

**THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

In the Matter of the Joint Application of)
Great Plains Energy Incorporated, Kansas)
City Power & Light Company and Westar) Docket No. 16-KCPE-593-ACQ
Energy, Inc. for approval of the Acquisition)
of Westar Energy, Inc. by Great Plains)
Energy Incorporated.)

**NOTICE OF RE-FILING STAFF'S PRE-FILED DIRECT TESTIMONY WITHOUT
REDACTIONS**

The Staff of the Kansas Corporation Commission (Staff and Commission or KCC, respectively), pursuant to the Commission's January 26, 2017, *Order on Prehearing Motions*, hereby files un-redacted versions of the same testimony Staff filed with redactions on December 16, 2016. Staff also states the following:

1. The Commission's *Order on Prehearing Motions* ordered redaction removal from all parties' testimony except for information that fell into one of the following categories: (1) attorney-client privilege, (2) attorney work-product, or (3) critical infrastructure information which poses a security risk if made public.

2. Relevant to Staff, Attachment 1 of the *Joint Applicants' Response to Staff's Motion to Declassify All Staff Testimony and Exhibits* (Joint Applicant's Response), filed January 20, 2016, contained an itemized list, categories (1)-(7), identifying the particular confidential classifications claimed by the Joint Applicants included in Staff's pre-filed direct testimony. Category (4) was listed as "Advice of counsel or other outside experts, advisors or consultants." Category (7) was listed as "Critical infrastructure information that poses a security risk if made public."

3. The Joint Applicants did not designate any information in Staff's direct testimony under category (4).

4. Category (7), pertaining to critical infrastructure, referenced KCC Staff Data Requests (DRs) 47, 50, and 52. These are addressed solely in the pre-filed direct testimony of Walter Drabinski. Staff has kept redacted the portions of testimony pertaining to these DRs, but un-redacted the remainder of his testimony.

WHEREFORE, Staff respectfully submits its un-redacted pre-filed direct testimony for Justin Grady, Adam Gatewood, Walter Drabinski, Ann Diggs, Casey Gile, and Robert Glass. Note that Jeff McClanahan and Scott Hempling also filed on December 16, 2016, but their testimony did not contain any confidential information.

Respectfully Submitted,



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STATE OF KANSAS)
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COUNTY OF SHAWNEE)

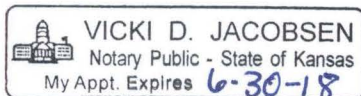
VERIFICATION

Michael Neeley, being duly sworn upon his oath deposes and states that he is Litigation Counsel for the State Corporation Commission of the State of Kansas, that he has read and is familiar with the foregoing *Notice of Re-filing Staff's Pre-Filed Direct Testimony Without Redactions* and that the statements contained therein are true and correct to the best of his knowledge, information and belief.



Michael Neeley # 25027
Kansas Corporation Commission of the
State of Kansas

Subscribed and sworn to before me this 27rd day of January, 2017.



Notary Public

My Appointment Expires: June 30, 2018

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

**IN THE MATTER OF THE JOINT
APPLICATION OF GREAT PLAINS ENERGY
INCORPORATED, KANSAS CITY POWER &
LIGHT COMPANY, AND WESTAR ENERGY,
INC. FOR APPROVAL OF THE ACQUISITION
OF WESTAR ENERGY, INC. BY GREAT
PLAINS ENERGY INCORPORATED**

DOCKET No. 16-KCPE-593-ACQ

DIRECT TESTIMONY

PREPARED BY

WALTER P. DRABINSKI

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

December 16, 2016

CONFIDENTIAL VERSION

CONFIDENTIAL VERSION

****■** Denotes Confidential Information**

This testimony was unredacted in certain areas and resubmitted on January 27, 2017, to
comply with Commission Order issued on January 26, 2017

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I. INTRODUCTION

A. BACKGROUND

Q. Please state your name, Company and business address.

A. Walter P. Drabinski, Vantage Energy Consulting LLC., 20844 4th Ave. West,
Cudjoe Key, FL 33042.

Q. What is your occupation?

A. I am the President of Vantage Energy Consulting LLC (Vantage), a management consulting firm that provides services to the regulated utility industry. On this assignment I have the capacity of Project Director for Vantage.

Q. Please describe your educational background and professional experience.

A. My education includes a BS in Electrical Engineering from the State University of New York at Buffalo in 1972 and an MBA from The Wharton School (University of Pennsylvania) in 1984. My experience totals 44 years, including 10 as a utility company manager and 34 as a management consultant specializing in utility issues.

Q. Please expand upon your background in the energy industry.

A. I began my career with Niagara Mohawk Power Company (NiMo). During my first five years with NiMo in upstate New York, I assisted in the construction/conversion of 2,000 MW of power plants. During construction, my primary responsibilities included review of operational design considerations, monitoring of construction, and acceptance

1 testing of all electrical power systems, including load metering and transmission
2 telemetry control systems, and many other systems. During this period, I also assisted in
3 the integration of the transmission system and new generation with the New York Power
4 Pool. After construction completion of the 850 MW Oswego 5, I became Electrical
5 Maintenance Supervisor, with responsibility for routine maintenance at the Oswego
6 Steam Plant, and outage assistance at two nearby nuclear stations and fifteen local hydro
7 generation stations. During my last five years at NiMo, I was corporate Director of
8 Training for power plants and had responsibility for management and technical training at
9 all fossil, hydro and nuclear plants. During this time, I developed extensive programs on
10 power plant efficiency improvement. I authored, or co-authored, five training manuals
11 on power plant operations, instrumentation, and control as part of an Electric Power
12 Research Institute project.

13 **Q. Describe your career in management consulting.**

14 A. In 1984, I joined a national management consulting firm in New York City and
15 have worked as a management consultant since that time. I formed Vantage Consulting,
16 Inc., in 1990 and then reorganized in 2010 after relocating to Florida as Vantage Energy
17 Consulting LLC. Since 1990, our firm has worked on almost 200 assignments with
18 utilities, state and federal regulators, and law firms. I have testified over 100 times on
19 areas of construction prudence, fuel and energy procurement, deregulation,
20 environmental cost recovery, reliability, performance, and utility operations.

21 **Q. Have you testified before the Kansas Corporation Commission before?**

1 A. Yes. I testified in DOCKET NO. 10-KCPE-415-RTS, related to the Iatan 1 & 2
2 power plant construction prudence.

3 **B. PURPOSE AND ORGANIZATON OF TESTIMONY**

4 **Q. What is the purpose of your testimony?**

5 A. My testimony addresses a number of issues associated with post-merger plans for
6 Generation, Transmission and Distribution (T&D), Customer Service and Supply Chain
7 activities. My testimony and the analysis that supports it provide an analytical foundation
8 that permits me to reach conclusions related to retirement plans, estimates of merger
9 related savings and the cost to implement those savings, high level condition assessments
10 of infrastructure and systems, the reasonableness of assumptions regarding savings due to
11 joint supply chain and customer service activities, and the impact to the State and local
12 communities from proposed workforce reductions.

13 **Q. Have you reached a conclusion as to whether this merger should go forward?**

14 A Yes. I conclude, based on my own analysis, that the Commission should not
15 approve the transaction. My testimony will demonstrate, from a technical and analytical
16 standpoint, that the Joint Applicants (JAs) have not met the hurdle set by the Merger
17 Standards, do not provide adequate testimony regarding merger savings and the cost to
18 implement the merger, and have not performed adequate analysis to support the argument
19 that decisions being made and the results of this merger will provide the best results for
20 the public generally in the State of Kansas. Further, the communities affected by

1 employee reductions, and the overall State economy will suffer losses greater than any
2 benefits demonstrated.

3 **Q. How have you organized your testimony?**

4 A. The testimony is broken into a number of sections. Section I of my testimony
5 provides discussion of my background, the purpose of my testimony, a summary of
6 proposed post-merger changes to staffing and Operations and Maintenance (O&M)
7 Costs, and a summary of conclusions.

8 Section II addresses the merger standards that apply to the issues we are
9 reviewing and my opinion as to how well the JAs have complied.

10 Section III provides a review of the planned generation retirements, related costs
11 savings and cost to achieve the savings as presented by Westar Energy, Inc. (Westar), and
12 Great Plains Energy (GPE) in their witnesses' testimony and related data responses.

13 Section IV reviews T&D analysis, related costs savings and the cost of
14 implementation presented by the Companies in their witnesses' testimony.

15 Section V reviews the plans for combining the Customer Service systems of the
16 two companies.

17 Section VI reviews the proposed merger related activities and projected savings
18 associated with Supply Chain activities.

19 Within the context of these review areas I will determine whether the proposed
20 savings are adequately supported and accurately calculated, whether the proposed

1 implementation costs are reasonably estimated and how the proposed changes impact the
2 merger standards that the Commission has established for this case.

3 While we do not propose that this merger go forward as structured, in Section VII
4 of my testimony I provide suggested guidelines for monitoring the performance promised
5 by the combined company based on stated and implied statements in its filing and
6 associated testimony, and for assuring that decisions on retirements, CAPEX and O&M
7 spending are made based on detailed analytical support.

8 **C. SUMMARY OF MAJOR POST-MERGER CHANGES**

9 **Q. What are the major changes proposed for the post-merger company as they relate**
10 **to your testimony?**

11 A. In order to provide some perspective on the changes proposed by the JAs, I have
12 developed the following charts to summarize how different the combined Company will
13 look if the merger is approved as requested and if the staffing reductions, changes in
14 O&M and generating unit reductions occur as projected. Later in my testimony, I address
15 these issues in more detail.

16 **STAFFING CHANGES**

17 **Q. Where did your data come from?**

1 A. I utilized Mr. Kemp's work paper merger savings spreadsheet.¹ The Tab named
2 DATA Lines 50-59, 68, and 69 provide data related to the power plants and, generation
3 supply. Lines 60-68 and 70 provide details on T&D, Lines 71-72 provide data on the
4 Supply Chain organization, and Customer Service and related customer relations staffing
5 was addressed in lines 24-42 and 67.² Savings associated with reductions in staff are
6 provided in the Tab names DATA. The supply chain savings are in a separate Tab
7 named SUPPLY CHAIN.³

8 **Q. What will the impact be on staffing for Generation, T&D and Supply Chain?**

9 A. Exhibit WPD-1 summarizes reductions in staffing. It shows that once the planned
10 generating unit retirements are fully implemented, staffing will be reduced by 392 FTE's
11 (Full Time Equivalents). Likewise T&D Staffing will decrease by 126 FTEs; Supply
12 Chain staffing will decrease by 28 FTEs, and Customer Service related activities will
13 decrease by 69 FTEs.⁴

¹ KCC-7 and KCC-134

² Staffing related to customer service was selected based on department names and may not be completely accurate.

³ A summary of my analysis is provided in WPD-Workpapers file: Savings Analysis WPD Rev1.xls

⁴ Please note that we use the JA witness data for our analysis knowing that no final decisions regarding generating unit closings or other consolidations have been finalized.

Exhibit – WPD -1

Summary of Proposed Changes in Staffing

Summary of Proposed Changes in Staffing - Post Merger										
Generation Staffing Analysis Summary	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Staffing Projection without Merger	505	505	505	505	505	505	505	505	505	505
Head Count Reduction Post Merger	39	39	326	392	392	392	392	392	392	392
Staffing Projection after Merger	466	466	180	113	113	113	113	113	113	113
Percent Reduction in Staffing	8%	8%	64%	78%	78%	78%	78%	78%	78%	78%
T&D Staffing Analysis	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Staffing Projection without Merger	149	149	150	150	150	150	150	150	150	150
Head Count Reduction Post Merger	24	24	24	24	24	24	24	24	24	24
Staffing Projection after Merger	125	126	126	126	126	126	126	126	126	126
Percent Reduction in Staffing	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Supply Chain Staffing Analysis	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Staffing Projection without Merger	82	81	81	79	79	79	79	79	79	79
Head Count Reduction Post Merger	28	28	28	28	28	28	28	28	28	28
Staffing Projection after Merger	54	53	53	51	51	51	51	51	51	51
Percent Reduction in Staffing	34%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Customer Service Staffing Analysis	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Staffing Projection without Merger	245	247	249	252	252	252	252	252	252	252
Head Count Reduction Post Merger	49	66	66	69	69	69	69	69	69	69
Staffing Projection after Merger	195	181	183	183	183	183	183	183	183	183
Percent Reduction in Staffing	20%	27%	27%	27%	27%	27%	27%	27%	27%	27%

1 **O&M CHANGES**

2 **Q. What was the impact on O&M reductions for Generation and T&D?**

3 A. Exhibit WPD-2 summarizes the O&M reductions. Similar to the staffing analysis, it
4 comes from Mr. Kemp's work paper merger savings spreadsheet.⁵

5 **Q. What is the impact on O&M expenditures for Generation and T&D?**

6 A. Once all changes are implemented, generation O&M will be reduced by 88% and
7 T&D O&M expenses will be reduced by 26%.⁶

⁵ KCC-7 and KCC-134

⁶ A summary of my analysis is provided in WPD-Workpapers file: Savings Analysis WPD Rev1.xls

Exhibit – WPD -2

Summary of Proposed Changes in O&M

Summary of Proposed Changes in O&M - Post Merger										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Generation O&M Analysis Summary										
O&M Projection without Merger	\$86,169,278	\$85,426,658	\$89,537,635	\$89,729,052	\$91,523,633	\$93,354,105	\$95,221,187	\$97,125,611	\$99,068,123	\$101,049,486
O&M Reduction Post Merger	\$2,756,587	\$5,638,284	\$60,939,837	\$78,617,815	\$80,160,664	\$81,733,927	\$83,338,207	\$84,974,116	\$86,642,280	\$88,343,338
O&M Projection after Merger	\$83,412,690	\$79,788,374	\$28,597,798	\$11,111,237	\$11,362,969	\$11,620,178	\$11,882,980	\$12,151,495	\$12,425,843	\$12,706,147
Percent Reduction in O&M	3%	7%	68%	88%	88%	88%	88%	87%	87%	87%
T&D O&M Analysis Summary										
O&M Projection without Merger	\$16,694,392	\$16,932,414	\$17,141,211	\$17,408,275	\$17,756,441	\$18,111,570	\$18,473,801	\$18,843,277	\$19,220,142	\$19,604,545
O&M Reduction Post Merger	\$2,251,441	\$4,507,389	\$4,512,286	\$4,517,582	\$4,585,501	\$4,654,441	\$4,724,419	\$4,795,450	\$4,867,550	\$4,940,735
O&M Projection after Merger	\$14,442,952	\$12,425,024	\$12,628,925	\$12,890,694	\$13,170,940	\$13,457,128	\$13,749,382	\$14,047,827	\$14,352,592	\$14,663,811
Percent Reduction in O&M	13%	27%	26%	26%	26%	26%	26%	25%	25%	25%

D. COMPLIANCE WITH MERGER STANDARDS

Q. Provide a summary of your overall conclusion, as well as specific conclusions for each area you review.

A. After performing a detailed analysis of post-merger plans for Generation, T&D, Customer Service and Supply Chain activities, I conclude, and agree with the Staff recommendation that this merger should not be approved. Overall, it does not satisfy the five the standards that I reviewed. Further, the proposed transaction does not promote the public interest when evaluated in light of any of the five Merger Standards my testimony analyzes.

Q. Are you familiar with the Commission's Merger Standards?

A. Yes, I reviewed the order issued in this docket reaffirming the merger standards as modified in Docket No. 97-WSRE-676-MER.

Q. Which merger standards are addressed in your testimony?

A. The following merger standards were addressed in my testimony.

- a) The effect of the transaction on consumers, including:
 - (iii) whether ratepayer benefits resulting from the transaction can be quantified;
 - (iv) whether there are operational synergies that justify payment of a premium in excess of book value; and
 - (v) the effect of the proposed transaction on the existing competition.
- b) The effect of the transaction on the environment.

c) Whether the proposed transaction will be beneficial on an overall basis to state and local economies and to communities in the area served by the resulting public utility operations in the state.

d) Whether the proposed transaction will likely create labor dislocations that may be particularly harmful to local communities, or the state generally, and whether measures can be taken to mitigate the harm.

f) Whether the transaction maximizes the use of Kansas energy resources.

Q. What is your overall conclusion regarding Merger Condition a) The effect of the transaction on consumers?

A. There are very few ratepayer benefits accruing due to this merger. Most of the savings could occur regardless of the merger, some are overstated, and many of the implementation costs are not identified or are underestimated. While there may be a few operational synergies, they do not justify the premium being paid. Mr. Grady's testimony states that even if all of the applicants savings estimates turn out to be true, there's no way the premium is justified.

Q What is your overall conclusion regarding Merger condition b) The effect of the transaction on the environment?

A. My analysis did not indicate that there is any impact on the environment in Kansas. All of the units proposed for retirement meet current Clean Air Act compliance requirements, and in fact some units just recently underwent major and costly upgrades. I conclude that the closing of many of the generating units the Joint Applicants have

1 identified as a source of savings from accelerated retirement were already planned for
2 retirement, and would have likely occurred regardless of the merger. Excess over
3 capacity of the Westar, KCP&L, and GMO were already high and only exacerbated by
4 recent changes in the Southwest Power Pool (SPP) capacity requirement reductions.⁷
5 Further, there is no longer certainty as to whether environmental rules, in the future, will
6 be enacted as currently written given the outcome of the recent national presidential
7 election.

8 Q **What is your overall conclusion regarding Merger Condition c) Benefit to state and**
9 **local economies?**

10 A There is no discernable benefit to local economies and communities. In fact,
11 shutting generating plants down and reducing staff in T&D, Customer Service and
12 Supply Chain departments hurts local economies by removing the salaries related
13 associated with 617 well-paying jobs.⁸

14 Q **What is your overall conclusion regarding Merger Condition d) Labor dislocations.**

15 A. Based on my evaluation of this merger standard, I conclude that the reduction of
16 over 600 jobs in the areas of generation, supply chain, T&D, and customer service will
17 have a major negative impact on the state and local communities of the combined
18 companies. However, Joint Applicants have not provided certainty regarding in which

⁷ The required level of capacity margin was reduced to 12% in June 2016 by the SPP

⁸ Witness Bob Glass provides details on the impact of employment losses.

1 state (Kansas versus Missouri) these reductions will occur; therefore my analysis cannot
2 distinguish between Kansas and Missouri in many instances.⁹

3 **Merger Condition f) – Maximize Kansas energy resources:** The reduction of 1,069
4 MW of generation production at seven generating units reduces the use of energy
5 resources in Kansas.

6 **Q. Do you address what actions should be required by the JAs should the merger, in its**
7 **present or a modified form, be approved?**

8 A. No. I am not recommending approval of this merger. However, this testimony
9 describes a number of conditions that should be imposed for this type of transaction
10 should it go forward, or if the deal is restructured, to allow it to promote the public
11 interest. These merger conditions are detailed in Section VII of the testimony. The
12 merger conditions address the need for:

- 13 • **Generating Unit Closure Approval** - a complete analysis and technical assessment
14 of generating units prior to a decision on which units should be retired, including a
15 comprehensive Integrated Resources Plan (IRP) that utilizes up-to-date data on
16 environmental regulations, capacity margin requirements, transmission constraints
17 and the value of capacity and energy sales. Approval should be sought from the
18 Commission before closure occurs.

⁹ I do not distinguish between Kansas and Missouri in my analysis here because it is not clear from the testimony and merger savings analysis in which state reductions will ultimately occur.

- 1 • **Stranded Cost Analysis** - A study and proposal on what stranded costs are likely to
2 be (from accelerated generating plant closures), how they are being minimized, and
3 how they will be addressed from a regulatory standpoint should be prepared and
4 presented to the Commission.
- 5 • **Reliability Metrics** - Development of a set of reliability metrics that measure quality
6 of service and include both outage and customer services indices.
- 7 • **New Technology Compliance Filing** - A compliance filing with the KCC regarding
8 new technology systems that are being installed or integrated. Since a significant
9 number of benefits arise from integrating these systems, progress related to the
10 company's efforts on the development and implementation of an Enterprise Wide
11 Asset Management System (EAM), Customer Information Systems (CIS), Outage
12 Management System (OMS), and Work Force Management System (WFM) should
13 be required. Key information such as potential benefits to reliability, customer
14 service and financial control should be provided, as well as details on available
15 information that may be useful in future monitoring of performance.
- 16 • **CAPEX/O&M Study** - A detailed study that reviews the level of O&M and CAPEX
17 needed for the integrated T&D system that considers current standards, equipment
18 age, reliability by circuit, best practices that can be developed and applied, and use of
19 emerging and newly implemented technologies such as the CIS, OMS and WFM
20 systems that are planned for implementation or integration.

II. GENERATION SYSTEM ANALYSIS

A. SCOPE OF ANALYSIS

Q. What was the scope of your analysis of the proposed generation unit retirements, reductions in plant staff, and other related personnel and cost reductions?

A. My review consisted of the following:

a) I reviewed the Joint Applicants' (JA) testimony to determine if all appropriate operational, integration and financial analysis is included and at an appropriate level.

The information provide is at a very low level with little technical analysis behind it.

According to Witness Kemp, most assumptions were developed by interviewing

senior managers. Many assumptions on O&M reductions and staffing changes are

very simplistic and have no technical support.

b) I reviewed the logic behind the JAs' proposed generating unit closings to determine if it makes sense today and the ramifications on reserve margins and system stability. I

assessed whether the process for selecting an initial group of plants made sense given

unit conditions, recent capital expenditures, and the potential for impact on coal

generation due to recent election and potential for revised EPA rules. My conclusion

is that there does not appear to be any formal process in place. No IRP was

performed and no studies on system reliability or transmission needs was completed.

c) I developed a summary analysis that shows before and after operational

characteristics of the separate and combined generating systems. This analysis

evaluated capacity reserve margins, reductions in generation from 2015, system heat

1 rate changes, ownership level by company, average weighted age per MW, total
2 system capacity before and after retirements, and average weighted (Equivalent
3 Forced Outage Rate) EFOR before and after. My general conclusion is that there was
4 not a great impact on the performance of the fleet. Average unit age improve slightly,
5 but EFOR, heat rate and other performance metrics did not change significantly.

6 Also, many of the units being proposed for retirement have reasonable good heat
7 rates.

8 d) I reviewed the current condition of each unit and its compliance with environmental
9 regulations.

10 e) I determined if the estimated savings are realistic and identified any additional
11 savings. I concluded that the savings in many cases were not merger related and did
12 not included all costs associated with achieving the retirements.

13 f) I determined if all implementation costs were identified and quantified, and made an
14 estimated of any additional implementation costs that are not identified. A significant
15 amount of costs to achieve above those presented by JA witnesses were identified.

16 g) I questioned whether there are stranded costs associated with the plant closures and
17 how the Companies plan to address them. The closing of the generating units in
18 Kansas have an estimated \$567 million in net book value that could become stranded
19 costs.

20 h) I questioned if there will be an economic impact on the communities in which the
21 plants are closed. I shared Bob Glass's concern that there is a direct and significant
22 impact on the economy of Kansas based on the reduction in jobs.

- 1 i) I assessed whether adequate analysis has been performed to determine which plants
2 will be retired.
- 3 j) I questioned whether plant closings required KCC approval. If so, would there be a
4 separate proceeding once KCP&L determines exactly which plants it will close? I
5 believe that decisions as important as these being considered require a full vetting by
6 the Commission and other stakeholders. Since the Joint Applicants do not offer a
7 firm plan with detailed analysis, it is incumbent on them to provide adequate
8 information for the Commission to approve the actions.
- 9 k) I evaluated whether the fuel adjustment costs will increase, post unit retirements, as
10 units that are higher on the dispatch curve operate more, directly impacting the
11 electric rates of customers? Data provided for the Westar units indicated significant
12 costs for replacement energy.
- 13 l) I questioned whether there are transmission constraints that arise due to plant
14 closings? The JAs engineers and SPP have not completed any analysis that addresses
15 transmission reliability.
- 16 m) I questioned whether the plants that are retired will be dismantled? What is the cost
17 for dismantling and who will be responsible? Will a rate adjustment be needed to
18 cover dismantling of power plants? Detailed information, in a formal proceeding,
19 along with the plan to retire and address stranded costs is needed.
- 20 n) I raised questions as to what rate treatment will be expected for any stranded assets
21 that arise after generating plant closings. Again, a formal proceeding should be
22 required.

- o) I evaluated the impact of unit retirements on capacity reserve margins for the combined company. Is the 12% capacity reserve levels set by Southwest Power Pool (SPP) a minimum or target for the SPP? Given that no analysis providing information of the future value of the units for energy and capacity has been developed, I conclude that any retirements should be delayed until a compensative IRP and associated sales projections are completed.
- p) I assessed whether there are major operational issues with any units that are not being addressed and may require significant expenditures. I asked if there will be unanticipated costs, particularly if capacity factors increase as units are retired. I concluded that a baseline assessment of long-term operation needs for each unit in the integrated system be performed before final approval for retirements is requested.
- q) I asked if the units proposed for retirement have capacity values within SPP that will be lost if they are retired. I asked if these values have been included in the cost of implementation. My conclusion is that an assessment of capacity values in SPP be assessed before final approval for retirements is requested

Q. Were you able to complete all analysis and answer the questions raised in the list above?

A. No. There were many instances in which either no information was available from the JAs to complete the analysis or more detailed analysis would have required on-site inspections, significantly more time or information that is simply not available. In some cases, the utilities provided responses in a different formats, making a comprehensive analysis impossible. My testimony indicates when there are questions and sometimes offers post-merger conditions that would require the JAs to provide analysis,

1 support and reporting on CAPEX, O&M, reliability, performance and impact to the
2 Kansas economy.

3 **B. GENERATING UNIT RETIREMENT ANALYSIS**

4 **Q. Have the JAs identified a list of plants that are likely to be closed?**

5 A. Yes. The JA provided a list with savings and implementation costs related to
6 these units. Exhibits WPD - 3 & 4 below, indicate the proposed list of pre-merger
7 retirements and post-merger retirements. A significant amount of information in Mr.
8 Kemp's testimony and exhibits provide cost savings, implementation costs and related
9 changes in reserve capacity.

Exhibit – WPD - 3

Current Retirement Scenarios

Retirement Scenarios			
Plant	Unit	Pre-Merger Plan	New Base
GordonEvansEnergyCenter	E1CT	NA	NA
GordonEvansEnergyCenter	E2CT	NA	NA
GordonEvansEnergyCenter	E3CT	NA	NA
GordonEvansEnergyCenter	GEV1	1/1/2028	NA
GordonEvansEnergyCenter	GEV2	1/1/2028	NA
LawrenceEnergyCenter	LEC4	NA	1/1/2019
LawrenceEnergyCenter	LEC5	NA	1/1/2019
Murray Gill Energy Center	MGL3	1/1/2025	1/1/2019
Murray Gill Energy Center	MGL4	1/1/2025	1/1/2019
Tecumseh Energy Center	TEC7	1/1/2022	1/1/2019
Montrose	2	1/1/2022	1/1/2019
Montrose	3	1/1/2022	1/1/2019
Sibley	1	1/1/2020	1/1/2019
Sibley	2	1/1/2020	1/1/2019
Sibley	3	NA	1/1/2020
Lake Road	1	NA	NA
Lake Road	2	NA	NA
Lake Road	3	NA	NA
Lake Road	4	1/1/2021	NA
Lake Road	5	NA	NA
Lake Road	6	1/1/2021	NA
Lake Road	7	NA	NA

Exhibit - WPD - 4

Schedule for Retirements¹⁰

Proposed Retirements in Merger Plan										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
GordonEvansEnergyCenter E1CT	0	0	0	0	0	0	0	0	0	0
GordonEvansEnergyCenter E2CT	0	0	0	0	0	0	0	0	0	0
GordonEvansEnergyCenter E3CT	0	0	0	0	0	0	0	0	0	0
GordonEvansEnergyCenter GEV1	0	0	0	0	0	0	0	0	0	0
GordonEvansEnergyCenter GEV2	0	0	0	0	0	0	0	0	0	0
LawrenceEnergyCenter LEC4	0	0	104	104	104	104	104	104	104	104
LawrenceEnergyCenter LEC5	0	0	370	370	370	370	370	370	370	370
Murray Gill Energy Center MGL3	104	104	104	104	104	104	104	104	104	104
Murray Gill Energy Center MGL4	86	86	86	86	86	86	86	86	86	86
Tecumseh Energy Center TEC7	65	65	65	65	65	65	65	65	65	65
Montrose 2	0	0	164	164	164	164	164	164	164	164
Montrose 3	0	0	176	176	176	176	176	176	176	176
Sibley 1	0	0	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
Sibley 2	0	0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Sibley 3	0	0	0	364.1	364.1	364.1	364.1	364.1	364.1	364.1
Lake Road 1	0	0	0	0	0	0	0	0	0	0
Lake Road 2	0	0	0	0	0	0	0	0	0	0
Lake Road 3	0	0	0	0	0	0	0	0	0	0
Lake Road 4	0	0	0	0	0	0	0	0	0	0
Lake Road 5	0	0	0	0	0	0	0	0	0	0
Lake Road 6	0	0	0	0	0	0	0	0	0	0
Lake Road 7	0	0	0	0	0	0	0	0	0	0

Q. Are these plans for closing of the generating stations in Kemp's cost analysis a certainty?

A. No. In the testimony of a number of JA witnesses, Data Request responses, and during meetings with JA representatives, it clear that these units were chosen as likely candidates due to age and the fact that they are coal fired.¹¹

Q. Are there other considerations that might change the retirement plans?

¹⁰ DR-BPU_3-14

¹¹ At October 10, 2016 meeting with JAs, Mr. Kemp explained that the selection was based on discussions with senior managers.

1 A. Yes. Given the recent national elections however, there may be additional
2 uncertainty as to which units are the best candidates for retirement.¹²

3 Also, KCP&L seems to add some confusion regarding retirements when in
4 Westar witness Mark Ruelle's Direct Testimony¹³ he raises questions regarding extensive
5 retirement of coal fired generation. He stated "Recently, we've both seen and share
6 concerns about record numbers of base loaded plants coal and nuclear, the most-job
7 intensive way to make electricity – shut down across the nation. The estimates for coal
8 plant closures just keep growing. Over 25,000 MW has been retired since 1995 and
9 about another 15,000 MW is estimated to be retired by 2025. It wasn't many years ago
10 when people were talking about a nuclear renaissance and long license life extensions to
11 60, or maybe even 80 years. In just the past couple of years-even days-we've learned of
12 more nuclear plant closures even as opportunity for extended license life remains. The
13 localized economic benefit to the mostly rural economies hosting these plants can't be
14 overstated. There are no certainties in the world, but efficiencies from this Transaction
15 may be one of the things that keeps these big, rural baseload plants running-at least in
16 Kansas."¹⁴ This is a baffling statement, since the retirement of these very plants is the
17 driver of many of the transactions' supposed efficiencies.

¹² The JAs have argued that likely environmental actions contributed to the selection of the ten units for retirement. Give the recent national elections and proposed changes in policy, these assertions may not be completely accurate.

¹³ Ruelle testimony Pg. 40

¹⁴ Ruelle testimony Pg. 40

1 **Q. Were there any other statements by senior management of the JAs that raise**
2 **further questions about the commitment to retire coal fired generation?**

3 A. Yes. JA witness Terry Bassham states that: “In fact, after closing of the
4 Transaction, by the end of 2017, GPE will have more than 3,000 MW of wind generation
5 (name plate capacity) at its disposal, with the potential for the development of more wind
6 power generated in Kansas for use by customers in Kansas. That amount of wind energy,
7 is equivalent to almost one-third of the total energy use by our customers. When coupled
8 with nuclear power, the ratio of emission-free energy to retail energy use is more than
9 45% once all of the wind facilities currently under contract are placed in service. Not
10 many utilities anywhere can make that claim. Moreover, we will do that while
11 maintaining all of our large base load plants and the hundreds of good-paying jobs—and
12 significant property tax contributions—associated with them. This presents a greater
13 opportunity to maximize the use of Kansas energy resources, representing both an
14 economic development opportunity and an environmental benefit opportunity for Kansas
15 resulting from the Transaction.”¹⁵ Like Mr. Ruelle’s statement, this assertion is directly
16 at odds with the stated plans of the Joint Applicants.

17 **Q. Based on all of the testimony and other external drivers, what is your conclusion as**
18 **to likely retirement scenarios?**

19 A. My conclusion is that there is a great deal of uncertainty, hesitation and
20 disagreement as to exactly what will occur with the generation fleet post-merger. No

¹⁵ Direct Testimony of Terry Bassham, pp. 13-14.

1 analysis, similar to an Integrated Resource Plan (IRP, has been performed, no system
2 stability and transmission analysis has been performed, there has been no detailed
3 analysis of stranded costs treatment, losses from energy and capacity sales, or impact to
4 the economy of Kansas.

5 **Q. Given the uncertainty surrounding plant closings, how did you proceed with**
6 **your analysis for this testimony?**

7 A. We assume the planned closures will go forward as proposed by the Joint
8 Applicants and supported by numerous data responses in this docket. However, we
9 recognize that the Joint Applicants have failed to make firm commitments in this area,
10 and in light of other contradictory remarks on this topic, note that the planned closures
11 may be subject to change.

12 **Q. Which units are scheduled for retirement and what will the reductions in generating**
13 **capacity be?**

14 A. Ten units are identified for retirement post-merger. Many of these units were
15 previously scheduled for retirement. The Exhibit WPD-3, above illustrates a change in
16 timing from pre-merger plans¹⁶ to the current new base plan. Exhibit WPD-4 provides
17 details on the units planned for retirement with both the pre-merger and current planned
18 retirement dates, the changes in operating profile with and without retirements, and the
19 changes in capacity reserve margin before and after proposed retirements.

¹⁶ DR-BPU_3-14

1 **Q. What is the overriding reason for retiring units, either pre or post-merger?**

2 A. There is currently significant overcapacity in the Southwest Power Pool (SPP). In
3 June 2016, the SPP reduced its required capacity margin from 13% to 12%.¹⁷ Our
4 analysis shows that the individual companies have overcapacity that will need to be
5 addressed with or without a merger.

6 **Q. Are there changes as to which units would be retired based on pre and post-merger**
7 **retirement plans?**

8 A. It is notable that four units that were scheduled for retirement prior to the proposed
9 merger are no longer on the retirement list, and three units that were not scheduled for
10 retirement pre-proposed merger and are now on the list. All of the eight units that were
11 scheduled for retirement before the proposed merger had later schedule dates. Again, it
12 is not clear if the pre-merger dates considered the June 2016 move to a 12% capacity
13 margin by SPP.

14 **Q. What is the impact on the capacity margins of Westar, KCP&L and GMO on the**
15 **proposed retirements?**

16 A. Exhibit WPD-5 provides a clear understanding of the combined companies
17 generating resources, including purchases and new generation between 2017 and 2026.
18 Line 7 and 9 indicate the total Peak Responsibility (Combined Demand Forecast) and the

¹⁷ Reserve capacity margin generally refers to the amount of proven generating capacity the utility has above that which is needed to meet peak load. It is measured in percent. The actual requirements are more complex and involve having adequate reserve to meet the loss of the largest unit.

1 Capacity Responsibility (including the 12% Reserve Margin) for the combined utility.
2 Line 30 provides the Total Net Accredited Capacity with Existing Resources, which
3 when added to the Total Planned Additions, provides the Net Capacity Position when no
4 retirements occur on line 38. Line 39 then provides the resulting reserve margin for the
5 planning period under a no retirement scenario. Lines 41 to 43 provide the reserve
6 margin for each company with no retirements.¹⁸

¹⁸

DR-BPU_3-14

Exhibit - WPD - 5

Summary of Load, Capacity and Reserve Margin Data

Summary of JA's current and projected loads, reserve margins and capacity										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LOADS										
Wizard Projected Combined Internal Demand	11197	11294	11374	11452	11524	11611	11697	11791	11867	11946
DSM (KCP&L)	43	79	105	142	171	193	214	231	249	264
DSM (GMO)	66	99	136	192	249	307	364	420	445	469
DSM (Westar)	240	236	233	227	222	218	215	212	209	207
Total DSM	349	415	474	561	642	718	793	862	904	940
Peak Responsibility (Combined Demand Forecast)	10848	10879	10900	10891	10882	10893	10904	10928	10963	11006
Capacity Responsibility (inc. 12% Reserve Margin)	12150	12185	12207	12198	12188	12201	12213	12240	12278	12327
CAPACITY										
Existing Generating Capacity (Combined share):										
KCPL	4361	4361	4361	4361	4361	4361	4361	4361	4361	4361
GMO	2087	2087	2087	2121	2121	2121	2121	2121	2121	2121
Westar	6083	6098	6098	6098	6098	6098	6098	6098	6098	6098
Total Existing Generating Capacity	12530	12545	12545	12579	12579	12579	12579	12579	12579	12579
Purchases :										
KCPL (wind, hydro)	335	335	335	335	335	335	335	273	273	273
GMO (wind)	96	96	96	96	96	96	96	96	96	96
Westar (wind, McPherson, KEPCo, State Line, KEPCo Hydro)	1073	1073	1073	1073	1073	1057	1057	1057	1057	1057
Total Capacity Purchases	1504	1504	1504	1504	1504	1488	1488	1427	1427	1427
Sales:										
KCPL	-52	-52	-42	-42	-15	-15	0	0	0	0
GMO	0	0	0	0	0	0	0	0	0	0
Westar	-426	-426	-254	-254	-209	-209	-150	-150	0	0
Total Capacity Sales	-478	-478	-296	-296	-224	-224	-150	-150	0	0
TOTAL NET ACCREDITED CAPACITY (Existing Resources)	13556	13571	13753	13787	13859	13843	13917	13856	14006	14006
PLANNED CAPACITY UNDER DEVELOPMENT										
KCPL	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1
GMO	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Westar	0	0	0	0	0	0	0	0	0	0
Total Planned Additions	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2
NET CAPACITY POSITION (Short) - No Retirements	1408	1387	1547	1590	1672	1643	1705	1617	1728	1681
RESERVE MARGIN No Retirements- Wizard	25%	25%	26%	27%	27%	27%	28%	27%	28%	27%
KCPL Reserve Margin - No Retirements	23%	23%	24%	24%	26%	26%	26%	24%	24%	23%
GMO Reserve Margin - No Retirements	8%	9%	11%	15%	18%	21%	24%	28%	29%	30%
Westar Reserve Margin - No Retirements	33%	32%	34%	32%	32%	30%	30%	28%	30%	29%
Potential Retirements										
Total Retirements - Cumulative	255	255	1165.9	1530	1530	1530	1530	1530	1530	1530
RESERVE MARGIN With Retirements - Wizard	23%	22%	15%	13%	13%	13%	14%	13%	14%	13%
NET CAPACITY POSITION (Short) With Retirements	1153	1132	381	60	142	113	175	87	198	151

Q. What do we learn from this analysis regarding the range of reserve margins for both the combined utility and each individual company?

1 A. The combined reserve margin varies for the combined company from 25% to 28%
2 for the 10 year planning period pre-retirements. When looking at the individual
3 companies, the results are different. Specifically, GMO has a range of reserve margins
4 that range from 8% in 2017 to 30% in 2026. KCP&L reserve margins stay in a narrow
5 band between 23% and 26% for the planning period and Westar reserve margins range
6 from 28% to 34%. Finally lines 46 (Potential Retirements), Line 48 (Reserve Margin
7 with retirements) and Line 49 Net Capacity Position with retirements, provide a
8 description of the combined company's status as to capacity reserve requirements after
9 the currently proposed retirements are achieved.

10 **Q. How large of a role did the units proposed for retirement play in each utility's**
11 **system in 2015?**

12 A. The ten units provided 1,541 MW of capacity; they had a 42% capacity factor,
13 producing 5.7 million mWh; the weighted average age of these units was 51 years old
14 and they had an EFOR of only 9.3%. The capacity factor was significant and the EFOR
15 was very low, indicating that these are very viable units, which operate regularly and with
16 minimum forced outages. By comparison, the LaCygne and Iatan units have EFOR
17 levels of between 14-17% with capacity factors between 54-75%. Similarly, Iatan I & II
18 produced just under 5.9 million kWh.

19 **Q. How efficient are the units that are being proposed for retirement?**

20 A. We can compare efficiency by looking at a ranking of units by heat rate. This
21 indicates the Btu/kWh. Some of the units proposed for retirement had reasonable heat
22 rates and ranked high within the fleet, Exhibit WPD-28 ranks all of the units in the

1 combined fleet by heat rate using 2015 data. It is noteworthy that of the 58 comparable
2 units in the fleet, Sibley 2 & 3 rank 9th and 10th and Montrose 3 ranks 15th, Lawrence
3 Energy Center 5 ranks 16th, and Tecumseh Energy Center 7 ranks 19th.

4 **Q. What is the overall impact on the fleet of generating units for each company and the**
5 **combined company after the proposed retirements are implemented?**

6 A. The details of each unit both before and after the proposed merger and resulting unit
7 retirements uses data from 2015. The analysis is provided in WPD Exhibits 25, 26 & 27
8 at the end of this testimony and is summarized below in Exhibit WPD-6 & 7. Total
9 capacity and actual generation is decreased by 13%, and the average age of the fleet is
10 reduced by 5% or 2.6 years.

Exhibit - WPD - 6

Summary of Details on Proposed Retirements

Summary Analysis of Units Proposed for Retirement									
	Company	Percent Owned	Fuel	Westar Capacity (MW)	Capacity Factor (2015)	Net Generation (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015) Percent
Lawrence Energy Center 4	Westar	100%	Coal	104.0	54.00	491,869	56	11,777	1.4
Lawrence Energy Center 5	Westar	100%	Coal	370.0	52.40	1,699,274	45	10,823	1.9
Tecumseh Energy Center 7	Westar	100%	Coal	72.0	60.90	384,251	59	11,231	3.4
Murray Gill Energy Center 3	Westar	100%	Natural Gas	104.0	2.20	20,295	60	18,885	13.2
Murray Gill Energy Center 4	Westar	100%	Natural Gas	90.0	1.90	14,978	57	19,618	13.4
Montrose 2	KCP&L	100%	Coal	164	35.19	505,565	56	11,629	4.73
Montrose 3	KCP&L	100%	Coal	176	34.06	525,055	52	10,815	4.43
Sibley 1	GMO	100%	Coal	49.8	24.57	103,318	56	N/A	26.21
Sibley 2	GMO	100%	Coal	47.1	19.14	85,511	54	10,402	43.24
Sibley 3	GMO	100%	Coal	364.1	57.96	1,848,218	47	10,402	15.85
Total				1541.0		5,678,334			
Weighted Average					42.0		51.2		9.3

Exhibit - WPD - 7

Summary of Retirement Analysis

Summary from Power Plant Assessment Spreadsheet						
	Total Generation		Total mWh (2015)		Fleet Age	
	W/O Retirement	With Retirement	W/O Retirement	With Retirement	W/O Retirement	With Retirement
Westar	6,373	5,585	22,524,725	19,722,437	33.4	30.8
KCP&L	4,361	4,021	18,637,359	17,606,739	27.5	29.6
GMO	3,897	3,436	4,887,175	2,850,128	33.3	31.2
Combined Fleet	14,516	12,647	46,055,614	40,185,659	33.4	31.8
Percent Change Combined Fleet		-13%		-13%		-5%

Q. What key observations do you draw from your analysis?

1 A. The Exhibits provided above and in the Appendix provide a number of interesting
2 observations, that when analyzed with other data raise a number of questions about the
3 real value of the retirements as they relate to the proposed merger:

- 4 • The exhibits above show that total capacity of the plants identified for retirement
5 is 1,491 MW based upon the proposed merger; This is a 13% reduction from the
6 combined fleet.
- 7 • The energy, in megawatt-hours (mWh), generated in 2015 by these units totaled
8 5,575,016 mWh;
- 9 • The weighted average capacity factor in 2015 was 42.6%; and the weighted
10 average age was 51 years old. Using 2015 data, we can observe that about 5.6
11 million mWh of energy will be removed from production, while reducing the
12 average life of the fleet by two years.
- 13 • As stated above, heat rate was not a primary consideration in choosing
14 retirements.

15 **Q. Did you do an assessment of the conditions of each unit and how well they comply**
16 **with current environmental standards?**

17 A. My analysis is summarized in Exhibits WPD-22, 23 and 24. It provides details on the
18 units size, age, heat rate, 2015 capacity factor, as well as a summary of how well it
19 complies with environmental standards and what its operating condition currently is.

20 **Q. Have the JAs conducted any comprehensive studies that evaluate the impact of these**
21 **potential future unit retirements on system stability, reliability, and other costs or**
22 **benefits?**

1 A. No. In response to Staff DR 276, GPE stated that it is not aware of any study that
2 SPP has conducted specifically evaluating the impact of these potential future unit
3 retirements on stability or reliability. The potential future retirements of Sibley 1, Sibley
4 2, Montrose 2 and Montrose 3 are currently in SPP's transmission planning models along
5 with many other assumptions on potential generating capacity changes in the region.

6 In another DR response, GPE stated, "GPE reviewed only non-fuel O&M and
7 capital expenditures for the six generation plants included in the retirement scenario. No
8 analysis of the overall cost of generation supply was performed for the purpose of
9 developing the bid, and no final decisions have been made with regard to plant
10 retirements. As Mr. Kemp has stated, selection of the optimal plant retirement plan will
11 require thorough analysis of the long-term options and impacts through an IRP process
12 that is expected to commence soon after the transaction close. GPE was aware, however,
13 that the generation plants in the retirement scenario were generally older or smaller, and
14 less fuel efficient." Unfortunately, the Commission is being asked to approve the merger
15 before a real analysis is complete and before a real estimate of merger savings can be
16 developed.

17 In another response,¹⁹ Westar stated that it has not conducted a detailed analysis
18 to evaluate the costs and benefits of potential future unit retirements. In May 2016,
19 Westar sent a request for proposal to multiple engineering firms to conduct a resource

¹⁹ DR KCBPU-3.14

1 planning study and prior to the receipt of proposals, the merger was announced and the
2 resource planning process cancelled.

3 **Q. Was any analysis conducted to determine if there is a market for the sale of energy**
4 **and capacity for these units that might justify their continued operation?**

5 A. The Joint Applicants have not performed any analysis as to the potential for sales
6 of energy or capacity into the system with the existing generating assets. An independent
7 analysis that considers all options for continued use, versus the real impact of costs to
8 achieve, plus the economic impact on the communities in Kansas that would suffer large
9 job losses, is needed to properly evaluate the impact on companies and the public
10 interest.²⁰

11 **Q. What do you conclude about the analysis and planning related to the proposed**
12 **retirement of 1541 MW?**

13 A. The lack of almost any analysis or planning related to the proposed retirements
14 demonstrates a frightening lack of preparation prior to filing this merger case and the
15 supporting testimony and support.

16 **Q. Are all of the proposed plant closings really merger related?**

17 A. No. Had the companies never proposed a merger, they would have each been
18 facing reserve margins that are well above the new requirements of the SPP and would
19 likely require consideration of unit retirements. The table in Exhibit WPD – 5 above

²⁰ DR KCC-331, KCC-340

1 summarizes the reserve margin of each company before and after the merger. It clearly
2 shows that each of the three generating entities would need to reduce excess capacity
3 over time, if it was economically justified.

4 **Q. Are there any pre-merger documents which address proposed retirements?**

5 The 2016 KCP&L IRP adds a great deal of clarification on pre-merger retirement
6 plans. This confidential document states that in every case, Montrose 1 would be retired
7 in 2016 and Montrose 2&3 would be retired in 2021. Given that this retirement was
8 included in every proposed plan, it is disingenuous to then argue that retirements are due
9 solely to the merger and that any cost savings are merger related.

10 **Q. What would a prudent utility manager do if reserve capacity requirements change,**
11 **sales projections indicate relatively low growth rates, and future projections show**
12 **reserve capacity well above required levels?**

13 A. Prudent management would likely take action under these circumstances to
14 reduce each company's capacity margin even without the merger. The Commission
15 should consider whether the savings presented are really merger related. I believe that, at
16 most, the retirements savings related to generation amount to no more than the present
17 value of accelerating already planned retirements. Because the retirements appear to be
18 purely speculative and backed by little to no planning, it is difficult to place any weight
19 on them at all.

C. GENERATING UNIT MERGER SAVINGS ANALYSIS

Q. Have you examined the testimony and exhibits that provide estimates of savings that will be achieved through the merger?

A. Yes. In Section I of my testimony, I provided tables that showed changes in headcount and O&M expenditures. Exhibit WPD-8, below was copied from the Summary tab and Data tab of Mr. Kemp's cost model.²¹ It provide the estimated savings, cost to achieve, and headcount reductions for the ten year period following the merger.

Exhibit - WPD - 8

Summary of Projected Savings and Cost to Achieve

\$(millions)												
Gross Savings	10yr	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenue Requirement	tbd	tbd	tbd	tbd	tbd	tbd	tbd					
Generation	653.15	2.76	5.64	60.94	78.62	80.16	81.73	83.34	84.97	86.64	88.34	88.34
Supply Chain	687.27	12.37	22.29	65.91	65.90	76.75	88.81	88.81	88.81	88.81	88.81	88.81
Shared Services	235.70	10.10	22.67	23.84	24.45	24.82	25.19	25.57	25.96	26.35	26.74	26.74
T&D / CS	47.16	2.38	4.78	4.79	4.81	4.88	4.95	5.03	5.10	5.18	5.26	5.26
Total Savings	1,623.27	27.62	55.39	155.48	173.77	186.61	200.69	202.75	204.84	206.98	209.15	209.15
Cost to achieve*		-15.58	-3.37	-31.03	-11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Savings		12.04	52.02	124.45	162.18	186.61	200.69	202.75	204.84	206.98	209.15	209.15
Savings Plan		0.00	50.00	100.00	150.00		150.00	150.00	150.00	150.00	150.00	150.00
Delta to plan		12.04	2.02	24.45	12.18	186.61	50.69	52.75	54.84	56.98	59.15	59.15
Headcount (Savings)		2017	2018	2019	2020	2021	2022	2022	2022	2022	2022	2022
Generation		39	39	326	392	392	392	392	392	392	392	392
Support Functions		28	28	28	28	28	28	28	28	28	28	28
T&D / CS		155	172	178	182	182	182	182	182	182	182	182
T&D / CS		36	36	36	36	36	36	36	36	36	36	36
Total		258	275	567	638	638	638	638	638	638	638	638
* Excludes Supply chain costs												

²¹ DR KCC-007; Summary Tab

1 **Q. Will there be stranded costs associated with the retirement of these units?**

2 A- I believe there will be stranded costs²² should the units be retired as planned. The
3 JAs have indicated that the Montrose, Sibley, Lawrence, Tecumseh and Murray Gill
4 facilities will be retired by 2020. While Sibley is a Missouri jurisdictional plant, all
5 others are based in Kansas. We know that Lawrence recently had a major environmental
6 retrofit, therefore it will have significant book value at the time of retirement. Exhibit
7 WPD-9 below provides the total remaining net book value of each unit proposed for
8 retirement. The Kansas jurisdictional amount is approximately \$567 million.²³ The JAs
9 have not identified or quantified any stranded costs associated with the selected units.
10 However, the remaining book value will need to be addressed in some manner.

11 **Q. Have the JAs indicated how these costs will be treated from a rate standpoint?**

12 A. No. I found no indication in the JAs testimony and other responses that provide
13 for a plan to address stranded costs. Further, I could find no details on whether the JAs
14 accounted for these costs as part of their merger savings analysis.

²² A stranded cost is the net book value of an asset that is no longer used and useful.
²³ DR KCC-411

Exhibit - WPD - 9

Net Book Value of Units Proposed for Retirement

Book Value of Units Proposed for Retirement		
Planned Retirements	Net Book Value	Jurisdiction
Lawrence Energy Center Common	\$78,813,394	Westar
LawrenceEnergyCenter LEC4	\$161,453,317	Westar
LawrenceEnergyCenter LEC5	\$209,289,668	Westar
Murray Gill Energy Center Common	\$3,514,315	Westar
Murray Gill Energy Center MGL3	\$7,619,508	Westar
Murray Gill Energy Center MGL4	\$3,078,135	Westar
Tecumseh Energy Center TEC7	\$39,948,790	Westar
Tecumseh Energy Center Common	\$21,880,472	Westar
Montrose 2	\$20,870,918	KCP&L-KS
Montrose 3	\$20,867,820	KCP&L-KS
Sibley 1	\$18,191,126	KCPL-GMO
Sibley 2	\$15,095,865	KCPL-GMO
Sibley 3	\$168,736,369	KCPL-GMO
Total All Units	\$769,359,698	
Total Kansas Jurisdiction	\$567,336,338	

Q. Have you reviewed the projected savings of the generating unit retirements and the costs for implementing the retirements and consolidation of operating and engineering departments?

A. Yes, I have reviewed the testimony and exhibits presented by the JA witnesses. In particular I have reviewed the testimony of Mr. Kemp and his Schedule WJK-3 from his testimony and the supporting spreadsheets.²⁴ I also attended a meeting with Mr. Kemp and other JA representatives where discussions on the approach and assumption made were had. Ms. Ann Diggs will be focusing on portions of Kemp's projected

²⁴ KCC-07 and KCC-134

savings and implementation costs, however I would offer the following observations. I provide Mr. Kemp's Schedule WJK-3, Estimated Transactions Savings below as a reference to our discussion here and later in my testimony.

Q. Do you know how much is included in the current rates of Westar and KCP&L for the Kansas units in Exhibit WPD-9, above?

A. According to the KCC Staff, this level of net book value would produce \$4.379 million in annual revenue requirement for KCPL and \$57.206 million in annual revenue requirement for Westar based on their most recent rate cases. This analysis does not include the effects of depreciation expense on these gross value of these plants, but it does give the Commission an idea of how material this issue is.

Exhibit - WPD - 10

Merger Savings Summary

SCHEDULE WJK-3 TRANSACTION SAVINGS ESTIMATES														
Million	Gross Savings				Costs to Achieve				Net Savings					
	2017 (1)	2018	2019	2020	2017 (1)	2018	2019	2020	2017 (1)	2018	2019	2020	2021+ (3)	
NFOM Expense														
Generation	1.0	5.6	60.9	78.6	0.7		27.6	8.6	0.3	5.6	33.3	70.0	80.3	
T&D / CS	6.0	4.8	4.8	4.8	0.6				5.4	4.8	4.8	4.8	4.9	
Shared Service	10.0	22.7	24.0	24.5	5.5	1.6	1.6	1.2	4.5	21.1	22.3	23.3	25.0	
Supply Chain	10.6	22.3	65.9	65.9	7.6	1.8	1.8	1.8	3.0	20.5	64.1	64.1	65.5	
Total NFOM	27.6	55.4	155.6	173.8	14.4	3.4	31.0	11.6	13.2	52.0	124.6	162.2	175.7	
Capital (2)	2.6	11.0	24.6	36.4	-	-	-	-	2.6	11.0	24.6	36.4		
Total	30.2	66.3	180.2	210.2	14.4	3.4	31.0	11.6	15.8	63.0	149.1	198.6	175.7	
(1) Assumed Jul-Dec 2017														
(2) Revenue requirement impact of capital expenditure reduction														
(3) Annual savings after 2020 were not projected for GPE's bid, but minimal additional costs to achieve would be expected, and gross annual NFOM savings would be expected to increase at roughly the rate of inflation. Capital-related savings would decline after 2020 and have not been quantified.														
Source: GPE savings estimates														

Q. How did the JAs develop a "cost to achieve" for the generating unit retirements?

A. The “cost to achieve”, a term used by Mr. Kemp in his testimony, support exhibits and models, permits him to develop a “net savings” for all areas addressed in his work. In the case of the generating units, he lists projected staffing, O&M budgets and labor costs. He then makes assumptions on closing of generating units, along with dates of closure. He then assumes, with no support, that the “cost to achieve” for each plant is 50% of the O&M budget for the year in which a plant is retired. For example, Montrose is retired in 2019 and had a projected non-retirement O&M budget for that year of \$19.5 million. Therefore Mr. Kemp assumes that the “cost to achieve” is \$9.7 million.

Q. Is there any support to suggest that his 50% assumption is correct?

A. We have no explicit evidence or analysis of what the cost to achieve for each generating station will be. Exhibit WPD-11, below provides the summary by department and generating station for Mr. Kemp’s estimate of “cost to achieve”. The total for the 2017-2019 period, as presented is \$37.6 million.

Exhibit - WPD - 11

Cost to Achieve Savings for Power Plants

	Cost to Achieve Savings for Power Plants						
Data Line	Company	Department	Function	2017	2018	2019	2020
50	KCPL GENERATION	Plant Operations	Central Machine Facility	\$65,796	\$0	\$0	\$0
51	KCPL GENERATION	Plant Operations	Montrose	\$0	\$0	\$9,743,263	\$0
52	KCPL GENERATION	Plant Operations	Sibley	\$0	\$0	\$3,357,929	\$6,867,722
53	KCPL GENERATION	Generation Service	Generation Sales & Services	\$1,022,049	\$0	\$0	\$0
54	KCPL GENERATION	Generation Service	Generation Engineering Svcs	\$66,100	\$0	\$0	\$0
55	KCPL GENERATION	Generation Service	Production Administration	\$57,087	\$0	\$0	\$0
56	Westar	Plant Operations	Lawrence Energy Center	\$0	\$0	\$8,847,256	\$1,299,161
57	Westar	Plant Operations	Tecumseh Energy Center	\$0	\$0	\$3,083,545	\$457,500
58	Westar	Generation Service	Plant Support Engineering	\$167,261	\$0	\$0	\$0
59	Westar	Plant Operations	Murray Gill Energy Center	\$0	\$0	\$2,554,181	\$0
			Total by Year	\$1,378,294	\$0	\$27,586,173	\$8,624,383
			Total for 2017-20				\$37,588,849

1 **Q. Do you have any concerns with the net savings estimates presented in Mr. Kemp's**
2 **testimony?**

3 A. Yes. There are a number of problems that we can raise as they relate to the
4 generation savings, as discussed below. First, it important to note that, as shown in
5 Exhibit WPD-10, there are both estimated gross savings and costs to achieve that result in
6 net savings. While all of the post retirement costs, or losses of revenue are not
7 quantifiable, we believe they are real and substantial errors in the merger savings
8 spreadsheet. I have concluded that the analysis supporting Mr. Kemp's net savings is too
9 simplistic for a merger of this size and complexity.

- 10 • When these units are retired, the generation that was produced through economic
11 dispatch must be replaced by the next most expensive source. We requested and
12 received an analysis²⁵ that projected the cost for increase fuel consumption or
13 purchased power after the retirements. Westar provided a spreadsheet showing
14 that these costs start at over \$10 million per year and rise to over \$25 million per
15 year within ten years as shown in the table below. We were unable to develop a
16 projection of the lost revenue for the KCP&L and GMO units. This increased
17 fuel cost would be paid by ratepayers. The results below will have an impact on
18 the amount of savings that will go back to customers.²⁶

²⁵ KCC-332 and KCC-342

²⁶ The JAs have modeled the total amount of savings they expect to go back to customers for the years 2018-2020 based on their rate case timelines, etc. The results are in the financial model in Response to Staff DR No. 169 (Confidential) They are currently projecting \$42.7 million to go to Westar customers during the three year period from 2018-2020.

Exhibit - WPD - 12

Westar RECA Increase Post-Retirement

Forecast Increase in RECA Energy Cost with Loss of Unit (\$)										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LEC4	\$946,840	\$1,590,878	\$1,338,816	\$1,095,607	\$1,725,618	\$3,257,866	\$3,859,333	\$4,238,577	\$4,881,976	\$5,254,023
LEC5	\$6,753,105	\$8,245,064	\$7,026,886	\$5,825,516	\$8,148,769	\$9,691,261	\$11,425,652	\$13,362,951	\$17,397,935	\$18,073,305
TEC7	\$1,533,671	\$529,275	\$376,600	\$156,014	\$480,937	\$1,428,501	\$1,640,698	\$710,191	\$1,319,409	\$1,295,638
MGEC3	\$886,138	\$1,218,554	\$1,236,180	\$1,208,646	\$1,555,094	\$174,002	\$173,897	\$128,954	\$190,020	\$144,964
MGEC4	\$734,529	\$834,605	\$940,030	\$897,723	\$1,181,841	\$115,057	\$159,401	-\$305,238	\$1,660,609	\$374,801
Yearly total	\$10,854,283	\$12,418,376	\$10,918,512	\$9,183,506	\$13,092,259	\$14,666,687	\$17,258,981	\$18,135,435	\$25,449,949	\$25,142,731
Ten Year Total	\$157,120,719									
Annual Ave.	\$15,712,072									
DR KCC 342										

- 1 • Costs associated with reduction in staffing may not be fully accounted for. There
2 are severance costs associated with retirements that typically amount to one
3 month salary per year of service for union employees.²⁷ Mr. Kemp claims that
4 this “cost to achieve” is included in the savings spreadsheet²⁸, but I cannot
5 quantify what portion of these costs are part of this analysis and whether it is a
6 reasonable estimation. For example, the Montrose staffing reduction would be
7 110 employees and the Data tab in Kemp’s Savings analysis gives an average
8 FTE labor cost of \$90,688 per year. If the average tenure was 20 years, the
9 severance package could be over \$16 million. Kemp, in his spreadsheet only
10 provides a \$9.7 million amount for Cost to Achieve.
- 11 • Costs for retirement and dismantlement, minus scrap value were provided ²⁹ for
12 Montrose and Sibley and indicated that the net cost would be \$71 million. Westar
13 has not yet developed an estimate for dismantling Tecumseh, Lawrence and
14 Murray-Gill. ³⁰ This amounts to \$97,394 per MW and projects to total cost to
15 dismantle all 1,530 MW as projected to \$149 million.³¹
- 16 • Stranded costs associated with retiring units that still have significant book value
17 could be substantial. Exhibit 9 indicates it could total \$567 million.

²⁷ DR CURB-80

²⁸ KCC-7

²⁹ DR KCC-330

³⁰ DR-KCC-339

³¹ Calculated by dividing \$71 mil by capacity at Lawrence, Murray Hill and Tecumseh and then apply to total retirements.

1 **Q. Can you summarize the potential costs to achieve that have not been totally**
2 **accounted for?**

3 A. Mr. Kemp includes \$37.6 million in his savings spreadsheet for a three year
4 period. There substantive analysis as to what these costs represent, but we were told part
5 of it is for severance pay. By my calculation, the cost of severance costs could be as high
6 as \$73 million if we assume all 392 employees lose their jobs, have an average tenure of
7 20 years, and have average annual earnings of \$112,000. We have put together an
8 analysis that attempts to give some perspective on other costs. Exhibit WPD -13 shows
9 that energy replacement costs for the retired units could be \$157 million over ten years
10 just for the Lawrence, Montrose and Tecumseh units. Costs to dismantle could be \$149
11 million based on limited information we received.

12 **Exhibit - WPD - 13**

13 **Cost to Achieve Analysis**

Cost to Achieve Analysis		
Kemp's stated cost to achieve	\$37,589,849	From DR KCC-7 - total for 2017 to 2019. Summarized in Exhibit WPD-11
Vantage Analysis of Cost to Achieve		
Energy replacement	\$157,120,719	Total for 2107-26; DR KCC-342; See Exhibit WPD-12 for Westar only cost.
Severance Costs	\$73,000,000	Based \$112K/FTE, 392 reduction in staff, and an average of 20 year tenure.
Cost for dismantling	\$149,000,000	Based on per MW estimate provided. DR KCC-330, DR KCC-330
Vantage estimated Cost to Achieve	\$379,120,719	

14
15 **Q. What is your conclusion regarding the JAs estimate of the cost to achieve the**
16 **merger savings projected?**

1 A. The analyses provided above shows, that when one considers all related costs for
2 retiring the units, the cost is almost 10 times that of Mr. Kemp's savings estimate. While
3 some of these numbers use assumptions that one could question, the overwhelming
4 number raises the question as to the overall validity of the savings being projected in this
5 proposed merger.

6 **Q. Is there likely to be an economic impact on local communities when entire**
7 **generating stations are retired prematurely?**

8 A. There may be a significant economic impact to communities where generating
9 station shutdowns occur. We have not seen any analysis of this impact by the JAs. While
10 there are some jobs that may not result in layoffs due to attrition and opening at other
11 power plants, the net result is that there will be a reduction of 392 well-paying jobs based
12 just on the staff reduction related to generation. Based on a simple analysis using Mr.
13 Kemp's savings spreadsheet, we can estimate the loss to the economy of Kansas and
14 Missouri as totaling \$44 million per year. Mr. Glass provides specific analysis regarding
15 the economic impact of lost jobs.

Exhibit - WPD - 14

Calculation of Generating Plant Related Wages Lost

Calculation of Lost Generation Related Wages			
Location	\$/FTE 2020	Staffing	Lost Wages
Central Machine Facility	\$94,138	12	\$1,129,656
Montrose	\$90,686	110	\$9,975,460
Sibley	\$97,465	111	\$10,818,615
Generation Sales & Services	\$94,808	38	\$3,602,704
Generation Engineering Svcs	\$61,273	74	\$4,534,202
Production Administration	\$157,405	3	\$472,215
Lawrence Energy Center	\$181,621	88.3	\$16,037,134
Tecumseh Energy Center	\$164,055	34.1	\$5,594,276
Plant Support Engineering	\$143,795	14	\$2,013,130
Murray Gill Energy Center	\$130,229	21.1	\$2,747,832
Total		505.5	\$56,925,224
Average \$/FTE for all employees			\$112,611.72
Total Jobs Lost			392
Cost for Total Jobs Lost			\$44,143,794

Q. What is your overall conclusion regarding merger related savings associated with the generating stations?

A. First, one can dismiss the entire presumption that closing generation units results in merger related savings. The issue of overcapacity exists whether there is a merger or not. While some retirements are accelerated, there is no post-merger rationale for this in any testimony we have reviewed. Second, even if one accepts the merger related generating capacity argument presented by the JAs, there are costs for achieving not accounted for. These include retirement costs, salvage costs, and stranded cost recovery. Further the revenue lost for energy production at these units should be accounted for in the calculation.

1 My overall conclusion is that the retirement and related cost savings projections
2 have no real basis in fact and are not supported by the level of analysis one would expect
3 for a merger of this size.

4

III. ANALYSIS OF T&D INTEGRATION

A. SCOPE OF TESTIMONY

Q. What was the scope of your analysis relative to the proposed T&D integration?

A. My analysis of the JA's Transmission and Distribution Systems included the following areas:

- a) A review of each Company's T&D system reliability monitoring programs.
- b) A review of each Company's system standards to determine if there are major differences that would account for performance differences.
- c) A review of each Company's T&D System design, configuration and condition to determine if there are major differences that would inhibit merger benefits or result in differences in performance.
- d) A review of each Company's Information Technologies to include the Outage Management System (OMS), Enterprise-Wide Asset Management System, Workforce Management Systems and Advanced Metering Infrastructure (AMR).

B. ENGINEERING STANDARDS

Q. Did you conduct a review of both Westar's and KCP&L's engineering standards, and what was the purpose of this review?

A. Yes. I conducted a review of the major standards that can readily be compared. The purpose for the analysis was to determine how each Company designed their

1 systems. This is important post-merger because the companies need to integrate design,
2 procurement, construction, inspection, data collection, outage management, and other
3 related operational activities.

4 **Q. What areas did you address in your analysis?**

5 A. We assessed the following areas:

- 6 • Engineering Standards Organization
- 7 • Overhead Distribution Standards
- 8 • Underground Distribution Standards
- 9 • Transmission System Standards
- 10 • Substation Standards
- 11 • Protection System Standards

12 A summary of our results are in Exhibit WPD-25 which follows this testimony.
13 The standards adequately address transmission, overhead and underground distribution,
14 substations and system protection.

15 **Q. Based on your review of each Company's Engineering Standards are each of the**
16 **associated Standards comprehensive, current, adequately supported and consistent**
17 **with Industry Standards?**

18 A. Yes. Based on a review of the requested data, it appears that the two Company's
19 Engineering Standards Systems are very similar from a design standpoint. Both
20 Companies maintain a dedicated Distribution Standards organization, while the
21 Transmission and Substation Standards are developed and maintained by the respective

Design/Engineering Groups. This will enable both Companies to deploy standard materials and methods including distribution transformers, cables, insulators, fuses, switches and reclosers.

Q. Why are comprehensive and well developed Engineering Standards important?

A. One of the stated objectives of this merger is improved T&D reliability through adoption of best practices.³² Since the two companies already have engineering standards that are similar, there should be no impediment to meeting the highest reliability performance standards.

Q. Do you have any concerns with the proposed staff reductions?

Yes. As outlined above both KCP&L and Westar have demonstrated a strong commitment to maintaining an effective Engineering Standards Program, however, the merger savings model projects a 6 FTE reduction of T&D Engineers as outlined in the JA's Merger Savings Model _5-14-18_annotated. Based on these staffing cuts, it is unclear whether the JAs will be able to continue with their commitment to a comprehensive Engineering Standard Program. This staffing reduction is particularly troublesome given that Westar previously proposed a significant increase in T&D CAPEX in order to improve reliability (as discussed below, these increases in T&D CAPEX are now in jeopardy based on the Joint Applicants' plans to cut spending in these areas

³² The basis for much of Kemp's savings analysis is that best practices will permit improved reliability, etc. at lower costs. Also, Merger Standards require improved service.

1 **Q. Are there other factors that can cause differences in reliability?**

2 A. Yes. There are a number of other factors that have an overriding impact on
3 reliability. The use of overhead versus underground wires is important since
4 underground wires are not affected by storms. The density of vegetation can be
5 important. A heavily treed area will cause more outages than an area with minimum
6 vegetation. Finally, the extent of a company's vegetation management is perhaps the
7 most important factor in maintaining reliability.

8 **Q. What is your overall conclusion regarding the reliability that can be achieved with**
9 **these standards?**

10 A. Proper engineering standards, a fully qualified and adequate staff and adequate
11 capital are important to assure continued T&D reliability. I am concerned, particularly
12 with Westar, that a move away from the program proposed through the Electric
13 Distribution Grid Resiliency Program (EDGR) will impair the ability to achieve the
14 targets it has set.

15 **C. SYSTEM DESIGN COMPARISON**

16 **Q. Did your review of the Company's T&D System design and configuration include**
17 **an analysis of the T&D System's major component's condition and maintenance**
18 **and inspection programs?**

19 A. Yes. Based on provided data, the KCP&L and Westar major component condition and
20 maintenance and inspection data is summarized in Exhibit WPD-26 which follows my
21 testimony.

1 **Q. What did you review?**

2 A. The review of each Company's T&D System design included an analysis of the
3 following major components and associated observations:

4 • **Substations**

5 o KCP&L substations are inspected on a 60 to 90 day schedule.

6 o Westar substations are inspected on a 60 to 90 day schedule.

7 • **Power & Distribution Transformers**

8 o KCP&L has a comprehensive and current Power Transformer Asset Monitoring
9 Plan, dated 6/6/2015.

10 o Westar transformers have a relatively low health score indicating that
11 maintenance or replacement of the generator step-up units is unlikely.

12 • **Mobile Transformers**

13 o KCP&L has 5 mobile transformers in various states of repair.

14 o Westar mobile transformers have a relatively low health score indicating that
15 maintenance or replacement of the generator step-up units is unlikely.

16 • **High Voltage Transmission Breakers**

17 o KCP&L utilizes SF6 gas high voltage breakers which are historically a high
18 maintenance design due to excessive gas leakage.

19 o Westar has experienced significant maintenance issues with the SF6 breakers.
20 This is a common problem in the industry.

21 • **Transmission Breakers**

1 o KCP&L breakers are visually inspected every 60 to 90 days. Major maintenance
2 is done on a 12 year cycle with function tests every 5 years.

3 o Westar has experienced significant maintenance issues with the SF6 breakers.
4 This is a common problem in the industry.

5 • **Protective Relay Systems**

6 o KCP&L distribution system and transmission system protection standards are
7 contained in the associated construction standards.

8 o Westar distribution system and transmission system protection standards are
9 contained in the associated construction standards.

10 • **Transmission System**

11 o KCP&L does not have a condition assessment report for all Transmission systems
12 down to a component level.

13 o Westar uses a combination of risk based, preventive and predictive maintenance
14 techniques to provide a foundation for their assessment and inspection programs
15 of the transmission system.

16 • **Overhead Distribution System**

17 o KCP&L does not have a comprehensive condition assessment report for its entire
18 overhead distribution system.

19 o Westar's overhead distribution system condition is consistent with industry
20 standards. Their wood pole inspection and restoration program has proven to be
21 effective.

22 • **Distribution Transformers**

1 o KCP&L does not have a condition assessment report on distribution transformers.

2 However, KCP&L has inspection programs that address these overhead assets.

3 o Westar does not do any internal testing of a distribution transformer, however

4 they do visual inspections.

5 • **Underground Distribution System**

6 o KCP&L does not have a condition assessment report on distribution transformers.

7 However, KCP&L has inspection programs that address these underground assets.

8 o Westar does not have any condition assessment data for conductors, switches or

9 splices. Recognizing that many Utilities have experienced significant failures in

10 their underground conductor and cable splices this data is extremely important in

11 determining the overall condition of the underground system.

12 **Q. Did your review of the Company's T&D System design and configuration include**
13 **an analysis of the T&D System's major components to include the number and size**
14 **of each as well as the respective age?**

15 A. Yes. Based on data, from KCP&L and Westar I summarized major component data in
16 Exhibit WPD-16. An analysis of this data indicates that both Company's major
17 components are aged and approaching a period when the industry standard Mean Time
18 To Failure (MTTF)³³ of 37 years will become a statistical issue. In addition, both
19 Company's Overhead Distribution System are expansive and subject to reliability issues
20 storm and vegetation issues. An aged Overhead Distribution System is made more

³³ DR-KCC- 51

1 vulnerable when it is impacted by purposeful reductions in routine maintenance (i.e.
2 reduced tree trimming).

3 **Q. Why is the comparison of system equipment important?**

4 A. Recognizing that the JAs have forecasted that significant cost savings can be realized
5 through the merger, it is imperative that an assessment be completed to identify specific
6 areas within each Company that may negatively impact the JAs ability to produce the
7 projected cost savings without negatively impacting system reliability.

Exhibit - WPD - 15

T&D System Size Comparisons³⁴

Component	KCP&L/GMO		Westar	
	Number	Ave. Age (Years)	Number	Ave. Age (Years)
Power Transformers Generator Step-up Units	16	23	30	24
Generator Auxiliary Transformers	77	23	80	20
Auto and/or ZigZag Transformers	17	21	29	54
Distribution Power Transformers (original manufacturer or LTC)	415	28	537	26
Distribution Power Transformer (re- manufactured or non-LTC)	38	28	663	26
Mobile Transformers	5	N/A	6	35
High Voltage Transmission Breakers (345 kV)	59	5	159	22
Transmission Breakers (<230 kV)	674	31	2,271	22
Transmission System 345 – 69 kV	3,600 circuit miles 73 circuits	56	6,400 circuit mi. 58,345 poles	35
Overhead Distribution System	15,600 circuit mi. 75,186 poles Kansas 403,819 poles Missouri	38	24,000 circuit mi. 589,377 poles	32
Distribution Transformers	N/A	N/A	276,815	24
Underground Distribution System	7,000 circuit mi.	30	4,900 circuit mi.	N/A

³⁴

Source documents: Westar – Annual Reliability Report, dated April 25, 2016 – CURB DR-18; KCP&L (Kansas & Missouri) – CURB DR-71, dated August 19, 2016; KCP&L (Kansas only) – Annual Report, dated April 29, 2016 – CURB DR-72; CEMMI-10 – KCC-DR-269

Exhibit - 16

T&D System Comparison Summary

GPE/Westar Statistical Data Profile				
Criteria	GPE		Westar	
		Ref.		Ref.
Number of Customers	846,100	1	700,000	2
Transmission (Circuit Miles)	3,600	3	6,400	4
Overhead Distribution (Circuit Miles)	15,600	3	24,000	4
Underground Distribution (Circuit Mi)	7,000	3	4,900	4
Reserve Capacity	14%	6	20%	6
SPP Reserve Capacity	12%	7	12%	7
	1	2015 Annual Report, page 25		
	2	2015 Annual Report, page 6		
	3	2015 Annual Report, page 23		
	4	2015 Annual Report, page 21		
	5	2016 IRP, page 7		
	6	2015 Annual Report, page 11		
	7	SPP Board Memo, dated April 26, 2016.		

Q. Did your review of the Company's T&D System design and configuration identify any specific areas that would negatively impact the proposed merger benefits?

A. Yes. As detailed in Exhibit WPD-15 & 16 above, the expansive Overhead Distribution System of both Companies indicates that there is significant exposure to distribution line storm damage if vegetation management is inadequate. Yet, as noted in the JA's Merger Savings Model _5-14-18_annotated, "Data" tab, row 64, Col. BI the JAs project reducing 8 FTE in Westar's Vegetation Management program that is expected to result in savings of \$3 million annually. Any reduction in resources in this area will certainly negatively impact the ability of the merged Companies to maintain their respective Company's reliability metric.

1 **Q. What is your conclusion based on this analysis?**

2 A. Based on a review of each Company's Annual Reliability Report, vegetation and
3 tree related issues were accountable for a large number of customer interruptions. The
4 JA's proposed reduction in the Westar vegetation management program will certainly
5 negatively impact the JA's resultant reliability.

6 **Q. What do you recommend?**

7 A. I strongly recommend that the \$3M reduction in annual spending associated with
8 the vegetation management program be eliminated from the proposed Merger Cost
9 Saving Estimates.

10 **D. POST MERGER STAFFING AND BUDGET ANALYSIS**

11 **Q. Did you review the proposed reductions in staffing provided in the Kemp Savings**
12 **Model?**

13 A. Yes. As was stated in Section I of my testimony, a total of 24 FTE will be
14 reduced after the merger. This amounts to a 16% reduction in staff and includes:

- 15 • 6 - KCP&L T&D engineers,
- 16 • 1 - KCP&L transmission planner,
- 17 • 2 – KCP&L transmission system operations FTEs,
- 18 • 3 – Westar workforce and asset management FTEs,
- 19 • 8 – Westar Vegetation management
- 20 • 1 – Westar System Planner,

- 3 – Transmission Operations FTEs

Q. Based on your review of the JA's Merger Savings Model _5-14-18_annotated do you believe the JA's have demonstrated a commitment of resources necessary to support the Engineering Standards Program?

A. No. As detailed in the JA's Merger Savings Model _5-14-18_annotated, "Data" tab, row 60, Col. BI, the JAs estimate a 6 FTE reduction in the KCP&L's T&D Engineering Department. Any reduction in resources in this area will certainly negatively impact the ability of the merged Companies to continue to support a comprehensive Engineering Standards Program.

Q. Based on your T&D system integration analysis, did you determine that the activities associated with post-merger T&D O&M and capital spending is appropriate based on the merger plan?

A. No. An analysis of this data indicates that both Companies have programs in place to monitor the condition of the Substations, Power Transformers, and Substation breakers, however KCP&L does not have systems to monitor the condition of the Transmission and Distribution Systems. This lack of a condition assessment negatively impacts our ability to determine if the post-merger KCP&L T&D O&M and, CAPEX estimates are accurate and attainable. In addition Westar identified \$886.8M in additional CAPEX to implement the EDGR,³⁵ which was not included in the post-merger CAPEX budget.

³⁵ Electric Distribution Grid Resiliency Program, dated February 9, 2015

1 **Q. Have the JAs conducted a system wide assessment of their transmission and**
2 **distribution systems to determine if they need significant CAPEX upgrades in order**
3 **to meet the reliability expectations that are expected as part of the merger?**

4 A. Westar, as part of EDGR, performed a great deal of analysis to support its
5 argument that it needs significant capital to meet future reliability targets.³⁶ However,
6 Westar did not perform a bottom up system wide assessment to provide a firm basis for
7 O&M and capital needed post-merger. GPE has not performed a bottom up assessment
8 of their T&D system according to its responses to data requests.³⁷

9 **Q. Why is an in-depth assessment such as this important?**

10 A. Without a well-defined, detailed analysis of the T&D system that looks at each
11 component and major circuit, it is very difficult to forecast what the appropriate level of
12 O&M and CAPEX is post-merger.

13 **Q. What should be included in a T&D asset assessment?**

14 A. Individual line reliability, failure analysis on transformers, breakers switches, and
15 other components, pole inspections, an evaluation of storm resiliency and other fault
16 driver's should be reviewed. Based on these results a CAPEX budget and long term
17 O&M program can be accurately developed. The Westar EDGR report provided a good
18 example of this type of evaluation. This assessment should also include an evaluation of

³⁶ EDGR Report, Dated February 9, 2015

³⁷ KCC-DR-51(KCP&L Distribution System Condition Assessment) & KCC-DR-283 (KCP&L Transmission System Condition Assessment)

1 Best Practices of each company and the industry in general, as well as a standardization
2 of practices in order to maximize effectiveness and savings.

3 **E. RELIABILITY PROGRAMS AND MEASUREMENT**

4 **Q. Did you review past projects related to improving reliability?**

5 A. Yes. In Docket No. 15-WSEE-115-RTS, Westar proposed Electric Distribution
6 Grid Resiliency Program (EDGR)³⁸ which requested a significant increase in capital
7 expenditures due to poor projections of worsening reliability, as measured by SAIDI and
8 SAIFI.

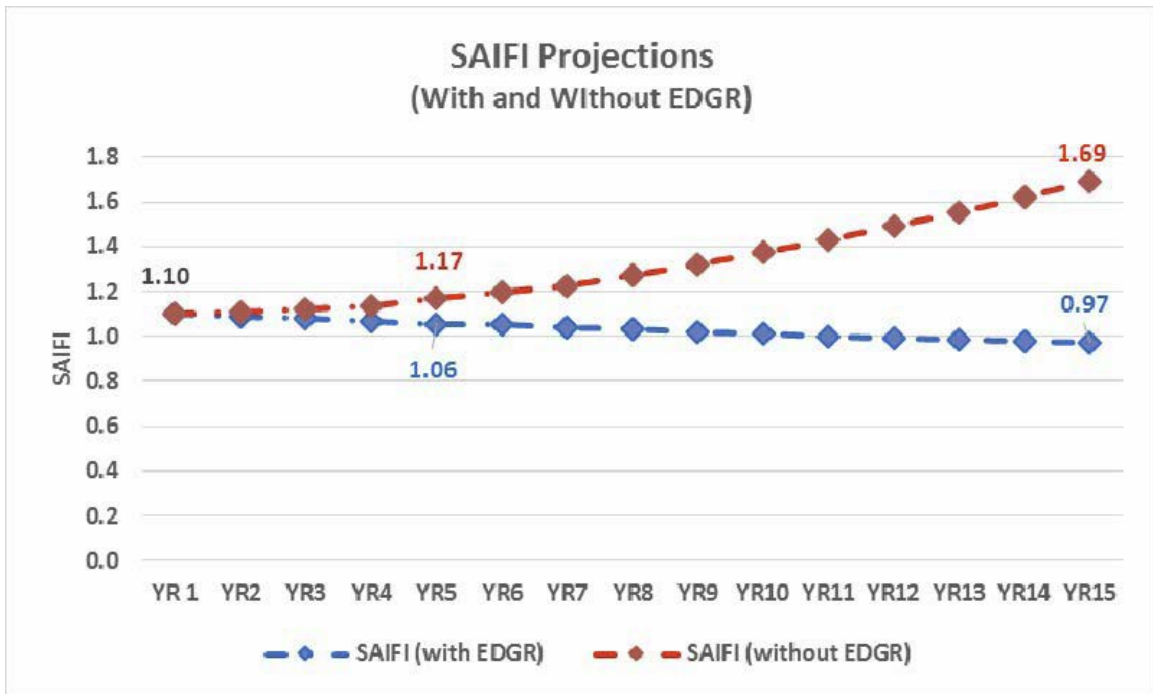
9 **Q. What was the objective of this proceeding and EDGR?**

10 A. The objective was to address an aging electric distribution infrastructure and
11 legacy assets that needed refurbishment or replacement; heavily loaded substation
12 transformers resulting in shortened asset life and limited operational flexibility; and a
13 lack of remote monitoring and operating equipment which results in limited visibility into
14 asset/system operating parameters and, in the event of an unplanned outage, lengthens
15 service restoration. A total of 41 actions were proposed across five capital initiatives
16 with a total estimated cost of \$886.8 million. In the study, Westar provided a graph that
17 showed the projected SAIFI results going forward with and without the EDGR program.

³⁸ Direct testimony of Jeffery W. Cummings, 2/9/2015, Exhibit JC-1

Exhibit - 17

EDGR SAIFI Projection



In addition to improved reliability, the program was also intended to improve safety and related liabilities. In fact, one-third of the capital investment represented projects that enhance safety. The EDGR report on page 6, stated:

Safety and Related Liabilities: Acknowledging that safety is always a factor in Westar's capital investment decisions, as a point of reference, approximately one-third of the proposed capital investment represent projects and programs, in addition to improving the grid, enhance safety. Specific programs related to wood poles, replacement of substation ground mats, and poles / equipment grounds, and addressing neutral conductors on existing ungrounded circuits illustrate the balance this program conveys in improving system performance yet remaining mindful of public and employee safety.

1 **Q. Was the entire EDGR program approved by the Commission?**

2 No. A one-year trial project was approved with a total cost of about \$50 million.
3 This trial was to take place in 2016 with a report indicating results to be produced
4 afterwards. The report on results has not yet been completed.

5 **Q. Is the EDGR program included in the merger plan and identified by the JA for**
6 **continuation?**

7 A. No. There is no mention of EDGR in the merger application. In fact, the
8 testimony of Mr. Kemp projects a significant decrease in CAPX spending by Westar
9 going forward.³⁹ This is incompatible with the EDGR proposal and supporting testimony
10 from 15-WSEE-115-RTS, and is unexplainable given the Joint Applicants' supposed
11 commitment to increased customer service and reliability to occur as a result of the
12 merger.

13 **Q. What was JA witness Kemp's position on EDGR?**

14 A. According to Mr. Kemp's explanation during a briefing on October 12, 2016,
15 management of the companies compared T&D CAPX spending for each company,
16 measured in \$/Customer. Since KCP&L spent \$153.95/Customer in 2016 compared to
17 Westar's \$218.09/Customer, it was concluded that KCP&L had "best practices" that
18 could be applied and that Westar could achieve the same results. This logic permitted
19 the JAs to propose CAPEX reductions of \$72 million in 2018, \$67 million in 2019 and

³⁹ Kemp Testimony, KCC DR Response 007, Workpapers spreadsheet, T&D CAPX tab

1 \$75 million in 2020 for the Westar service territory. These cost savings are included in
2 the Joint Applicants' claims of \$200 million per year in cost savings. In summary,
3 instead of increasing spending by about \$59 million per year as it planned through
4 EDGR, the JAs' merger savings calculation expects Westar to reduce spending by about
5 \$70 million per year. As Exhibit WPD-17 shows, the actual result proposed is a
6 reduction of 46% - 48% from that proposed with EDGR.

Exhibit - 18

Proposed T&D Post-Merger Spending

Proposed T&D Post-Merger Spending					
	2016	2017	2018	2019	2020
Customers (Millions)					
Westar	0.70	0.70	0.70	0.70	0.70
GPE	0.84	0.84	0.84	0.84	0.84
Distribution Spend					
Westar	\$153	\$136	\$170	\$165	\$186
GPE	\$129	\$129	\$118	\$118	\$133
Distribution Spend / Customer					
Westar	\$218.09	\$194.42	\$243.14	\$235.96	\$266.19
GPE	\$153.95	\$153.64	\$140.44	\$140.67	\$158.35
Adjusted Distribution Spend					
Westar			\$98	\$98	\$111
GPE	\$129	\$129	\$118	\$118	\$133
Adjusted Distribution Spend / Customer					
Westar	\$0.00	\$0.00	\$140.44	\$140.67	\$158.35
GPE	\$153.95	\$153.64	\$140.44	\$140.67	\$158.35
Distribution Reduction for Westar			\$71.89	\$66.70	\$75.49
EDGR Proposed CAPEX Spending			\$59.00	\$59.00	\$59.00
Total Effective Reduction in Spending			\$130.89	\$125.70	\$134.49
Proposed Westar Spending with EDGR Included			\$229.20	\$224.17	\$245.33
Percent Reduction in Planned plus EDGR Spending			57%	56%	55%
DR KCC-7, T&D CAPEX Tab					

Q. Is this a logical analysis? Are these assumption correct?

A. Absolutely not! There is very little correlation between the number of customers and the amount of capital needed in the system to maintain reliable and safe service. A look at the detailed information in Exhibits WPD-15 and WPD-16 illustrates that while

1 KCP&L and Westar systems are similar in age, the makeup of the systems is very
2 different systems. GPE has 21% more customers, but 35% less overhead distribution
3 circuit miles than Westar. However, it has 43% more underground circuit miles. In
4 general the number of outages is based on the number of poles, insulators, transformers,
5 wires, and other components that are affected by age, weather and other events. In other
6 words, the longer and more complex the system for a given number of customers, the
7 more you need to spend on replacement and maintenance. The exception is underground
8 distribution which does not suffer the same problems from wind, lightning, and other
9 environmental causes.

10 **Q. What is your conclusion as to how the decision to reduce spending was made?**

11 A. I believe the JAs proposal does not provide a sound basis for determining the
12 level of spending for the two systems. A more appropriate analyses would be to look at
13 individual line segments for levels of reliability, age of equipment, and loading. As well
14 as mean time to failure for key components. Pole inspections and other thermal imaging
15 inspections would provide further insight on where money should be spent. A quick
16 review of the detailed list of projects proposed for Westar shows relevant detail that is
17 needed for a robust reliability improvement program. I am providing a copy of the
18 detailed CAPEX list proposed by Westar for its EDGAR program to illustrate the
19 diligence and depth of analysis needed when a Company is making decisions related to
20 safety and reliability. Exhibit WPD-31 shows the list of capital projects Westar believed
21 it needed to undertake only one year ago.

1 Q. How does the proposed reductions in O&M spending for T&D impact your opinion
2 on the validity of this merger?

3 A. It confirms my conclusion that this merger does not meet the merger standards.
4 In fact, the proposed reductions in O&M may move Westar in the completely wrong
5 direction.

6 **Q. What actions should be considered by the JA regarding the conditions and future**
7 **reliability of both the Westar and KCP&L System?**

8 A. First, while the Westar and KCP&L systems differ as stated above, they are
9 similar in some respects. They have similar engineering design standards, are of similar
10 age and experience the same weather patterns. Therefore, I recommend that a system
11 wide assessment, similar to EDGR, be performed to ascertain exactly what expenditures
12 are needed and in what areas.

13 **F. VEGETATION MANAGEMENT:**

14 **Q As a part of its merger savings calculation, does GPE anticipate a reduction in**
15 **Westar's Vegetation Management Program expenditures?**

1 A- Yes. The Kemp savings estimate indicates that Westar's Vegetation Management
2 budget is \$33M.⁴⁰ As part of the merger savings, GPE assumed a \$3M Vegetation
3 Management annual reduction in spending.

4 **Q- Have you reviewed the most recent Westar North and South Annual**
5 **Reliability Performance Reports?**

6 A. Yes. They indicate that Vegetation Management issues continue to contribute to
7 the number and duration of Westar Customer Interruptions.

8 **Q. Do the JAs expect that the \$3M reduction in the Vegetation Management**
9 **expenditures will not negatively impact the associated customer interruptions?**

10 A- In a data response⁴¹ GPE reported that "The estimated savings of \$3 million per
11 year in Vegetation Management is reasonable and conservative compared with the
12 combined annual Vegetation Management budget that was assumed to be close to \$60
13 million". Quite frankly, I question this rationale. Making a blanket statement with no
14 analytical backup is inappropriate. The EDGR report and Westar's detailed reliability
15 reports have focused on vegetation management as the key to reducing their poor
16 reliability scores. In addition, the Westar explanation did not fully explain the \$243,000
17 per FTE that was utilized to support the \$3.4M reduction in the Vegetation Management
18 budget. This obvious inaccuracy questions the credibility of this estimate.

⁴⁰ As noted in the GPE Merger Savings Model "Q7_CONF_Workpaper_Merger Savings Model_5-14-18_annotated", Sky O&M tab, row 24

⁴¹ KCC-DR-338, dated November 15, 2016

Q. What is your conclusion regarding the proposed reductions in vegetation management spending for Westar T&D?

A. This plan is not feasible and is likely to lead to a greater increase in outages than predicted in Westar's own EDGR analysis. Should the EDGR test in 2016 achieve its intended results, the prudent decision would be to move forward with additional spending not less.

Exhibit - 19

EDGR CAPEX 5 Year Plan⁴²

Initial 5-Year CAPEX PLAN and BENEFIT CAPTURE PROFILE

	PROPOSED CAPEX RIDER	SAIFI Reduction	SAIDI Reduction	Annual Reduced Cost of Outages to Customers (Note 1)
Replace Aging Assets	\$64.9 million	.012	3.9	\$2.6 million
Harden Overhead Assets	\$49.5 million	.016	5.1	\$3.4 million
Harden Underground Assets	\$6.8 million	.004	0.9	\$0.1 million
Improve System Resiliency	\$36.4 million	.011	5.4	\$2.6 million
Upgrade the Substation Infrastructure	\$59.1 million	.001	0.2	\$0.3 million
TOTAL	\$216.7 million	.044	15.5	\$9.0 million

NOTE:

1. The annual reduced cost of outages to customers reflect a translation of the reduction / avoidance of customer interruptions to potential customer savings predicated on DOE's ICE or Berkley models (source: "Estimated Value of Service Reliability for Electric Utility Customers in the United States" Research Project Final Report dated June 2009); and the reductions indicated in the initial 5-Year view (totaling \$9.0 million) reflect those to be realized by Westar's customers during Year 5.

Q. How do you respond to the JAs' claims that GPE can apply best practices that will reduce spending at Westar while increasing reliability?

A. First, our analysis does not indicate that there are significant differences between the system design, system construction and procurement standards, inspection practices

⁴² EDGR Testimony, JC 1, Page 8

1 or maintenance practices for each Company that would likely result in a significant
2 increase in reliability while spending significantly less per circuit mile. Vantage
3 performed an analysis that compared system design standards, inspection and
4 maintenance practices, and staffing in preparation for this testimony. In general the
5 standards and system design specifications of Westar and KCP&L were very similar,
6 inspections were similar and reasonable and staffing levels were appropriate. In fact, the
7 merger plan does not call for a reduction to T&D field operations staffing.⁴³

8 **Q. Does each company track reliability measures that are common to the industry?**

9 A. Yes. Each Company is required to publish its T&D System reliability yearly in an
10 Annual Report. A summary of the last 5 years of reliability data is provided in Exhibit
11 WPD-20. The companies currently use three different indices for measuring reliability as
12 described and provided below. Further, the calculations can be made with and without
13 major storms being included. There are also other indices that are common within the
14 utility industry that we describe. The definitions of the indices provided below are:

15 **SAIDI** – (System Average Interruption Duration Index) is the sum of customer
16 interruption durations (cumulative sum of the product of the number of customers
17 interrupted and outage duration) divided by the total number of customers served in
18 minutes.

⁴³ Kemp Savings model DR KCC-7; DATA tab, line 66

1 **SAIFI** – (System Average Interruption Frequency Index) is the total number (cumulative
2 sum) of interrupted customers divided by the total number of customers served.

3 **CAIDI** - (Customer Average Interruption Duration Index) is the (cumulative) sum of
4 customer interruption duration divided by the total number of customer interruptions.
5 This is also equal to SAIDI divided by SAIFI.

6 **Q. What have the results for SAIFI, SAIDI and CAIDI been for the last five years?**

7 A. In general the results of SAIFI and SAIDI for KCP&L have been significantly
8 better than for Westar. CAIDI, due to the way it is calculated is higher for KCP&L than
9 for Westar.

Exhibit - WPD - 20

Westar / KCP&L Reliability Profile⁴⁴

Westar / KCP&L Reliability Profile							
Criteria	Company	Years					5 Year Average
		2011	2012	2013	2014	2015	
SAIDI	Westar South	141.3	164.0	186.5	116.7	146.2	150.9
	Westar North	133.9	140.1	139.1	169.9	233.2	163.2
	KCP&L (Kansas only)	237.3	72.8	109.3	113.06	138.69	134.2
	KCP&L (Kansas & Missouri)	75.0	63.0	67.4	79.7	73.7	71.8
SAIFI	Westar South	1.609	1.225	1.448	1.287	1.408	1.39
	Westar North	1.582	1.475	1.475	1.621	1.726	1.59
	KCP&L (Kansas only)	0.98	0.64	0.76	0.86	0.89	0.83
	KCP&L (Kansas & Missouri)	0.70	0.58	0.71	0.79	0.74	0.70
CAIDI	Westar South	87.8	133.8	128.8	90.7	103.8	108.9
	Westar North	84.6	95.0	94.3	104.8	135.2	102.8
	KCP&L (Kansas only)	242.4	113.7	143.7	131.8	156.29	157.6
	KCP&L (Kansas & Missouri)	107.6	108.3	95.7	101.6	99.7	102.6

⁴⁴

Source documents: Westar – Annual Reliability Report, dated April 25, 2016 – CURB DR-18; KCP&L (Kansas & Missouri) – CURB DR-71, dated August 19, 2016; KCP&L (Kansas only) – Annual Report, dated April 29, 2016 – CURB DR-72; CEMMI-10 – KCC-DR-269

1 **Q. Based on your review of each Company's T&D system reliability programs are each**
2 **of the programs and consistent with emerging industry standards?**

3 **A.**No. There are two more reliability measures that are becoming common in the
4 industry. They are:

5 **MAIFI** - The majority of electric customers utilize a wide variety of digital electronic
6 equipment that must be manually reset after a momentary loss of power. For this reason
7 additional emphasis should be placed on momentary outages. Momentary outages are
8 monitored utilizing the IEEE-1366 Momentary Average Interruption Frequency Index
9 (MAIFI) that represents the system-wide average number of momentary outages per year
10 and is the number of momentary customer interruptions divided by the total customers
11 served. A momentary interruption is typically defined as any interruption that is less than
12 the definition of a sustained outage. Most distribution systems only track momentary
13 interruptions at the substation level, which does not account for pole-mounted devices
14 that might momentarily interrupt a customer. MAIFI is rarely used in reporting
15 distribution indices because of the difficulty in knowing when a momentary interruption
16 has occurred. Momentary outage can be captured by utilizing the following:

- 17 • Substation breaker trip and reclose.
- 18 • Distribution recloser operation
- 19 • Customer call-ins
- 20 • Supervisory Control and Data Acquisition (SCADA) system operation
- 21 • Outage Management System (OMS) data
- 22 • Advanced Metering Infrastructure (AMI)

1
2 **CEMMI-10** - The majority of customer service complaints are driven by multiple
3 momentary service interruptions. Multiple momentary interruptions are measured by
4 monitoring in excess of 10 Customers Experiencing Multiple Momentary Interruptions
5 (CEMMI-10). KCP&L reported,⁴⁵ based on a review of data in the OMS, that no electric
6 customers have experience 10 momentary outages in 2015.

7 **G. IMPLEMENTATION OF IT SYSTEMS**

8 **Q. Did you review the Company's Information Technologies to see if they are currently**
9 **compatible?**

10 A. Yes. I reviewed each Company's Outage Management System (OMS),
11 Enterprise-Wide Asset Management System (EAM), Workforce Management Systems
12 (WFM) and Advanced Metering Infrastructure (AMR) System to determine if they are
13 current, comprehensive and readily compatible.

14 **Q. What were your conclusions?**

15 A. KCP&L and Westar each have separate Enterprise Asset Management Systems, Outage
16 Management Systems, Workforce Management Systems and Advanced Metering
17 Infrastructure Systems. The systems operate on various platforms with unique operating
18 systems that limit the interface and integration of each Company's systems.

⁴⁵ KCC-DR-269

1 The major technology issue facing the electric utility today is the lack of individual
2 system compatibility and the ability to integrate data across the various platforms,
3 including the more traditional business sector and the electric utility operations sector.
4 The Company's Information Technology Systems are made-up of a patchwork of various
5 mainframe and distributed technologies including;

- 6 • Intergraph distributed platform Automated Mapping/Facility Management EAM
7 system (KCP&L)
- 8 • Mainframe based platform legacy EAM system (Westar)
- 9 • Oracle distributed platform OMS (KCP&L)
- 10 • Intergraph distributed platform OMS (Westar)
- 11 • Mainframe based platform legacy WFM (KCP&L)
- 12 • Landis+Gyr distributed platform AMR (KCP&L)
- 13 • Landis+Gyr distributed platform AMR (Westar)

14 The integrations of these systems into a cohesive information management system that
15 will enable the merged company to maximize the utilization of business, financial and
16 operational data will certainly require a significant investment of time and resources.

17 **Q. Why are these systems important?**

18 A. These systems are important because they are the platform for collecting,
19 analyzing and providing data on a real time basis for making operating decisions. They
20 are also used for long term strategic and financial planning.

1 **Q. Based on your review of the JA’s Merger Savings do you believe the JA’s have**
2 **demonstrated a commitment of resources necessary to support the integration of**
3 **these Information Technologies?**

4 A. No. As detailed in the JA’s Merger Savings Model _5-14-18_annotated, “Data” tab, row
5 63, Col. BI, the JAs estimate a 3 FTE reduction in the Westar Work & Asset
6 Management Department and lines 22-29 indicates a 27 FTE reduction for IT. Any
7 reduction in resources in this area will certainly negatively impact the ability of the
8 merged Company to successfully complete the integration of the above Information
9 Technologies.

IV. CUSTOMER SERVICE INTEGRATION

Q. What is the purpose of this section of your testimony?

A. This section of the testimony examines three customer service functions – customer offices, call center operations, and customer information systems (CIS). The last of these, customer information systems, includes the retail billing functions. The Commission’s Merger Standards are designed to evaluate whether the proposed transaction will promote the public interest. Since these three customer service functions directly impact the quality of service customers receive, the Commission needs to determine if the proposed transaction will promote the public interest and have a positive effect on the quality of service the customers’ receive.

Q. Will there be significant changes in the staffing and budget of the Customer service areas?

A. I have reviewed the Data in Mr. Kemp’s testimony⁴⁶ and prepared a summary that presents changes in staffing and budget for a number of Customer Service related areas. The same source provides a summary of the Cost to Achieve for these groups. I present it in Exhibit WPD-21 below.

⁴⁶

DR KCC-07

Exhibit - WPD - 21

Customer Service Post-Merger Staff/Budget

Summary of Post Merger Changes in Customer Service Areas										
Pre-Merger Staff Plan	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Customer Systems Support	16	16	16	16	16	16	16	16	16	16
Enterprise Systems Support	22	22	22	22	22	22	22	22	22	22
Customer & Community Affairs	8	9	10	10	10	10	10	10	10	10
Customer & Community Affairs	8	9	10	10	10	10	10	10	10	10
Corporate Communications	17	19	20	22	22	22	22	22	22	22
Government Affairs	3	4	4	4	4	4	4	4	4	4
Community Relations	6	6	7	7	7	7	7	7	7	7
Economic Development	5	5	5	6	6	6	6	6	6	6
External Communications	1	1	1	1	1	1	1	1	1	1
Customer Insight	5	5	5	6	6	6	6	6	6	6
eServices	3	3	4	4	4	4	4	4	4	4
Marketing Intelligence	7	8	8	9	9	9	9	9	9	9
Energy Efficiency	10	11	12	13	13	13	13	13	13	13
Customer Solutions	8	9	10	10	10	10	10	10	10	10
Business Center	3	4	4	4	4	4	4	4	4	4
Customer Relations Center	122	117	112	107	107	107	107	107	107	107
Total Head Count	245	247	249	252	252	252	252	252	252	252
Post Merger Staff Reductions	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Customer Systems Support	0	8	8	8	8	8	8	8	8	8
Enterprise Systems Support	5	5	5	5	5	5	5	5	5	5
Customer & Community Affairs	3	4	4	4	4	4	4	4	4	4
Customer & Community Affairs	3	4	4	4	4	4	4	4	4	4
Corporate Communications	7	8	8	9	9	9	9	9	9	9
Government Affairs	1	2	2	2	2	2	2	2	2	2
Community Relations	2	3	3	3	3	3	3	3	3	3
Economic Development	2	2	2	2	2	2	2	2	2	2
External Communications	0	1	1	1	1	1	1	1	1	1
Customer Insight	2	2	2	2	2	2	2	2	2	2
eServices	1	1	1	2	2	2	2	2	2	2
Marketing Intelligence	3	3	3	4	4	4	4	4	4	4
Energy Efficiency	4	5	5	5	5	5	5	5	5	5
Customer Solutions	3	4	4	4	4	4	4	4	4	4
Business Center	1	2	2	2	2	2	2	2	2	2
Customer Relations Center	12	12	12	12	12	12	12	12	12	12
Proposed Staffing Reductions	49	66	66	69	69	69	69	69	69	69
Total Headcount	245	247	249	252	252	252	252	252	252	252
Headcount Reduction	49	66	66	69	69	69	69	69	69	69
Percent Reduction	20%	27%	27%	27%	27%	27%	27%	27%	27%	27%
O&M Savings Post Merger		\$6,096,015	\$6,010,612	\$6,075,994	\$6,075,994	\$6,075,994	\$6,075,994	\$6,075,994	\$6,075,994	\$6,075,994
Cost To Achieve	\$1,084,487	\$1,481,064	\$0	\$758,332						

Q. What is the potential impact of the transaction on customer offices?

1 A. The merger savings model assumes there will be no closures of other customer
2 facilities.⁴⁷ Based on these facts, one expects there would be no deterioration of the
3 customer's experience with the utility with regard to the customer service functions
4 related to customer offices. At least in the short term. The Joint Applicants have not
5 committed to a formal length to any of these commitments.

6 **Q. How will call center operations be affected by the proposed transaction?**

7 A. At this time, there are minimal merger savings identified in the merger saving model
8 relative to the continued operation of the existing call centers.⁴⁸ If the transaction is
9 approved, it is conceivable that there would be some potential to realize synergies related
10 to the call centers. This potential becomes more probable if the Companies proceeds
11 with the implementation of an integrated CIS. An integrated CIS would potentially allow
12 for economies of scale in the call centers by physical or virtual combinations of customer
13 service representative teams. These economies would require the development of a
14 consistent set of policies and procedures for dealing with customer interface such as
15 billing inquiries, customer turn on/off requests, deposits, etc. as well as standardized
16 service standards. In conclusion, one expects the customer's experience to be at least
17 neutral if the integrated CIS is implemented. However, these minimal savings and
18 service enhancements are not sufficient to justify Commission approval of the proposed
19 transaction.

⁴⁷ DR_BPU-2-2 – savings model assumptions.

⁴⁸ See Q7_CONF_Workpaper_Merger Savings Model_5_14_16_Annotated.

1 **Q. What are the Companies’ current plans to update their CIS platform?**

2 A. In response to a data request the merger savings were based on the presumption that
3 “GPE is well along in the implementation of its new CIS platform, while Westar is in the
4 planning stages for replacing its CIS”.⁴⁹ From existing testimony, it is unclear if
5 Westar’s system plans include replacement of the Power Billing System (PBS) which
6 manages complex accounts. It does not appear that Westar’s Energy Accounting System
7 (EAS) which manages wholesale customer information and billing would be replaced.⁵⁰
8 Both Companies are using the same vendor for the updated CIS platforms. It is important
9 to note that both companies intend to proceed with the implementation of the new CIS
10 regardless of whether the Companies merge or not. Based on this fact, any improvements
11 in customer service related to the updated CIS platforms are not merger-related and
12 would accrue irrespective of the merger.

13 **Q. How would the proposed transaction affect the Companies’ current plans to**
14 **implement updated CIS platforms?**

15 A. As of September 2016, Westar has spent approximately \$2.3 million on the planning
16 phase.⁵¹ However, if the transaction is approved and the Companies are able to share the
17 same CIS platform, the Companies’ merger saving model proposes that there is the
18 potential for estimated savings in capital costs from extending GPE’s CIS platform to
19 Westar. According to the merger savings model, there is the potential for a savings of

⁴⁹ DR_ BPU-2-29 – CIS plans.

⁵⁰ DR_CURB_13, question 1 – description of billing systems.

⁵¹ DR_CURB_135 – expenditures to date on CIS.

1 \$43.5 million in capital expenditures.⁵² The merger savings model assumes no reduction
2 in non-fuel O&M for the CIS project. Although this seems like a significant amount, in
3 the scheme of other projected savings related to this transaction, this amount pales in
4 comparison to other projected savings. Again, since both Companies plan to implement
5 new CIS platforms, the customers' ultimate service experience will depend upon the
6 successful implementation of the installations and not whether the transaction is
7 approved.

8 **Q. What are some of the potential benefits associated with the implementation of new**
9 **CIS platforms?**

10 A. The new CIS may provide the Companies with more operational and performance
11 information to allow better management as well as improved customer service and
12 satisfaction. Newer CIS generally provide features that customers increasingly require
13 such as social media engagement, improved e-billing and payment, emergency and
14 outage communications, two-way grid communications and customer segmentation for
15 more efficient communications.

16 **Q. Do you have any recommendations for the Commission relative to the new CIS**
17 **platforms?**

18 A. Although the new CIS are planned to be implemented regardless of the merger, the new
19 systems provide an opportunity for the Commission to monitor this component of
20 customer service in a more detailed manner. The new CIS platforms are a crucial

⁵² See CAPEX sheet of Q7_CONF_Workpaper_Merger Savings Model_5_14_16_Annotated.

1 element of improved customer service. As such, the Commission should monitor the
2 progress of the installation, be advised of any problems or glitches with the installations,
3 and after the projects are completed require a regular reporting of performance metrics.
4 The Commission Staff and the Companies could work together to develop a reporting
5 format including performance metrics. A study by the National Regulatory Research
6 Institute (NRRI) found that most states already require some form of reporting on
7 customer service and billing. The Companies' responses⁵³ indicate that many of the
8 standard industry call center statistics are already being tracked and could easily be
9 incorporated into a report to the Commission. For future reference, the Commission
10 should consider the inclusion of the following metrics for inclusion in the report:

⁵³ DR_BPU_271 – call center performance metrics

Exhibit - 22

Customer Information Statistics

Call Center Statistics	
	Total calls presented
	Calls answered transferred to agents
	Calls abandoned (both in agent queue and IVR)
	Blocked calls
	Service levels
	First call resolution
Interactive Web Statistics (self service)	
	Number of “hits” to FAQ section of the web site
Billing Statistics	
	Percentage of bills estimated
	Percentage of customers billed on time
	Percentage of bills requiring correction after billing
Customer Satisfaction	
	Customer satisfaction levels

Q. With regard to the impact of the three customer service functions you reviewed, do you think there is an impact on customers?

A. With regard to the matter of customer offices and call center operations, there is no real change in the current level of customer service. With regard to the new CIS platform, it appears that the quality of level of service the customers would experience could be enhanced in areas such as communication channels, outreach and alternative interfaces such as self-service web interactions. But this level of enhanced service will be realized irrespective of the merger as the Companies are already committed to new CIS platforms.

1 However, if the transaction were to be approved, the consolidation of the CIS platforms
2 could provide the enhanced services at a reduced cost for implementation and potentially
3 long-term cost savings.

4

V. SUPPLY CHAIN SAVINGS

Q. Have you reviewed the proposed supply chain savings included in Mr. Kemp's testimony and exhibits?

A. Yes. The Merger Savings Model that KCP&L used to quantify the savings it believed could be realized if the transaction were approved indicated that the following estimate of Supply Chain savings would result.⁵⁴

Exhibit - 23

Supply Chain Proposed Merger Savings

(\$ Millions)	2017	2018	2019	2020	2021	2022
CAPITAL CARRYING CHARGE AVOIDANCE	\$1.97	\$5.20	\$18.92	\$29.61	\$40.64	\$51.66
TOTAL OM SAVINGS + CAPEX AVOIDANCE COST SAVINGS	\$12.37	\$22.29	\$65.91	\$65.90	\$78.55	\$90.61

The savings are a result of a three areas of potential savings with regard to Supply Chain.

There is a presumed reduction in capital carrying charge due to better management of a larger inventory base. There is a proposed headcount reduction derived from the combination of the Supply Chain function. Finally, there is an assumed potential to reduce CAPEX. In response to a data request, the Joint Applicants clarified that the Supply Chain savings are derived primarily from the reduction of head count in the

⁵⁴ See DR KCC-7 at Supply Chain tab.

1 purchasing and T&D material management groups plus economy of scale purchasing and
2 improved terms of strategic contracts.⁵⁵

3 **Q. Do you believe that these savings can be achieved only through the merger?**

4 A. No. I believe that most of the Supply Chain savings that are proposed can be achieved
5 without the merger. The projected savings are based on the pretext that there are
6 economies of scale that a larger company can achieve, there are contracts with suppliers
7 and contractors that are more favorable for one company versus another, and that
8 inventory and equipment reductions can only be realized if the merger were to be
9 approved. This logic does not hold for the Westar and GPE.

10 **Q. Why do you think most of the Supply Chain savings can be achieved without the**
11 **merger?**

12 A. Both Westar and GPE are large, sophisticated utilities with experienced and well
13 managed procurement and contract management departments. If there are greater savings
14 to be gained through a larger purchasing network, this could be achieved without a
15 merger. Many small utilities, coops, and municipals have developed procurement groups
16 that achieve similar economies of scale. Lastly, I question whether it is appropriate for
17 the Commission to give any weight to any capital expenditure reductions planned by the
18 Joint Applicants, whether in the Supply Chain area or elsewhere. The capital expenditure
19 budget of these utilities is entirely within the discretion of their management and the

⁵⁵ DR_KCC_45 – description of potential savings

1 Boards of Directors. Because any loss of capital expenditures from the standalone
2 budgets before the merger will result in lost earnings and profit opportunities, the
3 management and Board of the pro forma combined entity may very well decide to
4 increase capital expenditures in other areas of the company to offset these losses (or
5 efficiencies). Therefore, I believe the Commission should find that capital expenditure
6 related savings estimates are entirely too speculative and imprecise to be given any
7 weight in evaluating whether a merger or acquisition is in the public interest.

VI. POTENTIAL MERGER CONDITIONS

Q. What is the purpose of this section of testimony?

A. The Commission has a number of decision to make. First, should the merger go forward as it is presently proposed? Second, if it does go forward, should a set of merger conditions be imposed that provides for ongoing analysis of major implementation requirements, feedback on the progress being made in implementation, the development of performance targets and reporting methodologies that provide detailed insight to the Commission? Further, should the Commission require the Companies to provide additional details on final plant retirements, cost accounting for stranded assets, impact on system reliability, transmission integrity and long term Integrated Resource Planning, before any final decisions are made in these areas?

Based on my analysis, I propose that the following merger conditions be considered as part of any decision on this matter.

A. GENERATING UNIT TECHNICAL ASSESSMENT

Q. What would this technical assessment consist of?

A. I recommend that a complete analysis and technical assessment of generating units prior to a decision on which units should be retired, including a comprehensive summary of unit conditions, needed major repairs, current and future compliance with environmental rules, strategic locations relative to grid reliability, potential for capacity

1 and energy sales. The results should be provided to the Commission Staff six months
2 before any unit retirement takes place.

3 **B. INTEGRATED RESOURCE PLAN**

4 **Q. Describe what the breath and timing of the Integrated Resources Plan (IRP) should**
5 **be?**

6 A. A well conducted IRP will look at all available generation resources with consideration
7 of fuel mix, renewables, transmission resources, and opportunities for sale of energy and
8 capacity. A robust model should be used that permits a number of logical alternatives to
9 be considered, that utilizes up to date data on fuel costs, environmental regulations,
10 capacity margin requirements, transmission constraints and the value of capacity and
11 energy sales. The IRP should consider the results of the Technology Assessments
12 proposed above to assure that the units considered for long-term use are reliable and
13 efficient. The IRP should be provided to the KCC Staff at least six months prior to any
14 planned retirements.

15 **C. STRANDED COST ANALYSIS**

16 **Q. Why do you believe a stranded cost analysis should be prepared?**

17 A. In aggregate the units the Joint Applicants have identified for accelerated
18 retirement have hundreds of millions of dollars in existing book value. Some have had
19 recent environmental upgrades that were very costly. It is appropriate that before taking
20 any action that creates significant stranded assets, that the JAs present their plan for
21 recovery to the Commission.

D. RETIREMENT ANALYSIS

Q. Are you proposing a merger condition related to the generating plant retirements?

A. Yes. Should the Commission determine that the savings accrued from retirements are attributable to the merger, we believe the following information should be tracked, accumulated and presented to the Commission on an annual basis, or more frequently if critical. Further, this information should be utilized in any upcoming rate cases.

Impact on RECA – The data in KCC-342 indicates that fuel cost increases for KCP&L alone will total \$157 million over the period from 2017-26⁵⁶. The costs for all retired units is likely to be even greater.

Staff reductions and cost to achieve – The Company should report, on a six month basis originally, and then annually after three years, the following: Total FTE's reduced, by position, due to merger; FTE's retained elsewhere in the Company; Cost for separation of management and represented workforce; other costs to implement.

Operating Statistics – Report annually the following data for each operating unit: Capacity factor; heat rate; EFOR; Gross and net generation;

Independent Analysis of Potential Sales and Economic Impact - Analysis of potential sales of energy and capacity, as well as the economic impact to local

⁵⁶ This is calculated by totaling the sums of each column of Forecast Increase in RECA Energy Cost with Loss of Unit (\$) for ten years. (KCC-342) Data for other units was unavailable.

1 communities should be performed and presented to the Commission prior to announcing
2 any final power plant closings.

3 **E. T&D RELIABILITY PERFORMANCE MEASURES**

4 **Q. Are you proposing any new T&D related performance measures and targets for**
5 **consideration post-merger? Also, what would the basis be for these new measures**
6 **and the targets you are proposing?**

7 A. We believe that two new measures should be considered for both tracking and
8 reporting. We also believe the five measures discussed below should be the framework
9 for performance targets. We are providing a set of targets that we believe are reasonable
10 and based on sound judgment, but recognize that the final targets and any incentives or
11 penalties need to be agreed to either as part of this proceeding or in a later proceeding.

12 **Q. What are the two new measures you are proposing?**

13 A. We propose that both MAIFI and CEMMI-10 be included in future performance
14 monitoring. Each is describe below.

15 **MAIFI**

16 The majority of electric customers utilize a wide variety of digital electronic equipment
17 that must be manually reset after a momentary loss of power. For this reason additional
18 emphasis should be placed on momentary outages. Momentary outages are monitored
19 utilizing the IEEE-1366 Momentary Average Interruption Frequency Index (MAIFI) that
20 represents the system-wide average number of momentary outages per year and is the

1 number of momentary customer interruptions divided by the total customers served. A
2 momentary interruption is typically defined as any interruption that is less than the
3 definition of a sustained outage. Most distribution systems only track momentary
4 interruptions at the substation level, which does not account for pole-mounted devices
5 that might momentarily interrupt a customer. MAIFI is rarely used in reporting
6 distribution indices because of the difficulty in knowing when a momentary interruption
7 has occurred. Momentary outage can be captured by utilizing the following:

- 8 • Substation breaker trip and reclose.
- 9 • Distribution recloser operation
- 10 • Customer call-ins
- 11 • Supervisory Control and Data Acquisition (SCADA) system operation
- 12 • Outage Management System (OMS) data
- 13 • Advanced Metering Infrastructure (AMI)

14 **CEMMI-10:**

15 The majority of customer service complaints are driven by multiple momentary service
16 interruptions. Multiple momentary interruptions are measured by monitoring in excess of
17 10 Customers Experiencing Multiple Momentary Interruptions (CEMMI-10). As per
18 KCC-DR-269 KCP&L reported that based on a review of data in the OMS, no electric
19 customers have experience 10 momentary outages in 2015.

20 **Q. Have you proposed a set of potential target levels for the five standards?**

21 **A.** Yes. The proposed standards are below, along with our basis for selecting them.

Exhibit - WPD - 24

GPE Merged Company Reliability Performance Targets

GPE Merged Company Reliability Performance Targets							
Criteria	Company	Years					Benchmark (Note 7)
		2017	2018	2019	2020	2021	
SAIDI	Westar South (Note 1)	145	130	120	110	104.6	81
	Westar North (Note 1)	233	170	140	110	104.6	
	KCP&L (Kansas & Missouri) (Note 2)	71.7	71.7	71.7	71.7	71.7	
	KCP&L (Kansas only) (Note 2)	136	135.5	135	134.8	134.2	
SAIFI	Westar South (Note 1)	1.40	1.10	1.00	0.90	0.97	0.86
	Westar North (Note 1)	1.60	1.20	1.10	0.90	0.97	
	KCP&L (Kansas & Missouri) (Note 2)	0.74	0.73	0.72	0.71	0.70	
	KCP&L (Kansas only) (Note 2)	0.89	0.87	0.85	0.82	0.83	
CAIDI	Westar South (Note 3)	103.8	103	102	101	100	94.0
	Westar North (Note 2)	135.2	125.0	110.0	104.8	103	
	KCP&L (Kansas & Missouri) (Note 4)	99.7	99.7	99.7	99.7	99.7	
	KCP&L (Kansas only) (Note 5)	156	132.0	120.0	110.0	99.7	
MAIFI (< 5 minutes)	Westar South (Note 6)	8.5	7.5	6.5	5.5	4.5	4.5
	Westar North (Note 6)	8.5	7.5	6.5	5.5	4.5	
	KCP&L (Kansas & Missouri) (Note 6)	8.5	7.5	6.5	5.5	4.5	
	KCP&L (Kansas only) (Note 6)	8.5	7.5	6.5	5.5	4.5	
CEMMI-5	Westar South (Note 6)	5	5	5	5	5	n/a

GPE Merged Company Reliability Performance Targets							
Criteria	Company	Years					Benchmark (Note 7)
		2017	2018	2019	2020	2021	
	Westar North (Note 6)	5	5	5	5	5	
	KCP&L (Kansas & Missouri) (Note 6)	5	5	5	5	5	
	KCP&L (Kansas only) (Note 6)	5	5	5	5	5	

1 Notes:

- 2 1. Target based on Westar EDGR related reliability improvement.
- 3 2. Target based on 5 year average of previous year's (2011 thru 2015) actual reliability
- 4 metric.
- 5 3. Target based on 2 year average of previous year's (2014 & 2015) actual reliability
- 6 metric.
- 7 4. Target based on the last year's (2015) actual reliability metric.
- 8 5. Target based on the continued improvement in the 2015 actual reliability metric.
- 9 6. Target based on a benchmark of recent industry data. The majority of the utilities do
- 10 not monitor or report MAIFI and CEMMI due to the inability to monitor interruptions
- 11 on a given distribution feeder. The addition of AMI technologies will enable this.
- 12 7. Benchmark based on the 2016 IEEE Benchmark Study.

13 **Q. Are there currently programs in place at Westar and KCP&L that will promote**
 14 **improved reliability?**

15 A. Yes. The following elements of a Reliability Improvement Programs are in place
 16 and new technology will permit even greater improvements.

1 A. Current Conventional Methods:

- 2 a. Vegetation Management
- 3 b. Animal Guards
- 4 c. Lightning Protection
- 5 d. Proactive Circuit Maintenance

6 B. New Improvement Programs:

- 7 a. Reconfiguration of the system
- 8 b. Loop Controls
- 9 c. Single Phase Reclosing
- 10 d. Automated Distribution System

11 **F. TECHNOLOGY INTEGRATION REPORT**

12 **Q. What will this requirement consist of?**

13 A. After the merger, should it occur, there will be a number of major Information

14 Technology systems that will need to be developed or combined. It can be argued that

15 these systems will be the linchpin to a successful merger. Given the complexity of these

16 systems, the amount of data that will be derived from them, and the impact they will have

17 on reliability, cost control, and data transfer, it is important that the Commission be

18 assured of their success. Therefore, I propose that the KCC Staff be provided with

19 reports on the progress of implementation every six months until the projects are

20 completed. Information in the report should include status, cost to date and projected

21 cost, a summary of the functions of the systems, a list of data that will be available and

22 details on how, once implemented these systems will improve reliability, quality of

1 service, financial control and other key management functions. Systems included in the
2 merger condition, should as a minimum, include:

- 3 o Enterprise Wide Asset Management System (EAM),
- 4 o Customer Service Systems (CIS),
- 5 o Outage Management System (OMS),
- 6 o Work Force Management System (WFM).

7 **G. T&D O&M AND CAPEX REPORT**

8 **Q. What will this requirement consist of?**

9 A. After the merger, should it occur, there will be a number of major
10 decisions made relative to the level O&M and CAPEX needed for the integrated T&D
11 system. This will become very important as the Company evaluates current standards,
12 equipment age, reliability by circuit, implements best practices that can be developed and
13 applied, and uses of emerging and newly implemented technologies such as the CIS,
14 OMS and WFM systems that are planned for implementation or integration. The report
15 should be provided annually, once the budget process is complete and should include
16 adequate data to provide the KCC staff with details on how priorities are set, capital and
17 O&M resources are allocated, and how construction and O&M activity performance is
18 measured.

19 **Q. Please summarize your concerns with the proposed merger as it is presently**
20 **formulated?**

1 A. In conducting my analysis and preparing my testimony, I have reached the
2 conclusion that this merger does not meet the Merger Standards discussed above for all of
3 the reasons given. I believe that savings summary presented by the Joint applicants
4 overstates net savings significantly. As my Exhibit WPD - 13 shows, the cost to
5 implement all of the proposed merger actions could be almost ten times that estimated by
6 Mr. Kemp. Furthermore, there is an overwhelming lack of in-depth detail supporting
7 many of the projections that prohibits me from even developing the type of analysis
8 needed for a transaction of this size. Therefore, I must conclude and recommend to the
9 Commission that this merger be rejected.

10 **Q. Does this conclude your testimony?**

11 A. Yes.

VII. APPENDIX

Exhibit - WPD - 25

Analysis of KCP&L Power Plants

KCP&L Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Montrose 1	100%	STG	Coal	170	0.00	0	58	0	0	N/A	Unit retired in 2016.
Montrose 2	100%	STG	Coal	164	35.19	505,565	56	11,629	4.73	Reported compliance with environmental regulations.	Coal quality problems contributed to the majority of the derates.
Montrose 3	100%	STG	Coal	176	34.06	525,055	52	10,815	4.43	Reported compliance with environmental regulations.	Electric distribution system problems contributed to the majority of the deratings.
LaCygne 1	KCPL 50%, KG&E/ Westar 50%	STG	Coal	368.1	58.29	1,572,434	43	10,521	14.71	Reported compliance with environmental regulations.	Forced draft fan problems contributed to the majority of the derates.
LaCygne 2	KCPL 50%, KG&E/ Westar 50%	STG	Coal	331.2	54.17	1,922,990	39	11,025	17.09	Reported compliance with environmental regulations.	Boiler water condition contributed to the majority of the deratings.
Iatan 1	KCPL 70%, GMO-SJLP 18%,	STG	Coal	499.0	58.64	2,564,000	36	10,152	17.83	Reported compliance with environmental regulations.	Pulverized coal and air piping contributed to the majority of the deratings.

KCP&L Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
	EDE 12%										EFOR has doubled in the last 3 years to significantly above industry standards.
Iatan 2	KCPL 54.71%, GMO-SJLP 6.24%, GMO-MPS – 11.76%, EDE 12%, MJMUE C – 11.76%, KEPCo 3.53%	STG	Coal	482.2	74.73	3,324,761	6	8,977	17.09	Reported compliance with environmental regulations.	Boiler tube failures contributed to the majority of the deratings. EFOR has doubled in the last 3 years to significantly above industry standards.
Hawthorn 5	100%	STG	Natural Gas	564.0	72.38	3,575,947	15	9,832	10.24	Reported compliance with environmental regulations.	Boiler water condition contributed to the majority of the deratings.
Hawthorn 6/9	100%	CC	Natural Gas	234.5	3.45	68,576	19/16	10,249	Unit 6 - 35.2 Unit 9 - 5.19	Reported compliance with environmental regulations.	Gas turbine issues.
Hawthorn 7	100%	CT	Natural Gas	78.1	1.74	10,501	16	29,300	85.75	Reported compliance with environmental regulations.	Gas turbine control system contributed to the majority of the deratings.
Hawthorn 8	100%	CT	Natural	79.1	1.84	11,616	16	13,842	81.88	Reported	Gas turbine

KCP&L Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
			Gas							compliance with environmental regulations.	control system contributed to the majority of the deratings.
Wolf Creek	KCPL 47%, Westar 47%, KEPCo 6%	STG	Nuclear	549.0	84.63	4,056,184	31	10,086	0.34	Reported compliance with environmental regulations.	No major derates reported.
Northeast 11	100%	CT	#2 Fuel Oil	52.2	0.00	0	44	Station average HR of 26,261	96.66	Reported compliance with environmental regulations.	Gas turbine fuel piping and valves problems contributed to the majority of the deratings.
Northeast 12	100%	CT	#2 Fuel Oil	40.9	0.00	0	44		95.86	Reported compliance with environmental regulations.	Gas turbine fuel piping and valves problems contributed to the majority of the deratings.
Northeast 13	100%	CT	#2 Fuel Oil	45.7	0.00	0	41		99.35	Reported compliance with environmental regulations.	Gas turbine vibration contributed to the majority of the deratings.
Northeast 14	100%	CT	#2 Fuel Oil	49.2	0.00	0	41		99.51	Reported compliance with environmental regulations.	Gas turbine fuel oil pump problems contributed to the majority of the deratings.

KCP&L Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Northeast 15	100%	CT	#2 Fuel Oil	52.9	0.00	0	40		99.38	Reported compliance with environmental regulations.	Combustion turbine issues.
Northeast 16	100%	CT	#2 Fuel Oil	52.8	0.00	0	40		99.22	Reported compliance with environmental regulations.	Gas turbine atomizing air problems contributed to the majority of the deratings.
Northeast 17	100%	CT	#2 Fuel Oil	53.2	0.00	0	39		95.1	Reported compliance with environmental regulations.	Combustion turbine issues.
Northeast 18	100%	CT	#2 Fuel Oil	52.2	0.00	0	39		96.5	Reported compliance with environmental regulations.	Combustion turbine issues.
Northeast Diesel	100%	Diesel	#2 Fuel Oil	2.0	0.00	0	33	N/A	N/A	Reported compliance with environmental regulations.	N/A
West Gardner 1	100%	CT	Natural Gas	79.5	1.49	9,818	13	13,580	57.26	Reported compliance with environmental regulations.	Combustion turbine issues.
West Gardner 2	100%	CT	Natural Gas	78.6	1.57	10,727	13	13,580	11.93	Reported compliance with environmental regulations.	Combustion turbine issues.
West Gardner 3	100%	CT	Natural Gas	77.3	1.26	8,752	13	13,580	72.22	Reported compliance with environmental regulations.	Combustion turbine issues.

KCP&L Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
West Gardner 4	100%	CT	Natural Gas	77.5	0.83	5,718	13	13,580	84.1	Reported compliance with environmental regulations.	Generator stator problems contributed to the majority of the derates.
Osawatomie 1	100%	CT	Natural Gas	75.7	0.54	3,616	13	16,656	91.36	Reported compliance with environmental regulations.	Gas Turbine issues
Spearville Wind Farm	100%	Wind	Wind	15.0	38.39	161,425	6	N/A	N/A	Reported compliance with environmental regulations.	N/A
Spearville Wind Farm	100%	Wind	Wind	31.0	34.04	299,674	10	N/A	N/A	Reported compliance with environmental regulations.	N/A

Notes:

1) Assessed compliance with EPA "MATS", "CSAPR", "GHG", "NAAQS", "SSM", "CCR", "ELG" "316b" regulations. As reported in the environmental related data request responses, all KCP&L facilities are currently compliant with all EPA regulations.

Source Documents:

- 1) KCC-DR-174 KCP&L Major Availability Detractors
- 2) KCC-DR-176 thru 184 Environmental Compliance Responses
- 3) KCC-DR-286 KCP&L Generating Plant Data
- 4) CURB-DR-88 GPE Generation Resources

KCP&L Reserve Capacity Profile				
	Capacity (MW)		Net Gen. (MWH) (2015)	Reserve Capacity
Total w/o Retirements	4,281	18,627,541	34.3%	28.1%
Total with Retirements	3,941	17,596,921	31.4%	25.9%
Change After Retirement	340	1,030,620	3%	2.2%
Percent Reduction	8%	5.5%	8%	8%

KCP&L Generation Profile	
Criteria	Value
Average age with all units	28.1 years
Average age with Sibley retired	25.9 years
Capacity all units	4,281
Capacity Sibley retired	3,941
Generation all units	18,627,541
Generation Sibley retired	17,596,921
Reduced generation	1,030,620
Percent reduced generation	6%

Exhibit - WPD - 26

Analysis of Westar Power Plants

Westar Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Jeffery Energy Center 1	Westar 92%, 8% GMO	STG	Coal	661	64.90	4,083,144	38	10,588	13.9	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	The modifications required to meet the EPA ELG regulations could add significantly costs to the facility.
Jeffery Energy Center 2	Westar 92%, 8% GMO	STG	Coal	658	55.90	3,498,648	36	11,371	9.3	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	The modifications required to meet the EPA ELG regulations could add significantly costs to the facility.
Jeffery Energy Center 3	Westar 92%, 8% GMO	STG	Coal	664	59.50	3,764,316	33	11,407	9.3	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	The modifications required to meet the EPA ELG regulations could add significantly costs to the facility.
Lawrence Energy Center 3	100%	STG	Coal	48.0	51.40	191,621	61	12,469	2	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	Retired Nov. 2015
Lawrence Energy Center 4	100%	STG	Coal	104.0	54.00	491,869	56	11,777	1.4	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	The modifications required to meet the EPA ELG regulations could add significantly costs to the facility.
Lawrence Energy Center 5	100%	STG	Coal	370.0	52.40	1,699,274	45	10,823	1.9	Reported compliance with environmental regulations except the Effluent Limitation Guidelines (ELG).	The modifications required to meet the EPA ELG regulations could add significantly costs to the facility.

Westar Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Tecumseh Energy Center 7	100%	STG	Coal	72.0	60.90	384,251	59	11,231	3.4	Reported compliance with environmental regulations.	Turbine overhaul scheduled for 2016 to address turbine bore cracking.
LaCygne 1	Westar 50%, KPC&L 50%	STG	Coal	367.0	51.10	1,642,765	43	10,521	14.71	Reported compliance with environmental regulations.	Forced draft fan problems contributed to the majority of the derates.
LaCygne 2	Westar 50%, KPC&L 50%	STG	Coal	329.0	63.50	1,832,279	39	11,025	17.09	Reported compliance with environmental regulations.	Boiler water condition contributed to the major of the derates.
Gordon Evans Energy Center ST 1	100%	STG	Nat Gas	152.0	3.60	48,163	55	14,575	21.1	Reported compliance with environmental regulations.	In 2006, cracking indications were found on the HP/IP dummy seal areas. These indications were machined out during the outage, and will be monitored in the future. A borescope was performed on the HP/IP, LP, and generator rotors with no indications found.

Gordon Evans Energy Center ST 2	100%	STG	Nat Gas	370.0	5.00	162,709	49	14,086	19.5	Reported compliance with environmental regulations.	Minor horizontal joint erosion was found during the last outage. We elected not to fix the erosion, and it will be monitored moving forward. Cracking was also identified in 2008 on the LP inner cylinder. Siemens deemed the cracking to be a low risk issue, and crack stop holes were drilled. We are monitoring the progression of the cracking, and will evaluate any changes at the next outage.
Gordon Evans Energy Center CT 1	100%	CT	Nat Gas	73.0	1.40	8,817	16	12,591	0.5	Reported compliance with environmental regulations.	CT1 had a major overhaul of the turbine inlet, compressor, combustor, turbine and exhaust in the Fall of 2015. There are currently no known issues on this unit.
Gordon Evans Energy Center CT 2	100%	CT	Nat Gas	71.0	1.40	8,624	16	12,729	1.9	Reported compliance with environmental regulations.	CT2 had a major overhaul of the turbine inlet, compressor, combustor, turbine and exhaust in the Fall of 2015. There are currently no known issues on this unit.
Gordon Evans Energy Center CT 3	100%	CT	Nat Gas	148.0	4.30	55,365	15	11,355	3.6	Reported compliance with environmental regulations.	The first stage compressor blades were changed on this unit in the Spring of 2015. The next scheduled outage on this unit is a turbine hot gas path inspection in 2018. There are currently no known issues on this unit.

Wolf Creek	KCPL 47%, Westar 47%, KEPCo 6%	STG	Nuc	549.0	84.63	4,056,184	31	10,083	0.3	Reported compliance with environmental regulations.	No major derates reported.
Murray Gill Energy Center 3	100%	STG	Nat Gas	104.0	2.20	20,295	60	18,885	13.2	Reported compliance with environmental regulations.	Rotor bore NDE produced indications during the 2011 outage. These indications were analysed by Regenco (Toshiba), and the existing failure probability was found to be within the Regenco recommended limit. We will continue monitor the indications at the next outage.
Murray Gill Energy Center 4	100%	STG	v	90.0	1.90	14,978	57	19,618	13.4	Reported compliance with environmental regulations.	The unit has not been opened since 2000. It is a sister to unit 3, so we would expect similar issues with to have developed. Unit 3 was overhauled in 2011 and was in good shape when we opened it.
Hutchinson 1	100%	CT	Nat Gas	56.0	0.50	2,499	42	23,308	3.8	Reported compliance with environmental regulations.	Unit 1 had a generator rotor rewind and stator re-wedge in the fall of 2015. There are currently no known issues on this unit.
Hutchinson 2	100%	CT	Nat Gas	52.0	0.50	2,299	42	22,541	6.9	Reported compliance with environmental regulations.	Unit 2 had a major turbine and generator overhaul in 2008 including inlet, compressor, combustor, turbine, exhaust and generator. There are currently no known issues on this unit.

Hutchinson 3	100%	CT	Nat Gas	57.0	0.30	1,557	42	28,436	0	Reported compliance with environmental regulations.	Unit 3 had a major turbine and generator overhaul in 1995 including inlet, compressor, combustor, turbine, exhaust and generator. There are currently no known issues on this unit.
Hutchinson 4	100%	CC/C T	#2 Fuel Oil	71.0	0.02	126	41	15,369	49.3	Reported compliance with environmental regulations.	Unit 4 had a major turbine overhaul in 1998 including inlet, compressor, combustor, turbine, and exhaust. The exhaust stack on GT4 is in poor condition and would need to be replaced if extended continued operations of this unit was required.
Spring Creek 1	100%	CT	Nat Gas	68.0	0.60	3,318	15	14,841	0	Reported compliance with environmental regulations.	This unit has not reached the require starts or hours to require any major inspections. There are currently no known issues on this unit.
Spring Creek 2	100%	CT	Nat Gas	68.0	0.50	3,192	15	14,948	25.7	Reported compliance with environmental regulations.	This unit has not reached the require starts or hours to require any major inspections. There are currently no known issues on this unit.
Spring Creek 3	100%	CT	Nat Gas	67.0	0.30	1,976	15	16,662	99.3	Reported compliance with environmental regulations.	This unit had an issue with a shorted generator rotor in the fall of 2015. The rotor was rewound and reinstalled. The turbine has not reached the require starts or hours to require any major inspections. There are currently no known issues on this unit.

Spring Creek 4	100%	CT	Nat Gas	68.0	0.40	2,138	15	16,040	39	Reported compliance with environmental regulations.	Last Major Overhaul: There have not been any major overhauls of this unit since it was installed
Emporia Energy Center 1	100%	CT	Nat Gas	45.0	13.60	53,690	8	11,546	2.4	Reported compliance with environmental regulations.	The high pressure hot section of P1 was replaced in April of 2016. There are currently no known issues on this unit.
Emporia Energy Center 2	100%	CT	Nat Gas	45.0	10.30	40,685	8	11,341	2.9	Reported compliance with environmental regulations.	The high pressure hot section of P2 was replaced in March of 2015 including a depot level inspection of the unit. There are currently no known issues on this unit
Emporia Energy Center 3	100%	CT	Nat Gas	44.0	11.40	43,750	8	11,320	3.7	Reported compliance with environmental regulations.	The high pressure hot section of P3 was replaced in April of 2015. There are currently no known issues on this unit.
Emporia Energy Center 4	100%	CT	Nat Gas	46.0	13.30	53,393	8	11,270	1.7	Reported compliance with environmental regulations.	The high pressure hot section of P4 was replaced in May of 2016. There are currently no known issues on this unit. There are currently no known issues on this unit.
Emporia Energy Center 5	100%	CT	Nat Gas	157.0	1.70	23,533	8	12,293	2.6	Reported compliance with environmental regulations.	The nozzles were replaced on P5 in 2013. The next scheduled outage is a combustor inspection with a first stage compressor blade replacement in 2019. There are currently no known issues on this unit.

Emporia Energy Center 6	100%	CT	Nat Gas	153.0	1.70	23,287	8	12,192	18.3	Reported compliance with environmental regulations.	The first stage turbine blades were replaced in the summer of 2016. A nozzle replacement, combustor inspection, first stage compressor blade replacement, and generator inspection are scheduled for 2017. There are currently high partial discharge readings on the generator of this unit.
Emporia Energy Center 7	100%	CT	Nat Gas	156.0	0.90	12,901	8	13,373	1.2	Reported compliance with environmental regulations.	P7's fuel nozzles were replaced in 2014. The next schedule outage on this unit is a combustor inspection and first stage compressor blade replacement in 2018. There are currently no known issues.
Central Plains Wind	100%	Wind Turbine (33)	Wind	99.0	34.08	275,377	8	N/A	N/A	Reported compliance with environmental regulations.	N/A
Western Plains Wind	100%	Wind Turbine (122)	Wind	280.0	N/A	N/A	Under Construction	N/A	N/A	N/A	Under construction

Notes:

1) Assessed compliance with EPA "MATS", "CSAPR", "GHG", "NAAQS", "SSM", "CCR", "ELG" "316b" regulations. As reported in the environmental related data request responses, all Westar facilities are currently compliant with all EPA regulations.

Source Documents:

- 1) KCC-DR-188 Westar Generation Statistics
- 2) KCC-DR-194 thru 202 Environmental Compliance Responses
- 3) KCC-DR-192 Major Availability Detractors
- 4) CURB-DR-30 Generation Resources
- 5) KCC-DR-190 Generation Condition Summary

Westar Reserve Capacity Profile				
	Capacity (MW)		Net Gen. (MWH) (2015)	Reserve Capacity
Total w/o Retirements	5,671.0	18,445,254	34.3%	34.3%
Total with Retirements	4,883.0	15,642,966	31.4%	31.4%
Change After Retirement	788.0	2,802,288	3%	3%
Percent Reduction	14%	15%	8%	8%

Westar Generation Profile	
Criteria	Value
Average age with all units	33.3 years
Average age with Sibley retired	31.3 years
Capacity all units	3,897
Capacity Sibley retired	3,436
Generation all units	4,887,175
Generation Sibley retired	2,850,128
Reduced generation	2,037,047
Percent reduced generation	42%

Exhibit - WPD - 27

Analysis of GMO Power Plants

GMO Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Sibley 1	100%	STG	Coal	49.8	24.57	103,318	56	N/A	26.21	Reported compliance with environmental regulations.	Cyclone feeder problems.
Sibley 2	100%	STG	Coal	47.1	19.14	85,511	54	10,402	43.24	Reported compliance with environmental regulations.	Cyclone feeder problems.
Sibley 3	100%	STG	Coal	364.1	57.96	1,848,218	47	10,402	15.85	Reported compliance with environmental regulations.	Cyclone feeder problems.
Jeffery Energy Center 1	Westar 92%, 8% GMO	STG	Coal	661.0	64.90	293,325	38	10588	13.9	Reported compliance with environmental regulations.	Condensate and hotwell pump problems
Jeffery Energy Center 2	Westar 92%, 8% GMO	STG	Coal	658.0	55.90	271,415	36	11371	9.3	Reported compliance with environmental regulations.	Feedwater pump problems.
Jeffery Energy Center 3	Westar 92%, 8% GMO	STG	Coal	664.0	59.50	301,380	33	11407	9.3	Reported compliance with environmental regulations.	ID Fan problems.
Lake Road 1	100%	STG	Natural Gas	9.4	5.71	(4,498)	66	Not Provided	28.62	Reported compliance with environmental regulations.	FD fan problems. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 2	100%	STG	Natural Gas	19.0	4.68	(7,787)	58	Not Provided	29.49	Reported compliance with environmental regulations.	Oil burner problems. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 3	100%	STG	Natural Gas	6.6	12.61	(7,733)	54	Not Provided	70.63	Reported compliance with environmental regulations.	Superheater tube leaks. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 4	100%	STG	Natural	96.3	27.77	233,500	50	Not	Not	Reported compliance with	Converted to natural gas

GMO Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
			Gas					Provided	Provided	environmental regulations.	in 2016. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 5	100%	STG	Natural Gas	61.9	0.23	(1,343)	42	Not Provided	32.68	Reported compliance with environmental regulations.	No major issues reported. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 6	100%	STG	Natural Gas	21.0	0.05	87	27	Not Provided	32.65	Reported compliance with environmental regulations.	No major issues reported. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Lake Road 7	100%	STG	Natural Gas	20.5	0.04	80	26	Not Provided	41.97	Reported compliance with environmental regulations.	No major issues reported. KCP&L did not respond to requests for heat rate data. Given their age and configuration the Unit is probably very inefficient.
Greenwood 1	100%	CT	NG/Fuel Oil	60.7	1.59	7,570	41	Station average HR of 43,000	3.27	Reported compliance with environmental regulations.	Reported 2 forced outages. Excessively high Heat Rate would limit this unit to a peaking operation.
Greenwood 2	100%	CT	NG/Fuel Oil	61.7	1.36	6,730	41		2.74	Reported compliance with environmental regulations.	Reported 2 forced outages. Excessively high Heat Rate would limit this unit to a peaking operation.
Greenwood 3	100%	CT	NG/Fuel Oil	62.9	0.41	7,679	39		6.58	Reported compliance with environmental regulations.	Reported 2 forced outages. Excessively high Heat Rate would limit this unit to a peaking operation.

GMO Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Greenwood 4	100%	CT	NG/Fuel Oil	60.7	1.33	7,073	37		2.27	Reported compliance with environmental regulations.	Reported 2 forced outages. Excessively high Heat Rate would limit this unit to a peaking operation.
Ralph Green 3	100%	CT	NG/Fuel Oil	70.9	2.14	13,309	35	22,000	23.65	Reported compliance with environmental regulations.	Reported 12 forced outages. Based on data provided this is a poor performing peaker.
Nevada	100%	CT	Fuel Oil	18.1	(0.08)	(127)	42	28,200	0	Reported compliance with environmental regulations.	No reported forced outages.
South Harper1	100%	CT	Natural Gas	101.2	0.03	(239)	11	Station average HR of 16,500	67.53	Reported compliance with environmental regulations.	Reports indicate that the Unit is available with no deratings.
South Harper2	100%	CT	Natural Gas	102.1	0.02	(192)	11		61.9	Reported compliance with environmental regulations.	Reported 3 forced outages.
South Harper3	100%	CT	Natural Gas	100.0	0/02	(326)	11		61.73	Reported compliance with environmental regulations.	Reported 3 forced outages.
Crossroads 1 (located in Mississippi)	100%	CT	Natural Gas	73.9	0.95	6,256	14	Station average HR of 13,845	4.23	Reported compliance with environmental regulations.	No forced outages were reported. All outages were associated with control testing
Crossroads 2 (located in Mississippi)	100%	CT	Natural Gas	73.8	0.61	4,165	14		20.44	Reported compliance with environmental regulations.	No forced outages were reported. All outages were associated with control testing
Crossroads 3 (located in Mississippi)	100%	CT	Natural Gas	71.8	0.76	5,039	14		9.05	Reported compliance with environmental regulations.	No forced outages were reported. All outages were associated with control testing
Crossroads 4 (located in	100%	CT	Natural Gas	72.0	0.66	4,532	14		27.49	Reported compliance with environmental	No forced outages were reported. All outages

GMO Power Plants Condition Assessment											
Station	Owner	Gen Type	Fuel	Capacity (MW)	Capacity Factor (2015)	Net Gen. (MWh) (2015)	Age	Heat Rate (2015)	EFOR (2015)	Environmental Compliance (Note 1)	Condition Assessment
Mississippi)										regulations.	were associated with control testing
latan 1	18%	STG	Coal	128.3	58.82	661,298	36	10,152	17.83	Reported compliance with environmental regulations.	Pulverized coal and air piping contributed to the majority of the deratings. EFOR has doubled in the last 3 years to significantly above industry standards.
latan 2	18%	STG	Coal	158.7	74.60	1,036,488	6	8,977	17.09	Reported compliance with environmental regulations.	Boiler tube failures contributed to the majority of the deratings. EFOR has doubled in the last 3 years to significantly above industry standards.
SJLP Landfill Gas	100%	CT	Landfill Gas	1.6	54.65	12,447	4	N/A	N/A	N/A	N/A

1

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Notes:

1) Assessed compliance with EPA "MATS", "CSAPR", "GHG", "NAAQS", "SSM", "CCR", "ELG" "316b" regulations. As reported in the environmental related data request responses, all GMO facilities are currently compliant with all EPA regulations.

Source Documents:

- 1) KCC-DR-292 thru 300 GMO Environmental Compliance Responses
- 2) KCC-DR-290 GMO Major Availability Detractors
- 3) CURB-DR-88 GPE Generation Resources

GMO Reserve Capacity Profile				
	Capacity (MW)		Net Gen. (MWH) (2015)	Reserve Capacity
Total w/o Retirements	3,879	4,887,302	33.2%	17.7%
Total with Retirements	3417	2,850,255	31.2%	16.5%
Change After Retirement	461	2,037,047	2%	1.2%
Percent Reduction	12%	42%	6%	6.8%

GMO Generation Profile	
Criteria	Value
Average age with all units	33.3 years
Average age with Sibley retired	31.3 years
Capacity all units	3,897
Capacity Sibley retired	3,418
Generation all units	4,887,302
Generation Sibley retired	2,850,225
Reduced generation	2,037,047
Percent reduced generation	42%

Exhibit - WPD - 28

Unit Ranking by Heat Rate

Rank	Station	Company	Fuel	Capacity (MW)	Capacity Factor (2015)	Heat Rate (2015)
1	Iatan 2	KCP&L	Coal	482.2	74.73	8,977
2	Iatan 2	GMO	Coal	158.7	74.60	8,977
3	Hawthorn 5	KCP&L	Natural Gas	564.0	72.38	9,832
4	Wolf Creek	Westar	Nuclear	549.0	84.63	10,083
5	Wolf Creek	KCP&L	Nuclear	549.0	84.63	10,086
6	Iatan 1	KCP&L	Coal	499.0	58.64	10,152
7	Iatan 1	GMO	Coal	128.3	58.82	10,152
8	Hawthorn 6/9	KCP&L	Natural Gas	234.5	3.45	10,249
9	Sibley 2	GMO	Coal	47.1	19.14	10,402
10	Sibley 3	GMO	Coal	364.1	57.96	10,402
11	LaCygne 1	Westar	Coal	367.0	51.10	10,521
12	LaCygne 1	KCP&L	Coal	368.1	58.29	10,521
13	Jeffery Energy Center 1	Westar	Coal	661	64.90	10,588
14	Jeffery Energy Center 1	GMO	Coal	661.0	64.90	10,588
15	Montrose 3	KCP&L	Coal	176	34.06	10,815
16	Lawrence Energy Center 5	Westar	Coal	370.0	52.40	10,823
17	LaCygne 2	Westar	Coal	329.0	63.50	11,025
18	LaCygne 2	KCP&L	Coal	331.2	54.17	11,025
19	Tecumseh Energy Center 7	Westar	Coal	72.0	60.90	11,231
20	Emporia Energy Center 4	Westar	Natural Gas	46.0	13.30	11,270
21	Emporia Energy Center 3	Westar	Natural Gas	44.0	11.40	11,320
22	Emporia Energy Center 2	Westar	Natural Gas	45.0	10.30	11,341
23	Gordon Evans Energy Center CT 3	Westar	Natural Gas	148.0	4.30	11,355

Rank	Station	Company	Fuel	Capacity (MW)	Capacity Factor (2015)	Heat Rate (2015)
24	Jeffery Energy Center 2	Westar	Coal	658	55.90	11,371
25	Jeffery Energy Center 2	GMO	Coal	658.0	55.90	11,371
26	Jeffery Energy Center 3	Westar	Coal	664	59.50	11,407
27	Jeffery Energy Center 3	GMO	Coal	664.0	59.50	11,407
28	Emporia Energy Center 1	Westar	Natural Gas	45.0	13.60	11,546
29	Montrose 2	KCP&L	Coal	164	35.19	11,629
30	Lawrence Energy Center 4	Westar	Coal	104.0	54.00	11,777
31	Emporia Energy Center 6	Westar	Natural Gas	153.0	1.70	12,192
32	Emporia Energy Center 5	Westar	Natural Gas	157.0	1.70	12,293
33	Lawrence Energy Center 3	Westar	Coal	48.0	51.40	12,469
34	Gordon Evans Energy Center CT 1	Westar	Natural Gas	73.0	1.40	12,591
35	Gordon Evans Energy Center CT 2	Westar	Natural Gas	71.0	1.40	12,729
36	Emporia Energy Center 7	Westar	Natural Gas	156.0	0.90	13,373
37	West Gardner 1	KCP&L	Natural Gas	79.5	1.49	13,580
38	West Gardner 2	KCP&L	Natural Gas	78.6	1.57	13,580
39	West Gardner 3	KCP&L	Natural Gas	77.3	1.26	13,580
40	West Gardner 4	KCP&L	Natural Gas	77.5	0.83	13,580
41	Hawthorn 8	KCP&L	Natural Gas	79.1	1.84	13,842
42	Gordon Evans Energy Center ST 2	Westar	Natural Gas	370.0	5.00	14,086
43	Gordon Evans Energy Center ST 1	Westar	Natural Gas	152.0	3.60	14,575
44	Spring Creek 1	Westar	Natural Gas	68.0	0.60	14,841
45	Spring Creek 2	Westar	Natural Gas	68.0	0.50	14,948
46	Hutchinson 4	Westar	#2 Fuel Oil	71.0	0.02	15,369

Rank	Station	Company	Fuel	Capacity (MW)	Capacity Factor (2015)	Heat Rate (2015)
47	Spring Creek 4	Westar	Natural Gas	68.0	0.40	16,040
48	Osawatomie 1	KCP&L	Natural Gas	75.7	0.54	16,656
49	Spring Creek 3	Westar	Natural Gas	67.0	0.30	16,662
50	Murray Gill Energy Center 3	Westar	Natural Gas	104.0	2.20	18,885
51	Murray Gill Energy Center 4	Westar	Natural Gas	90.0	1.90	19,618
52	Hutchinson 4	Westar	#2 Fuel Oil	176.0	1.80	20,045
53	Ralph Green 3	GMO	NG/Fuel Oil	70.9	2.14	22,000
54	Hutchinson 2	Westar	Natural Gas	52.0	0.50	22,541
55	Hutchinson 1	Westar	Natural Gas	56.0	0.50	23,308
56	Nevada	GMO	Fuel Oil	18.1	(0.08)	28,200
57	Hutchinson 3	Westar	Natural Gas	57.0	0.30	28,436
58	Hawthorn 7	KCP&L	Natural Gas	78.1	1.74	29,300
N/A	Central Plains Wind	Westar	Wind	99.0	34.08	N/A
N/A	Western Plains Wind	Westar	Wind	280.0	N/A	N/A
N/A	Northeast Diesel	KCP&L	#2 Fuel Oil	2.0	0.00	N/A
N/A	Spearville Wind Farm	KCP&L	Wind	31.0	34.04	N/A
N/A	Spearville Wind Farm	KCP&L	Wind	15.0	38.39	N/A
N/A	Sibley 1	GMO	Coal	49.8	24.57	N/A
N/A	SJLP Landfill Gas	GMO	Landfill Gas	1.6	54.65	N/A
N/A	Lake Road 1	GMO	Natural Gas	9.4	5.71	Not Provided
N/A	Lake Road 2	GMO	Natural Gas	19.0	4.68	Not Provided
N/A	Lake Road 3	GMO	Natural Gas	6.6	12.61	Not Provided
N/A	Lake Road 4	GMO	Natural Gas	96.3	27.77	Not Provided

Rank	Station	Company	Fuel	Capacity (MW)	Capacity Factor (2015)	Heat Rate (2015)
N/A	Lake Road 5	GMO	Natural Gas	61.9	0.23	Not Provided
N/A	Lake Road 6	GMO	Natural Gas	21.0	0.05	Not Provided
N/A	Lake Road 7	GMO	Natural Gas	20.5	0.04	Not Provided
N/A	Crossroads 1 (located in Mississippi)	GMO	Natural Gas	73.9	0.95	Station ave. HR of 13,845
N/A	South Harper1	GMO	Natural Gas	101.2	0.03	Station ave. HR of 16,500
N/A	Northeast 11	KCP&L	#2 Fuel Oil	52.2	0.00	Station ave. HR of 26,261
N/A	Greenwood 1	GMO	NG/Fuel Oil	60.7	1.59	Station ave. HR of 43,000
N/A	Northeast 12	KCP&L	#2 Fuel Oil	40.9	0.00	
N/A	Northeast 13	KCP&L	#2 Fuel Oil	45.7	0.00	
N/A	Northeast 14	KCP&L	#2 Fuel Oil	49.2	0.00	
N/A	Northeast 15	KCP&L	#2 Fuel Oil	52.9	0.00	
N/A	Northeast 16	KCP&L	#2 Fuel Oil	52.8	0.00	
N/A	Northeast 17	KCP&L	#2 Fuel Oil	53.2	0.00	
N/A	Northeast 18	KCP&L	#2 Fuel Oil	52.2	0.00	
N/A	Greenwood 2	GMO	NG/Fuel Oil	61.7	1.36	
N/A	Greenwood 3	GMO	NG/Fuel Oil	62.9	0.41	
N/A	Greenwood 4	GMO	NG/Fuel Oil	60.7	1.33	

Rank	Station	Company	Fuel	Capacity (MW)	Capacity Factor (2015)	Heat Rate (2015)
N/A	South Harper2	GMO	Natural Gas	102.1	0.02	
N/A	South Harper3	GMO	Natural Gas	100.0	0/02	
N/A	Crossroads 2 (located in Mississippi)	GMO	Natural Gas	73.8	0.61	
N/A	Crossroads 3 (located in Mississippi)	GMO	Natural Gas	71.8	0.76	
N/A	Crossroads 4 (located in Mississippi)	GMO	Natural Gas	72.0	0.66	

1

2

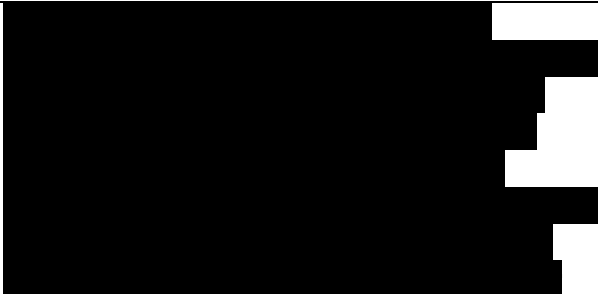
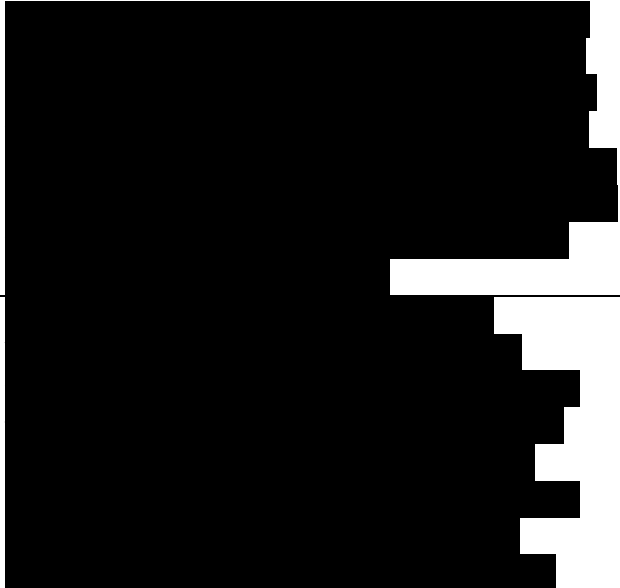
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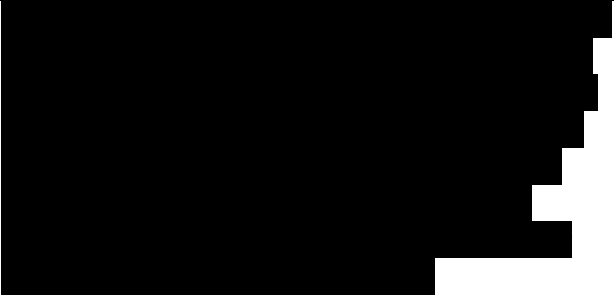
Exhibit - WPD - 29

2

T&D System Analysis

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
Substations	KCC-49 KCC-284	[REDACTED]	KCC-78	[REDACTED]
Power Transformers	KCC-47	[REDACTED]	KCC-75	[REDACTED]

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
				
				

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
				 
				

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
Substation Breakers	KCC-50/ KCC-284		KCC-77	

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
Protective Relaying System	KCC-62		KCC-85	
Transmission System	KCC-283		KCC-72/ KCC-73	

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
Overhead Distribution System	KCC-51		KCC-79	

KCP&L / Westar T&D System Condition Assessment Profile				
T&D System Component	KCP&L		Westar	
	DR Ref.	T&D System Component Condition Assessment	DR Ref.	T&D System Component Condition Assessment
Distribution Transformers	KCC-48/ KCC-51	[REDACTED]	KCC-76	[REDACTED]
Underground Distribution System	KCC-52	[REDACTED]	KCC-80	[REDACTED]

Exhibit - WPD - 30

Engineering Standards Analysis

KCP&L / Westar Engineering Standards Profile				
Standard	KCP&L		Westar	
	DR Reference	Standard Description	DR Reference	Standard Description
Engineering Standards Organization	KCC-62	KCP&L does have an Engineering Standards Group that currently consists of a manager and two engineers, and an applications specialist. Standards for transmission, substation, and protection systems are maintained by each respective engineering group.	KCC-62	Westar does have an Engineering Standards Group that is responsible for the development and maintenance standards documents in the Distribution and Sub-Transmission areas (34.5kV and below). The Engineering Standards Group currently consists of a manager, three engineers and two interns. Standards for transmission, substation, and protection systems are maintained by each respective engineering group.
Overhead Distribution Standards	KCC-62	The overhead distribution standards range from service voltages to 34kV. Various configurations are covered including single-phase and three-phase, single and double circuit, overhead transformers and regulators, as well as horizontal and vertical construction. Guying and anchoring standards are also included overhead standards range from service voltages to 34kV. Various configurations are covered including single-phase and three-phase, single and double circuit, overhead	KCC-62	Overhead Distribution Standards provide the configuration of the distribution system engineering standards and line construction standards. Various configurations are covered including single-phase and three-phase, single and double circuit, overhead transformers, regulators, sectionalizers, reclosers, metering and switches, as well as horizontal and vertical construction. Guying and anchoring standards are also included. The Westar standard primary distribution voltage is 12 kV (nominal).

KCP&L / Westar Engineering Standards Profile				
Standard	KCP&L		Westar	
	DR Reference	Standard Description	DR Reference	Standard Description
		transformers and regulators, as well as horizontal and vertical construction. Guying and anchoring standards are also included. The KCP&L standard primary distribution voltage is 12 kV (nominal).		
Underground Distribution Standards	KCC-62	The underground distribution standards also range from service voltages to 34kV. Included in these sections are conduit and duct bank installation, underground secondaries and services, primary cables and accessories, AC network, as well as pad-mounted transformers and switchgear.	KCC-62	The underground standards are detailed in the Westar Service Standards. Details for the interconnection of pad mount transformers to service equipment is included.
Transmission System Standards	KCC-62	The transmission system standards range from 69kV to 345kV. They include overhead as well as underground construction. The overhead construction contains single pole, H-frame, and lattice tower construction, as well as single and multiple circuit configurations. Underground standards cover pipe type as well as concentric cable.	KCC-62	The Westar Transmission Standards are developed and maintained by the Transmission Engineering Group.
Substation Standards	KCC-62	Substation standards consist of various voltages from 4kV to 345kV. They range from single transformer portal substations to multiple transformer with multiple transmission feed substations. These standards include the substation layout as well as the wiring diagrams for the	KCC-62	Substation standards consist of various voltages from 15kV to 345kV. They range from single transformer portal substations to multiple transformer with multiple transmission feed substations. These standards include the substation layout as well as the wiring diagrams for the

KCP&L / Westar Engineering Standards Profile				
Standard	KCP&L		Westar	
	DR Reference	Standard Description	DR Reference	Standard Description
		equipment.		equipment.
Protection System Standards	KCC-62	A portion of the distribution system protection standards are contained in the aforementioned distribution construction standards. They are found in section 110 System Protection. These standards include the fusing of transformers and capacitors as well as the coordination of reclosers and line fuses. There is also additional system protection standards related to the transmission system	KCC-62	Protection Standards are embedded in the Overhead Distribution Standards, Substation Standards and the Service Standards
Generation Standards	KCC-62	There are no generation standards.	KCC-62	There are no generation standards.

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2

Exhibit - WPD - 31

EDGR Capital Project List

Westar EDGR Capital Projects List	
Action / Initiative	15-Yr Capex
Replace Direct Buried Substation Getaways	\$96,000,000
Replace/Rebuild Deteriorated 34kV Substations	\$26,850,000
Install or Replace Failed Substation UG Getaway Risers Arrestors and Install Arrestor on Getaways	\$0
Substation Ground Mat Improvement Program	\$22,500,000
Add Monitoring Equipment on High Critical Sub Equipment	\$13,750,000
Replace Substation Lightning Arrestors	\$12,808,428
Replace Poor Performing Breakers	\$57,750,000
Install SCADA on Distribution Substations - Partial SCADA	\$4,950,000
Install SCADA on Distribution Substations - Full SCADA	\$33,750,000
Substation Infrastructure Upgrades	\$268,358,428
Install Lightning Arrestors and Replace Missing Ground Wires (B)	\$0
Install Lightning Arrestors and Replace Missing Ground Wires (A)	\$0
Add Neutral Conductors to Ungrounded Circuits	\$60,000,000
Implement Engineering Grounding Requirements	\$0
Truss or Fiber Wrap Restorable Wood Pole "Rejects"	\$23,804,000
OH Line Urgent Repairs	\$55,862,000
Overhead Asset Hardening	\$139,666,000
Install URD Riser Lightning Arrestors	\$0
Test and Replace URD Cable and Terminations	\$17,531,250
Replace or Repair Elbows and Lightning Arrestors	\$0
UG Pad Mounted Equipment Repairs	\$6,322,838
Install Topeka and Wichita Downtown Secondary Network Monitoring Equipment	\$745,200
Underground Asset Hardening	\$24,599,288
Replace Mainline CSP Transformers with Conventional	\$9,908,550
Aged Conductor Replacement Program	\$37,000,158
Replace Single Phase Reclosers (hydraulic)	\$1,800,000

Repair and Replace Single Phase Reclosers (non-hydraulic)	\$9,646,763
Replace Deteriorated Open-wire Secondary	\$9,500,000
Replace Switches and GOABs	\$24,198,300
Replace Two and Three Phase Reclosers (hydraulic)	\$3,750,000
Repair and Replace Three Phase Reclosers (non-hydraulic)	\$4,680,000
Repair and Replace Regulators	\$5,100,000
Complete Downtown Network Repairs and Upgrades	\$20,000,000
Replace Deteriorated and Failed Vault Transformers and Protectors	\$11,500,000
PILC Cable Replacement Program	\$52,500,000
Replace Non-Restorable Wood Poles	\$60,862,500
Repair and Replace Capacitors	\$6,695,000
Aging Asset Replacement	\$257,141,271
System Improvements to Reduce Transformer Peak Load to < 90%	\$121,384,000
Replace Visual Fault Indicator Batteries	\$200,000
Install New Mid-Circuit and Open Point Reclosers	\$15,000,000
Purchase Spare Transformers	\$10,000,000
Install Mainline Equipment Wildlife Protection Guards and Insulated Wire	\$0
Install Substation Wildlife Protection on Distribution Buses and Breakers	\$41,250,000
Install Visual Fault Indicators	\$3,600,000
ATO Monitoring and Control Package	\$5,625,000
System Resiliency	\$197,059,000
Total	\$886,823,986
NOTES:	
Those items with "0" indicated as CAPEX are part of the EDGR Program as O&M related items.	

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16-KCPE-593-ACQ

I, the undersigned, certify that a true and correct copy of the above and foregoing Notice of Re-Filing Staff's Pre-Filed Direct Testimony Without Redactions - Direct Testimony of Walter Drabinski was served via electronic service this 27th day of January, 2017, to the following:

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