EXHIBIT

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Exhibit No.:
Issue(s): Purpose of KCPL's and GMO's Generation Resources/ Missouri Customers Should Not Pay for Kansas RES/ Crossroads Transmission Costs Should Continue to be Excluded/ Retirement of Sibley 3 is Imprudent/ Impact on FAC Cost of Retirement of Sibley 3
Witness/Type of Exhibit: Mantle/Surrebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2018-0145 ER-2018-0146

# SURREBUTTAL TESTIMONY

# OF

# LENA M. MANTLE



Submitted on Behalf of
the Office of the Public Counsel

**KANSAS CITY POWER & LIGHT COMPANY**
**CASE NO. ER-2018-0145**

**KCP&L GREATER MISSOURI OPERATIONS COMPANY**
**CASE NO. ER-2018-0146**

** **

**Denotes Confidential Information that has been redacted**

September 4, 2018

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

| | | |
|---|---|---|
| In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service | ) ) ) ) | File No. ER-2018-0145 |
| In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service | ) ) ) ) | File No. ER-2018-0146 |

## AFFIDAVIT OF LENA M. MANTLE

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF COLE** )

Lena M. Mantle, of lawful age and being first duly sworn, deposes and states:

1. My name is Lena M. Mantle. I am a Senior Analyst for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Lena M. Mantle
Senior Analyst

Subscribed and sworn to me this 4th day of September 2018.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JERENE A. BUCKMAN
My Commission Expires
August 23, 2021
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My Commission expires August 23, 2021.

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## CASE NO. ER-2018-0146

**Q. What is your name?**

A. Lena M. Mantle.

**Q. Are you the same Lena M. Mantle who testified in direct and rebuttal in this case?**

A. Yes, I am.

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

A. In this surrebuttal testimony:

1. I describe actions of Kansas City Power & Light Company ("KCPL") and KCP&L Greater Missouri Operations Company ("GMO") (collectively referred to as KCP&L) that show KCP&L no longer considers their energy-generating resources as resources to meet their customers' needs contrary to the statement in the rebuttal testimony of their witness Tim M. Rush.

2. I respond to KCP&L witness Burton L. Crawford's rebuttal testimony where he tries to justify why KCPL's Missouri customers should pay for energy from a purchased power contract that KCPL entered into to satisfy the Kansas, not Missouri, renewable energy standard ("RES") requirements.

3. On the topic of Crossroads, I explain how some of KCP&L witness Rush's rebuttal testimony regarding GMO's request to recover Crossroads transmission costs from its customers is misleading, and show how KCP&L witness Crawford's rebuttal testimony about valuing Crossroads, based on the circumstances in 2007, is erroneous because the appropriate circumstances are

those based in 2003, the circumstances I described in Schedule LMM-R-5C of my rebuttal testimony beginning on page 33 of 73.

4. I respond to Mr. Crawford's rebuttal testimony regarding the resource planning process that showed the retirement of Sibley 3 was cost effective.

5. I respond to KCP&L witness Darrin R. Ives rebuttal testimony on the impact on GMO's fuel adjustment clause ("FAC") charges if GMO's revenue requirement is based on Sibley 3 as not being retired when GMO will retire it essentially contemporaneously with new rates in the GMO rate case.

## Purpose of KCPL's and GMO's Generation Resources

**Q. KCP&L witness Tim Rush asserts that your allegations that KCP&L no longer considers its generation resources as resources to meet its customers' needs but rather are resources to generate revenue from the Southwest Power Pool ("SPP") market are unsupported.[1] What is your support for this statement?**

A. The following supports my assertion that KCP&L now myopically primarily looks at its generation resources for SPP market revenues instead of to assure it can provide safe and adequate serve to its customers.

The most obvious support is found in the changes in GMO's preferred resource plans from 2012 through 2018. Attached as Schedule LMM-S-1 are GMO's preferred resource plans in 2012, 2015, and 2018.[2] GMO's 2012 and 2015 preferred resource plans show minimal generation plant retirements. GMO's 2012 plan only has 99 megawatts ("MW") retiring in 2017. That planned retirement was pushed back another three years in GMO's 2015 plan, to 2020. GMO's recently filed 2018 resource plan has retirements of over 500 MW in 2018 and 2019.

As for generation additions, GMO's 2012 plan includes the addition of 450 MW of natural gas combined cycle generation, 19 MW of solar generation and 350

[1] Rebuttal testimony of Tim M. Rush, page 6:1-4.
[2] As provided in Case Nos. EO-2012-0324, EO-2015-0252, and EO-2018-0269, respectively.

MW of wind generation. GMO's 2015 plan shows an addition of 207 MW of natural gas combustion turbines late in the planning period, 10 MW of solar generation, and 310 MW of wind additions, 40MW less than its 2012 plan. GMO's 2018 plan shows only solar and wind generation additions, and the amount of wind additions, 266 MW, is less than the 310 MW amount in GMO's 2015 plan.

**Q. Did something occur between 2015 and 2018 that affected GMO's capacity and energy resource planning?**

A. Yes. The SPP market started in March 2014[3] when GMO was developing its 2015 resource plan, and developers began to plan and build significant amounts of wind generation in the SPP footprint.

**Q. Why did these changes affect GMO's resource planning?**

A. GMO has shifted its planning from relying on generation it owns to resources owned by others made available through the SPP markets.

**Q. Would you elaborate on your answer?**

A. Yes, with the retirement of over 500 MW of owned generation, specifically base load generation, GMO is shifting its emphasis from owning resources to provide for its customers to relying on others to provide for its customers. In its 2018 plan, GMO cited lower SPP reserve margin requirements, continued low long-term gas price forecasts, low long-term peak load forecasts, and environmental regulations as the key drivers in the early retirements of its coal units. In technical discussions in this case, the parties were told Sibley 3 was being retired because of its operation and maintenance costs.

**Q. Is there anything else that supports your assertion that GMO has changed how it does its capacity and energy resource planning?**

[3] My direct testimony incorrectly stated that the market started in 2005.

A. In his rebuttal testimony, Mr. Rush, by focusing on capacity and SPP revenues supports my assertion when on page 6 of his rebuttal testimony, Mr. Rush states:

> The SPP Integrated Marketplace does not supersede the Company's responsibilities with regard to capacity adequacy and reserves. All revenue from SPP is used to reduce the cost to energy used by the Company's customers so customers see the benefits of sales.

Further, KCP&L witness Crawford does so as well when he emphasizes the importance of meeting the SPP reserve margin in his rebuttal testimony by stating, "Crossroads was added to the GMO supply portfolio *to meet GMO's SPP reserve margin.*"[4] (Emphasis added) He again mentions the importance of having enough capacity when he states, "Absent Crossroads, GMO would be required to add additional generating capacity through either constructing new generation or purchasing capacity." According to Mr. Crawford's testimony, Crossroads was not added to meet customers' needs but to meet the SPP reserve margin and is not needed to meet customers' energy needs now but instead to meet capacity requirements.

**Q. What is the significance of their focus on capacity?**

A. Capacity is the amount of energy a plant is generating at a specific point in time. Energy is the aggregation of capacity over time. Crossroads facility has a capacity of 300 MW, meaning that is what it can produce. However, according to Staff's fuel model estimates, Crossroads, on a normalized basis generates only ** ** megawatt-hours ("MWh") of energy in a year. Sibley 3 has just 20 percent more capacity at 364 MW but, according to Staff's fuel model estimates, generates 400 times more energy, ** ** MWh, on a normalized basis.

**Q. What do these estimates mean about the fuel costs to generate energy at Crossroads compared to fuel costs to generate energy at Sibley 3?**

[4] Page 4:21.

A. Staff's model estimates the fuel cost for a MWh of generation from Crossroads to be almost 2.5 times that of Sibley 3. It also means that Sibley's fuel costs were less than Staff's normalized market price inputs a greater number of hours than Crossroads' fuel costs.

**Q. How does this emphasis on capacity adequacy support your statement that KCPL and GMO no longer consider their energy-generation resources as resources to meet their customers' energy needs; instead, they are resources to generate revenue from SPP?**

A. First of all, capacity adequacy requirements assure that there is enough generation capacity to meet the needs of KCP&L's customers one hour of the year – typically the peak hour of the year – plus a set margin. However, customers require energy 8,760 hours of the year, not just during the peak hour of the peak day of the year. KCPL owns an abundance of capacity. GMO does not. It does not even own enough generation to meet its SPP capacity requirements. Instead, it relies on capacity contracts with KCPL for the capacity it needs to meet its SPP capacity adequacy requirements. Because these contracts do not allow GMO to purchase energy from KCPL, GMO is relying on the SPP market for energy to meet its customers' energy requirements.

GMO's 2018 preferred resource plan, provided in Case No. EO-2018-0269, shows this is GMO's long-term plan – satisfy SPP capacity requirements with contracts and satisfy its customers' energy needs with SPP market purchases. GMO's preferred resource plan, as summarized in its preferred plan balance sheet, attached to this testimony as Schedule LMM-S-2, shows that it intends to meet much of its capacity requirements over the next 20 years through purchased power agreements ("PPAs").

**Q. Why is OPC concerned with this?**

A. This approach is based on long-term assumptions that KCP&L input into its resource planning model. The capacity PPA costs KCP&L used as inputs in its resource planning modelling were forecasted estimates based on the current surplus of capacity in the SPP. The energy market prices were also forecasted estimates.

**Q. But KCP&L witness Crawford states in his rebuttal testimony that "capacity from current requests to interconnect new generation to the SPP transmission system (over 88,000 MW) exceeds the total existing SPP generating capacity."[5] Does that not alleviate OPC's concern?**

A. No. First, Mr. Crawford did not provide support for the 88,000 MW of generation interconnection requests he cites. The SPP Marketing Unit *State of the Market 2017* report provides the active interconnection requests at the end of 2017 at 47,710 MW; almost half of the 88,000 MW Mr. Crawford's testifies to. Secondly, these are interconnection "requests." A request does not assure that the generation will be built. Lastly, additional generation does not equate to SPP accredited capacity. Of the almost 48,000 MW of interconnection requests described in the SPP report, 93% is for renewable energy sources. Because renewable resources are intermittent and dependent upon the amount of wind blowing or the amount of light available, the SPP accredited capacity for these resources will not be known until the generation is actually built. So, if only one third of the renewable resources are built and their accredited capacity is 30 percent, the 45,000 MW of renewable requests would result in only 4,500 MW of SPP accredited capacity. This is only 5% of the 88,000 MW total load in SPP.

One of the reasons for the current surplus in capacity in SPP is its recent lowering of the capacity reserve margin it requires of its members to 12%. This is in contrast to the recent increase in capacity margin requirement of the Midcontinent Independent System Operator ("MISO") from 16% its 2017/18

[5] Page 3:21 – 4:2

planning year to 17% for its 2018/19 planning year. This demonstrates how easily reserve margin requirements change. Increases in reserve margins result in a tightening of the capacity available, which in turn results in an increase in the costs of capacity contracts.

Even assuming a constant capacity reserve margin over the next 20 years, the current surplus in capacity may not exist for as long as KCP&L estimates it will. The estimate of capacity surplus is based off of publicly-announced retirement dates of generation resources. All of the utilities in SPP are reviewing their resources, and are making decisions on whether or not they will prematurely (15-20 years earlier than previously announced) retire some of their resources, just as The Empire District Electric Company, GMO and Westar have done. As more premature retirements are announced, the surplus capacity will decrease, increasing the cost of any PPAs for capacity. Since capacity contracts are typically for less than five years, KCP&L's estimates for the costs of capacity markets very far into the future are merely a guess.

**Q. You testified KCPL has excess capacity. Will it always be available for GMO?**

A. Maybe. But if it is, and if KCPL and GMO are not regulated in Missouri collectively as one utility, then for the sake of KCPL's customers, this capacity should be offered to GMO at the fair market price. That market price should be determined based on the supply of excess capacity in the SPP. The availability of excess capacity from KCPL does not lessen the risk of KCP&L's capacity market price forecast being incorrect in its resource planning process. Assuming KCPL's capacity will be available at or below cost to GMO if the availability, and cost, of capacity in SPP tightens is not a realistic assumption for GMO or KCPL.

**Q. Do you have an estimate of the fair market price for capacity PPA's over the next 20 years for GMO?**

A. No. However, I do know that the risk to GMO from fluctuating capacity PPA prices will be mitigated through 2040 if it does not prematurely retire its Sibley 3 unit. By continuing to operate Sibley 3, GMO will have an additional 364 MW of capacity through 2040.

**Q. What else in Mr. Rush's answer supports your statement that KCP&L is planning for the SPP market not to meet its customers' needs?**

A. In Mr. Rush's answer, he states, "**All** revenue from SPP is used to reduce the cost to energy used by the Company's customers so customers see the benefits of sales." (Emphasis added.) In other words, the purpose of the revenues received from SPP for generation is to offset costs to customers.

This is consistent with the schedules supporting KCPL's and GMO's calculations of FAC base rates. These schedules show, as described in my rebuttal testimony, off-system sales revenues, not as the sales above what was needed to supply the customers' requirements, but the total revenues KCPL and GMO received from SPP for energy from their generating units. Likewise, KCP&L defines purchased power costs as the amount they paid to SPP for the energy their customers' required, not as the amount of energy purchased above the generation of their own units.

KCPL's contract for hydro power also provides support that KCP&L is planning to beat the market not to meet the needs of their customers. I go into why it is imprudent for Missouri ratepayers to pay for this energy later in this testimony. However, the cost/benefit analysis provided for this contract[6] was conducted entirely as a comparison of the energy cost to market prices as forecasted by KCPL. This was not capacity or energy that was needed to meet the needs of Missouri's customers. However since KCPL's comparison of the cost of the energy to its forecasted market prices showed the market price would be greater than the contract

[6] KCPL responses to OPC data request 8002, supplemented after rebuttal testimony was file with response 8002S

price of the energy, KCPL entered into a contract for five times the amount of renewable energy capacity that the state of Kansas required.

**Q. How accurate were KCPL's forecasted market prices in this analysis?**

A. They were very inaccurate. The forecasted annual 7x24 market price[7] for 2017, which KCPL designated as the most likely scenario, was forecasted to be ** **. The annual average market prices used in KCPL's fuel run used to estimate fuel and purchased power for its revenue requirement in this case is ** ** - about half of the forecasted market price. Staff's annual average market price is ** ** - less than half the most likely market price forecast of KCPL. The scenario with the lowest annual price used in KCPL's analysis[8] was based on a forecasted annual market price for 2017 of ** **.

**Q. Is this the only energy purchased power contract that KCP&L entered into because it forecasts the market prices will be greater than the contracted cost of energy?**

A. No. KCP&L has entered into several contracts on behalf of both KCPL and GMO with wind generation based on the contracted cost of energy and KCP&L's forecast of SPP market prices.

**Q. How accurate were KCP&L's forecasted market prices in analyzing these contracts?**

A. I have not reviewed the analyses KCP&L conducted for these purchased power contracts. However, as I provided in my rebuttal testimony, it is OPC's belief that these contracts have resulted in negative off-system sales margins; meaning the costs of these contracts are greater than the revenues they generated from SPP for

[7] Mid Gas Mid CO3 Scenario
[8] Low Gas Low CO4 Scenario

energy. This leads me to believe that the market prices used to conduct the cost benefits of these contracts were also inaccurate.

**Q. What is the consequence of KCP&L entering into these contracts where the market prices used in the cost/benefit analyses were so far off?**

A. The costs of these purchased power contracts flow through KCP&L's fuel FACs which result in higher bills for KCP&L customers. Shareholders, with the exception of five percent of the inaccuracies of the fuel modeling used to set rates, are made whole. This continues, regardless of how inaccurate the cost/benefit analysis was, for the life of the contract. Even though KCPL's customers were already paying for enough generation to meet their energy needs, they are now paying higher bills for ten to twenty years, all because KCP&L decided to enter into a contract for energy betting that its analysis was correct and customers' bills would be lower. Shareholders on the other hand, see little if any, negative consequences as a result of KCP&L's poor analysis.

In addition, because KCP&L's FACs allow transmission costs for purchased power contracts, the purchase of energy through these contracts results in greater SPP costs being included in their FACs. This means that when these SPP costs increase between rate cases a greater portion of the increase is passed through to KCP&L's customers resulting in higher bills for the customers. This, in turn, reduces the uncertainty for the shareholders of recovering this portion of the SPP costs.

**Q. Would you summarize your support for your statement that KCP&L no longer considers its generation resources as resources to meet its customers' needs?**

A. It is supported by the significant changes in GMO's resource plan from its 2012 and 2015 preferred resource plan. It is supported by KCP&L's insistence that it is meeting its customers' needs simply because it is meeting SPP's capacity

adequacies requirements. It is supported by KCP&L's reporting of gross purchased power costs and off-system sales revenues in the calculation of their FAC bases. It is supported by the analysis provided to justify KCPL's hydro contract. It is supported by KCP&L entering into multiple wind purchased power contracts that are resulting in negative off-system sales margins. KCP&L no long views its generation resources as resources to meet its customers' needs. Instead, they manipulate their generation resources to generate the most revenues from the SPP market.

## Missouri Customers Should Not Pay for Kansas RES

**Q. Would you summarize this issue?**

A. In my direct testimony, I provided OPC's recommendation that, because KCPL did not need to enter into a contract between KCPL and the Central Nebraska Public Power and Irrigation District ("hydro contract") to serve Missouri customers, KCPL's revenue requirement should be reduced by $8,273,960 – the costs included for this contract.

**Q. What was KCPL's response to this recommendation?**

A. Mr. Crawford asserts in his rebuttal testimony that the appropriate comparison for prudence determination was in 2011.

**Q. Do you agree?**

A. No.

**Q. Why not?**

A. OPC, in its data request 8002, asked KCPL to provide all of its documentation regarding its initial decision to enter into the hydro contract. KCPL's response to this data request is attached to this testimony as Schedule LMM-S-3. The

confidential Power Point presentation that was included with this response is attached as Schedule LMM-S-4 and the Kansas RES statute provided in this response is attached as Schedule LMM-S-5. Nowhere in this response does KCPL indicate that this contract was necessary to for it to provide safe and adequate service for its Missouri customers. KCPL's justification provided in Schedule LMM-S-3 describes the Kansas RES requirements and how this contract met the Kansas requirements more cost-effectively than adding wind resources. The Power Point presentation attached as Schedule LMM-S-4 is titled, *Hydroelectric Power Renewable Resource PPA Opportunity – Central Nebraska Public Power and Irrigation District (CNPPID).* On page 7 of this presentation, KCPL states that KCPL has sufficient wind capacity available to meet its Missouri RES requirements. On page 8 of this presentation, KCPL states that the hydro facilities that were the subject of the contract ** **.

In addition, KCPL's capacity balance spreadsheet provided in EO-2012-0323,[9] attached as Schedule LMM-S-6, shows that although the capacity balance of KCPL's preferred resource plan was very small every year, the capacity available for purchased power agreements (the line titled "Additional PPA" under the heading of **Sales:**) was greater than 75 MW through 2023, *i.e.*, KCPL would have enough excess capacity that it should consider offering the capacity to entities through PPAs. Because the amount is greater than the capacity acquired through this hydro contract, the hydro contract was not necessary for KCPL to have a positive capacity balance.

**Q. Was the energy from this contract needed for KCPL's Missouri customers?**

A. No. KCPL routinely sells excess energy into the SPP market.

**Q. Is the energy from the contract cost-effective to generate revenues from the SPP market for energy?**

[9] This analysis would have been conducted in 2011 when KCPL was reviewing the hydro contract.

A. No. The contract cost of the energy from the hydro plant is typically above the market price. The contract is ** ** resulting in KCPL's customers having to pay more for the energy than the revenue they receive from SPP.

All of this combined shows that this contract was not necessary to serve KCPL's load and it was imprudent for KCPL to enter into this contract for Missouri customers.

**Q. How do you respond to Mr. Crawford's rebuttal testimony that these costs should be passed on to Missouri customers because at the time KCPL analyzed this contract "on average, the contract price was less than projected market prices and as such, the contract was expected to reduce Missouri retail customer revenue requirements"?[10]**

A. An analysis is only as good as its inputs. The analyst needs to know the limits of the inputs, the likelihood of the inputs being incorrect, and the potential impact of incorrect assumptions and inputs (sensitivity). As I previously discussed, the forecasted market prices KCPL used in its analysis of this contract were wildly inaccurate. KCPL was attempting to model market prices knowing there was likely to be a SPP market in the future, but having almost no reliable information upon which to base its forecasts. Therefore, there was great uncertainty regarding the market prices.

However, KCPL did have certainty that if its analysis was incorrect, the Kansas statute allowed it to recover the costs of the contracts it entered into to meet that statute. It also knew that the Missouri Commission was likely in 2015 to authorize KCPL to use a FAC that would allow KCPL to pass through its purchased power costs to its Missouri customers.

[10] Page 9:3-4.

**Q. Without these safeguards, would KCPL have entered into this risky contract?**

A. It is my opinion that if KCPL's shareholders had to take on the risk of this contract, which is a ** **,[11] KCPL would not have entered into it. My opinion is supported by GMO, after it became an affiliate of KCPL, asking again in its pending rate case for recovery for Crossroads annual transmission costs of $6.4 million that this Commission has specifically denied twice and the Staff's estimate of the normalized annual cost of this contract for KCPL to be more than twice that amount at ** **.

**Q. You stated that the state of Kansas has a statute that allows KCPL to recover the cost of this contract. What is that statute?**

A. Attached in Schedule LMM-S-5, Section 66-1259 of the Kansas statute states:

> **Same; renewable energy resource requirements; recovery of costs by affected utilities.** The commission shall allow affected utilities to recover reasonable costs incurred to meet the new renewable energy resource requirements required in the renewable energy standards act.

While I am not an attorney, I believe this statute allows KCPL to recover its costs of complying with the statute from its Kansas customers.

**Q. Mr. Crawford states these costs were fully included in the cost of service in rate Case Nos. ER-2014-0370 and ER-2016-0285. Is he correct?**

A. He may be. While I was a witness in those cases, I do not know that anyone other than KCPL was aware of the circumstances surrounding this contract in either case.

**Q. Did anyone challenge the prudency of those costs in either of those cases?**

A. To my knowledge there was no testimony filed in these cases describing this contract and why it was prudent for KCPL's Missouri customers to have to pay for

[11] **

**

energy provided through this contract. There was no mention of the prudency of this contract for Missouri customers in any stipulation and agreement in either of these cases. To my knowledge, the prudency of this contract was not brought before this Commission to make a determination of whether it was prudent for Missouri customers in either of these cases. Therefore, the fact that these costs have been included in previous rate cases does not signify this contract is prudent for Missouri customers.

It seems inconsistent to me for KCP&L to suggest that the Commission has found this contract is prudent for Missouri customers simply because the contract costs were included in KCPL's cost of service in two prior Missouri rate cases when KCP&L is requesting the cost of transmission for Crossroads be included in GMO's cost of service after the Commission has specifically and explicitly decided twice that no costs for Crossroads transmission be passed through to its customers.

**Q. Does the fact that a cost/benefit analysis was conducted that showed this contract might be cost effective in the long-run make this contract prudent for KCPL's Missouri customers?**

A. No. KCPL did not need any additional capacity to meet the load requirements of KCPL's Missouri customers, and, since KCPL's own analysis showed there was the possibility that the contract would not be cost-effective, the deal was not too good to pass up. This contract was needed to meet the capacity requirements of the Kansas RES statute. The cost of the energy in the contract was known to be high. Future market prices were unknown. This is a risk for which Missouri customers should not be paying and has nothing to do with prudently serving these customers.

**Q. Would this contract be prudent for KCPL's Missouri customers if the market price was higher than the contract price for energy from this contract?**

A. Not necessarily. However, there would be no harm to KCPL's Missouri customers if the market price was higher than the contract energy price and, therefore, no reason for the Commission to address prudency.

**Q. In your direct testimony, you recommended an adjustment of $8,273,960 to KCPL's revenue requirement, but you stated above that the Staff's estimate of the normalized annual cost of this contract for KCPL is ** **. Can you explain the difference?**

A. Yes. The ** ** is the total cost of the hydro contract as modelled by Staff. The recommendation in my direct testimony was based on workpapers KCPL provided with its direct case. The adjustment was based on a reduction in off-system sales revenue for off-system sales of the same magnitude of the hydro generation MWh.

A run of the fuel model by either Staff or KCPL would give a more accurate measure of the removal of this contract from the fuel expenses. However, both Staff and KCPL have refused to run their fuel models to provide estimates of the impact of any of OPC's positions when OPC asked them to in data requests issued on July 30, 2018.

## Crossroads Transmission Costs Should Continue to be Excluded

**Q. In your answer regarding the purpose of this testimony, you stated that you would explain how some of Mr. Rush's rebuttal testimony regarding GMO's request to recover Crossroads transmission costs from its customers is misleading. What did Mr. Rush testify to that is misleading?**

A. Mr. Rush, in his rebuttal testimony, states;

> [T]the Commission determined that the plant's fair market value should be less than the original cost by over half (allowing $61.8 million into rate base compared to the original cost of $132 million)

> and that *the transmission costs at the levels in the prior cases should be excluded from recovery.* (Emphasis added) [12]

He also testifies:

> That is why the Company's proposal is to continue with the lower plant value and set the transmission loss at the *$4.9 million established in the last Crossroads Commission order.*" (Emphasis added)[13]

**Q. How is this testimony misleading?**

A. The testimony conveys the idea that the Commission in its orders in past GMO rate cases excluded a specific amount of Crossroads transmission costs from GMO's revenue requirement. However, in the last case that the Commission issued an order regarding the exclusion of Crossroads transmission costs, Case No. ER-2012-0175, the Commission did not set a value for the exclusion of Crossroads transmission costs.

**Q. What did the Commission say in its Report and Order in that case regarding Crossroads transmission costs?**

A. In its July 9, 2013, *Report and Order* in Case No. ER-2012-0175, the Commission on page 57, said the following:

> Therefore, the Commission will order that the value of Crossroads for GMO's MPS rate base shall be $62,609,430 *without transmission cost.* (Emphasis added)

On page 58 of that same Report and Order, the Commission found:

> There are generating facilities closer, including Dogwood's facility and the South Harper plant. Even though Crossroads provides power for GMO only during half of the days in the summer, GMO pays about $5.2 million to transmit power from Crossroads all year round. The high cost of transmission is not outweighed by lower fuel costs in Mississippi.

[12] Page 14:7-11.
[13] Page 14:18-19.

Finally, on page 59 the Commission offered the following conclusion:

> Therefore, the Commission concludes that including the Crossroads transmission costs does not support safe and adequate service at just and reasonable rates, *and the Commission will deny those costs.* (Emphasis added)

**Q. Did the Commission order exclude a fixed amount of Crossroads transmission cost?**

A. No. The Commission excluded **all** transmission cost. It mentioned the amount GMO was paying at that time to be $5.2 million, not the $4.9 million Mr. Rush testifies to in this case.[14] However, the Commission is clear in its *Report and Order* that the value of Crossroads transmission established in the last Crossroads Commission order was zero ($0). OPC is recommending that the Commission again order no transmission costs associated with Crossroads be included in GMO's revenue requirement.

**Q. Was Case No. ER-2012-0175 GMO's last general rate increase case?**

A. No. GMO's last general rate increase case was Case No. ER-2016-0156.

**Q. Did GMO request recovery of Crossroads transmission costs in that case?**

A. Yes. Similar to this case, GMO asked for recovery of Crossroad transmission costs above $4.9 million.

**Q. Were any Crossroads transmission costs included in the revenue requirement in Case No. ER-2016-0156?**

A. The revenue requirement resulting from Case No. ER-2016-0156 was a black box agreement that did not identify whether or not it included any Crossroads transmission costs. However, in the September 20, 2016 *Stipulation and*

[14] The amount of transmission costs requested by GMO in Case No. ER-2010-0356 was $4.9 million. The Commission excluded all Crossroads transmission costs in ER-2010-0356. GMO requested $5.2 million in Case No. ER-2012-0175. As provided in this testimony, the Commission excluded all Crossroads transmission costs in ER-2012-0175 also.

*Agreement* in the case, GMO agreed to not include any Crossroads transmission costs in its FAC.

**Q. Is any of Mr. Rush's other rebuttal testimony misleading?**

A. Yes. The following testimony:

> The decision to place [Crossroads] in rate base was the absolute right thing to do for both the Customer and Company at the time it was done. The Company and customers needed the capacity that Crossroads provided. (Emphasis removed)[15]

GMO's customers did not specifically need the capacity that *Crossroads* provided at the time GMO moved Crossroads into its rate base in 2007. GMO and its customers needed generation in 2005, after GMO's contract for power from the Aries plant (now Dogwood) ended. As detailed in Schedule LMM-R-5C of my rebuttal testimony, the type of generation, according to the resource planning analysis conducted in 2003 by Aquila, Inc., n/k/a GMO, that would meet its customers' needs most cost effectively, and with the least amount of risk in 2005, was owned generation. The analysis did not show that combustion turbines located in a transmission-constrained area of Mississippi was the least-cost, risk-adverse choice for Aquila's customers.

**Q. Was Aquila Merchant actively looking to sell Crossroads in 2005?**

A. Yes. However, there were no buyers. According to Exhibit 395 HC in GMO rate case no. ER-2012-0175[16] **

**

[15] Page 14:3-6.
[16] Case No. ER-2012-0175, EFIS item 462, Exhibit 395 HC,**
**

**Q. Did Aquila rely on Crossroads to meet its generation needs before 2007?**

A. Aquila met a portion of its generation needs through a purchased power agreement with Aquila Merchant for Crossroads capacity.

**Q. Mr. Crawford provided a presentation Aquila made to Staff on October 31, 2007 as Confidential Schedule BLC-9 attached to his rebuttal testimony. Is this a summary of the appropriate analysis for the Commission to make its determination regarding the prudency of GMO's acquisition of Crossroads or the inclusion of transmission costs in GMO's revenue requirement?**

A. No. As was done in previous Aquila and GMO cases, extensive evidence has been provided again in this case that the appropriate time for GMO to acquire generation was prior to when this presentation was made to Staff. By blindly ignoring the analysis that was done prior to this presentation, GMO is only presenting a portion of the information the Commission has considered in the past and should consider in this case also. I will not go into detail here regarding the history prior to this decision, as it has already been provided as Schedule LMM-R-5C to my rebuttal testimony, in Staff's *Cost of Service Report*, and in the rebuttal testimony of Staff witness Cary G. Featherstone. The Commission has appropriately considered this history in the past when it excluded all Crossroads transmission costs from GMO's revenue requirement.

## Retirement of Sibley 3 is Imprudent

**Q. Mr. Crawford states in his rebuttal testimony that retiring Sibley 3 will save GMO's retail customers over $150 million over the next 20 years.[17] Does not that mean retiring this unit at the end of 2018 is prudent?**

A. No.

[17] Burton L. Crawford rebuttal testimony, page 2:10-12.

**Q. Why not?**

A. While the $150 million estimate may be an indication of prudence, this is an estimate resulting from a resource planning model which is based on many inputs, including forecasted market prices, availability of surplus capacity for GMO to enter into contracts for, the forecasted cost of capacity purchases, customer loads and many others.

Earlier in my surrebuttal testimony I testified regarding the inaccurate market prices used in the analysis of KCPL's hydro contract. The market price forecasts used in the 2018 resource planning models should be more reliable now that the SPP market has been established, but the SPP day market has existed for less than five years. Considerable uncertainty stills surrounds future market prices. For example, the SPP market monitor *State of the Market 2017* report[18] describes how the day-ahead market prices showed more volatility in 2017 than they did in 2016. The incidence of negative market prices have doubled. It discusses possible changes to SPP market rules to deal with these problems in the future. With this type of uncertainty in the short run, it is difficult to forecast future market prices with any certainty.

I have already discussed concerns regarding the risks associated with assuming continued surplus capacity in SPP, and the pricing of future capacity contracts, so I will not repeat them here. However, the retirement of Sibley 3 decreases the reliability of GMO to providing safe and adequate service, as GMO will rely on market volatility instead of a generator it owns. Assumptions regarding the availability and price of excess capacity are made in resource planning models. Changes in reserve margin requirements and the potential premature retirement of capacity of other SPP members result in great uncertainty of capacity available for PPAs and the cost of that capacity.

[18] https://www.spp.org/documents/57928/spp_mmu_asom_2017.pdf

In addition to uncertainty regarding market prices and capacity availability, GMO's customers' load growth is higher than the load growth of any other investor-owned utility in the state of Missouri. In addition to growth in its residential and commercial sales, it has been announced that Nucor Steel is building a rebar micro-mill in Sedalia. GMO has filed a *Notice of Intended Case Filing,* Case No. EO-2019-0052,[19] stating that it intends to file an application for a special electric rate for this facility, which indicates that GMO anticipates the demand of Nucor to be greater than 50 MW. As shown on the GMO capacity balance sheet attached as Schedule LMM-S-2, GMO in its 2018 resource plan filing estimated its 2019 peak to be 1,837 MW. Nucor's expected load would increase that peak by at least 3%. This increase in peak demand and need for additional energy would not be as concerning for an electric utility with excess capacity and generating plant, but this customer is building in GMO's territory at a time when GMO has announced it is prematurely retiring its generation plant that contributes the most of GMO's MWh generation to SPP. This is load that was not included in GMO's 2018 resource plan filing that GMO is relying on to make its decision to retire Sibley 3. It could be that it is cost effective to continue to operate Sibley 3 due to the addition of this customer.

With all this uncertainty regarding the SPP market, capacity availability and customer load impacts, it is imprudent for GMO to retire a generating plant for which it expects its customers to continue to pay, even when that plant is not producing any energy or providing any capacity.[20]

Indeed, the Commission, in a recent order, emphasized that there is value in certainty. In its *Amended Report and Order* in Case No. EO-2017-0065 the Commission found:

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[19] EO-2019-0052 *In the Matter of the Application of KCP&L Greater Missouri Operations Company For Approval of a Special Rate for a Facility Whose Primary Industry is the Production or Fabrication of Steel in or Around Sedalia, Missouri*

[20] Cost of Service Rebuttal testimony of Darrin R. Ives, page 9:14-18.

> The hedging program still provides value to Empire and its customers by reducing risk even if the adverse outcomes hedged against do not come to pass.

In addition, with respect to the value of certainty, the Commission included the following in its decision:

> The value of having a hedging program truly is analogous to the cost and value of buying property insurance. A homeowner may buy earthquake insurance for a lifetime at a substantial cost and never suffer damage from an earthquake. That does not mean the insurance premiums have been wasted. The risk reduction offered by insurance has a value, although that value may not be fully realized until there is an earthquake, just as the value of hedging may not be fully realized until a combination of factors results in a price spike in the natural gas market.

In this case, the Commission found that losses were prudent because hedging provided value to customers. Currently Sibley 3 is a hedge against market price volatility and capacity availability. With its retirement, that hedge that provides certainty will be gone. Therefore, it is prudent to keep Sibley 3 running for the certainty of the capacity and energy availability it provides. It is imprudent for GMO to prematurely retire Sibley 3 based on a resource planning analysis that estimates a potential loss of up to $150 million over 20 years based on uncertain inputs coupled with a large change in customer load requirements.

**Q. Is there any certainty that OPC does see with respect to GMO's analysis?**

A. The one thing that is certain is GMO's retail customers will not see $150 million in savings over the next twenty years if the Commission approves the cost of service GMO is requesting.

**Q. Why would customers not see $150 million in savings?**

A. Customers will not see this savings because, even though GMO has announced Sibley 3 will be retired two days after the operation of law date of this case, GMO is asking for the full operations and maintenance ("O&M") costs of the Sibley units to be included in its revenue requirement.[21] Therefore, if the Commission approves GMO's request to include Sibley 3 O&M costs in its revenue requirement, GMO's customers will not "save" any O&M costs if the unit is retired until the effective date of new rates in GMO's next rate case. O&M "savings" will all go to the shareholders until the effective date of new rates in GMO's next rate case – likely about four years from January 2019. With "savings" such as these that go to the shareholder instead of the ratepayers, it could be many years before new rates are set that provide any "savings' from the retirement of Sibley 3 for GMO's customers.

In addition, Mr. Ives provides rebuttal testimony that it is very likely that some of the savings modeled in the resource planning process will not be achieved when he states:

> Given the Company's merger commitment approved by the Commission in Case No. ER-2018-0012 not to involuntarily sever employees due to retirement of these units (Merger Condition 8), it is clear that some O&M costs related to these units may continue to exist, even if all of the units are retired on schedule. Additionally, if the units are retired, there will be other costs associated with these units after retirement at a minimum for site maintenance and security and for a period of time for either dismantlement or retirement in place required activities.[22]

**Impact on FAC Cost of Retirement of Sibley 3**

**Q. Mr. Ives also provides rebuttal testimony regarding the impact on GMO if the Commission denies it cost recovery of the Sibley 3 unit costs and O&M**

[21] Since GMO has announced it will retire Sibley 3 two days after the operation of law date for new rates established in this case, OPC recommends the cost of service for new rates not include the O&M costs of the Sibley plant. Direct testimony of OPC witness John A. Robinett.
[22] Page 4:19 – 5:2.

**expenses in this case, and GMO decides not to retire Sibley 3. Would you provide the Commission information on the impact on changes in costs and revenues that would flow through the FAC if Sibley 3 fuel is included in the revenue requirement and GMO retires Sibley 3 as announced?**

A. FAC costs would immediately increase and FAC revenues would decrease. When market prices are greater than the fuel cost that would have been incurred by Sibley 3 if it was generating energy, the cost to GMO's customers will increase by the difference between the market price and the fuel cost of Sibley 3. In addition, FAC charges will increase because GMO is not likely to make any off-system sales in SPP if Sibley 3 is retired. Staff's updated fuel run[23] shows that, on a normalized basis, Sibley 3 would provide ** ** MWh of the ** ** MWh generated by GMO's owned-generation and GMO would sell ** ** MWh. If Sibley 3 is retired, owned-generation will be reduced by ** **. Therefore, it is unlikely GMO would have any generation on which it could make any off-system sales if Sibley 3 is retired.

While this increase in FAC costs would not be seen in FAC charges until September 2019, there would definitely be an increase in GMO's FAC charges.

**Q. Do you have an estimate of the amount of cost increase?**

A. Because of the interactions between generation and the SPP market, OPC asked both GMO[24] and Staff[25] to provide a fuel run with and without Sibley 3 to get an estimate of the cost consistent with the costs that are likely to be included in the FAC base rate. Staff objected to the data request within ten days stating that it was "unduly burdensome; it requires Staff to conduct an analysis and create information not immediately available to Staff in the form described and sought." GMO's response, received 20 days after the data request was issued was "The Company

[23] Staff response to OPC data request 442 on August 14, 2018.
[24] OPC Data request 8546.
[25] OPC Data request 444.

has not performed this fuel model run." Therefore, OPC does not have an estimate that takes into account these interactions on an hourly basis.

Lacking this information, OPC, using information from Staff's fuel run provided in response to OPC data request 442, estimates the impact of increased purchases from the SPP market and decreased off-system sales revenues to be over $12 million a year. This is an increase in annual fuel and purchased power expense, as modeled by Staff, of over 7%.

**Q. How does this compare to the increase in fuel for the FAC in GMO's direct filing?**

A. GMO's application provides that it was requesting a rebase of fuel for its FAC of $21.7 million. The impact on fuel cost of retiring Sibley 3 would increase that amount by 57%. Through GMO's FAC, GMO's customer's bills will increase, due to KCP&L's management's decision to retire Sibley 3 within days of the most likely effective date of new rates in GMO's rate case, without the inclusion of any of the benefits of reduced O&M costs to the customers.

In addition to increases in costs and decreases in off-system sales revenues, customers will be exposed to the volatility and uncertainty of market prices of which will be passed on to them through GMO's FAC charges.

**Q. Why is OPC bringing up the imprudence of retiring Sibley 3 prior to when GMO actually retires the plant?**

A. There are consequences that cannot be undone by a finding of imprudence after a plant has been retired.

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

A. Yes, it does.

# GMO Preferred Resource Plans

# 2012 and 2015

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**Table 11: GMO Preferred Resource Plan**

| Year | CC's (MW) | Solar (MW) | Wind (MW) | MEEIA DSM (MW) | Retire (MW) | Existing Capacity (MW) |
|---|---|---|---|---|---|---|
| 2012 | - | | | 57 | | 2,210 |
| 2013 | - | | | 76 | | 2,218 |
| 2014 | - | | | 95 | | 2,143 |
| 2015 | - | | | 112 | | 2,143 |
| 2016 | - | | | 131 | | 2,143 |
| 2017 | - | | | 149 | 99 | 2,078 |
| 2018 | - | 10 | | 155 | | 2,078 |
| 2019 | - | | 150 | 172 | | 2,078 |
| 2020 | - | | | 189 | | 2,078 |
| 2021 | 300 | 6 | 100 | 206 | | 2,078 |
| 2022 | - | | | 222 | | 2,078 |
| 2023 | - | 3 | | 239 | | 2,078 |
| 2024 | - | | 100 | 255 | | 2,078 |
| 2025 | - | | | 274 | | 2,078 |
| 2026 | - | | | 291 | | 2,078 |
| 2027 | - | | | 309 | | 2,078 |
| 2028 | 150 | | | 326 | | 2,078 |
| 2029 | - | | | 344 | | 2,078 |
| 2030 | - | | | 363 | | 2,078 |
| 2031 | - | | | 381 | | 2,078 |

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Volume 1, Page 23

**Table 15: GMO Preferred Resource Plan**

| Year | CT's (MW) | Wind (MW) | Solar (MW) | DSM (MW) | Retire (MW) | Existing Capacity (MW) |
|---|---|---|---|---|---|---|
| 2015 | 0 | | | 55 | | 2143 |
| 2016 | 0 | | 5 | 50 | | 2143 |
| 2017 | 0 | 260 | | 91 | | 2135 |
| 2018 | 0 | | | 116 | | 2135 |
| 2019 | 0 | 50 | | 153 | | 2038 |
| 2020 | 0 | | | 208 | 96 | 1942 |
| 2021 | 0 | | | 265 | | 1942 |
| 2022 | 0 | | | 322 | | 1942 |
| 2023 | 0 | | | 379 | | 1942 |
| 2024 | 0 | | | 435 | | 1942 |
| 2025 | 0 | | | 460 | | 1942 |
| 2026 | 0 | | 5 | 483 | | 1942 |
| 2027 | 0 | | | 505 | | 1942 |
| 2028 | 0 | | | 527 | | 1942 |
| 2029 | 0 | | | 546 | | 1942 |
| 2030 | 0 | | | 564 | | 1942 |
| 2031 | 0 | | | 579 | | 1942 |
| 2032 | 0 | | | 595 | | 1942 |
| 2033 | 0 | | | 610 | | 1942 |
| 2034 | 207 | | | 624 | | 1942 |

# GMO Preferred Resource Plans

# 2015 and 2018

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**Table 15: GMO Preferred Resource Plan**

| Year | CT's (MW) | Wind (MW) | Solar (MW) | DSM (MW) | Retire (MW) | Existing Capacity (MW) |
|---|---|---|---|---|---|---|
| 2015 | 0 | | | 55 | | 2143 |
| 2016 | 0 | | 5 | 50 | | 2143 |
| 2017 | 0 | 260 | | 91 | | 2135 |
| 2018 | 0 | | | 116 | | 2135 |
| 2019 | 0 | 50 | | 153 | | 2038 |
| 2020 | 0 | | | 208 | 96 | 1942 |
| 2021 | 0 | | | 265 | | 1942 |
| 2022 | 0 | | | 322 | | 1942 |
| 2023 | 0 | | | 379 | | 1942 |
| 2024 | 0 | | | 435 | | 1942 |
| 2025 | 0 | | | 460 | | 1942 |
| 2026 | 0 | | 5 | 483 | | 1942 |
| 2027 | 0 | | | 505 | | 1942 |
| 2028 | 0 | | | 527 | | 1942 |
| 2029 | 0 | | | 546 | | 1942 |
| 2030 | 0 | | | 564 | | 1942 |
| 2031 | 0 | | | 579 | | 1942 |
| 2032 | 0 | | | 595 | | 1942 |
| 2033 | 0 | | | 610 | | 1942 |
| 2034 | 207 | | | 624 | | 1942 |

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**Table 3: GMO Preferred Plan**

| Year | CT (MW) | Wind (MW) | Solar (MW) | DSM (MW) | Retire (MW) |
|---|---|---|---|---|---|
| 2018 | 0 | 146 | | 78 | 406 |
| 2019 | 0 | 120 | | 72 | 97 |
| 2020 | 0 | | | 124 | |
| 2021 | 0 | | | 153 | |
| 2022 | 0 | | | 168 | |
| 2023 | 0 | | | 182 | |
| 2024 | 0 | | | 200 | |
| 2025 | 0 | | | 217 | |
| 2026 | 0 | | | 232 | |
| 2027 | 0 | | | 246 | |
| 2028 | 0 | | 10 | 245 | |
| 2029 | 0 | | | 240 | |
| 2030 | 0 | | | 238 | |
| 2031 | 0 | | | 233 | |
| 2032 | 0 | | | 231 | |
| 2033 | 0 | | | 234 | |
| 2034 | 0 | | | 238 | |
| 2035 | 0 | | | 244 | |
| 2036 | 0 | | | 250 | |
| 2037 | 0 | | | 256 | |

# Table 2: GMO Forecast of Capacity Balance - Preferred Plan

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A. System Generating Capacity (GMO share)** | | | | | | | | | | | | | | | | | | | | |
| **Base Capacity** | | | | | | | | | | | | | | | | | | | | |
| Iatan I | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 |
| Iatan II | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 |
| Jeffrey Energy Center 1 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| Jeffrey Energy Center 2 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| Jeffrey Energy Center 3 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| Sibley 2 | 42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sibley 3 | 364 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Base Capacity** | 863 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |
| **Intermediate Capacity** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Peaking Capacity** | | | | | | | | | | | | | | | | | | | | |
| Greenwood 1 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| Greenwood 2 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Greenwood 3 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| Greenwood 4 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| KCI 1 | - | - | - | - | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| KCI 2 | - | - | - | - | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Lake Road 1 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Lake Road 2 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Lake Road 3 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Lake Road 4 | 97 | 97 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Lake Road 5 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| Lake Road 6 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Lake Road 7 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Ralph Green 3 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| Nevada | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| South Harper 1 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 |
| South Harper 2 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 |
| South Harper 3 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Cross Roads Unit 1 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Cross Roads Unit 2 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Cross Roads Unit 3 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Cross Roads Unit 4 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| SJLP Landfill Gas | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Total Peaking Capacity** | 1,171 | 1,171 | 1,074 | 1,074 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 |
| **Intermittent Capacity (Nameplate)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Percent Accredited Intermittent Capacity** | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| **Total Accredited Intermittent Capacity** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Wind Additions | | | | | | | | | | | | | | | | | | | | |
| Solar Additions | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Total Intermittent Capacity with Additions** | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Total Generation Capacity (TGC)** | 2,034 | 1,628 | 1,530 | 1,530 | 1,564 | 1,564 | 1,564 | 1,564 | 1,564 | 1,564 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 | 1,565 |
| **B. Capacity Transactions** | | | | | | | | | | | | | | | | | | | | |
| **Purchases:** | | | | | | | | | | | | | | | | | | | | |
| KCP&L | 60 | 125 | 35 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| NextEra Gray County (50 MW) | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | - | - | - | - | - | - |
| NextEra Ensign (98.8 MW) | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | - | - | - | - | - |
| Enel Rock Creek (120 MW) | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| NextEra Osborn (60 MW) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| NextEra Pratt (140 MW) | - | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| EDPR Prairie Queen (120 MW) | - | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| PPA Purchase | - | 134 | 324 | 332 | 302 | 287 | 299 | 270 | 271 | 203 | 302 | 314 | 326 | 340 | 367 | 413 | 423 | 432 | 467 | 480 |
| Reduction in Capacity due to Steam Customers | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) | (5) |
| **Total Capacity Purchases (P)** | 133 | 440 | 540 | 513 | 483 | 468 | 480 | 460 | 452 | 444 | 483 | 495 | 507 | 521 | 539 | 548 | 556 | 567 | 602 | 595 |
| **Sales:** | | | | | | | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Capacity Sales (S)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Net Transactions (NT)** | 133 | 440 | 540 | 513 | 483 | 468 | 480 | 460 | 452 | 444 | 483 | 495 | 507 | 521 | 539 | 548 | 556 | 567 | 602 | 595 |
| **Total System Capacity (TSC)** | 2,166 | 2,067 | 2,070 | 2,043 | 2,047 | 2,032 | 2,044 | 2,024 | 2,016 | 2,008 | 2,048 | 2,060 | 2,072 | 2,086 | 2,104 | 2,113 | 2,123 | 2,132 | 2,167 | 2,160 |
| **C. System Peaks & Reserves** | | | | | | | | | | | | | | | | | | | | |
| **Peak Demands** | | | | | | | | | | | | | | | | | | | | |
| Forecasted Peak | 1,900 | 1,910 | 1,965 | 1,970 | 1,982 | 1,995 | 2,007 | 2,011 | 2,024 | 2,036 | 2,052 | 2,063 | 2,076 | 2,089 | 2,104 | 2,116 | 2,131 | 2,147 | 2,165 | 2,179 |
| Less DSM: | | | | | | | | | | | | | | | | | | | | |
| Demand Response | | (39) | (75) | (90) | (94) | (97) | (103) | (109) | (115) | (121) | (127) | (127) | (122) | (114) | (107) | (105) | (105) | (106) | (107) | (107) |
| Energy Efficiency | | (7) | (18) | (20) | (30) | (34) | (38) | (44) | (49) | (55) | (60) | (64) | (68) | (72) | (75) | (80) | (84) | (89) | (94) | (99) |
| MEEIA | (78) | (27) | (20) | (25) | (25) | (24) | (24) | (24) | (23) | (20) | (10) | (1) | (0) | (0) | (0) | 1 | 2 | 2 | 2 | 3 |
| Demand-Side Rates | (0) | (0) | (5) | (12) | (20) | (27) | (35) | (41) | (45) | (46) | (48) | (46) | (47) | (48) | (49) | (50) | (51) | (52) | (52) | (53) |
| **Peak Forecast less DSM (PF)** | 1,821 | 1,837 | 1,846 | 1,817 | 1,813 | 1,813 | 1,806 | 1,793 | 1,792 | 1,793 | 1,807 | 1,822 | 1,838 | 1,855 | 1,872 | 1,882 | 1,892 | 1,903 | 1,915 | 1,923 |
| **Capacity Reserves (CR)** | 345 | 230 | 230 | 226 | 234 | 218 | 238 | 231 | 224 | 215 | 241 | 238 | 234 | 231 | 232 | 231 | 231 | 229 | 253 | 237 |
| **D. Capacity Needs** | | | | | | | | | | | | | | | | | | | | |
| % Reserve Margin | 19% | 13% | 12% | 12% | 13% | 12% | 13% | 13% | 13% | 12% | 13% | 13% | 13% | 12% | 12% | 12% | 12% | 12% | 13% | 12% |
| % Capacity Margin | 16% | 11% | 11% | 11% | 11% | 11% | 12% | 11% | 11% | 11% | 12% | 12% | 11% | 11% | 11% | 11% | 11% | 11% | 12% | 11% |
| **Required Capacity (RC)** | 2,040 | 2,058 | 2,061 | 2,035 | 2,031 | 2,030 | 2,023 | 2,008 | 2,007 | 2,008 | 2,023 | 2,041 | 2,058 | 2,078 | 2,097 | 2,107 | 2,119 | 2,131 | 2,144 | 2,153 |
| **Capacity Balance** | 126 | 10 | 9 | 8 | 16 | 2 | 21 | 15 | 9 | 0 | 25 | 19 | 14 | 8 | 7 | 6 | 4 | 1 | 23 | 7 |

KCPL
Case Name: 2018 KCPL Rate Case
Case Number: ER-2018-0145

Response to Mantle Lena Interrogatories - OPC_20180523
Date of Response: 6/1/2018

Question:8002

Please provide all documentation regarding the initial decision to enter into contracts for hydro power. This documentation should include at a minimum a copy of the source document that required KCPL to obtain hydro power and the justification for entering into the hydro contract.

Response:

The attachments to this response, Q8002_CONF_KCPL_Hydro value analysis.xlsx and Q8002_CONF_KCPL_CNPPID Hydro Presentation.ppt are considered **CONFIDENTIAL** as they contain marketing analyses or other market-specific information relating to goods or services purchased or acquired for use by the Company in providing services to customers.

Kansas Renewable Energy Standards (RES), specifically Kansas Statutes K.S.A 66-1256 to 66-1262, which are attached as "Q8002_KCPL_Kansas Statutes 66-1256 to 1262.docx" were in effect at the time (beginning approximately September 2010) that the CNPPID hydroelectric contract was being considered. These Statues (specifically K.S.A 66-1258) required KCP&L to provide net renewable generation capacity, based on the average demand of the prior three years of each year's requirement as follows:

- not less than 10% of its peak demand for calendar years 2011 through 2015,
- not less than 15% of its peak demand for calendar years 2016 through 2019,
- not less than 20% of the affected utility's peak demand for each calendar year beginning in 2020.

In addition, at the time there were Federal proposed rules requiring renewable energy as follows: 3% in 2012 per the Bingaman-Brownback bill, and 13% in 2013 per the Graham bill. Federal proposed renewable rules in 2010 indicated that 6 MW of planned upgrades at the CNPPID hydro facilities would qualify as renewable resources, i.e. "incremental hydropower" added after January 1, 1992 (under the Bingaman/Brownback bill) and after Jan. 1, 2001 (under the Klobuchar bill).

Using banked capacity, along with existing capacity and capacity to be installed at its Spearville wind facility, KCP&L expected to be in need of additional KS renewable capacity to meet its Kansas RES requirements. Accordingly, the CNPPID hydro facility was one option available to KCP&L. At that time, the CNPPID hydro facility compared favorably to other options such as wind, based on the prices in wind RFP responses received in 2010. Wind prices were higher and

capacity factors lower in 2010 than they are currently. Also, there would be no short or long-term capital investment with the hydro contract.

Under the KS Statutes, as long as the contract term was greater than one year, KCP&L could claim 100% of nameplate capacity, regardless of actual output or capacity factor from that facility. Thus, the hydro facility was more cost effective than comparable wind generation. Also, an analysis conducted in 2013 and attached as "Q8002_CONF_KCPL_Hydro value analysis.xlsx", indicated that over the ten-year contract period, the proposed hydro contract price yielded total expenditures that would be less than the expected value of the energy produced, therefore it was expected to be economic in addition to the fact it would be a renewable resource.

The CNPPID hydro facility qualified as a renewable energy resources under Statute K.S.A 66-1257. The Environmental attributes, Renewable Energy Certificates (RECs) will be available for all generation from these facilities. This generation is certified by the Low Impact Hydropower Institute and its generation qualifies as renewable energy credits under the Green-e program of the Center for Resource Solutions.

See attached PowerPoint presentation "Q8002_CONF_KCPL_CNPPID Hydro Presentation.ppt" for information related to the justification for entering into the hydro contract.

**Information Provided By:**
Randy Spale, Resource Planning Analyst – Sr

**Attachments:**
Q8002_KCPL_Kansas Statutes 66-1256 to 1262.docx
Q8002_CONF_KCPL_Hydro value analysis.xlsx
Q8002_CONF_KCPL_CNPPID Hydro Presentation.ppt
Q8002_Verification.pdf

ER-2018-0145
and
ER-2018-0146

KANSAS CITY POWER & LIGHT COMPANY
and
KANSAS CITY POWER LIGHT
GREATER OPERATIONSCOMPANY

SCHEDULE
LMM-S-4

HAS BEEN DEEMED

"CONFIDENTIAL"

IN ITS ENTIRETY

# Kansas Statutes

## Chapter 66: Public Utilities

### Article 12: Miscellaneous Provisions

**Statutes:**

- **66-1256: Renewable energy standards act.** K.S.A. 2009 Supp. 66-1256 through 66-1262, and amendments thereto, shall be known and may be cited as the renewable energy standards act.

**History:** L. 2009, ch. 141, § 1; May 28.

- **66-1257: Same; definitions.** As used in the renewable energy standards act:

(a) "Affected utility" means any electric public utility, as defined in K.S.A. 66-101a, and amendments thereto, but does not include any portion of any municipally owned or operated electric utility.

(b) "Commission" means the state corporation commission.

(c) "Net renewable generation capacity" means the gross generation capacity of the renewable energy resource over a four-hour period when not limited by ambient conditions, equipment, operating or regulatory restrictions less auxiliary power required to operate the resource, and refers to resources located in the state or resources serving ratepayers in the state.

(d) "Peak demand" means the demand imposed by the affected utility's retail load in the state.

(e) "Renewable energy credit" means a credit representing energy produced by renewable energy resources issued as part of a program that has been approved by the state corporation commission.

(f) "Renewable energy resources" means net renewable generation capacity from:

(1) Wind;

(2) solar thermal sources;

(3) photovoltaic cells and panels;

(4) dedicated crops grown for energy production;

(5) cellulosic agricultural residues;

(6) plant residues;

(7) methane from landfills or from wastewater treatment;

(8) clean and untreated wood products such as pallets;

(9) (A) existing hydropower;

(B) new hydropower, not including pumped storage, that has a nameplate rating of 10 megawatts or less;

(10) fuel cells using hydrogen produced by one of the above-named renewable energy resources; and

(11) other sources of energy, not including nuclear power, that become available after the effective date of this section, and that are certified as renewable by rules and regulations established by the commission pursuant to K.S.A. 2009 Supp. 66-1262, and amendments thereto.

**History:** L. 2009, ch. 141, § 2; May 28.

- **66-1258: Same; renewable energy portfolio standards; rules and regulations.** (a) The commission shall establish by rules and regulations a portfolio requirement for all affected utilities to generate or purchase electricity generated from renewable energy resources or purchase renewable energy credits. For the purposes of calculating the capacity from renewable energy credit purchases, the affected utility shall use its actual capacity factor from its owned renewable generation from the immediately previous calendar year. Renewable energy credits may only be used to meet a portion of portfolio requirements for the years 2011, 2016 and 2020, unless otherwise allowed by the commission. Such portfolio requirement shall provide net renewable generation capacity that shall constitute the following portion of each affected utility's peak demand:

(1) Not less than 10% of the affected utility's peak demand for calendar years 2011 through 2015, based on the average demand of the prior three years of each year's requirement;

(2) not less than 15% of the affected utility's peak demand for calendar years 2016 through 2019, based on the average demand of the prior three years of each year's requirements; and

(3) not less than 20% of the affected utility's peak demand for each calendar year beginning in 2020, based on the average demand of the prior three years of each year's requirement.

(b) The portfolio requirements described in subsection (a) shall apply to all power sold to Kansas retail consumers whether such power is self-generated or purchased from another source in or outside of the state. The capacity of all net metering systems interconnected with the affected utilities under the net metering and easy connection act in K.S.A. 2009 Supp. 66-1263 et seq., and amendments thereto, shall count toward compliance.

(c) Each megawatt of eligible capacity in Kansas installed after January 1, 2000, shall count as 1.10 megawatts for purposes of compliance.

(d) The commission shall establish rules and regulations required in this section within 12 months of the effective date of this act.

**History:** L. 2009, ch. 141, § 3; May 28.

- **66-1259: Same; renewable energy resource requirements; recovery of costs by affected utilities.** The commission shall allow affected utilities to recover reasonable costs incurred to meet the new renewable energy resource requirements required in the renewable energy standards act.

**History:** L. 2009, ch. 141, § 4; May 28.

- **66-1260: Same; renewable energy resource investment by affected utilities; calculation by commission .** For each affected utility, the commission shall determine whether investment in renewable energy resources required to meet the renewable portfolio requirement, as required by K.S.A. 2009 Supp. 66-1258, and amendments thereto, causes the affected utility's total revenue requirement to increase one percent or greater. The retail rate impact shall be determined net of new nonrenewable alternative sources of electricity supply reasonably available at the time of the determination.

**History:** L. 2009, ch. 141, § 5; May 28.

- **66-1261: Same; rules and regulations; violations; penalties; exceptions.** (a) The commission shall establish rules and regulations for the administration of the renewable energy standards act, including reporting and enforcement mechanisms necessary to ensure that each affected utility complies with this standard and other provisions governing the imposition of administrative penalties assessed after a hearing held by the commission. Administrative penalties should be set at a level that will promote compliance with the

renewable energy standards act, and shall not be limited to penalties set forth in K.S.A 66-138 and 66-177, and amendments thereto.

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(b) For the calendar years 2011 and 2012, the commission is not required to assess penalties if the affected utility can demonstrate it made a good faith effort to comply with the portfolio standards requirement. The commission shall exempt an affected utility from administrative penalties for an individual compliance year if the utility demonstrates that the retail rate impact described in K.S.A. 2009 Supp. 66-1260, and amendments thereto, has been reached or exceeded and the utility has not achieved full compliance with K.S.A. 2009 Supp. 66-1258, and amendments thereto. In imposing penalties, the commission shall have discretion to consider mitigating circumstances. Under no circumstances shall the costs of administrative penalties be recovered from Kansas retail customers.

(c) The commission shall establish rules and regulations required in this section within 12 months of the effective date of this act.

**History:** L. 2009, ch. 141, § 6; May 28.

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- **66-1262: Same; certification of renewable energy resources; rules and regulations.** (a) The commission shall establish rules and regulations for the administration of a certification process for use of renewable energy resources described in subsection (f)(11) of K.S.A. 2009 Supp. 66-1257, and amendments thereto, for purposes of fulfilling the requirements of K.S.A. 2009 Supp. 66-1258, and amendments thereto. Criteria for the certification process shall be determined by factors that include, but are not limited to: Fuel type, technology and the environmental impacts of renewable energy resources described in subsection (f)(11) of K.S.A. 2009 Supp. 66-1257, and amendments thereto. Use of renewable energy resources described in subsection (f)(11) of K.S.A. 2009 Supp. 66-1257, and amendments thereto, shall not cause undue or adverse air, water or land use impacts.

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(b) The commission shall establish rules and regulations required in this section within 12 months of the effective date of this act.

**History:** L. 2009, ch. 141, § 7; May 28.

# ER-2018-0145
# and
# ER-2018-0146

KANSAS CITY POWER & LIGHT COMPANY
and
KANSAS CITY POWER LIGHT
GREATER OPERATIONSCOMPANY

## SCHEDULE
## LMM-S-6

HAS BEEN DEEMED

"HIGHLY CONFIDENTIAL"

IN ITS ENTIRETY