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Sponsoring Party: Great Plains Energy Incorporated,  
Kansas City Power & Light  
Company, and KCP&L Greater  
Missouri Operations Company  
Case No.: EM-2018-0012  
Date Testimony Prepared: February 21, 2018

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: EM-2018-0012**

**SURREBUTTAL TESTIMONY**

**OF**

**BURTON L. CRAWFORD**

**ON BEHALF OF**

**GREAT PLAINS ENERGY INCORPORATED  
KANSAS CITY POWER & LIGHT COMPANY, AND  
KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**February 2018**

**SURREBUTTAL TESTIMONY**

**OF**

**BURTON L. CRAWFORD**

**Case No. EM-2018-0012**

1 **I. INTRODUCTION AND PURPOSE**

2 **Q: Please state your name and business address.**

3 A: My name is Burton L. Crawford. My business address is 1200 Main, Kansas City, Missouri  
4 64105.

5 **Q: By whom and in what capacity are you employed?**

6 A: I am employed by Kansas City Power & Light Company (“KCP&L” or “Company”) as  
7 Director, Energy Resource Management.

8 **Q: On whose behalf are you testifying?**

9 A: I am testifying on behalf of Great Plains Energy Incorporated (“GPE”) and its wholly-  
10 owned subsidiaries, Kansas City Power & Light Company (“KCP&L”) and KCP&L  
11 Greater Missouri Operations Company (“GMO”). In addition, I am providing information  
12 regarding Westar Energy, Inc. and Kansas Gas and Electric Company’s (together referred  
13 to herein as “Westar”) renewable generation portfolio. GPE, KCP&L, GMO and Westar,  
14 collectively referred to herein as “Applicants,” filed an Application seeking approval of the  
15 Missouri Public Service Commission (“Commission”) for the merger of GPE and Westar  
16 (the “Merger”). The new holding company formed by the Merger is referred to variously  
17 in this testimony as the “combined company”.

1 **Q: What are your responsibilities?**

2 A: My responsibilities include managing the Energy Resource Management (“ERM”)  
3 department at KCP&L. Activities of ERM include integrated resource planning, wholesale  
4 energy purchase and sales evaluations, fuel budgeting, renewable energy standards  
5 compliance, and capital project evaluations.

6 **Q: Please describe your education, experience and employment history.**

7 A: I hold a Master of Business Administration from Rockhurst College and a Bachelor of  
8 Science in Mechanical Engineering from the University of Missouri. Since joining  
9 KCP&L in 1988, I have served in various areas including regulatory, economic research,  
10 and power engineering.

11 **Q: Have you previously testified in a proceeding at the Missouri Public Service  
12 Commission (“MPSC” or “Commission”) or before any other utility regulatory  
13 agency?**

14 A: Yes, I have. I provided testimony to the Commission in KCP&L’s most recent Missouri  
15 rate case and in a variety of other proceedings. I have also appeared before the Kansas  
16 Corporation Commission (“KCC”) on behalf of KCP&L.

17 **Q: What is the purpose of your testimony?**

18 A: The purpose of my Surrebuttal Testimony is to respond to the rebuttal testimony of Renew  
19 Missouri witness Karl Rábago who testifies that specific clean energy and renewable  
20 resource commitments are necessary for the Merger to satisfy the not detrimental to the  
21 public interest standard to be applied by the Commission. Applicants’ witnesses Messrs.  
22 Greenwood and Reed respond to Mr. Rábago’s testimony regarding the merger standard.  
23 Mr. Rábago also states that “the Applicants could fully comply with their proposed plan

1 without any increase in or even study of clean energy development.”<sup>1</sup> Throughout my  
2 testimony, I discuss GPE’s and Westar’s active pursuit of clean and renewable energy now  
3 and over the last 10 to 15 years that demonstrates there is no need for the Commission to  
4 condition its approval of the Merger upon additional clean energy plans and studies.  
5 Sections II and III of my Surrebuttal Testimony provide an overview of GPE and Westar’s  
6 current renewable energy portfolios, the renewable and clean energy requirements that  
7 apply in each state, and clean energy initiatives that GPE and Westar have been involved  
8 in or are currently pursuing. Finally, Section IV discusses, how together Applicants have  
9 a significant amount of renewable and clean energy and will retire a significant amount of  
10 fossil-fuel generating units by the end of 2018.

## 11 **II. GPE’S CLEAN ENERGY AND RENEWABLE GENERATION POSITION**

### 12 **Q. Have Applicants demonstrated a commitment to clean energy?**

13 A: Yes. KCP&L and GMO’s strong history of pursuing renewable and clean energy  
14 demonstrates that both companies have embraced and will continue to embrace renewable  
15 and clean energy. GPE owns or has contracted for almost 1,900 MW of renewable supply  
16 to serve its customers, exceeding the voluntary Kansas renewable standard and the  
17 Missouri renewable requirements. KCP&L and GMO additionally plan to retire  
18 approximately 850 MW of fossil-fueled generation by the end of 2019. KCP&L and GMO  
19 are actively pursuing other clean energy initiatives regarding energy efficiency and green  
20 power rates. I understand that Westar has similar initiatives as discussed below. The  
21 commitments proposed by Mr. Rábago are unnecessary and, as discussed by Mr.  
22 Greenwood in his Rebuttal Testimony, this is not the proper forum to consider them.

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<sup>1</sup> Rebuttal Testimony of Karl Rábago, at 19.

1 **Q: Please provide an overview of GPE’s renewable energy portfolio.**

2 A: As of the end of 2017, KCP&L and GMO either own or contract for approximately 1,898  
3 MW of renewable energy. Table 1, below provides a list of KCP&L and GMO’s renewable  
4 energy resources.

**Table 1: KCP&L and GMO Renewable Assets**

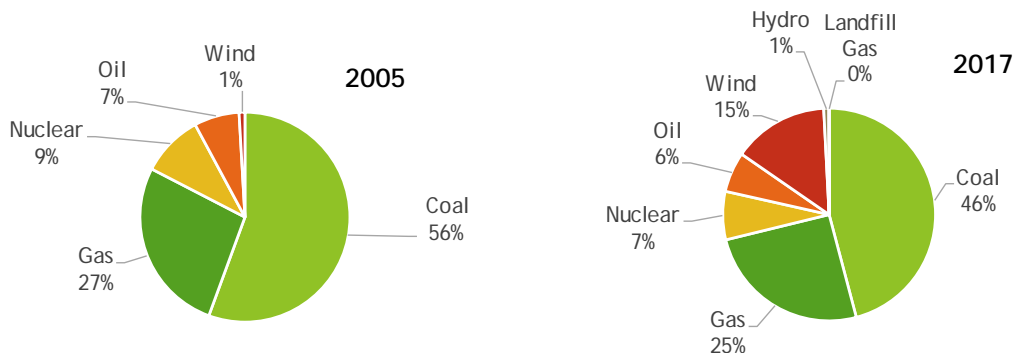
<b>Facility</b>	<b>Fuel</b>	<b>Owned or Contracted<sup>2</sup></b>	<b>In-Service Date</b>	<b>MW</b>
Gray County	Wind	PPA	Mar. 2001	60
Spearville 1	Wind	Owned	Sept. 2006	100
Spearville 2	Wind	Owned	Dec. 2010	48
Cimarron-2	Wind	PPA	June 2012	131
Spearville 3	Wind	PPA	Oct. 2012	101
Ensign	Wind	PPA	Nov. 2012	99
State Creek	Wind	PPA	Dec. 2015	150
Waverly	Wind	PPA	Dec. 2015	200
Osborn	Wind	PPA	Dec. 2016	200
Rock Creek	Wind	PPA	Dec. 2017	300
Pratt	Wind	PPA	Dec. 2018	244
Prairie Queen	Wind	PPA	May 2019	200
CNPPID	Hydro	PPA	Jan. 2014	60
Greenwood	Solar	Owned	June 2016	3
St. Joseph	LFG <sup>3</sup>	Owned	Mar. 2012	1.6
Kansas City	Solar	Owned	2012-2014	0.17
<b>TOTAL</b>				<b>1,898</b>

5 Since 2005, KCP&L and GMO have added 1,454 MW of renewable energy to their  
6 supply mix, and GPE has contracted for an additional 444 MW expected to be in-service  
7 by mid-2019. Below is a comparison of KCP&L and GMO’s supply mix from 2005 to  
8 2017. Figure 1 shows that since 2005, KCP&L and GMO have added approximately 15%  
9 of renewable capacity to their supply mix and moved toward a cleaner and more diversified  
10 supply portfolio.

<sup>2</sup> Contracted capacity is indicated by “PPA” which stands for Purchased Power Agreement.

<sup>3</sup> “LFG” stands for landfill gas.

**Figure 1: KCP&L and GMO Supply Mix Comparison of 2005 to 2017**



1 Furthermore, in 2017, approximately 21% of GPE’s retail sales were supplied by  
 2 renewable energy.

3 **Q: Does Missouri require electric Investor-Owned Utilities (“IOUs”) to comply with**  
 4 **specific rules related to generation planning and renewable energy?**

5 A: Yes, Missouri requires both. IOUs are required to develop an Integrated Resource Plan  
 6 (“IRP”) every three years and update them as needed annually. The fundamental objective  
 7 of the IRP process at IOUs is to provide the public with energy services that are safe,  
 8 reliable and efficient, at just and reasonable rates, in a manner that serves the public  
 9 interest.<sup>4</sup> In addition, Missouri has a Renewable Energy Standard (“RES”) that requires  
 10 all electric utilities to generate or purchase renewable energy credits (“RECs”) and solar-  
 11 RECs associated with renewable energy resources in sufficient quantity to meet the  
 12 statutory requirements.<sup>5</sup> The specific requirements are:

- 13 • No less than ten percent (10%) in each calendar year 2018 through 2020; and
- 14 • No less than fifteen percent (15%) in each calendar year beginning in 2021.<sup>6</sup>

<sup>4</sup> 4 CSR 240-22.010(2).

<sup>5</sup> Sections 393.1020-.1030, Mo. Rev. Stat. (2016).

<sup>6</sup> 4 CSR 240-20.100. At least two percent (2%) of each year’s RES requirement must be derived from solar energy

1 **Q: Please describe the most recent IRP updates filed by KCP&L and GMO.**

2 A: Both companies filed an IRP Annual Update Preferred Plan in June 2017 for years 2017  
3 through 2036 which notes changes to the 2015 IRP. The KCP&L report forecasts the  
4 addition of the following generation: (1) 7 MW of solar additions in-service by 2028; (2)  
5 180 MW of additional wind by 2018; and (3) the increase of demand side management  
6 from 30 MW in 2017 to 492 MW in 2027.<sup>7</sup> Similarly, GMO's IRP Annual Update  
7 Preferred Plan forecasts: (1) 5 MW of solar additions in-service by 2028; (2) 120 MW of  
8 additional wind by 2018; and (3) the increase of demand side management from 60 MW  
9 in 2017 to 328 MW in 2027.<sup>8</sup> For both companies, all new generation planned over the  
10 twenty-year horizon is renewable energy only.

11 **Q: Are both KCP&L and GMO in compliance with the Missouri RES?**

12 A: Yes, and more. Both companies filed annual reports in April 2017 that demonstrate their  
13 RES compliance. The 2017 combined generation from KCP&L's and GMO's non-solar  
14 renewable resources was approximately 4.7 million MWh. Solar RES compliance for both  
15 companies comes from customer generated solar, 0.17 MW of KCP&L solar installations,  
16 and a 3 MW GMO-owned solar facility. Both companies exceed the Missouri RES  
17 requirements.

18 **Q: Have KCP&L and GMO recently added renewable energy to their generation mix  
19 that is beyond any Missouri RES requirement?**

20 A: Yes. KCP&L and GMO entered Power Purchase Agreements ("PPA") totaling 300 MW  
21 for wind energy from the Rock Creek wind facility in Holt County, Missouri which came  
22 online in late 2017. In addition, GPE has contracted for an additional 444 MW of wind

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<sup>7</sup> KCP&L Integrated Resource Plan 2017 Annual Update, June 2017. EO-2017-0229

<sup>8</sup> GMO Integrated Resource Plan 2017 Annual Update, June 2017. EO-2017-0230

1 generation (244 MW from the Pratt wind facility located in Pratt County KS and 200 MW  
2 from the Prairie Queen wind facility located in Allen County KS). The Pratt wind farm is  
3 expected to come online by the end of 2018 and the Prairie Queen wind farm is expected  
4 to be online by June 2019. These resources will be allocated between KCP&L and GMO.

5 **Q: Does Kansas have a renewable energy standard that KCP&L complies with?**

6 A: Yes, although the Kansas standard is voluntary, as of 2015. IOUs provide historical and  
7 projected renewable capacity data annually to the KCC that shows how they comply with  
8 RES.<sup>9</sup> To comply with the state's voluntary RES program, IOUs must own or purchase  
9 renewable generation such that the nameplate capacity of the renewable generation is equal  
10 to 20% of the utility's prior three-year peak retail load by 2020. KCP&L easily exceeds  
11 the standard. Based on current in-service renewable resources, KCP&L exceeds the  
12 expected 2020 standard by approximately 50%.

13 **Q: Has GPE announced the retirement of several fossil-fueled facilities?**

14 A: Yes. In addition to including the retirement of coal and gas facilities in its IRP Annual  
15 Preferred Plans, GPE has publicly stated that it plans to shut down the fossil-fueled  
16 facilities shown in Table 2.

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<sup>9</sup> Renewable Energy Standards Act, Kan. Stat. Ann. § 66-1256 (2015). See also Docket No. 13-KCPE-463-CPL.



**Table 2: GPE Fossil-Fueled Retirements<sup>10</sup>**

<b>Generating Unit</b>	<b>Capacity</b>	<b>In-service</b>	<b>Retire by</b>
Lake Road 4/6	97 MW	1967	Dec. 31, 2019
Montrose 2	164 MW	1960	Dec. 31, 2018
Montrose 3	176 MW	1964	Dec. 31, 2018
Sibley 1 <sup>11</sup>	48 MW	1960	Dec. 31, 2018
Sibley 2	51 MW	1962	Dec. 31, 2018
Sibley 3	364 MW	1969	Dec. 31, 2018

1 **Q: Please describe KCP&L’s and GMO’s other clean energy initiatives.**

2 A: KCP&L’s and GMO’s other clean energy initiatives are: (1) energy efficiency; (2) energy  
3 storage; and (3) green power rates.

4 **Q: Please discuss KCP&L and GMO’s energy efficiency initiatives.**

5 A: KCP&L and GMO have a history of implementing Demand Side Management (“DSM”)  
6 programs. Throughout the 1990s, KCP&L offered various energy efficiency, demand  
7 reduction and pricing programs to encourage energy efficiency. In 2005, KCP&L adopted  
8 the Comprehensive Energy Plan (“CEP”), which was the product of a highly collaborative  
9 process with its customers, community leaders and regulators to develop a regional  
10 approach to the investments needed to meet its customers’ needs for safe, reliable and  
11 cleaner power. The CEP resulted in six major commitments.: (1) to propose a portfolio of  
12 demand response, energy efficiency and affordability programs for approval by the

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<sup>10</sup> Press Release, KCP&L Continues Sustainability Commitment by Announcing Retirement of Six Units at Three Power Plant, June 2, 2017

<sup>11</sup> Sibley 1 retired from electric service on June 1, 2017, and Montrose 1 (170 MW not listed in table above) was retired in April 2016.

1 Commission; (2) to build 100 MW of wind generation in 2006; (3) to explore the potential  
2 for an additional 100 MW of wind in 2008; (4) to proceed with environmental investments  
3 related to Iatan 1 and La Cygne 1 for accelerated compliance with environmental  
4 regulations; (5) to invest in transmission and distribution facilities and upgrades; (6) to  
5 build 800-900 MW of new, advanced, coal-fired generation at the Iatan Station, including  
6 state-of-the-art environmental equipment.

7 In 2009, the Missouri Energy Efficiency Investment Act (“MEEIA”) was enacted  
8 by the Missouri legislature. MEEIA authorized the Commission to approve Demand Side  
9 Investment Mechanisms (“DSIMs”) for the state’s utilities and to allow cost-recovery for  
10 such programs and associated investment incentives. MEEIA does not set forth mandatory  
11 targets for energy efficiency, and program filings under MEEIA are entirely voluntary.  
12 Both KCP&L and GMO embraced MEEIA and are currently in a second 3-year cycle of  
13 DSM programs. KCP&L and GMO are continuing their commitment to energy efficiency  
14 with the development of MEEIA Cycle 3 programs to be in effect beginning in 2019. From  
15 2013 through 2017, KCP&L and GMO have implemented demand-side programs that have  
16 resulted in an approximately 260 MW reduction in retail customer demand.

17 **Q: Please discuss KCP&L energy storage initiatives.**

18 A: In 2012, KCP&L incorporated a \$2.3 million SmartGrid demonstration project and  
19 operational testing of energy storage. Two forms of lithium-ion battery storage systems  
20 were demonstrated: (1) a 1.0 MW/1.0 MWh Bulk Energy Storage System; and (2) 6.0  
21 kW/11.2 kWh Premise Energy Storage System. While the SmartGrid Demonstration  
22 Project concluded in 2015, these systems are still in place and KCP&L continues to track

1 the development and costs of storage technologies for future resource and demand-side  
2 program planning.

3 **Q: Please discuss KCP&L and GMO’s green power rates initiatives.**

4 A: As discussed further in the Surrebuttal Testimony of Applicants’ witness Ives, KCP&L and  
5 GMO recently proposed two green power plans in Missouri which customers may  
6 subscribe to: (1) a Solar Subscription Pilot Rider tariff and (2) a Renewable Energy  
7 Program tariff.<sup>12</sup> The Solar Subscription Pilot Rider is a community solar program where  
8 one or more solar generating units will be installed on the KCP&L and GMO systems, and  
9 customers will be offered the opportunity to receive the output through a subscription. The  
10 program will be offered to both residential and commercial customers. The Renewable  
11 Energy Program is a renewable subscription program where KCP&L and GMO will  
12 execute one or more purchased power agreements with third parties to supply renewable  
13 energy to participating commercial and industrial customers. KCP&L will make similar  
14 green power plan proposals when it files its next general rate case in Kansas which is  
15 expected to occur in the second quarter of 2018.

16 **Q. Have KCP&L and GMO demonstrated a commitment to grid modernization?**

17 A. Yes. Both KCP&L and GMO have made substantial investment in the installation of  
18 Automated Meter Infrastructure (“AMI”), also known as smart meter technology. The  
19 AMI installation was completed in the urban portions of both companies<sup>13</sup> at the end of  
20 2016, with over 700,000 meters upgraded, or nearly 80% of all customers. A Meter Data  
21 Management software system was installed shortly thereafter to further enable the full

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<sup>12</sup> See Direct Testimony of Bradley D. Lutz, filed on behalf of Kansas City Power & Light Company, No. ER-2018-0145 (Jan. 30, 2018) and on behalf of KCP&L Greater Missouri Operations Company, No. ER-2018-0146 (January 30, 2018).

<sup>13</sup> Rural upgrades are scheduled for 2019-2020 rollout.

1 capabilities of this new technology. In addition, KCP&L and GMO have identified and  
2 applied various distribution automation and smart grid technologies on their systems,  
3 including automated reclosers with remote operation capabilities, smart switches with  
4 coordinated automatic reconfiguration (self-healing) capabilities, and communicating  
5 faulted circuit indicators. Finally, in January 2018 an article in the industry magazine T&D  
6 World touted an innovative project to modernize the KCP&L distribution system with a  
7 new standard suite of state-of-the-art capacitor controls developed through a vendor  
8 collaboration.<sup>14</sup>

9 KCP&L and GMO also have a history of leadership in distribution system automation  
10 and smart grid development. As one of the early adopters of capacitor automation in the  
11 early 1990s, KCP&L played a major role in the development of some of the first  
12 commercially available automated capacitor controls, and was a leader in the adoption of  
13 automated meter reading technology (also known as AMR – the precursor to today’s smart  
14 meter systems). In addition, KCP&L partnered with the U.S. Department of Energy from  
15 2010 to 2015 for a \$50 million Smart Grid Demonstration project. It is notable that  
16 KCP&L and GMO implemented these advancements voluntarily without any mandate  
17 imposed on them. Rather, these improvements occurred in the course of thoughtful,  
18 diligent and prudent investment in technology to deliver reliable and cost-effective service  
19 to customers.

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<sup>14</sup> “KCP&L Modernizes Capacitor Bank Controls,” T&D World (January 2018).

1 **III. WESTAR'S CLEAN ENERGY AND RENEWABLE GENERATION POSITION**

2 **Q: Please provide an overview of Westar's clean energy and renewable portfolio.**

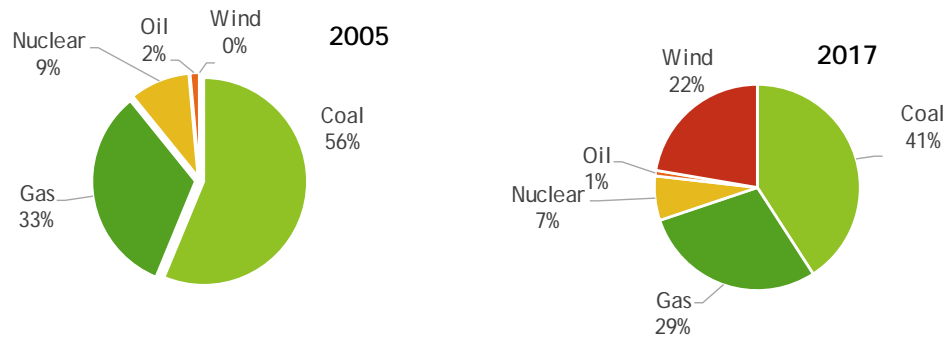
3 A: As of the end of 2017, Westar owned or had contracted for approximately 1,765 MW of  
 4 renewable energy. Table 3 provides a list of Westar's renewable energy assets.

**Table 3: Westar's Renewable Generation Assets**

<b>Facility</b>	<b>Fuel</b>	<b>Owned or Contracted</b>	<b>In-Service Date</b>	<b>MW</b>
Central Plains	Wind	Owned	March 2009	99
Flat Ridge 1	Wind	Owned	Feb. 2009	50
Flat Ridge 1A	Wind	PPA	March 2009	50
Meridian Way	Wind	PPA	Dec. 2008	96
Rolling Meadows	LFG	PPA	Jan. 2010	5.6
Ironwood	Wind	PPA	Aug. 2012	168
Post Rock	Wind	PPA	Oct. 2012	201
Manhattan SC	Solar	Owned	Apr. 2014	0.031
Lawrence SC	Solar	Owned	Aug. 2014	0.030
Shawnee SC	Solar	Owned	Sep. 2014	0.057
Parson SC	Solar	Owned	Mar. 2015	0.016
Kay Wind	Wind	PPA	Nov. 2015	200
Cedar Bluff	Wind	PPA	Nov. 2015	199
Wichita SC	Solar	Owned	Dec. 2015	0.017
Topeka GO	Solar	Owned	Feb. 2016	0.008
Ninnescah	Wind	PPA	Dec. 2016	208
Kingman I	Wind	PPA	Dec. 2016	103
Kingman II	Wind	PPA	Dec. 2016	103
Western Plains	Wind	Owned	Feb. 2017	281
Community Solar	Solar	PPA	Sept. 2017	1.02
<b>TOTAL</b>				<b>1,764.8</b>

5 Since 2005, Westar has added these 1,765 MW of renewable energy to its  
 6 generation mix. Figure 2 shows a comparison of Westar's supply mix from 2005 to 2017.  
 7 Since 2005, Westar has grown its wind generation capacity to approximately 22% of its  
 8 generation capacity and lowered its coal-fired generation capacity by almost 15 percentage  
 9 points, to approximately 41%.

**Figure 2: Westar’s Generation Mix Comparison of 2005 to 2017**



1           Moreover, in 2017, 31%<sup>15</sup> of Westar’s retail sales were supplied by renewable  
2 energy.

3 **Q: Does Westar comply with the Kansas RES Act?**

4 A: Yes. In 2017, Westar reported it had 1,765 MW of renewable capacity, which would more  
5 than cover the 20% RES compliance percentage.

6 **Q: Is it your understanding that Westar has decided it can accelerate the retirement of  
7 several of its fossil-fueled units by five to ten years?**

8 A: Yes. Similar to GPE, Westar has announced that it plans to retire 781 MW of fossil-fueled  
9 generation by the end of 2018. The units had originally been slated to close between 2023  
10 and 2028, but it was determined that these units could be retired earlier. Westar is planning  
11 to retire the fossil-fueled resources shown in Table 4.

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<sup>15</sup> Westar December 2017 Generation Results.

**Table 4: Westar Fossil-Fueled Retirements**

<b>Generating Unit</b>	<b>Capacity</b>	<b>In-service</b>
Murray Gill Unit 3	104 MW	1956
Murray Gill Unit 4	86 MW	1959
Tecumseh Unit 7	61 MW	1957
Gordon Evans Unit 1	154 MW	1961
Gordon Evans Unit 2	376 MW	1967

1 **Q: Does Mr. Rábago recommend that the Commission require Applicants to develop and**  
2 **adopt a commitment that provides for a firm date-certain to close the Westar coal**  
3 **and gas-fired power plants slated for retirement?**<sup>16</sup>

4 A: Yes. Although Applicants confirm they will retire these units soon, they cannot provide a  
5 firm retirement date until the Southwest Power Pool (“SPP”) completes the 2018 Integrated  
6 Transmission Planning (“2018 ITP”) study. Westar has provided the required 6-month  
7 notice to the SPP for retirement of Tecumseh 7, Gordon Evans 1 and Gordon Evans 2 steam  
8 units which will allow for unit retirements by December 31, 2018. Westar has not yet  
9 provided this notice for the Murray Gill 3 or 4 units but intends to do so before Summer  
10 2018 to allow for retirement by December 31, 2018. The SPP is currently conducting the  
11 2018 ITP which includes 0 MW output for all units Westar plans to retire. The study will  
12 be finalized and approved by the SPP Board of Directors in July 2018.

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<sup>16</sup> Rebuttal Testimony of Karl Rábago, at 24.

1 **Q: Is Westar seeking to add renewable resources to its generation mix?**

2 A: Yes. Westar completed the addition of 280 MW of new wind energy by adding its Western  
3 Plains wind farm in early 2017. More recently, Westar issued a request for proposals  
4 (“RFP”) in August 2017 regarding renewable resources<sup>17</sup> for projects that can attain  
5 commercial operation no later than December 31, 2020. As noted by Westar’s Chad Luce,  
6 the RFP responses contained very cost competitive bids,<sup>18</sup> which will likely lead to  
7 additional renewable energy for Westar by 2021.

8 **Q: Please describe Westar’s other clean energy initiatives?**

9 A: Westar’s other clean energy initiatives are: (1) energy efficiency; (2) energy storage; and  
10 (3) green power rates.

11 **Q: Please discuss Westar’s energy efficiency initiatives.**

12 A: Westar has several energy efficiency programs in place, including its WattSaver Air  
13 Conditioner Cycling Program in which customers participate in a programmable  
14 thermostat program; an energy efficiency demand response program for large customers  
15 that allows for dependable load control and a resource for managing peak load  
16 requirements; and a program targeted at medium to larger business and city/government  
17 facilities that provides in-depth training on efficient building operation. Additionally,  
18 through Westar’s smart meter deployment, all customers have access to an online energy  
19 dashboard on their MyWestar account page that gives detailed daily energy cost and usage  
20 information down to 15-minute intervals. This dashboard also automatically emails  
21 customers weekly summary reports. Customers can select to have alerts sent on bill

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<sup>17</sup> RFP specified that preference would be given to wind projects with greater than 50 MW of nameplate capacity, biomass projects greater than 25 MW and landfill gas, hydro and solar projects greater than 5 MW.

<sup>18</sup> Direct Testimony of Chad Luce, at 6-7, Kansas Corporation Commission Docket 18-WSEE-190-TAR, (November 6, 2017).



1 threshold amounts (as set by the customer) and on unusually high energy usage based on  
2 90-day historical trends. These reports and alerts educate customers regarding their current  
3 usage patterns and allow them to make adjustments during a billing period.

4 **Q: Does Westar currently have an energy storage initiative underway?**

5 A: Yes, Westar is in the planning stage to invest in a 1 MW / 4 MWh energy storage system.  
6 Proposals for the system were received from multiple vendors, and Westar's plan is to  
7 purchase and install a system to begin operation by the fourth quarter of 2018. Westar's  
8 near-term objective for the project is to defer a substation upgrade with the long-term goal  
9 of learning more about energy storage and its uses.

10 **Q: Please discuss Westar's green power programs.**

11 A: Westar currently offers three renewable energy programs to its customers: (1) the RENEW  
12 program (marketed as Westar Wind); (2) the Community Solar program; and (3) the Wind  
13 Generation Service program. At the end of 2017, Westar Wind had over 21,000  
14 participants and the 1.2 MW Community Solar program had over 400 customers  
15 subscribed. In addition, in November 2017 Westar proposed the implementation of a new  
16 Direct Renewable Participation Service ("DRPS") tariff. If approved by the KCC, the  
17 DRPS tariff will allow larger commercial and industrial customers to purchase wind  
18 capacity from a new, local wind generation source. The wind resource contracted to fulfill  
19 the RFP discussed above would be used to source the wind energy for this program.

20 In 2016, Westar launched an award-winning customer communication plan on  
21 renewable energy. Winning a 2017 Chartwell gold medal award, the plan included a  
22 comprehensive Clean Energy Kansas section on its website, targeted social media, in-  
23 cinema short films, and outdoor advertising. The Clean Energy Kansas web information

1 provides detailed information and education tools for customers to better understand  
2 Westar's green power programs like Westar Wind and Community Solar. It also provides  
3 guidance for customers interested in private solar and other distributed energy resource  
4 interconnections. The site offers a personal assistance option from a Westar employee if  
5 needed.

6 **Q: Has Westar demonstrated a commitment to grid modernization activities?**

7 A: Yes. Westar has also made substantial investment in the installation of AMI or smart meter  
8 technology, which is 90% deployed and will be complete by this summer. A Meter Data  
9 Management software system was also installed to enable the full capabilities of the new  
10 technology. Westar has identified and applied various distribution automation and smart  
11 grid technologies on its systems, including automated reclosers with remote operation  
12 capabilities, smart switches with coordinated automatic reconfiguration (self-healing)  
13 capabilities, and communicating fault indicators.

14 **Q: Are the commitments proposed by Mr. Rábago necessary for Westar to pursue and  
15 implement renewable and clean energy?**

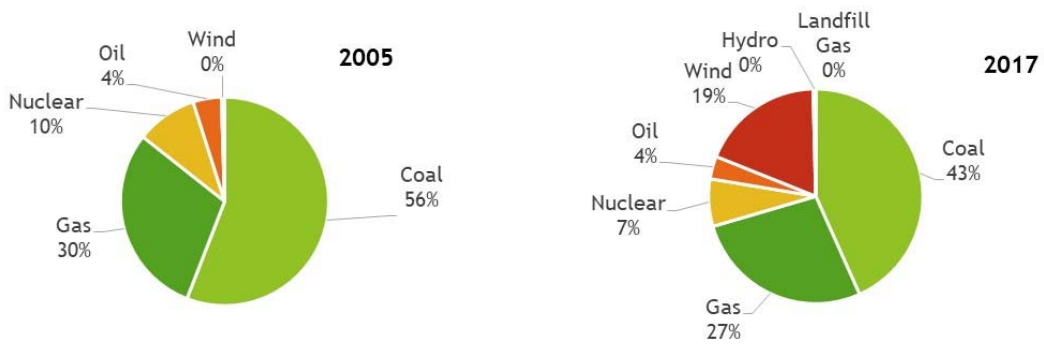
16 A: No. Like GPE, Westar has a strong history of pursuing renewable and clean energy, and  
17 will continue to embrace renewable and clean energy. Westar has approximately than  
18 1,760 MW of renewable generation in its portfolio, exceeding its voluntary RES  
19 requirements. Westar is currently evaluating the addition of renewable generation and  
20 plans to retire 781 MW of fossil-fueled generation by the end of 2018. Westar is actively  
21 pursuing other clean energy initiatives including, energy storage and green power rates.  
22 The commitments proposed by Mr. Rábago are unnecessary and, as discussed by Mr.  
23 Greenwood, this is not the proper forum to consider them.

1 **IV. Applicants Combined Commitment to Clean Energy**

2 **Q: Please provide an overview of the combined company’s generation resource mix.**

3 A: As show in Figure 3, together, KCP&L, GMO and Westar’s supply mix includes almost  
4 20% renewable capacity compared to the combined generation mix in 2005 that included  
5 less than 1% of renewable capacity.

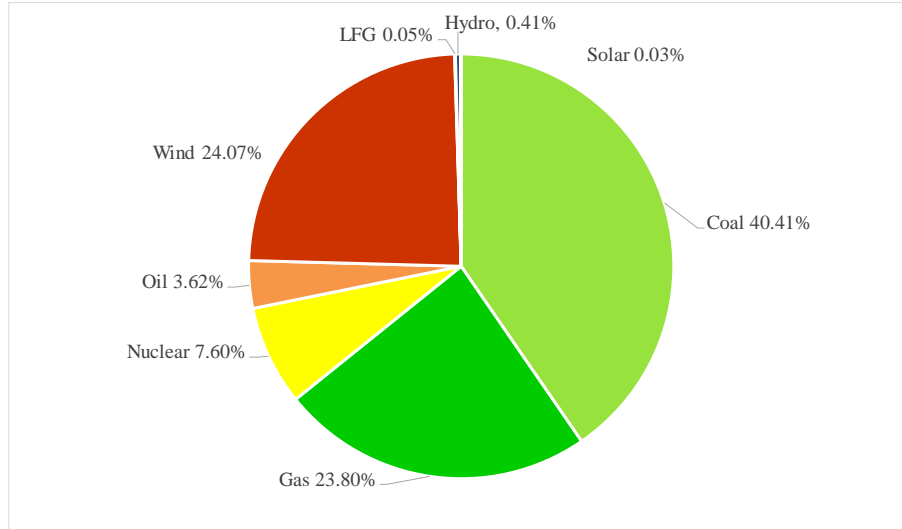
**Figure 3: KCP&L/GMO and Westar Combined Generation Mix**



6 **Q: Based on Applicants’ forecasted generation retirements and additions, please provide**  
7 **an overview of the combined company’s supply resource mix in 2020.**

8 A: See Figure 4 below for a forecast of supply resource mix for 2020.

**Figure 4: KCP&L/GMO and Westar Forecast Combined Supply Mix - 2020**



1 **Q: Do you agree with Mr. Rábago’s assertion that the Merger application does not**  
2 **provide sufficient assurance that clean energy development will occur as a result of**  
3 **the Merger?**<sup>19</sup>

4 **A:** While the Merger application does not include specific assurances that clean energy  
5 development will occur after the Merger, KCP&L, GMO and Westar have a long-term,  
6 clearly demonstrated track record of advancing clean energy. Such actions will continue  
7 after the Merger has been completed. After the Merger closes, KCP&L, GMO and Westar  
8 will have significant renewable energy resources. The size, scale, and financial strength  
9 and flexibility of the new combined company should enable KCP&L, GMO and Westar to  
10 pursue even more renewable energy than they would be able to on a standalone basis. The  
11 combined wind portfolio of these three utilities will be one of the largest in the United  
12 States, with renewable energy accounting for approximately 30% of their retail sales.

<sup>19</sup> Rebuttal Testimony of Karl Rábago, at 23.

1 Finally, energy efficiency and demand response programs are expected to continue to be a  
2 key component of Applicants' resource portfolio.

3 **Q: How do you respond to Mr. Rábago's recommendation to conduct a comprehensive,**  
4 **transparent, parallel integrated resource planning project for the combined**  
5 **companies in both Missouri and Kansas.<sup>20</sup>**

6 A: As part of the KCP&L and GMO 2019 IRP Updates, a combined KCP&L/GMO/Westar  
7 analysis will be conducted. This process, as with other formal IRP proceedings in  
8 Missouri, will be open to all interested stakeholders.

9 **Q: In summary, are any of the commitments proposed by Renew Missouri something the**  
10 **Commission should consider including in its Order in this docket?**

11 A: No, they are not. Applicants' long history of pursuing renewable and clean energy  
12 demonstrates they have embraced and will continue to embrace renewable and clean  
13 energy. Applicants own or have contracted for over 3,600 MW of renewable supply to  
14 serve their customers, exceeding both the Kansas RES standard and Missouri RES  
15 requirements. In addition, Applicants plan to retire more than 1,600 MW of fossil-fuel  
16 generation by the end of 2019 and are actively pursuing other clean energy initiatives  
17 regarding energy efficiency and green power rates. The commitments proposed by Mr.  
18 Rábago are unnecessary and, as discussed by Mr. Greenwood, this is not the proper forum  
19 to consider them.

20 **Q: Does that conclude your testimony?**

21 A: Yes, it does.

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<sup>20</sup> Rebuttal Testimony of Karl Rábago, at 17.

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

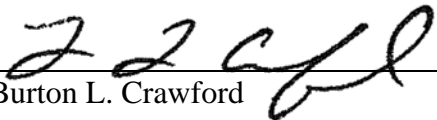
In the Matter of the Application of Great Plains     )  
Energy Incorporated for Approval of its Merger     ) Docket No. EM-2018-0012  
with Westar Energy, Inc.                             )

**AFFIDAVIT OF BURTON L. CRAWFORD**

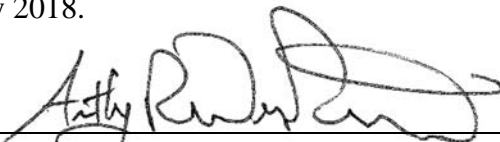
**STATE OF MISSOURI**     )  
   ) ss  
**COUNTY OF JACKSON**     )

Burton L. Crawford, being first duly sworn on his oath, states:

1. My name is Burton L. Crawford. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Energy Resource Management.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Great Plains Energy Incorporated, Kansas City Power & Light Company, and KCP&L Greater Missouri Operations Company consisting of twenty (20) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

  
\_\_\_\_\_  
Burton L. Crawford

Subscribed and sworn before me this 21<sup>st</sup> day of February 2018.

  
\_\_\_\_\_  
Notary Public

My commission expires: 4/26/2021

