposes, the three utilities with the highest growth in Industrial Sales MWhs during this period were MidAmerican, Entergy Texas, and Southwestern Public Service. These three utilities' rates declined on average $(.0045/kWh) during this period.[81] The three utilities with the largest reduction in Industrial Sales MWhs during

[81] MidAmerican's rates increased $.0137/kWh, Southwestern Public Service's rates decreased by $(.0041)/kWh, and Entergy Texas' rates decreased by $(.0231)/kWh. These rate changes ranked 10th lowest, 4th lowest, and the lowest observation, respectively, out of the study group.

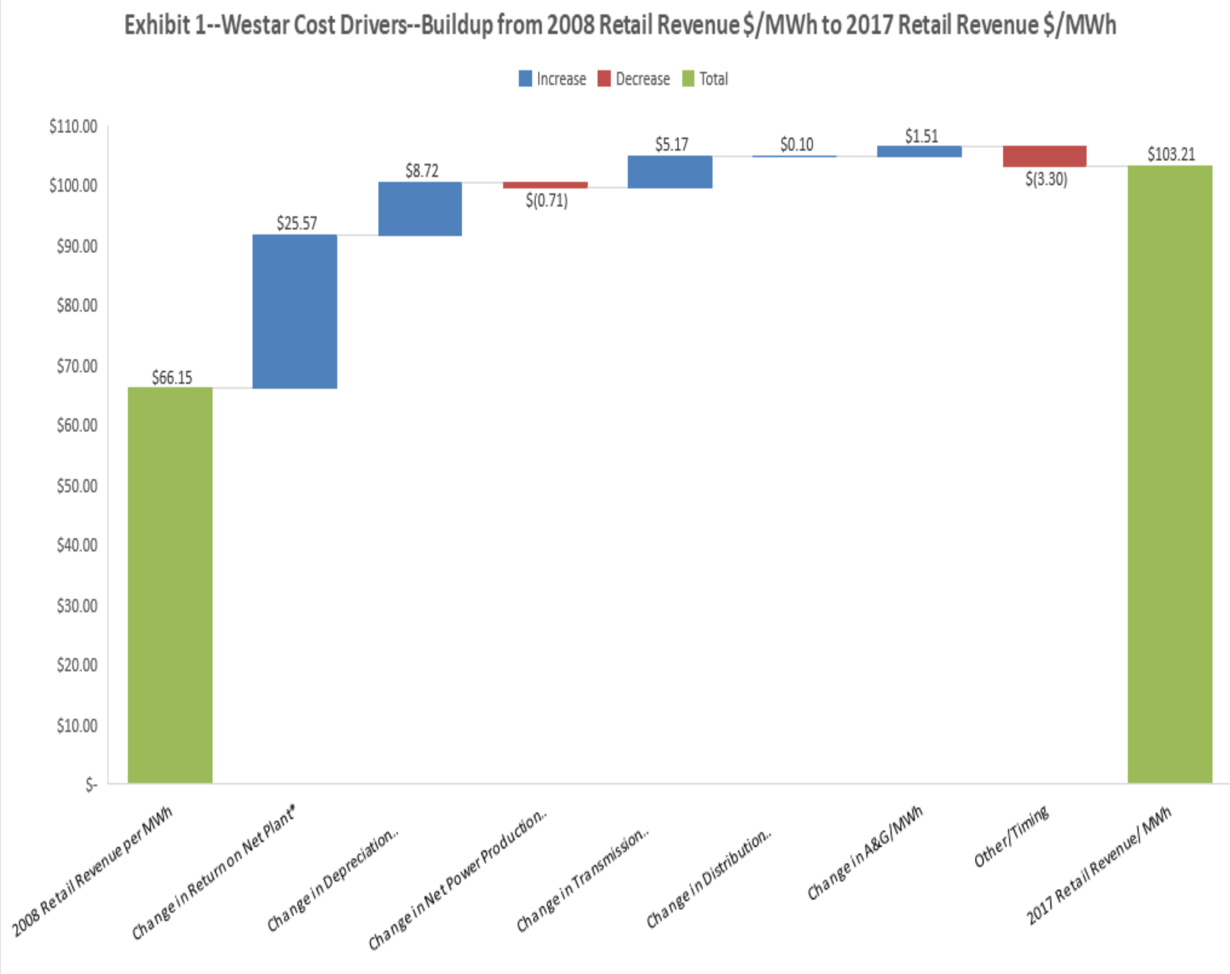
this period were Union Electric (Ameren Missouri), Northern States Power, and Interstate Power and Light. These three utilities' rates increased on average $.0292/kWh.[82]

E. Detailed Examination of Westar and KCP&L Cost Drivers

In this section we detail our findings as it relates to Westar and KCP&L's cost drivers, as reported in their FERC FORM 1s. This section is not a substitute for the detailed section above on the rate history of Westar and KCP&L before the Kansas Corporation Commission, as that information presents the actual history of rate changes, what the specific drivers were by rate case or surcharge mechanism, and how those rate change categories/drivers compare to the total amount of rate changes during the study period. However, because utility ratemaking is so closely influenced by a utilities' underlying cost of providing utility service, a detailed examination of the changes in Westar and KCP&L's costs overtime is instructive and appropriate for this study. To begin, we present the following waterfall graphs that present Westar and KCP&L's Total Retail Revenue/kWh in 2008, the cost drivers that have contributed to changing rates, and the ultimate level of Retail Revenue/kWh in 2017. First, Exhibit 1, with Westar:

[82] Union Electric's rates increased $.0360/kWh, Interstate Power and Light's rates increased by $.0266/kWh, and Northern States Power's rates increased by $.0251/kWh. These rare changes ranked 5th, 7th, and 8th highest, respectively, out of the study group.

Utility	2008 Retail Revenue per MWh	Change in Return on Net Plant*	Change in Depreciation Expense/Retail MWh	Change in Net Power Production Expense Less SFR/Retail MWh	Change in Transmission Expense/MWh	Change in Distribution Expense/MWh	Change in A&G/MWh	Other/Timing	2017 Retail Revenue/ MWh
Westar Energy	$ 66.15	$ 25.57	$ 8.72	$ (0.71)	$ 5.17	$ 0.10	$ 1.51	$ (3.30)	$ 103.21



*Change in Return on Net Plant calculated as (2017 Net Plant/Retail MWh * Pre-Tax ROR from 15-WSEE-115-RTS Docket) less (2008 Net Plant/Retail MWh * Pre-Tax ROR from 08-WSEE-1041-RTS Docket)

This graph was created from data taken from Westar's FERC FORM 1, as calculated by Staff. The first green bar starts with Westar's 2008 Retail Revenue/MWh of $66.15/MWh, then adds the identified cost drivers together to arrive at Westar's 2017 Retail Revenue/MWh, $103.21. Each of the drivers identified, Return on Net Plant/Retail MWh[83], Depreciation Expense/Retail MWh, Net Power Production

83 To calculate the Return on Net Plant/Retail MWh, Staff first calculated Net Plant/Retail MWh for 2008, then applied Westar's Commission-authorized Pre-Tax Rate of Return (the Weighted Average Cost of

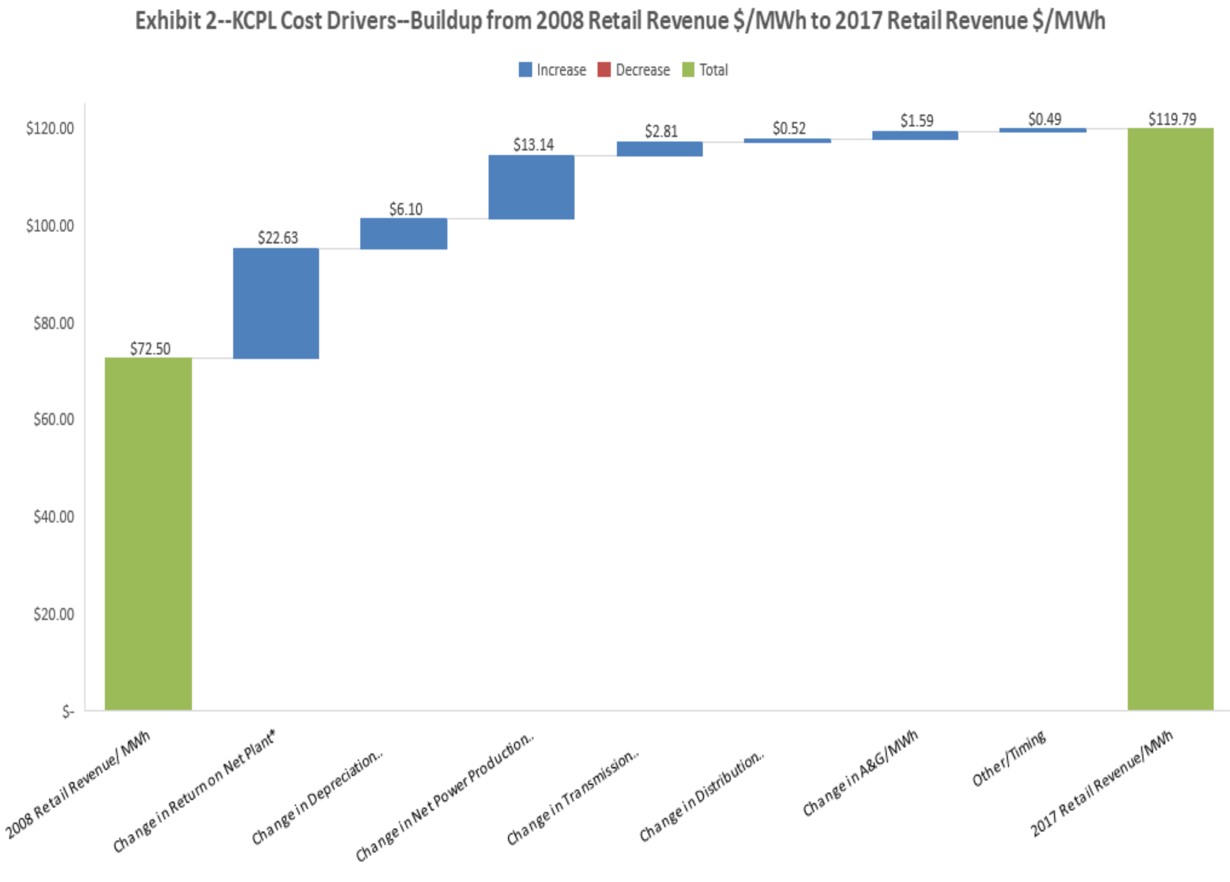
Expense/Retail MWh, Transmission Expense/MWh, Depreciation Expense/MWh and A&G Expense/MWh are all calculated as the difference between each of these values as calculated for 2017, less each of these values as calculated for 2008. What is obvious from this chart is that the change in Return on Net Plant, and the associated Depreciation Expense, explains almost all of the increase in Westar's Retail Rate Level/kWh during this period. Transmission Expense/MWh has also increased significantly for Westar, owing to Westar's substantial Transmission investment, and the substantial transmission investment that has taken place in the Southwest Power Pool (SPP) during this period. This also shows that Net Power Production Expense has not changed much for Westar during these ten years. What is also evident from this graph is that the change in Westar's A&G Expense/MWh has not been a major contributing factor to Westar's rate changes. There is also an error factor of around 3% that cannot be explained by the changes in cost categories as we've calculated.[84]

Next, Exhibit 2— with KCP&L:

Capital after being adjusted for State and Federal Income Tax Expense) adopted by the Commission in the 08-WSE-1041-RTS rate proceeding. The same calculation was done for 2017, using the Pre-tax Rate of Return established by the Commission in the 15-WSEE-115-RTS Docket (the rate of return that would have been in effect for 2017). Then the difference between the two was calculated.

[84] As noted above, this analysis is not perfect, because it does not account for the difference between FERC-regulated returns on investment and KCC-regulated returns on investment, and because there are necessarily time delays between when a utility incurs costs and when those costs affect the revenue requirement.

Utility	2008 Retail Revenue/ MWh	Change in Return on Net Plant*	Change in Depreciation Expense/Retail MWh	Change in Net Power Production Expense Less SFR /Retail MWh	Change in Transmission Expense/MWh	Change in Distribution Expense/MWh	Change in A&G/MWh	Other/Timing	2017 Retail Revenue/ MWh
KCPL	$ 72.50	$ 22.63	$ 6.10	$ 13.14	$ 2.81	$ 0.52	$ 1.59	$ 0.49	$ 119.79



*Change in Return on Net Plant calculated as (2017 Net Plant/Retail MWh * Pre-Tax ROR from 15-KCPE-116-RTS Docket) less (2008 Net Plant/Retail MWh * Pre-Tax ROR from 07-KCPE-905-RTS Docket)

This graph, like the one presented regarding Westar above, was created solely from data taken from KCPL's FERC Form 1, then used to calculate changes in cost drivers per Retail MWh or Total MWh, as indicated. Also like the Westar graph, because the source data used for this analysis was taken from KCP&L's FERC FORM 1, it contains a blending of Kansas and Missouri jurisdictional data, so there is necessarily going to be an error factor in this analysis. Notwithstanding those caveats, the major drivers behind KCP&L's Total Rate Revenue/kWh during this period are obviously the change in Return on Net Plant/Retail MWh[85], and the Depreciation Expense/Retail MWh that

[85] To calculate this change in return on Net Plant/kWh Staff used the same methodology described above for Westar, instead using the Commission-Authorized Pre-Tax Rate of Return (Pre-Tax ROR) from the 07-

accompanies that change in Net Plant. Also, KCP&L's Net Power Production Expense/Retail MWh has increased significantly during this period, accounting for 27.89% of the increase in Retail Rate Revenue during this period.[86] Changes in Transmission Expense/MWh were around half the impact on KCPL's costs as compared to Westar's increase in this expense. Also, Distribution Expense/MWh and A&G Expense/MWh had negligible impact as one can see by examining the chart.

F. Peer Company Benchmarking and Cost Driver Review

In this section we evaluate and compare against one another, each of the 23 companies in the study group, including Westar and KCP&L, on their major cost categories and sales levels that are relevant to an evaluation of a utility's Total Retail Revenue/kWh or the change in Total Retail Revenue/kWh from 2008-2017. We have split these factors into two tiers, the 1st tier typically being the most relevant or explanatory, however, there are exceptions where the 2nd tier factors prove to be more important or relevant for an individual utility and its Total Retail Revenue/kWh levels. Also, the 2nd tier factors include items like A&G Expense/MWh and Total Salaries and Wages/MWh, which are not always major contributing factors to ultimate rate levels or rate changes, but often are of great concern to policymakers and the public generally.

First, we present two tables that compare 2017 Retail Revenue/kWh to the 1st tier factors, and then the 2nd tier factors. We will then discuss our observations about Westar and KCP&L, as presented in these tables. Then, we will present two tables that compare the change in Retail Rate Revenue/kWh from 2008 to 2017 to our two tiers of cost and sales data, with a discussion of our observations about Westar and KCP&L following that. Last, we will present and discuss each of the 21 other companies in the study group with a discussion of how these companies rank on certain important cost/sales categories, with special emphasis on the cost/sales categories we believe are most explanatory or relevant to each peer companies' 2017 Retail Revenue/kWh or the change in Retail Revenue/kWh from 2008-2017. In these charts, each column of data is conditionally formatted such that the highest values in that category are shaded red, the lowest categories are shaded green, and middle values are shaded yellow. Additionally, each value for each cost/sales category is ranked from high to low to show where each peer utility company ranks versus its peers within that category.

KCPE-905-RTS case (for the 2008 data year) and the Pre-Tax ROR from the 15-KCPE-116-RTS case for the 2017 data year.

[86] $13.14/MWh / $47.29 of increased Retail Revenue/MWh = 27.78%.

Exhibit 4--1st Tier Explanatory Factors Vs. 2017 Retail Revenue Per kWh (Sorted by 2017 Retail Revenue per kWh)

	2017 Retail Revenue per kWh	(High to Low)	2017 Net Plant Per Retail MWh	(High to Low)	2017 Industrial MWHs	(High to Low)	2017 Total Retail Sales MWHs	(High to Low)	2017 Total Power Production Expense Less SFR Per Retail MWh	(High to Low)	2017 Total Electric O&M Per MWh	(High to Low)
Black Hills Colorado Electric	$ 0.1294	1	$ 377.98	6	433,761	21	1,901,235	21	$ 60.18	2	$ 82.69	2
Kansas City Power and Light	**$ 0.1198**	**2**	**$ 441.48**	**4**	**1,814,780**	**15**	**14,534,482**	**12**	**$ 33.20**	**12**	**$ 45.72**	**18**
Northwestern Wisconsin Electric	$ 0.1195	3	$ 220.38	21	42,378	23	168,116	23	$ 60.49	1	$ 83.81	1
Black Hills Power	$ 0.1173	4	$ 503.26	1	430,300	22	1,759,765	22	$ 26.38	20	$ 53.59	12
Empire District	$ 0.1147	5	$ 420.12	5	1,080,150	17	4,515,535	19	$ 27.97	17	$ 60.80	5
Northwestern Corporation	$ 0.1132	6	$ 321.86	12	659,409	19	7,705,578	17	$ 35.85	10	$ 55.20	9
El Paso Electric	$ 0.1049	7	$ 348.52	9	1,045,319	18	7,843,959	16	$ 39.05	6	$ 50.46	15
Northern States Power	$ 0.1046	8	$ 306.64	16	8,829,073	3	34,065,667	1	$ 51.44	3	$ 68.04	3
Westar Energy	**$ 0.1032**	**9**	**$ 463.92**	**3**	**5,688,830**	**10**	**19,293,184**	**8**	**$ 24.35**	**21**	**$ 45.95**	**17**
Interstate Power and Light	$ 0.1014	10	$ 317.38	13	6,733,293	7	14,393,847	13	$ 27.86	18	$ 61.50	4
KCPL GMO	$ 0.0963	11	$ 304.53	17	1,289,913	16	7,931,919	15	$ 30.81	15	$ 57.12	7
Public Service Co. of Colorado	$ 0.0955	12	$ 317.07	14	6,449,173	9	28,628,812	3	$ 39.00	7	$ 51.78	14
Union Electric	$ 0.0932	13	$ 311.80	15	4,464,551	13	31,597,238	2	$ 27.03	19	$ 43.49	21
MDU Resources Group	$ 0.0922	14	$ 355.71	7	539,877	20	3,306,470	20	$ 34.64	11	$ 59.66	6
Southwestern Electric Power	$ 0.0839	15	$ 351.05	8	5,267,845	12	17,147,210	11	$ 32.96	13	$ 43.84	20
Entergy Arkansas	$ 0.0833	16	$ 327.00	11	7,528,301	4	20,888,456	6	$ 36.40	9	$ 48.56	16
Oklahoma Gas and Electric	$ 0.0787	17	$ 274.54	18	6,777,520	6	26,277,891	4	$ 38.74	8	$ 54.59	10
Ottertail Power	$ 0.0773	18	$ 257.95	19	1,938,423	14	4,814,984	18	$ 31.46	14	$ 54.50	11
Minnesota Power	$ 0.0753	19	$ 330.48	10	6,697,793	8	8,997,352	14	$ 19.31	22	$ 45.60	19
Public Service Co. of Oklahoma	$ 0.0750	20	$ 203.34	22	5,668,890	11	18,026,293	10	$ 39.45	5	$ 56.93	8
Entergy Texas	$ 0.0736	21	$ 174.55	23	7,520,955	5	18,058,445	9	$ 44.84	4	$ 52.41	13
Mid American Energy	$ 0.0728	22	$ 477.08	2	12,964,048	1	24,561,979	5	$ 18.92	23	$ 31.11	23
Southwestern Public Service	$ 0.0678	23	$ 241.23	20	10,721,063	2	19,305,301	7	$ 30.18	16	$ 42.44	22
Average	$ 0.0953		$ 332.52		4,547,202		14,596,683		$ 35.24		$ 54.34	
High	$ 0.1294		$ 503.26		12,964,048		34,065,667		$ 60.49		$ 83.81	
Low	$ 0.0678		$ 174.55		42,378		168,116		$ 18.92		$ 31.11	
Westar Vs. Average	$ 0.0079		$ 131.40		1,141,628		4,696,501		$ (10.8851)		$ (8.39)	
KCP&L Vs. Average	$ 0.0245		$ 108.96		(2,732,422)		(62,201)		$ (2.0380)		$ (8.61)	

Exhibit 5--2nd Tier Explanatory Factors Vs. 2017 Retail Revenue Per kWh (Sorted by 2017 Retail Revenue per kWh)

	2017 Retail Revenue per kWh	(High to Low)	2017 Transmission Expense Per MWh	(High to Low)	2017 Distribution Expense Per MWh	(High to Low)	2017 A&G per MWh	(High to Low)	2017 Salaries and Wages Per MWh	(High to Low)	2017 Industrial Sales as % of Total Retail Sales	(High to Low)	2017 Number of Customers	(High to Low)
Black Hills Colorado Electric	$ 0.1294	1	$ 3.18	16	$ 7.62	2	$ 12.17	6	$ 11.46	10	22.81%	16	96,126	21
Kansas City Power and Light	**$ 0.1198**	**2**	**$ 4.03**	**15**	**$ 2.63**	**17**	**$ 10.35**	**10**	**$ 11.84**	**7**	**12.49%**	**22**	**539,416**	**9**
Northwestern Wisconsin Electric	$ 0.1195	3	$ 0.89	23	$ 8.15	1	$ 13.66	2	$ 16.02	4	25.21%	13	13,898	23
Black Hills Power	$ 0.1173	4	$ 9.15	3	$ 4.23	7	$ 9.74	11	$ 8.77	13	24.45%	14	72,026	22
Empire District	$ 0.1147	5	$ 5.17	12	$ 5.14	3	$ 13.57	3	$ 21.85	1	23.92%	15	171,839	17
Northwestern Corporation	$ 0.1132	6	$ 4.87	13	$ 5.00	5	$ 11.46	7	$ 11.77	8	8.56%	23	431,099	13
El Paso Electric	$ 0.1049	7	$ 1.93	19	$ 2.04	19	$ 12.61	5	$ 9.70	11	13.33%	21	415,629	14
Northern States Power	$ 0.1046	8	$ 9.07	4	$ 2.73	14	$ 10.61	9	$ 14.80	5	25.92%	11	1,466,398	1
Westar Energy	**$ 0.1032**	**9**	**$ 8.67**	**5**	**$ 2.71**	**15**	**$ 7.67**	**17**	**$ 7.92**	**17**	**29.49%**	**10**	**706,505**	**7**
Interstate Power and Light	$ 0.1014	10	$ 18.01	1	$ 1.98	20	$ 10.62	8	$ 9.51	12	46.78%	4	489,611	11
KCPL GMO	$ 0.0963	11	$ 5.65	11	$ 4.18	8	$ 16.64	1	$ 11.92	6	16.26%	19	323,476	16
Public Service Co. of Colorado	$ 0.0955	12	$ 1.50	20	$ 2.68	16	$ 8.93	14	$ 8.03	16	22.53%	17	1,459,191	2
Union Electric	$ 0.0932	13	$ 2.28	18	$ 3.31	11	$ 8.76	15	$ 11.76	9	14.13%	20	1,215,799	3
MDU Resources Group	$ 0.0922	14	$ 11.01	2	$ 4.59	6	$ 9.44	13	$ 16.35	3	16.33%	18	142,901	19
Southwestern Electric Power	$ 0.0839	15	$ 4.56	14	$ 3.27	12	$ 3.96	23	$ 5.31	21	30.72%	9	534,632	10
Entergy Arkansas	$ 0.0833	16	$ 1.44	21	$ 2.92	13	$ 9.52	12	$ 3.93	22	36.04%	7	708,864	6
Oklahoma Gas and Electric	$ 0.0787	17	$ 6.01	10	$ 3.44	10	$ 7.70	16	$ 8.39	14	25.79%	12	838,252	4
Ottertail Power	$ 0.0773	18	$ 6.18	9	$ 3.52	9	$ 13.53	4	$ 18.70	2	40.26%	6	131,852	20
Minnesota Power	$ 0.0753	19	$ 6.28	8	$ 1.74	22	$ 7.19	18	$ 8.05	15	74.44%	1	146,370	18
Public Service Co. of Oklahoma	$ 0.0750	20	$ 7.23	6	$ 5.12	4	$ 5.57	20	$ 5.62	20	31.45%	8	550,023	8
Entergy Texas	$ 0.0736	21	$ 1.36	22	$ 1.86	21	$ 5.29	21	$ 3.38	23	41.65%	5	446,771	12
Mid American Energy	$ 0.0728	22	$ 2.29	17	$ 2.63	18	$ 5.89	19	$ 6.92	18	52.78%	3	770,335	5
Southwestern Public Service	$ 0.0678	23	$ 7.06	7	$ 1.33	23	$ 5.26	22	$ 6.85	19	55.53%	2	389,818	15
Average	$ 0.0953		$ 5.56		$ 3.60		$ 9.57		$ 10.38		30.04%		524,384	
High	$ 0.1294		$ 18.01		$ 8.15		$ 16.64		$ 21.85		74.44%		1,466,398	
Low	$ 0.0678		$ 0.89		$ 1.33		$ 3.96		$ 3.38		8.56%		13,898	
Westar Vs. Average	$ 0.0079		$ 3.11		$ (0.89)		$ (1.90)		$ (2.46)		-0.55%		182,121	
KCP&L Vs. Average	$ 0.0245		$ (1.53)		$ (0.97)		$ 0.78		$ 1.45		-17.55%		15,032	

As you can see from these tables, Westar's Total Retail Revenue/kWh was $10.32/kWh in 2017, the 9th highest Retail Rate Revenue/kWh in the study group in 2017. Also, this was $.0079/kWh (8.28%) higher than the average Retail Rate Revenue/kWh in the study group in 2017. Westar served 706,705 customers in Kansas at the end of 2017, which was the 7th highest observation in the group. Westar's Net Plant/Retail MWh was the 3rd highest in the group, at $463.92/MWh, $130/MWh higher than the group average. Westar had slightly above average Industrial Sales MWhs, and above average Total Retail MWhs, ranking 10th and 8th amongst the study group for these observations, respectively. Westar also had slightly below average Industrial Sales Mix, at 29.49% (10th) of Total Retail Sales, vs. 30.04% for the group. Westar had the 3rd lowest Net Power Production Expense/Retail MWh amongst the group, at $24.35/MWh, almost $11/MWh less than the average for the group. Westar also had low Total O&M Expense/MWh, the 7th lowest in the group at $45.95/MWh, which is $8.39/MWh less than average. Westar's Transmission Expense/MWh was $3.11/MWh higher than the group average and ranked 5th highest in the group, at $8.67/MWh. Westar's Distribution Expense/MWh (15th), A&G Expense/MWh (7th lowest), and Total Salaries and Wages/MWh (7th lowest), were all significantly below the average for the group. Referring to our three key factors/cost drivers discussed earlier in the report, Westar has high Net Plant, low Net Power Production Expenses, and average Industrial Sales MWhs and Industrial Sales Mix. This all adds up to a utility with rates that are 8.28% higher than average during 2017.

KCP&L's Total Retail Revenue/kWh was $.1198/kWh in 2017, the 2nd highest Retail Rate Revenue/kWh in the study group for 2017. Also, this was $.0245/kWh (25.70%) higher than the average Retail Rate Revenue/kWh in the study group in 2017. This can be explained by two primary factors, first, KCP&L's Net Plant/Retail MWh was the 4th highest in the group, at $441.48/MWh, versus $332.52/kWh for the study group. Second, KCP&L's Industrial Sales Mix of just 12.5% is the 2nd lowest of the study group. Additionally, KCP&L's Industrial Sales MWhs are 60% less than the average of the group. KCP&L's Total Retail Sales MWhs are very close to average at just half of one percent less than the average of the study group. KCP&L's Net Power Production Expense/Retail MWh is just below the average of the group, at $33.020/MWh (versus $35.20/MWh for the group average). Its Total O&M/MWh is $45.72/MWh, which is the 6th lowest among the group. KCP&L has below average Transmission Expense/MWh (15th highest) and Distribution Expense/MWh (17th highest). It's A&G Expense/MWh was $10.35/MWh, versus $9.57/MWh for the group (10th highest) and its Total Salaries and Wages/MWh was $11.84/MWh, versus $10.38/MWh for the group (7th highest). Referring to our three key factors/cost drivers discussed before, KCP&L has high Net Plant, average Net Power Production Expenses and low Industrial Sales and Industrial Sales Mix. This adds up to a utility with the second highest Retail Revenue/kWh in the study group, at 25.70% above the average for the group.

Next, we present two tables comparing the change in Total Retail Revenue/kWh from 2008-2017 versus two tiers of cost/sales data. These tables are essentially presented in the same fashion as the two previous tables, but this time it is the change in each of these factors that is evaluated and compared amongst the companies in the study group, because the tables are attempting to explain the change in Retail Revenue/kWh instead of the 2017 level.

Exhibit 6--1st Tier Explanatory Factors Vs. Change in Retail Revenue Per kWh (Sorted by Change in Retail Revenue per kWh 2017-2008)

	Change in Retail Revenue per kWh (2017-2008)	(High to Low)	Change in Net Plant Per Retail MWh (2017-2008)	(High to Low)	Change in Industrial MWHs (2017-2008)	(High to Low)	Change in Total Retail Sales MWhs (2017-2008)	(High to Low)	2017-2008 Total Power Production Expense Less SFR Per Retail MWh	(High to Low)	2017-2008 Total Electric O&M Per MWh	(High to Low)
Kansas City Power and Light	**$ 0.0473**	**1**	**$ 242.67**	**4**	**(246,326)**	**19**	(724,030)	**19**	**$ 13.14**	**1**	**$ 7.50**	**7**
Black Hills Power	$ 0.0425	2	$ 264.10	2	15,879	9	86,832	12	$ 6.33	4	$ 4.88	9
Black Hills Colorado Electric	$ 0.0389	3	$ 283.08	1	(18,824)	12	155,320	11	$ 1.65	6	$ 9.71	5
Westar Energy	**$ 0.0371**	**4**	**$ 254.71**	**3**	**(79,840)**	**16**	(421,293)	**18**	**$ (0.71)**	**9**	**$ 1.35**	**11**
Union Electric	$ 0.0360	5	$ 124.91	19	(4,790,959)	23	(6,383,388)	23	$ 9.89	3	$ 8.90	6
Empire District	$ 0.0329	6	$ 224.93	6	6,900	10	(256,442)	17	$ (9.50)	16	$ 10.31	3
Interstate Power and Light	$ 0.0266	7	$ 195.55	10	(1,008,894)	21	(1,567,502)	21	$ (8.28)	14	$ 9.94	4
Northern States Power	$ 0.0251	8	$ 169.36	12	(1,314,503)	22	(2,140,322)	22	$ 2.27	5	$ 4.75	10
MDU Resources Group	$ 0.0215	9	$ 230.50	5	57,465	8	643,018	6	$ 1.31	8	$ 12.57	2
Minnesota Power	$ 0.0213	10	$ 218.21	8	(39,540)	13	(141,037)	15	$ (2.93)	10	$ 6.76	8
KCPL GMO	$ 0.0178	11	$ 153.54	15	(355,507)	20	(1,125,148)	20	$ (11.50)	17	$ (4.63)	14
Northwestern Corporation	$ 0.0163	12	$ 186.14	11	(49,495)	14	375,946	8	$ (14.73)	19	$ (5.11)	15
Southwestern Electric Power	$ 0.0148	13	$ 218.34	7	(134,076)	17	(24,580)	14	$ (8.54)	15	$ (5.81)	17
Mid American Energy	$ 0.0137	14	$ 207.80	9	3,852,707	1	3,633,022	1	$ 11.32	2	$ (3.01)	13
Ottertail Power	$ 0.0105	15	$ 64.36	21	653,272	4	570,607	7	$ 1.34	7	$ 19.67	1
Oklahoma Gas and Electric	$ 0.0081	16	$ 137.23	16	(189,157)	18	871,711	4	$ (7.50)	13	$ (0.32)	12
Public Service Co. of Colorado	$ 0.0081	17	$ 155.68	14	175,876	6	357,491	9	$ (13.74)	18	$ (10.44)	20
Entergy Arkansas	$ 0.0024	18	$ 124.98	18	316,826	5	(149,446)	16	$ (5.92)	11	$ (8.69)	18
Northwestern Wisconsin Electric	$ 0.0012	19	$ 39.98	23	72	11	(2,098)	13	$ (6.49)	12	$ (5.61)	16
Southwestern Public Service	$ (0.0041)	20	$ 131.73	17	1,453,838	3	1,111,430	3	$ (21.37)	22	$ (16.28)	21
Public Service Co. of Oklahoma	$ (0.0050)	21	$ 81.16	20	117,722	7	272,835	10	$ (19.05)	21	$ (10.32)	19
El Paso Electric	$ (0.0057)	22	$ 162.45	13	(56,958)	15	809,605	5	$ (14.89)	20	$ (17.09)	22
Entergy Texas	$ (0.0231)	23	$ 53.24	22	1,572,562	2	2,524,958	2	$ (28.88)	23	$ (36.41)	23
Average	$ 0.0167		$ 170.64		(2,650)		(66,196)		$ (5.51)		$ (1.19)	
High	$ 0.0473		$ 283.08		3,852,707		3,633,022		$ 13.14		$ 19.67	
Low	$ (0.0231)		$ 39.98		(4,790,959)		(6,383,388)		$ (28.88)		$ (36.41)	
Westar Vs. Average	$ 0.0204		$ 84.08		(77,190)		(355,097)		$ 4.80		$ 2.54	
KCP&L Vs. Average	$ 0.0306		$ 72.04		(243,676)		(657,834)		$ 18.65		$ 8.69	

Exhibit 7--2nd Tier Explanatory Factors Vs. Change in Retail Revenue Per kWh (Sorted by Change in Retail Revenue per kWh 2017-2008)

	Change in Retail Revenue per kWh (2017-2008)	Ranking (High to Low)	2017-2008 Transmission Expense Per MWh	Ranking (High to Low)	2017-2008 Distribution Expense Per MWh	Ranking (High to Low)	2017-2008 A&G Expense per MWh	Ranking (High to Low)	2017-2008 Salaries and Wages Per MWh	Ranking (High to Low)
Kansas City Power and Light	**$ 0.0473**	**1**	**$ 2.81**	**13**	**$ 0.52**	**12**	**$ 1.59**	**15**	**$ 1.52**	**11**
Black Hills Power	$ 0.0425	2	$ 5.88	3	$ 2.58	3	$ 2.28	11	$ 1.81	10
Black Hills Colorado Electric	$ 0.0389	3	$ (1.38)	23	$ 4.35	2	$ 1.84	14	$ 1.47	13
Westar Energy	**$ 0.0371**	**4**	**$ 5.17**	**7**	**$ 0.10**	**19**	**$ 1.51**	**16**	**$ 1.33**	**14**
Union Electric	$ 0.0360	5	$ 1.49	16	$ 0.31	16	$ 1.84	13	$ 2.70	8
Empire District	$ 0.0329	6	$ 4.10	11	$ 1.79	4	$ 6.74	1	$ 13.25	1
Interstate Power and Light	$ 0.0266	7	$ 12.84	1	$ 0.42	13	$ 3.31	6	$ 1.51	12
Northern States Power	$ 0.0251	8	$ 5.52	4	$ 0.25	18	$ 3.20	7	$ 3.60	4
MDU Resources Group	$ 0.0215	9	$ 8.47	2	$ 0.68	11	$ 1.29	18	$ 0.07	20
Minnesota Power	$ 0.0213	10	$ 4.65	10	$ 0.09	20	$ 0.08	22	$ (0.05)	21
KCPL GMO	$ 0.0178	11	$ 2.10	15	$ 0.73	9	$ 5.29	3	$ (0.43)	23
Northwestern Corporation	$ 0.0163	12	$ 2.49	14	$ 1.63	5	$ 5.05	4	$ 5.47	3
Southwestern Electric Power	$ 0.0148	13	$ 3.29	12	$ 0.72	10	$ 0.03	23	$ 0.89	15
Mid American Energy	$ 0.0137	14	$ 0.99	17	$ (0.47)	22	$ 1.45	17	$ 0.84	16
Ottertail Power	$ 0.0105	15	$ 4.73	9	$ 1.21	7	$ 5.37	2	$ 6.73	2
Oklahoma Gas and Electric	$ 0.0081	16	$ 5.02	8	$ 1.32	6	$ 2.53	10	$ 2.95	7
Public Service Co. of Colorado	$ 0.0081	17	$ 0.48	19	$ 0.78	8	$ 3.07	8	$ 2.48	9
Entergy Arkansas	$ 0.0024	18	$ 0.34	21	$ (0.74)	23	$ 3.94	5	$ 0.26	18
Northwestern Wisconsin Electric	$ 0.0012	19	$ 0.27	22	$ (0.44)	21	$ 0.96	19	$ 0.10	19
Southwestern Public Service	$ (0.0041)	20	$ 5.50	5	$ 0.39	14	$ 2.01	12	$ 3.07	6
Public Service Co. of Oklahoma	$ (0.0050)	21	$ 5.34	6	$ 4.98	1	$ 0.85	20	$ 0.70	17
El Paso Electric	$ (0.0057)	22	$ 0.42	20	$ 0.28	17	$ 2.76	9	$ 3.60	5
Entergy Texas	$ (0.0231)	23	$ 0.62	18	$ 0.34	15	$ 0.54	21	$ (0.18)	22
Average	$ 0.0167		$ 3.53		$ 0.95		$ 2.50		$ 2.33	
High	$ 0.0473		$ 12.84		$ 4.98		$ 6.74		$ 13.25	
Low	$ (0.0231)		$ (1.38)		$ (0.74)		$ 0.03		$ (0.43)	
Westar Vs. Average	$ 0.0204		$ 1.64		$ (0.85)		$ (0.99)		$ (1.00)	
KCP&L Vs. Average	$ 0.0306		$ (0.71)		$ (0.43)		$ (0.91)		$ (0.81)	

From these tables we can see that Westar had the 4th highest increase in Retail Revenue/kWh from 2008 to 2017, at $.0371/kWh. This was $.0204/kWh larger than the average rate increase of the group of $.0167/kWh. This attributed to Westar's increase in Net Plant/Retail MWh, which increased by the 3rd largest margin in the group, at $254.71/MWh (versus $170.64/MWh on average). Additionally, Westar experienced the 8th largest reduction in Industrial Sales MWhs, and the 6th largest reduction in Total Retail Sales MWhs during this time frame, ranking 16th and 18th for these observations, respectively. Additionally, Westar's Net Power Production Expense/Retail MWh was basically flat at $(.71)/MWh, while the study group average declined $(5.51)/MWh. Westar's Total O&M Expense/MWh also grew more than average, at $1.35/MWh, versus a study group average reduction at $(1.19)/MWh. Westar's Transmission Expense/MWh grew the 7th fastest of the group, at $5.17/MWh versus the average of $3.53/MWh. Offsetting this was the fact that Westar's Distribution Expense/MWh (5th lowest), A&G Expense/MWh (8th lowest), and Total Salaries and Wages/MWh (14th) grew below the average rate of the group, though these factors were only below the study group average around $1/MWh each. Focusing on our three key factors, Westar's Net Plant/Retail MWh grew the 3rd fastest, its Industrial Sales MWhs shrank by the 8th largest amount, and its Net Power Production Expense/Retail MWh, while basically flat at $(.71)/MWh was the 9th largest change in the 23 company group, as most of the peers in the study experienced significant reductions in this cost category.

KCP&L's Total Retail Revenue/kWh increased by $.0473/kWh, the largest increase in Retail Revenue/kWh of the study group from 2008-2017. This was $.0306/kWh higher than the average for the group. This is primarily attributed to KCP&L's growth in Net Plant/Retail MWh, which is the 4th highest in the group at $242.67/MWh (versus $170.64/MWh for the group average). Additionally, KCP&L has experienced the largest increase in Net Power Production Expense/Retail MWh of any utility in the study group, at $13.14/MWh. This occurred while the study group declined on average by $5.51/MWh. Lastly, KCP&L has experienced the 5th lowest growth in Industrial Sales Volumes and Total Retail Sales Volumes MWhs in the group. KCP&L has experienced the 7th highest increase in Total O&M Expense/MWh, but it has had below average increases in Transmission Expense/MWh (13th), Distribution Expense/MWh (12th), A&G Expense/MWh (15th), and Total Salaries and Wages/MWh (11th). With regard to our three key factors, KCP&L's Net Plant/Retail MWh increased by the 4th largest amount, its Net Power Production Expense/Retail MWH increased by the largest amount, and its Industrial Load decreased by the 5th largest amount. The combination of all three of these key variables moving in an adverse fashion were significant contributing factors to KCP&L's change in Retail Revenue/kWh during the study period.

Next, we include a discussion of each of the 21 peer companies included in the study, how each of them rank in terms of 2017 Total Retail Revenue/kWh and change in Retail Revenue/kWh from 2008-2017, and what we believe are the contributions to these rankings and observations. The discussion of each of the peer companies is presented in alphabetical order below. KCP&L and Westar are included, but only to present their generation capacity and environmental retrofit data as compared to the peers.

<u>Minnesota Power—Ultimate Parent, ALLETE, Inc.</u>

Minnesota Power (MP) is a vertically-integrated, regulated utility operating in Minnesota. MP had 146,370 customers in 2017, ranking 18th largest out of the 23 company study group. MP had the 5th lowest Retail Revenue/kWh of the group in 2017, at $.0753/kWh. Contributing to this fact is MP's Net Power Production Expense/MWh and Total O&M Expense/MWh, ranking 2nd lowest and 5th lowest, respectively. Additionally, MP has relatively low A&G Expense/MWh, ranking 6th lowest in the group. The most standout observation about MP is its Industrial Sales Mix, 74.44% of MP's Total Retail Sales in 2017 were reported as Industrial Sales per MP's FERC Form 1, the highest observation amongst the study group. This undoubtedly contributes to MP's low O&M per MWh, and relative low rate positioning amongst the study group.

MP's total Retail Revenue/kWh grew by $.0213/kWh during the 2008-2017 study period, ranking 10th highest in the group. MP's Net Plant/Retail MWh grew by $218.21/MWh, the 8th highest in the group. MP's Industrial Sales MWhs and Total Retail Sales volumes shrank by a larger margin than the average in the group, ranking 13th and 15th highest, respectively. MP's Net Power Production Expense/Retail MWh fell by less than the average of the group, ranking 10th highest, and its Total O&M Expense/Retail MWh grew by more than the average, ranking 8th highest. MP's Transmission Expense/MWh grew slightly more than average (10th), while it's A&G Expense and Total Salaries & Wages/MWh grew much below average, at the 2nd and 3rd lowest amongst the group, respectively.

MP's generation capacity mix is approximately 57% coal-fired, 27% wind, 6% hydro-electric, and 5% natural gas-fired. According to SNL Financial, approximately 60% of MP's coal fleet has been retrofitted with environmental controls since 2010.

MP's parent company, ALLETE, Inc., is an energy company headquartered in Duluth, Minn. In addition to its electric utilities, Minnesota Power and Superior Water, Light and Power of Wisconsin, ALLETE owns ALLETE Clean Energy, based in Duluth, BNI Energy in Bismarck, N.D., U.S. Water Services headquartered in St. Michael, Minn., and has an eight percent equity interest in the American Transmission Co.

<u>Black Hills Colorado Electric, Inc.—Ultimate Parent, Black Hills Corporation</u>

Black Hills Colorado Electric, Inc. (BHCE), is a regulated utility operating in Colorado. BHCE had 96,126 customers in 2017, the 3rd lowest customer count in the study group. BHCE had the highest Retail Revenue/kWh of all 23 companies studied, at $.1294 per kWh. Contributing to this are the facts that BHCE has the 2nd highest Net Power Production Expense and Total O&M Expense per MWh of the group, at $60.18/MWh, and $82.69/MWh, respectively. BHCE also has the 6th highest Net Plant/Retail MWh, and the 3rd lowest Industrial Sales MWhs and Total Retail Sales MWhs. BHCE also has the 2nd highest Distribution Expense/MWh.

In addition to high absolute rates, BHCE has also experienced the 3rd highest increase in total Retail Revenue/kWh in the study period (2008-2017). Contributing to this is the fact that BHCE experienced the highest increase in Net Plant/Retail MWh of all companies in the study at $283.08/MWh. BHCE also experienced the 6th highest increase in Net Power Production Expense/MWh and the 5th highest increase in Total O&M Expense/MWh.

BHCE's parent company, Black Hills Corp. is a utility company based in Rapid City, South Dakota; the company serves 1.25 million natural gas and electric utility customers in eight states: Arkansas, Colorado, Iowa, Kansas, Montana, Nebraska, South Dakota and Wyoming.

Black Hills Power, Inc.—Ultimate Parent, Black Hills Corporation

Black Hills Power, Inc. (BHP), is a vertically-integrated, regulated electric utility serving customers in South Dakota, Wyoming and Montana. BHP had 72,026 customers in 2017, the 2nd lowest amongst the study group. BHP had the 4th highest Retail Revenue/kWh in 2017 at $.1173/kWh. BHP had the highest Net Plant/Retail MWh in the study group, at $503.26/MWh. Likely contributing to this fact are BHP's low Total Retail Sales MWhs, and Industrial Sales MWhs, both of which are the 2nd lowest amongst the group. BHP also had the 4th lowest Net Power Production Expense/MWh, at $26.38/MWh, and the 3rd highest Transmission Expense/MWh, at $9.15/MWh.

BHP experienced the 2nd highest growth in Retail Revenue/kWh from 2008 to 2017. Contributing to this is the fact that BHP's Net Plant/Retail MWh increased by the 2nd largest margin, at $264.10/MWh. BHP also had the 4th largest increase in Net Power Production Expense/Retail MWh, increasing $6.33/MWh, when the group average fell by $(5.51)/MWh. During this time BHP experienced the 3rd highest increase in Transmission Expense/MWh and Distribution Expense /MWh, but below average A&G Expense/MWh and Total Salaries and Wages/MWh. A bright spot for BHP was its Industrial Sales MWhs and Total Retail Sales MWhs, both increasing faster than the average of the group, and ranked 9th and 12th amongst the group, respectively.

BHP's generation capacity at the end of 2017 is fairly evenly distributed between coal-fired (46%) and natural gas-fired capacity (52%).

BHCE's parent company, Black Hills Corp. is a utility company based in Rapid City, South Dakota; the company serves 1.25 million natural gas and electric utility customers in eight states: Arkansas, Colorado, Iowa, Kansas, Montana, Nebraska, South Dakota and Wyoming.

El Paso Electric Company

El Paso Electric Company (El Paso) is a vertically-integrated, regulated electric utility serving customers in New Mexico and Texas. El Paso had 415,629 customers in 2017, ranking 14th out of 23 companies in the study group. El Paso's total Retail Revenue/kWh was $.1049 in 2017, the 7th highest in the study group. Despite having above average cost retail rates, El Paso experienced the 2nd greatest reduction in retail rates during the 2008-2017 period, as El Paso's rates were the 2nd highest in the study group in 2008. The greatest contributing factor to El Paso's relative rate decline has been its reduction in Net Power Production Expense/MWh, which declined by $14.89/MWh, the 4th largest decline in the study group. El Paso also experienced the 2nd largest reduction in Total O&M Expense/MWh, declining $17.09/MWh. Despite this decline, El Paso still has relatively high Net Power Production Expenses in 2017, at $39.05/Retail MWh, the 6th highest in the study group. El Paso has below average Industrial Sales MWhs (18th) and Total Retail Sales MWhs (16th), but its Total Retail Sales MWhs grew the 5th largest from 2008 to 2017. El Paso has the 3rd lowest Industrial Sales Mix as a Percentage of Total Retail Sales and the 5th highest A&G expense per MWh.

El Paso's generation capacity consists of nuclear power production (28%), and natural gas (72%). This has undoubtedly contributed to El Paso's relative rate decline during this time frame, as natural gas prices have declined precipitously since 2008 at the beginning of the study period.

<u>Empire District Electric Company, Inc.—Ultimate Parent, Algonquin Power and Utilities Corp.</u>

Empire District Electric Company (Empire) is a vertically-integrated, regulated electric and gas utility serving electric customers in Kansas, Missouri, Arkansas, and Oklahoma. Empire serves 171,839 customers in 2017 (17th), less than 5% of which are Kansas customers. Empire's 2017 Retail Revenue/kWh was the 5th highest in the group, at $.1147/kWh. Contributing to Empire's relatively high 2017 rates are the fact that Empire had the 5th lowest Total Retail Sales MWhs and the 7th lowest Industrial Sales MWhs in the group in 2017. Additionally, Empire had the 5th highest Net Plant/Retail MWh, at $420.12/MWh. Empire also had the 3rd highest Distribution Expense/MWh and A&G Expense/MWh and the highest Total Salaries and Wages/MWh of the study group. Lastly, Empire's Total O&M Expense/MWh was the 5th highest of the study group, at $60.80/MWh. A bright spot for Empire is that its Net Power Production Expense/Retail MWh is the 7th lowest of the group, at $27.97/MWh.

Empire's Retail Revenue/kWh grew by $.0329/kWh from 2008 to 2017, the 6th largest increase in the group. Contributing to this increase was Empire's increase in Net Plant/Retail MWh, $224.93/MWh, the 6th largest increase in the group. Empire also had the 7th largest decline in Total Retail MWhs sold. Significantly, Empire experienced the largest increase in A&G Expense/MWh and Total Salaries and Wages/MWh during this time frame. This contributed to Empire's growth in Total O&M Expense/MWh, which grew by $10.31/MWh, the 3rd largest growth of the study group. Similar to the 2017 observation above, Empire's Net Power Production Expenses shrank by $(9.50)/MWh, which was the 8th greatest decline amongst the group.

Empire's generation capacity was 70% gas-fired and 29% coal-fired during 2017. The energy production out of these units was almost even – 51% coal, 49% gas. All of Empire's coal fleet has been retrofitted with advanced environmental retrofits.

Empire's parent company, Algonquin Power and Utilities Corp., (APUC) is a diversified generation, transmission and distribution utility with approximately US $9 billion of total assets. Through its two business groups, APUC provides rate regulated natural gas, water, and electricity generation, transmission, and distribution utility services to over 760,000 connections in the United States. APUC holds ownership interest or long terms contracts in 1.7 GW of installed capacity in wind, solar and hydroelectric generating facilities.

Entergy Arkansas, LLC. —Ultimate Parent, Entergy Corp.

Entergy Arkansas, LLC. (ENA) is a vertically-integrated, regulated electric utility serving customers in Arkansas and Louisiana. ENA served 708,864 customers in 2017 (6^{th} highest). ENA's 2017 Retail Revenue/kWh was $.0833/kWh, the 8^{th} lowest in the study group. Contributing to ENA's below average rates during 2017 was the fact that ENA had the 3^{rd} lowest Transmission Expense/MWh, and the 2^{nd} lowest Total Salaries and Wages/MWh. ENA also had the 4^{th} highest Industrial Sales MWhs and the 6^{th} highest Total Retail Sales MWhs. ENA's Net Plant/Retail MWh is right at average, at $327/MWh. ENA also had average Net Power Production Expenses/Retail MWh, at $36.39/MWh ($9^{th}$), and below average Total O&M Expense/MWh, at $48.56 ($8^{th}$ lowest). ENA's Industrial Sales Mix was the 7^{th} highest in the study group, at 36.04%.

ENA also had the 6^{th} smallest rate change from 2008 to 2017, at just $.0024/kWh. Contributing to ENA's Stable rates during this time frame was the fact that ENA had the 3^{rd} lowest increase in Transmission Expense/MWh, and the largest reduction in Distribution Expense/MWh of the group. ENA also had the 6^{th} lowest increase in Salaries and Wages/MWh. ENA had the 6^{th} lowest increase in Net Plant/Retail MWh, and the 6^{th} greatest reduction in Total O&M Expense/MWh during this time frame. ENA's Net Power Production Expense/Retail MWh decreased about the average level, at $5.92/MWh. Lastly, ENA's Industrial Sales MWhs grew by the 5^{th} largest margin.

ENA's generation capacity during 2017 was 22% coal-fired, 35% natural gas-fired, and 41% nuclear. According to information reported on SNL Financial, ENA has only retrofitted approximately 256 MW of its 1200 MW coal-fired generating fleet.

ENA was granted a $189.7 million increase in its Arkansas base rates on December 18, 2018 that was not reflected in the rate data discussed above.

ENA's parent company, Entergy Corporation, is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including nearly 9,000 megawatts of nuclear power. Entergy delivers electricity to 2.9 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of approximately $11 billion and more than 13,000 employees.

Entergy Texas, Inc. —Ultimate Parent, Entergy Corp.

Entergy Texas, Inc. (ENT) is a vertically-integrated, electric regulated utility serving 446,771 customers in Texas (12^{th}). ENT's total Retail Revenue/kWh was $.0736/kWh in 2017, the 3^{rd} lowest absolute rate level in the study group. This is made possible by a culmination of several factors, including the lowest Net Plant/Retail MWh in the group at $174.55/MWh, the 2^{nd} lowest Transmission Expense/MWh, the 3^{rd} lowest Distribution Expense/MWh and A&G Expense/MWh, the lowest Salaries and Wages/MWh, and the 5^{th} highest Industrial Sales Mix in the group, at 41.65% of Retail Sales. ENT also had above average Total Retail Sales MWhs (9^{th} highest) and had the 5^{th} highest absolute level of Industrial Sales MWhs. The one dull spot for ENT is its Net Power Production Expense/Retail MWh, which is the 4^{th} highest of the group at $44.84/MWh. Rounding out the 2017 statistics is ENT's Total O&M/MWh, which is just under average at $52.41/MWh.

From 2008 to 2017, ENT experienced the largest decline in Retail Revenue/kWh of the study group, at $.0231/kWh. This decline has been from a lofty peak though, in 2008 ENT had the 4^{th} highest absolute rate level in the study group, at $.0967/kWh. There are several factors to attribute this to, but primarily is ENT's reduction in its Net Power Production Expense/Retail MWh, at $(28.88)/MWh, this is the largest reduction over this time of the study group. ENT also had the 2^{nd} lowest increase in Net Plant/Retail MWh, and the 2^{nd} highest growth in Industrial Sales MWhs, and Total Retail Sales MWhs. ENT's Total O&M Expense/MWh declined by the largest margin of the group as well. Rounding out these statistics is the fact that ENT's A&G Expense/MWh and Total Salaries and Wages/MWh grew the 3^{rd} lowest and 2^{nd} lowest amongst the group, respectively.

ENT's generation capacity is split 11% coal-fired, and 89% natural gas-fired. Of the 268 MW of coal-fired generating capacity, approximately 104 MW has been environmentally retrofitted, according to SNL Financial.

ENT was granted a $53.2 million increase in base rates on December 20, 2018. This rate increase was not included in the rate data discussed above.

ENT's parent company, Entergy Corporation, is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including nearly 9,000 megawatts of nuclear power. Entergy delivers electricity to 2.9 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of approximately $11 billion and more than 13,000 employees.

Interstate Power and Light Company—Ultimate Parent, Alliant Energy Corporation.

Interstate Power and Light Company (IPL) is a regulated electric and natural gas company providing service to customers in Iowa and Minnesota. IPL served 489,611 customers in 2017 (11th). IPL's total Retail Revenue/kWh were $.1014/kWh during 2017. This ranks the 10th highest, right below Westar at $.1032/kWh. Notably, IPL does not own any Transmission Assets, but it does have the highest Transmission Expense/MWh of the group, at $18.01/MWh. IPL has the 3rd lowest Distribution Expense/MWh, slightly above average A&G Expense/MWh, and below average Salaries and Wages/MWh. IPL has the 13th highest Net Plant/Retail MWh, at $317.38/MWh. IPL has Total Retail Sales MWhs that are almost exactly average compared to the study group, however, IPL's Industrial Sales MWhs were the 7th highest in 2017, and its Industrial Sales Mix was the 4th highest of the group, at 46.78% of Total Retail Sales. IPL had the 6th lowest Net Power Production Expenses/Retail MWh, at $27.85/MWh. Rounding out these statistics is IPL's Total O&M Expense/MWh, which was 4th highest at $61.50/MWh.

IPL experienced the 7th largest increase in Retail Revenue/kWh during the study period, at $.0266/kWh. This can be explained in part by IPL's increase in Transmission Expense/MWh during this time, the largest increase in the group at $12.84/MWh. Another likely contributor to IPL's rate increases during this time frame was IPL's loss of Industrial Sales MWhs and Total Retail Sales MWhs. IPL experienced the 3rd largest reduction in both sales levels during this time period. IPL's Net Plant/Retail MWh increased just over the average level, at $195.55/MWh. IPL's Net Power Production Expense declined by more than the average, at $8.28/Retail MWh, however, its Total O&M Expense/MWh increased much more than average, at $9.94/MWh (4th highest).

IPL's generation capacity is 32% coal-fired, 56% natural gas-fired, and 8% wind-powered. According to the information available within SNL Financial, 75% of IPL's coal-fired generating capacity has been retrofitted with advanced environmental controls.

IPL was granted a $130 million increase in base rates on February 2, 2018, that was not included in the rate data discussed above.

IPL's parent company, Alliant Energy is the parent company of two public utility companies - IPL and Wisconsin Power and Light Company - and of Alliant Energy Finance, LLC, the parent company of Alliant Energy's non-utility operations. Alliant Energy is an energy-services provider with utility subsidiaries serving approximately 960,000 electric and 410,000 natural gas customers.

Kansas City Power and Light Company—Ultimate Parent, evergy, Inc.

KCP&L's generating capacity is 58% coal-fired, 17% natural gas-fired, 13% nuclear, 3% wind, and 9% other. All of KCP&L's coal-fired generating units have been environmentally retrofitted.

KCP&L's parent company, Evergy is the owner of KCP&L, KCP&L Greater Missouri Operations Company and Westar Energy, Inc. Through these subsidiaries, Evergy serves 1.6 million customers in Kansas and Missouri.

KCP&L Greater Missouri Operations Company—Ultimate Parent, evergy, Inc.

Kanas City Power and Light Greater Missouri Operations Company (GMO) is a vertically-integrated, regulated electric utility providing service to 323,476 in Missouri (16th). GMO comprises the former Aquila service territory in Missouri made up of the former St. Joseph Light and Power Company and Missouri Public Service Company. KCP&L and GMO merged in 2008. GMO's total Retail Revenue/kWh ranked No. 11 out of the study group in 2017, at $.0963/kWh. GMO's Net Plant/Retail MWh ranks 7th lowest of the group at $304.53/MWh. Offsetting this factor is GMO's Industrial Sales MWhs, which rank 8th lowest of the group, at just 28% of the average Industrial Sales MWhs of the study group. GMO's Total Retail Sales MWhs rank 15th in the group, at just over half the average sales level. GMO's Net Power Production Expense/Retail MWh ranks 15th in the group, at $30.81/MWh, but its Total O&M Expense/MWh ranks 7th highest at $57.12/MWh. GMO has average Transmission Expense/MWh (11th) and above average Distribution Expense/MWh (8th) and Salaries and Wages/MWh (6th), but its A&G Expense/MWh was the highest of the study group, at $16.64/MWh.

GMO's change in Retail Revenue/kWh from 2008 to 2017 was just over the average for the study group, ranking 11th at an increase of $.0178/kWh. GMO's change in Net Plant/Retail MWh ranked 15th Highest in the group, at $153.54/MWh. GMO's change in Net Power Production Expenses/Retail MWh was the 7th lowest of the group, and its Total O&M Expense/MWh declined by more than the average of the group (14th). GMO's Transmission Expense/MWh (15th) and Distribution Expense/MWh (9th) increased at a rate below the average of the group, but its A&G Expense/MWh increased the 3rd highest, at $5.29/MWh. GMO's Total Salaries and Wages/MWh experienced the largest reduction of the study group during this time frame. Lastly, GMO experienced the 4th largest reduction in Industrial Sales Volumes and Total Retail Sales Volumes in MWhs.

GMO's generation capacity was 47% coal-fired, 51% natural gas-fired during 2017. While over half of GMO's coal-fired capacity at the end of 2017 did not contain environmental controls, those facilities are scheduled to retire by the end of 2018.

KCP&L's parent company, evergy is the owner of KCP&L, KCP&L Greater Missouri Operations Company and Westar Energy, Inc. Through these subsidiaries, evergy serves 1.6 million customers in Kansas and Missouri.

MDU Resources Group, Inc.

MDU Resources Group (MDU) is a diversified energy company offering regulated electric utility services to 142,901 customers in Montana, North Dakota, South Dakota, and Wyoming (5th lowest). MDU also provides natural gas delivery service to 8 states in the West and Upper Midwest, and has an unregulated construction materials and services business. MDU's total Retail Revenue/kWh ranked 14th in 2017 at $.0922/kWh. MDU had the 8th highest Net Plant/Retail MWh, at $355.71/MWh. MDU had the 4th lowest Industrial Sales MWhs and Total Retail Sales Volume of the study group in 2017. MDU had slightly below average Net Power Production Costs at $34.63/MWh ($11^{th}$) and slightly above average Total O&M Expense/MWh, at $59.66/MWh ($6^{th}$ Highest). MDU had the second highest Transmission Expense/MWh of the group, at $11.01/MWh, and the 6^{th} highest Distribution Expense/MWh. MDU's A&G Expense per MWh was average, but it had the 3^{rd} highest Total Salaries and Wages/MWh of the study group, at $16.35/MWh. Lastly, MDU's Industrial Sales Mix was low, ranking 18^{th} at 16.33% of Total Retail Sales.

MDU's Total Retail Revenue/kWh grew the 9^{th} largest amount during the study period, at $.0215/kWh. While MDU's Net Plant/Retail MWh grew the 5^{th} highest amount, at $230.50/MWh, it also experienced the 6^{th} highest growth in Total Retail Sales volumes and the 8^{th} highest growth in Industrial Sales volumes. MDU's Net Production Expenses grew faster than the average at $1.31/MWh ($8^{th}$) and its Total O&M Expense/MWh grew the 2^{nd} highest amount, at $12.57/MWh. MDU's growth in Distribution Expense/MWh (11^{th}) was about average, while its Transmission Expense/MWh grew the 2^{nd} highest amount of the group at $8.47/MWh. MDU's A&G expense grew the 6^{th} slowest during this time frame at just under half the change in A&G/MWh experienced by the group. Lastly, MDU's Total Salaries and Wages/MWh grew by the 4th slowest amount of the group.

MDU's generation capacity is split 50.8% coal-fired, 29.2% gas-fired, and 20% wind-powered. Approximately half of MDU's coal-fired generation capacity has been environmentally retrofitted according to SNL Financial Data.

MidAmerican Energy Company—Ultimate Parent, Berkshire Hathaway, Inc.

MidAmerican is a regulated electric and natural gas utility providing service to 770,335 customers in Iowa, Illinois, and South Dakota (5^{th}). MidAmerican also provides natural gas service to approximately 750,000 customers in these states plus Nebraska. During 2017, MidAmerican had the second lowest total Retail Revenue/kWh of the study group, at $.0728/kWh. This was despite MidAmerican having the second highest Net Plant/Retail MWh of the study group, at $477.08/MWh. There are several drivers in the data that explain these apparently contradictory results. First, MidAmerican had the highest Industrial Sales MWhs of the study group, at nearly 3 times the average of the group. Second, MidAmerican had the 3^{rd} highest Industrial Sales Mix as percentage of Total Retail Sales in the group, at 52.78% of sales. Third, MidAmerican had the lowest Net Power Production Expense/Retail MWh and Total O&M Expense/MWh of the group, at $30.17/MWh and $42.44/MWh, respectively. Both of the last statistics can be explained by MidAmerican's significant company-owned wind investment, at least partially supported by Iowa's State Production Tax Credit of $.015/kWh. Rounding out these statistics are the fact that MidAmerican had the 5^{th} largest Total Retail Sales MWhs, the 5^{th} lowest A&G Expense/MWh, the 6^{th} lowest Distribution Expense/MWh, and the 7^{th} lowest Transmission Expense/MWh.

MidAmerican's change in Total Retail Revenue/kWh ranked 14th highest in the group, at $.0137/kWh from 2008-2017. During this time MidAmerican's Net Plant/Retail MWh grew slightly above the average for the group at $207.80/MWh (9th) and its Net Power Production Expense/Retail MWh grew the second largest amount of the group, at $11.32/MWh. However, one true stand out for MidAmerican during this time was its growth in Industrial Sales MWhs and Total Retail Sales MWhs, ranking 1st out of the group in both categories. MidAmerican grew its Industrial Sales volumes by nearly 40% during this period, when the average number for the group shrank. MidAmerican's Transmission Expense/MWh (17th), Distribution Expense/MWh (2nd lowest), A&G Expense/MWh (17th), and Salaries and Wages/MWh (16th), all grew at rates below the average during this period.

MidAmerican's generation capacity was 46% wind-powered, 29% coal-fired, 19% natural gas-fired, and 5% nuclear. All of MidAmerican's 2700 MW of coal-fired capacity appears to have been retrofitted with modern environmental retrofits.

MidAmerican's parent company, Berkshire Hathaway is one of the world's largest diversified holding companies, with over $700 Billion in assets.

Northern States Power Company-MN—Ultimate Parent, Xcel Energy, Inc.

Northern States Power (NSP), is a vertically-integrated, regulated electric utility that sells electricity to 1,466,398 customers in North Dakota, South Dakota, and Minnesota (1st). NSP also provides natural gas service to approximately 500,000 customers in Minnesota and North Dakota.

In 2017, NSP had the 8th highest total Retail Revenue/kWh, at $.1032/kWh, just above Westar Energy. NSP had the 8th lowest Net Plant/Retail MWh of the group, but it had the 3rd highest Net Power Production Expense/Retail MWh and Total O&M Expense/MWh of the group, at $51.44/MWh and $68.04/MWh, respectively. NSP had above average Transmission Expense/MWh (4th), A&G Expense/MWh (9th), and Salaries and Wages/MWh (5th), but it had below average Distribution Expense/MWh (14th). Importantly, NSP had the largest Total Retail Sales MWhs and the 3rd largest Industrial Sales MWhs, but it did have below average Industrial Sales Mix, at 25.92% of Total Sales.

During the period 2008 to 2017, NSP's total Retail Revenue/kWh grew at the 8th fastest pace, at $.0251/kWh. This is despite the fact that NSP's Net Plant/Retail MWh grew at a rate below the average, or $169.36/MWh (12th). This can be explained by the fact that NSP had the 2nd largest reduction in Industrial MWhs and Total Retail Sales volumes in the study group. Additionally, NSP's Net Power Production Expense/Retail MWh grew at the 5th largest rate, or $2.27/MWh. NSP's Total O&M Expense/MWh also grew faster than average at $4.75/MWh (10th), as did NSP's Transmission Expense/MWh (4th), A&G Expense/MWh (7th), and Total Salaries and Wages/MWh (4th).

NSP's generation capacity mix is split 31% coal-fired, 33% natural gas-fired, 22% nuclear, and 11% wind-powered. Of NSP's 2400 MW of coal-fired generation capacity, just over 70% has been environmentally retrofitted according to SNL Financial and EIA data.

NSP's parent company, Xcel Energy, is a large electric and gas utility holding company serving millions of customers across eight Western and Midwestern states. Xcel Energy is also the parent company of Public Service Company of Colorado and Southwestern Public Service, which are both part of the study group.

Northwestern Wisconsin Electric Company

Northwestern Wisconsin Electric Company (NWEC) is a vertically-integrated, regulated electric utility providing service to 13,898 electric customers in Minnesota and Wisconsin (23rd). In 2017, NWEC's total Retail Revenue/kWh was the 3rd highest in the study group. This is despite having the 3rd smallest Net Plant/Retail MWh of the group, at \$220.38/MWh. Partially explaining that apparent contradiction is NWEC's Net Power Production Expenses/MWh, which ranked the highest in the study group in 2017, at \$60.48/MWh. NWEC's Total O&M Expense/MWh is also the highest in the study group, at \$83.81/MWh. NWEC also had the smallest Industrial Sales MWhs and Total Retail Sales MWhs in the group. It also had below average Industrial Sales Mix, at 25.21% of Total Retail Sales. NWEC had the highest Distribution Expense/MWh (\$8.15/MWh), the second highest A&G Expense/MWh (\$13.66/MWh), and the 4th highest Salaries and Wages/MWh. It did however, have the lowest Distribution Expense/MWh of the group, at just \$.89/MWh.

Despite having high absolute rates in 2017, NWEC's rates were basically unchanged during the study period, ranking the 5th lowest increase of the group, at \$.0012/kWh. This can be attributed to the fact that NWEC's Net Plant/Retail MWh was basically unchanged at \$39.98/MWh, the lowest observation in the group. NWEC experienced slightly above average sales growth during this time from Industrials (11th) and Total Retail Sales (13th). It also experienced an above average reduction in Net Power Production Expense/Retail MWh (12th) and Total O&M Expense/MWh (16th). Also contributing to NWEC's flat rates were its above average control of expenses during this time frame. NWEC's Transmission Expense/MWh (2nd lowest), Distribution Expense/MWh (3rd lowest), A&G Expense/MWh (5th lowest), and Salaries and Wages/MWh (5th lowest), all grew significantly less than the average for the study group.

NWEC's generation capacity consists of 25 MWs of fuel-oil fired turbines and internal combustion engines.

Northwestern Corporation

Northwestern Corporation (NW) is a vertically-integrated, regulated electric utility serving 431,099 customers in Montana, South Dakota, and Wyoming (13th). NW also serves gas customers in Montana, Nebraska, and South Dakota. NW's total Retail

Sales/kWh ranked 6th in the study group in 2017, at $.1132/kWh. NW's Net Plant/Retail MWh was just under the average for the study group, ranked 12th out of the 23 companies, at $321.86/MWh. NW had very low Industrial Sales volumes (4th lowest) and relatively low Total Retail Sales (7th lowest), and it had the lowest Industrial Sales Mix of the study group in 2017, at just 8.56% of Total Retail Sales. Helping NW was its Net Power Production Expense/Retail MWh at $35.85/MWh (10th) and Total O&M Expense/MWh at $55.20/MWh (9th), both of which were very near the average of the study group. NW had slightly below average Transmission Expense/MWh (13th) and above average Distribution Expense/MWh (5th), A&G Expense/MWh (7th) and Salaries and Wages/MWh (8th).

NW experienced average Retail Revenue/kWh growth during the study period, growing rates by $.0163/kWh (12th), compared to $.0167/kWh for the study group on average. NW's Net Plant/Retail MWh grew slightly higher than the study group average, at $186.14/MWh (11th). NW's Industrial Sales volumes grew less than the average of the group (14th) but its Total Retail Sales volumes grew faster than the average (8th). NW's Net Power Production Expenses shrank significantly, the 5th largest decline in the group, at $(14.73/MWh). NW's Total O&M Expense/MWh also declined by more than the group average, at $5.11/MWh (15th). NW's Transmission Expense/MWh was close to the average at 14th overall and $2.49/MWh, however, NW's Distribution/MWh (5th), A&G Expense/MWh (4th), and Salaries and Wages/MWh (3rd) all grew significantly faster than average.

NW's generation capacity consists of 34% hydro-electric, 24% natural gas-fired, 9% wind-powered, and 33% coal-fired. Based on data from SNL Financial, approximately half of NW's coal-fired generating unit has been retrofitted with environmental controls.

<u>Oklahoma Gas and Electric Company—Ultimate Parent, OGE Energy Corp.</u>

Oklahoma Gas and Electric Company (OG&E) is a vertically-integrated, regulated electric utility providing service to 838,252 customers in Oklahoma and Arkansas (4th). In 2017, OG&E's total Retail Revenue/kWh was $.0787/kWh, the 7th lowest in the study group. OG&E's Net Plant/Retail MWh was the 6th lowest, at $274.54/MWh. OG&E had slightly above average Net Power Production Expenses/Retail MWh, at $38.73/MWh, vs. $35.24/MWh on average for the group and OG&E's Total O&M Expense/MWh was almost exactly average (10th). OG&E had above average Industrial Sales MWhs (6th) and Total Retail Sales MWhs (4th), but it had below average Industrial Sales Mix, at 25.79% (12th) of Total Retail Sales. OG&E had average Transmission Expense/MWh (10th) and Distribution Expense/MWh (10th), and below average A&G Expense/MWh (16th), and Salaries and Wages/MWh (14th).

OG&E's Retail Revenue/kWh has increased less than the average from 2008through 2017, at $.0081/kWh (8th lowest). This was made possible by OG&E's below average growth in Net Plant/Retail MWh, at $137.23/MWh (16th), vs. $170.64/MWh on average. Also, OG&E's Net Power Production Expense/Retail MWh declined by more than the average, at \$(7.50/MWh), which ranks 13th overall. OG&E's Total O&M Expense/MWh was basically flat, and close to the average of the group (12th). While OG&E's Industrial Sales Mwhs shrank by the 6th largest margin, its Total Retail Sales volumes grew by the 4th largest amount. Transmission Expense/MWh (8th) and Distribution Expense/MWh (6th) grew faster than average, as did A&G Expense/MWh (10th) and Total Salaries and Wages/MWh (7th), but not in a significant fashion.

OG&E's generation capacity was 59% natural gas-fired, 35% coal-fired, and 6% wind-powered. According to SNL Financial, all 2,500 MW of OG&E's coal-fired generation units have been retrofitted with NOx and Mercury controls, but none of these units have had Flue Gas Desulphurization (FGD or Scrubber) units installed to control Sulphur Dioxide. FGD's are under construction at 1000 MWs of this coal-fired capacity now, at an estimated cost of \$550 million according to publicly available data on SNL Financial. OG&E is also in the process of retrofitting 1,150 MW of coal-fired capacity into natural gas-fired capacity. These investments are expected to the subject of a third annual rate case OG&E filed on January 2, 2019 . This case requested an increase in revenues of \$7.6 million, or 4.4%. OG&E also filed a rate increase request on October 1, 2018 with the Arkansas Public Service Commission in which OG&E has requested a \$6.4 million (6.26%) increase in base rates.

OG&E's parent company, OGE Energy Corp., is headquartered in Oklahoma City. In addition to owning OG&E, OGE Energy Corp. holds a 25.6 percent limited partner interest and 50 percent general partner interest in Enable Midstream Partners, LP.

Otter Tail Power Company—Ultimate Parent, Otter Tail Corp.

Otter Tail Power Company (OTP) is a vertically-integrated, regulated electric utility providing service to 131,852 customers in Minnesota, North Dakota, and South Dakota (20th). In 2017, OTP's total Retail Revenue/kWh was \$.0773/kWh, 6th lowest in the group. OTP had the 5th lowest Net Plant/Retail MWh, at \$257.95/MWh. OTP had below average Industrial Sales MWhs (14th) and the 6th lowest Total Retail Sales MWhs, however, its Industrial Sales Mix was the 6th highest amongst the study group, at 40.26% of Total Retail Sales. Additionally, OTP had below average Net Power Production Expense/Retail MWh, at \$31.45/MWh (14th), and average Total O&M Expense/MWh at \$54.50/MWh (11th). OTP had average Transmission Expense/MWh (9th) and Distribution Expense/MWh (9th), but it had significantly above average A&G Expense/MWh (4th highest at \$13.51/MWh) and Total Salaries and Wages/MWh (2nd highest at \$18.70/MWh).

OTP's change in total Retail Revenue/kWh during the study period ranks 15th highest overall, at \$.0105/kWh. This was made possible by the 3rd smallest growth in Net Plant/Retail MWh, along with the 4th highest growth in Industrial Sales MWhs, and the 7th largest increase in Total Retail Sales MWhs during this time. Because of OTP's size, this was the largest percentage increase in Industrial load, and the 4th largest percentage increase in Total Retail Sales MWhs. OTP's Net Power Production Expense/Retail MWh increased by the 7th largest margin of the group, and it experienced the largest increase in Total O&M Expense/MWh, at $19.67/MWh. OTP's change in Transmission Expense/MWh (9th) and Distribution Expense/MWh (7th) were slightly above average, but the change in A&G Expense/MWh ($5.37/MWh) and Salaries and Wages/MWh ($6.73/MWh) were significantly higher than the average, each ranking 2nd highest in the study group.

OTP's generation capacity was 67% coal-fired, 6% natural gas-fired, and 17% wind-powered at the end of 2017. Out of OTP's 543 MW of coal-fired generation capacity, 256 MW was equipped with significant environmental controls (SO2, Mercury and NOx controls), 287 MW was equipped with just Mercury controls, and 406 MW was equipped with NOx controls.

OTP currently has a rate increase request pending before the South Dakota Public Utilities Commission, filed on April 20, 2018. OTP requests a $6.7 million (21.58%) increase in base rates in this case.

OTP's parent company, Otter Tail Corporation, has interests in diversified operations that include an electric utility and manufacturing businesses.

<u>Public Service Company of Colorado—Ultimate Parent, Xcel Energy, Inc.</u>

Public Service Company of Colorado (PSC) is a vertically-integrated, regulated electric utility serving 1,459,191 customers in Colorado (2nd). PSC also serves approximately $1.4 million gas customers. In 2017, PSC's total Retail Revenue/kWh was $.0955/kWh, or 12th highest in the study group. PSC's Net Plant/Retail MWh was 14th in the group, at $317.07/MWh. PSC's Industrial Sales MWhs ranked 9th highest, while its Total Retail Sales MWhs were the 3rd largest in the group. PSC's Industrial Sales Mix was 7th lowest overall at 22.53% of Total Retail Sales. PSC's Net Power Production Expenses/Retail MWh were the 7th highest in the group at $39/MWh, and its Total O&M Expense/MWh was below average at $51.78/MWh (14th). PSC's Transmission Expense/MWh (20th), Distribution Expense/MWh (16th), A&G Expense/MWh (14th), and Total Salaries & Wages/MWh (16th), were all below average for the group.

PSC's Total Retail Revenue/kWh changed by $.0081/kWh, or the 7th lowest in the group from 2008-2017. This was made possible by PSC's below average growth in Net Plant/Retail MWh (14th), its above average growth in Industrial (6th) and Total Retail Sales (9th) and above average reduction in Net Power Production Expense/Retail MWh (6th lowest) and Total O&M Expense/MWh (4th lowest). PSC's Transmission Expense/MWh grew significantly less than the average (5th lowest) and its Distribution Expense/MWh grew less than the average (8th). PSC's A&G Expense/MWh (8th) and its Total Salaries and Wages/MWh (9th) grew faster than the average, but not significantly so.

PSC's generation capacity was 55% natural gas-fired, 39% coal-fired, and 6% hydro-electric. According to data provided by SNL Financial, all of PSC's coal-fired generating units have modern environmental controls or retrofits.

PSC's parent company, Xcel Energy, is a large electric and gas utility holding company serving millions of customers across eight Western and Midwestern states. Xcel Energy is also the parent company of Northern States Power and Southwestern Public Service, which are both part of the study group.

<u>Public Service Company of Oklahoma—Ultimate Parent, American Electric Power Co. Inc.</u>

Public Service Company of Oklahoma (PSO) is a vertically-integrated, regulated utility serving 550,023 customers in Oklahoma (8th). In 2017 PSO's Total Retail Revenue/kWh was $.075/kWh, the 4th lowest in the study group. PSO's Net Plant per Retail/MWh was the 2nd lowest in the group. PSO had slightly above average Industrial Sales MWhs (11th) and Total Retail Sales MWhs (10th), and its Industrial Sales Mix was a close to average 31.45% (8th). Its Net Power Production Expenses/Retail MWh was the 5th highest in the group at $39.45/MWh. PSO's Total Electric O&M Expense/MWh was the 8th highest at $56.93/MWh, though not appreciably above the average at $54.34/MWh. PSO's Transmission Expense/MWh was above average at $7.23/MWh, as was its Distribution Expense/MWh at $5.12/MWh (4th). PSO's A&G Expense/MWh ($5.57/MWh) and Salaries and Wages/MWh ($5.62/MWh) were both significantly below average, at 4th lowest overall.

PSO also experienced the 3rd largest reduction in rates from 2008-2017, at $(.005)/kWh. This was made possible by the 4th lowest increase in Net Plant/Retail MWh, $81.16/MWh, versus $170.64/MWh for the average and by the 3rd largest reduction in Net Power Production Expense/Retail MWh, at $(19.05)/MWh, versus an average of $(5.51)/MWh for the group. PSO's Total O&M Expense/MWh decline was also significant, at $(10.32)/MWh, the 5th largest decline of the group. PSO also experienced above average increases in Industrial Sales MWhs (7th) and Total Retail MWhs (10th). PSO experienced above average increases in Transmission Expense/MWh at $5.34/MWh (6th) and Distribution Expense/MWh at $4.98/MWh (1st), while it experienced the 4th and 7th lowest overall increase in A&G Expense/MWh and Total Salaries and Wages/MWh, respectively.

PSO filed a rate case on September 26, 2018 before the Oklahoma Corporation Commission in which PSO has requested a $88.45 million increase in revenues, or 6.5%. Also, PSO had a rate increase on January 1, 2018 of $75.5 million, which increased rates 11.50%. Because the rate and cost data used in this study was based on 2017 information, this recent rate increase was not captured in the data presented for PSO.

PSO's generation capacity is 89% natural gas-fired and 11% coal-fired. According to SNL Financial, all of PSO's 560 MW of coal-fired generation capacity has modern environmental controls equipped.

PSO's parent company, American Electric Power Co. Inc. (AEP), is one of the largest regulated utility companies in the United States. AEP maintains the nation's largest transmission system, 219,000 miles of distribution lines, and 32,000 MW of power production. AEP serves 5.4 million regulated customers in 11 states. AEP is also the parent company of Southwestern Electric Power Company, another company included in the study group.

Southwestern Electric Power Company—Ultimate Parent, American Electric Power Co. Inc.

Southwestern Electric Power Company (SWEPCO), is a vertically-integrated, regulated electric utility providing electric service to 534,632 customers in Texas, Louisiana, and Arkansas (10th). In 2017, SWEPCO's total Retail Revenue/kWh was $.0839/kWh, 15th in the study group. SWEPCO's Net Plant/Retail MWh was $351.08/MWh, the 8th highest in the group. SWEPCO had slightly above average Industrial Sales MWhs, (12th) and Total Retail Sales MWhs (11th), and its Industrial Sales Mix was right at average, at 30.72% of Total Retail Sales (9th). SWEPCO's Net Power Production Expense/Retail MWh was below the average, at $32.96/MWh (13th), compared to the average of the group at $35.24/MWh. SWEPCO's Total O&M Expense/MWh was the 4th lowest of the group, at $43.84/MWh, more than $10 less than the average of the group ($54.34/MWh). SWEPCO's Transmission Expense/MWh (14th), Distribution Expense/MWh (12th), A&G Expense/MWh (Lowest), and Total Salaries & Wages/MWh (3rd lowest), were all below average for the group.

SWEPCO's total Retail Revenue/kWh increased below the average amount during the study period, at $.0148/kWh (13th). This is despite SWPECO's Net Plant/Retail MWh increasing at the 7th fastest rate, $218.34/MWh. Also, SWPCO had the 7th largest decline in Industrial MWhs sold. It did lose less Total Retail Sales MWhs than the average of the group (14th), but just barely. SWEPCO's reduction in Net Power Production Expense/Retail MWh was above the average of the group, reducing its expense by $(8.54)/MWh (15th) versus the group average of $(5.51)/MWh. Additionally, SWEPCO experienced the 7th largest reduction in Total O&M/MWh, at $(5.81)/MWh versus the average of $(1.19)/MWh. SWEPCO's Transmission Expense/MWh (12th), Distribution Expense/MWh (10th), A&G Expense/MWh (Lowest), and Total Salaries & Wages/MWh (9th lowest) increased by less than the average of the group.

SWEPCO's generation capacity was split evenly between coal-fired and natural gas-fired generation. According to SNL Financial, 60% of SWPECO's coal-fired generation capacity is equipped with environmental retrofits, with a 1056 MW scrubber project scheduled for 2020.

SWEPCO's parent company, American Electric Power Co. Inc. (AEP), is one of the largest regulated utility companies in the United States. AEP maintains the nation's largest transmission system, 219,000 miles of distribution lines, and 32,000 MW of power production. AEP serves 5.4 million regulated customers in 11 states. AEP is also the parent company of Public Service Company of Oklahoma, another company included in the study group.

<u>Southwestern Public Service Company—Ultimate Parent, Xcel Energy, Inc.</u>

Southwestern Public Service Company, (SPS) is a vertically-integrated, regulated electric utility serving 389,818 customers in New Mexico and Texas (15^{th}). SPS's total Retail Revenue/kWh in 2017 was the lowest of the study group, at $.0678/kWh. This can be attributable to SPS's 4^{th} lowest Net Plant/Retail MWh, at $241.23, nearly $100/MWh less than the average at $332.52/MWh. Also, SPS had the 2^{nd} highest Industrial Sales MWhs, and the 2^{nd} highest Industrial Sales Mix, at 55.53% of Total Retail Sales. SPS's Total Retail Sales MWhs are also above average, at the 7^{th} highest in the group. SPS had the 8^{th} lowest Net Power Production Expense, at $30.18, more than $5/MWh less than the average. SPS also had the 2^{nd} lowest Total O&M Expense/MWh, at $42.44/MWh, nearly $12/MWh less than the average. SPS had above average Transmission Expense/MWh, at $7.06/MWh, vs. $5.56/MWh on average. However, SPS's Distribution Expense/MWh (lowest), A&G Expense/MWh (2^{nd} lowest), and Total Salaries and Wages/MWh (5^{th} lowest), were significantly below the average of the group.

During the study period, SPS's total Retail Revenue/kWh shrank by the 4^{th} most of the group, declining by $(.0041)/kWh. SPS's Net Plant/Retail MWh during this period grew by the 7^{th} smallest amount. Also, SPS's Industrial Sales MWhs grew by the 3^{rd} largest amount, as did its Total Retail Sales MWhs. It also experienced the 2^{nd} largest reduction in Net Power Production Expense/Retail MWh, at $(21.37)/MWh, and the 3^{rd} largest reduction in Total O&M Expense/MWh, at $(16.28)/MWh. SPS's experience with other costs is somewhat mixed, having experienced above average increases in Transmission Expense/MWh (5^{th}) and Total Salaries and Wages/MWh (6^{th}), but below average increases in Distribution Expense/MWh (14^{th}) and A&G Expense/MWh (12^{th}).

SPS's generating capacity is split 53% natural gas-fired and 46% coal-fired. According to data provided by SNL Financial, approximately 66% of SPS's coal-fired capacity has some form of NOx control, but none of SPS's units appear to have been retrofitted with Scrubbers to control Sulphur Dioxide.

SPS's parent company, Xcel Energy, is a large electric and gas utility holding company serving millions of customers across eight Western and Midwestern states. Xcel Energy is also the parent company of Northern States Power and Public Service Company of Colorado, which are both part of the study group.

<u>Union Electric Company—Ultimate Parent, American Corporation</u>

Union Electric Company (UE) is a vertically-integrated, regulated electric and natural gas distribution utility serving 1,215,799 electric customers in Missouri (3^{rd}). UE also serves gas customers in Missouri. UE's total Retail Revenue/kWh was $.0932/kWh, or 13^{th} out of the 23 company study group. UE's Net Plant/Retail MWh was $311.80/MWh, 15^{th} in the group and slightly below the group average of $332.52/MWh. UE's Industrial Sales

MWhs was very close to average, ranking 13^{th} in the group, but its Total Retail Sales MWhs were the 2^{nd} largest, at more than twice the average of the group. UE's Industrial Sales Mix was the 4^{th} lowest of the group, at 14.13%, less than half of the average for the group. UE had the 5^{th} smallest Net Power Production Expense/Retail MWh, at $27.02, more than $8/MWh below the average for the group. Also, UE's Total O&M Expense was the 3^{rd} lowest of the group, at $43.49/MWh, more than $10/MWh below the average. UE had below average Transmission Expense/MWh (6^{th} lowest), Distribution Expense/MWh (11^{th}), and A&G Expense/MWh (15^{th}), but it had slightly above average Salaries and Wages/MWh (9^{th}), though around $1/MWh more than the average.

UE's Retail Revenue/kWh grew by the 5^{th} largest margin from 2008-2017, growing $.036/kWh. This is despite UE's Net Plant/Retail MWh growing the 5^{th} slowest of the group, just $124.91/MWh. This is attributable to UE's loss of Industrial Sales MWhs and Total Retail Sales MWhs during the study period, both of which were the largest loss experienced by the study group (both losses were also the largest of the study group in percentage terms). UE's Net Power Production Expense/Retail MWh increased the 3^{rd} largest of the group, $9.89/MWh, which is significantly above the average of the group, a reduction of $(5.51)/MWh. UE's Total O&M Expense/MWh also grew significantly more than the average, ranking the 6^{th} highest at $8.90/MWh, versus $(1.19)/MWh on average for the group. UE's Transmission Expense/MWh (16^{th}), Distribution Expense/MWh (16^{th}), and A&G Expense/MWh (13^{th}), all grew slower than the average, but UE's Total Salaries and Wages/MWh (8^{th}), grew faster but just barely over the average.

UE's generation capacity was 48% coal-fired, 31% natural gas-fired, 11% nuclear, and 7% hydro-electric. According to the data provided on SNL Financial, out of Ameren's 5,544 MW of coal-fired capacity, 990 MW has been retrofitted to remove Sulfur Dioxide. The other units do have various forms of NOx, Mercury, and Particulate matter environmental controls.

UE's parent company, St. Louis-based Ameren Corporation serves 2.4 million electric customers and more than 900,000 natural gas customers in a 64,000-square-mile area through its Ameren Missouri and Ameren Illinois rate-regulated utility subsidiaries.

Westar Energy, Inc.—Ultimate Parent, Evergy, Inc.

At the end of 2017, Westar's generation capacity was split 49% coal-fired, 35% natural gas-fired, 9% nuclear, and 7% wind. All of Westar's coal-fired generating units have had modern environmental controls added via retrofit projects.

Westar's parent company, Evergy is the owner of KCP&L, KCP&L Greater Missouri Operations Company and Westar. Through these subsidiaries, Evergy serves 1.6 million customers in Kansas and Missouri.

G. Conclusions Drawn from Peer Review

As stated in Section XII. D., the data used in Staff's analysis reveals that there are three major factors that explain the reason for KCP&L's, Westar's, and the peer companies' relative rate levels, either in the current year, or expressed as the amount of rate change over the last ten years. The three major factors include: (1) levels of Net Plant (expressed as Net Plant/Retail MWh in the study), (2) Net Power Production Expense (expressed as Net Power Production Expense/Retail MWh in the study), and (3) Industrial Sales levels (expressed as both the absolute level of Industrial Sales and as a percentage of Total Retail Sales in the study). Some combination of these three factors are usually implicated if a utility has high or low rate levels, or high or low levels of rate change.

One common theme affecting two of the three major factors (Net Plant and Net Power Production Expense) is the percentage of natural gas-fired generation capacity in a utility's overall generation fleet. The analysis performed by Staff indicates that utilities that have a high percentage of natural gas-fired generation capacity have experienced the beneficial impacts of significant declines in natural gas fuel prices (Net Power Production Expense) and have avoided significant rate increases associated with the environmental retrofits of coal-fired generation. The reduction in natural gas prices along with the influx of renewable energy (primarily wind) in SPP have also led to significant declines in wholesale market prices for energy in the SPP IM. These downward forces on SPP IM prices also has negative impacts on Sales for Resale Margins for utilities with a heavy coal-fired generation mix.

KCP&L

Section XII. D. summarized Staff's findings regarding KCP&L as follows:

> For KCP&L, the major drivers explaining its rate change from 2008 to 2017 can be attributed to increases in Net Plant/Retail MWh, driven by environmental retrofit projects and the construction of a new coal-fired generating unit, Iatan 2. Additionally, KCP&L has experienced the largest increase in Net Power Production Expense/Retail MWh of any other utility in the study group. This expense increased by $13.14/MWh for KCP&L, versus the average reduction of $(5.51)/MWh experienced by the group. Staff calculates that that swing of $18.65/MWh is responsible for 61% of KCP&L's above-average growth in Retail Rate Revenue/kWh from 2008-2017.
>
> Additionally, KCP&L experienced the 5th largest reduction in Industrial Sales load and Total Retail Sales load. KCP&L's relatively higher rate increases during this period have not been a result of mismanagement of A&G Expense or Total Salaries and Wages/MWh. In fact, KCP&L's growth in each of these categories is below the average of the study group, ranking 15th highest and 11th highest, respectively. [Footnotes omitted.]

Westar

Section XII. D. summarized Staff's findings regarding Westar as follows:

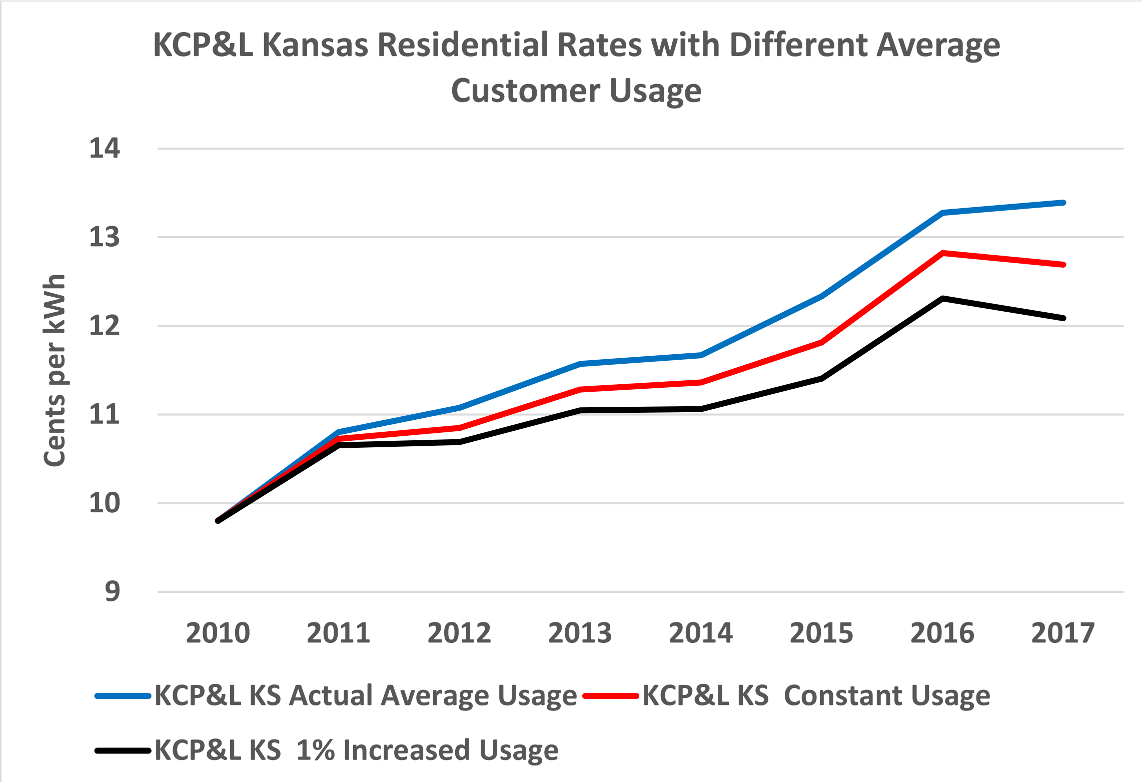
> Westar's change in rates from 2008-2017 can almost entirely be attributed to increases in Net Plant/Retail MWh (and the necessary increases in rates to support these investments). These investments were predominantly in the areas of Production Plant and Transmission Plant. The driving factor behind Westar's increased Production Plant was environmental retrofits to coal-fired generating units mandated by state and federal environmental regulations. Westar's Transmission Plant investments are driven by the need to replace aging infrastructure to maintain reliability, the desire of state and federal policy makers to expand the transmission grid to enhance the development of renewable energy and competitive power markets, and supportive cost recovery mechanisms and ratemaking incentives available at the FERC for these investments.
>
> In addition, Westar experienced a significantly below average change in Industrial and Retail Sales Load, ranking 8th lowest and 6th lowest in the categories, respectively. Last, Westar's Transmission Expense/MWh, related in part to its increased Transmission Plant investment, has increased faster than the average of the study group.
>
> Westar's Net Power Production Expense was basically flat during this period, decreasing $(.71)/MWh, however, this is significantly below the average reduction of the study group, at $(5.51)/MWh. In an industry that has been dominated by reductions in natural gas prices and wholesale power prices, a utility who keeps its Net Power Production Expense flat will fall behind on a relative basis to its peers. Staff calculates that 23.5% of the difference in rate growth between Westar and the study group can be attributed to the fact that the average Net Power Production Expense fell faster than Westar's during this period. Lastly, what the data shows is that Westar's relative rate changes during this period of time have not been driven by increases in A&G Expense or Total Salaries and Wages. In fact, Westar managed these expenses better than the average of the study group over this time period, ranking 8th and 10th lowest, respectively in these two categories. [Footnotes omitted.]

XIII. Future of Electric Rates for KCP&L and Westar in Kansas

Staff's conclusions regarding the reasons for the increases in both Westar and KCP&L's rates are primarily due to (1) capital investments related to environmental improvements and new fossil-fuel generating resources, the addition of renewable resources, and transmission system projects, (2) flat to declining volumetric sales, and (3) a generation portfolio mix heavily weighted to coal-fired generation rather than gas-fired generation, which is currently less expensive due to low natural gas prices. The capital investments in environmental improvements, fossil-fuel generation sources, additional renewable resources, and transmission system projects have already been made and these investments are currently in rates. The inclusion of these investments in rates was evaluated through the rate setting process described in detail in this study. And, in a number of cases, the predetermination statute was used to establish the prudence of the capital investments. Because these investments have been evaluated and placed in rates, subsequently removing them from rates runs afoul of numerous regulatory principals and legal protections.

The declining volumetric sales in the Residential, Commercial and Industrial rate classes are not within the control either Westar or KCP&L. Rather, these declines are a symptom of the broader economic conditions in Kansas. Staff also notes in this study that Westar and KCP&L's customer numbers have not declined, but have remained stable. As discussed in Section XI. A., this indicates to Staff that there is also a level of organic energy efficiency resulting from engineering efficiency in home appliances and new HVAC units that is reducing volumetric sales.

Below is a graph that has KCP&L Kansas Residential rates given the decline since 2010 in average customer usage (the blue line), rates assuming constant average usage since 2010 (the red line), and rates assuming a one percent annual increase in the average usage since 2010 (the black line). Because an increase in customer usage increases costs to KCP&L, a five cent per kWh was added to the cost of providing the additional energy. By 2017 the actual all-in Residential rates was 13.39¢. If average usage had been constant the all-in rate would have been 12.69¢, and if average usage had increased one percent the rate would have been 12.09¢. Thus, if from 2010 to 2017 growth in average customer usage in the KCP&L Kansas service territory had only decline to an annual one percent growth rate, the all-in rate for Residential customers would have been 1.3¢ less.



While both Westar and KCP&L have closed three older generation facilities post-merger, each company's current generation mix is heavily weighted to coal-fired generation, which effectively forecloses the companies from being able to take advantage of lower gas fuel prices. The only recourse for Westar and KCP&L is to continue to evaluate – through an integrated resource process (currently being developed) – whether the current coal-fired units continue to be cost effective resources.

However, the recently completed merger between KCP&L and Westar will enable the newly formed parent company (evergy) to create savings through both merger and non-merger savings that neither Westar or KCP&L could create as stand-alone companies. The merger is forecasted to achieve approximately $800 million in merger and non-merger related costs savings. These costs savings coupled with the completion of both company's major capital plans will bring price stability and may lead to further rate reductions. Moreover, Staff, Westar, and KCP&L are currently engaged in developing a capital expense reporting process as well as an integrated resource planning (IRP) model to provide greater transparency for capital investments budgeted in the near-term as well as longer-term resource planning. Staff also notes that, if volumetric sales rebound and begin to increase in the next five years, there could be even larger rate reductions.

The merger will provide a number of benefits to ratepayers that will aid in providing rate stability or perhaps lower rates over the next five to ten years. Some of these benefits are as follows:

- The merger agreement (Agreement) establishes a five-year base rate moratorium. More specifically, base rates may not go up for five years, but all of KCP&L and Westar's riders will continue to be updated annually. All but one of these riders (the fuel cost adjustment factor) are statutorily authorized.

- The merger is expected to achieve approximately $800 million in merger and non-merger related savings over five years. Staff testified in the merger proceeding that the Agreement enables 60% of the net benefits of the merger to be guaranteed to benefit customers during the five-year moratorium period. After the five-year moratorium period is over, all of the achieved savings will be passed through to ratepayers in the first rate cases for KCP&L and Westar.

- The merger has created efficiencies that reduce the need for capital investment by approximately $1 billion over the next five years.

- The Agreement provides $50 million in upfront bill credits across all jurisdictions.

- The Agreement provides guaranteed bill credits for each year beginning in 2019 and ending in 2022 of $8.65 million annually ($34.6 million total) for Westar and $2.8 million annually ($11.3 million total) for KCP&L.

- The Agreement guarantees that at least $22.5 million of merger-related savings would be included in Westar recently completed post-merger rate case and $7.5 million would be reflected in KCP&L's recently completed post-merger rate case.

- The Agreement includes an Earnings Review and Sharing Plan (ERSP) that allows ratepayers to share in any over earnings (additional merger savings) during the five-year moratorium.

Both Westar and KCP&L recently completed rate cases that resulted in rate reductions of $66 million and $10.7 million respectively.[87] These rate reductions were largely possible because of the cumulative effect of the guaranteed level of merger savings noted above as well as the reduction in income tax expense related to the Tax Cuts and Jobs Act. With current reduced base rates locked into place by the five-year rate moratorium, Westar and KCP&L's base rates have been stabilized. In addition, Westar and KCP&L have stated that their major capital investment plans have been completed and approximately $800 million in merger and non-merger savings are expected to be generated over the next five years. Should these forecasts bear out, Staff expects rates to continue to be stable. However, a variety of factors could impact these utilities' rate trends. For example, sales volumes could increase from a much higher penetration of electric vehicles or a new industry establishing industrial facilities in Kansas. Such an increase in sales volumes would lower rates. Conversely, a new President that promotes a clean air agenda similar

[87] These rate reduction amounts account for the fact that certain amounts previously collected from the Ad Valorem Tax Surcharge, pursuant to K.S.A. 66-117(f), were now being collected in base rates. The actual reduction to base rates was $(50,311,893) for Westar and $(3,916,417) for KCP&L.

to that of the Clean Power Plan proposed under President Obama – could create a need for additional capital investments, placing upward pressure on rates.