Exhibit No.:	
Issue:	RES Retail Rate Impact Calculation
Witness:	Burton L. Crawford
Type of Exhibit:	Direct Testimony
Sponsoring Party:	KCP&L Greater Missouri Operations Company
Case No.:	EA-2014-
Date Testimony Prepared:	September 4, 2013

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: EA-2014-

DIRECT TESTIMONY

OF

BURTON L. CRAWFORD

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
September 2013

DIRECT TESTIMONY

OF

BURTON L. CRAWFORD

Case No. EA-2014-

Q: Please state your name and business address.

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

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

A: I am employed by Kansas City Power & Light Company ("KCP&L") as Director, Energy Resource Management.

Q: What are your responsibilities?

A: My responsibilities include managing the Energy Resource Management ("ERM") department. Activities of ERM include resource planning, wholesale energy purchase and sales evaluations, Generation division budgeting, and capital project evaluations.

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

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

Q: Have you previously testified in a proceeding at the Missouri Public Service Commission ("MPSC" or "Commission") or before any other utility regulatory agency?

A: Yes, I have. I provided testimony to the Commission in KCP&L's and KCP&L Greater Missouri Operations Company ("GMO" or "Company") most recent Missouri rate cases and in a variety of other proceedings. I have also appeared before the Kansas Corporation Commission on behalf of KCP&L.

Q: What is the purpose of your Direct Testimony?

A: The purpose of my testimony is to describe GMO's Retail Rate Impact calculation included in its Missouri Renewable Energy Standards ("RES") Compliance Plan filed on May 28, 2013. I will also respond to the concerns expressed by the MPSC Staff ("Staff") in their report on GMO's RES Compliance Plan filing in Case No. EO-2013-0505.

Q: What is the Retail Rate Impact ("RRI")?

A: On an annual basis, the Company is required to file its plans for meeting the RES requirements. As part of its 2013 filing, the Company calculated its projected RES compliance costs. The RRI is a measure of these projected RES compliance costs.

Q: What are the major components of the RRI calculation?

A: The major components of the RRI calculation include establishing a baseline revenue requirement in which to compare the costs of RES compliance and the projected RES compliance costs. The projected RES compliance costs include:

- Net cost of renewable generation and/or Renewable Energy Credit (REC) costs directly attributable to meeting RES energy targets
- Solar rebate costs

- Other costs such as REC registration fees and renewable resource registration fees

Q: How was the baseline revenue requirement determined?

A: The RES rules require a comparison of RES compliance related costs to the revenue requirements of a non-renewable generation and purchased power portfolio (i.e., baseline). The Company calculated the revenue requirement for this non-renewable portfolio based on the Preferred Resource Plan from its 2012 IRP filing. Future wind and solar additions that were directly attributable to RES compliance were removed from the Preferred Plan and the IRP model was re-run to calculate the annual revenue requirements under the same set of scenarios used in the IRP analysis.

Q: Were any other adjustments made to the IRP Preferred Plan to determine the non-renewable plan's revenue requirement?

A: No other adjustments were made. Along with removing future renewable resources attributable to RES compliance, the RES rule requires that the non-renewable portfolio have sufficient resources to meet the utilities needs for the next 10 years on a least cost basis. Since the wind resources removed from the Preferred Plan provide little capacity to the Company's portfolio, no additional non-renewable resources were added to the Preferred Plan. Generation that would have been provided by the renewable resources removed would generally be replaced with Company owned resources and increased purchased power.

Q: Would adding additional non-renewable resources to the non-renewable resource plan decrease revenue requirements?

A: It is unlikely that adding additional non-renewable resources to the non-renewable resource plan would decrease revenue requirements. As a test of this premise, the Company developed an alternative resource plan that replaced a portion of the renewable resources removed from the Preferred Plan with 50 MW of gas-fired combined cycle generation and ran it through the IRP model. The revenue requirements of this alternative plan were greater than the revenue requirements without this additional non-renewable resource.

Q: How do you know that the renewable resources removed from the Preferred Plan when determining the non-renewable resource plan revenue requirements were directly attributable to RES compliance?

A: As part of the IRP process, the Company specifically included additional renewable resources necessary to meet the RES energy requirements in most of the alternative resource plans analyzed, including its Preferred Plan. These additional renewable resources were the ones removed from the Preferred Plan when determining the non-renewable resource plan revenue requirements for the RRI calculation. In order to determine if these renewable resources would have been added for reasons other than RES compliance (e.g., economics) the Company compared the revenue requirements of the non-renewable resource plan to one that added 50 MW of additional wind resources consistent with the renewable resource timing in the IRP Preferred Plan. The 50 MW wind resource addition increased revenue requirements and therefore would not have been added for economics.

Q: For which year or years did GMO conduct the RRI calculation?

A: Rule 240-20.100(5)(A) requires the RRI to be calculated for each planning year that includes the addition of renewable generation directly attributable to RES compliance. Since Rule 240-20.100(7)(B) states that the Compliance Plan shall cover the current and immediately following two calendar years, the Company calculated the RRI for 2013, 2014, and 2015 in its 2013 RES Compliance Plan.

Q: How were the RES compliance costs estimated?

A: Since GMO currently has sufficient non-solar renewable resources to meet RES compliance during the 2013-2015 RES Compliance Plan period, no additional non-solar renewable resource costs were included in the RRI calculation.

GMO is currently meeting the RES solar energy requirements through the purchase of solar RECs ("S-RECs"). The projected cost of S-REC purchases needed for 2013-2015 RES compliance were included in the 2013 RES Compliance Plan RRI calculations. The projected costs were based on recent S-REC purchases costs.

The RES compliance costs also include costs related to REC registration and renewable facility registration.

Lastly, GMO estimated the amount of solar rebates to be paid in 2013 based on recent history of rebate payments. These were considered part of the RES compliance costs.

Q: How was the RRI calculated?

A: Once the Company calculated the annual non-renewable resource plan revenue requirements, a 10-year average revenue requirement was calculated for each of three

separate time periods. The table shown below provides the 10-year period used for each of the 2013-2015 RRI calculations.

Planning Year	Non-renewable Resource Plan Average Revenue Requirement Period
2013	2013-2022
2014	2014-2023
2015	2015-2024

The annual cost of RES compliance was then calculated as a percentage of the 10-year average non-renewable resource plan revenue requirements to determine the RRIs for 2013, 2014 and 2015.

Given that the projected amount of solar rebates exceeds the 1% RRI limit in 2013, projected rebate payments were adjusted downward in each year (2013, 2014, and 2015) to meet the 1% RRI limits. Adjusting the projected rebate payments to keep at the 1% RRI limit resulted in the following solar rebate cap amounts:

Year	Solar Rebate Cap
2013	$10,138,390
2014	$10,722,434
2015	$11,344,965

The details concerning this calculation can be found in the workpapers submitted to parties in the current case.

Q: Has the Staff offered any opinion on GMO's approach to the RRI calculations?

A: Yes. In Staff's report concerning GMO's RES Compliance Plan filing in Case No. EO-2013-0505, Staff described three parts of the Company's RRI calculations that Staff believes do not comply with the rules. These include:

(1) Averaging the non-renewable portfolio,

(2) Determination of the non-renewable portfolio, and

(3) Determination of the RES-compliant portfolio.

Q: Please respond to Staff's first concern, averaging the non-renewable portfolio revenue requirements.

A: Based on discussions between the Staff and Company subsequent to the Staff's report, it is the Company's understanding that Staff's concern is not with the Company's averaging of the non-renewable portfolio revenue requirements, but with the fact that the Company did not base the RRI calculations on a 10-year average of the RES-compliant portfolio revenue requirement. The Company based the RRI on the annual projected RES-compliance costs as a percentage of the 10-year average non-renewable portfolio revenue requirement. Under Staff's view of the 1% cap, RES compliance costs can exceed 1% in any given year as long as the compliance costs average to 1% over a 10-year period. The Company's view limits RES compliance costs to 1% each year. Note that both the Staff and Company's approach to the RRI calculation includes averaging the non-renewable portfolio revenue requirements over a 10-year period.

There is a potential problem created with Staff's view that the RES compliance costs can exceed 1% in any given year as long as the 10-year average compliance costs are limited to 1%. Since the RRI calculation for any given compliance plan year is based on forward looking costs only, it ignores costs incurred in previous years. If the previous year's actual compliance costs exceed 1% and the forward looking 10-year average is 1%, the actual RES compliance impacts can greatly exceed 1%. As a simple example, assume that RES compliance costs are 10% in Year 1, and 0% in Years 2-10 and the average compliance cost works out to a 1% RRI over the 10-year period. In Year 2 when the RRI is calculated, it would allow for another 10% increase in revenue requirements

assuming Year 3-11 are 0%. This could continue indefinitely with the end result being a 10% increase in costs over any given period even though the RRI has a 1% limit.

Given the forward-looking RRI calculation required by the RES rule, each year's RES compliance costs need to be closely aligned with the 1% cap to ensure that actual RES compliance costs don't exceed 1% in any given 10-year period.

Q: Please respond to Staff's second concern; the determination of the Company's non-renewable portfolio.

A: Staff's second concern was that the Company included the impact of the Ensign wind Power Purchase Agreement ("PPA") in its calculation of the non-renewable portfolio revenue requirements. Staff believes this PPA should have been excluded from the revenue requirement calculation since Ensign by definition is a renewable resource.

It is the Company's belief that the RRI calculation is intended to be a measure of RES compliance costs and should therefore only reflect costs expected to be incurred that are directly attributable to RES compliance. The Ensign PPA was not a direct result of RES compliance; it was added to the GMO generation portfolio based on the economics of the contract. Therefore, this PPA should be treated the same as any other GMO resource used to serve retail customers. The existence of the PPA should not impact the allowed level of RES compliance costs. If resources that are not directly attributable to RES compliance such as the Ensign PPA are removed from the calculation of the non-renewable portfolio revenue requirements, the baseline will no longer reflect what would have occurred absent the RES requirements. Over time, this would increase the baseline revenue requirements and allow the potential for actual RES compliance costs to exceed 1% of what would have occurred absent the RES. Therefore, renewable resources that

are added to the Company's portfolio based on economics should not be removed from the non-renewable portfolio revenue requirement determination. Only those renewable resources that are directly attributable to RES compliance should be removed.

Q: Please respond to Staff's third concern; the determination of the Company's RES-compliant portfolio.

A: Staff's third concern is two-fold. First, Staff is concerned that the Company's RES-compliant portfolio does not include existing non-renewable resources. The RES-compliant portfolio revenue requirements that include the existing non-renewable resources were provided as part of the work papers provided to Staff. It can be found on the Annual Assumptions worksheet.

Staff's other concern with the Company's RES-compliant portfolio is that it does not reflect the same renewable energy resource additions as the Company's IRP. As Staff points out, the RRI calculations begin adding renewable resources in 2019 where the Preferred Plan begins additions in 2018. While the workpapers show the addition of renewable resources in 2019, these additions do not impact the Company's RRI calculations for 2013, 2014 and 2015 as they occur outside the RES Compliance Plan period.

Q: Has the Company calculated what the RRI would be based on Staff's interpretation of the RES rules?

A: Yes, it has. The Company made adjustments to its RRI calculations to reflect its understanding of Staff's interpretation of the RES rules. These adjustments include:

(1) Averaging of the 10-year RES-compliant portfolio revenue requirement,

(2) Removal of the Ensign wind PPA from the determination of the non-renewable portfolio revenue requirement,

(3) A calculation of the total revenue requirement for the RES-compliant portfolio based on future wind additions that match GMO's IRP Preferred Plan.

Q: What were the results of these calculations?

A: Assuming that no solar rebates would be paid in 2013, 2014, and 2015, the RRI for each of these years is 1.28%, 1.39%, and 1.58% respectively. Since the RRI exceeds the 1% cap, the Company adjusted downward the future wind builds to get each year's RRI at or below 1%. When making these reductions to future wind builds, it allowed for some solar rebates to be paid in 2013 while remaining at the 1% cap.

Like the Company's approach to the calculations, using Staff's approach indicates that the 2013 cap on solar rebates is less than what the Company expects to pay out in 2013. The following table compares the results of the Company's method vs. Staff's method. Note that Staff did not perform this calculation; it was done by the Company based on discussions between the Staff and Company.

Year	Solar Rebate Cap Company Method	Solar Rebate Cap Staff Method
2013	$10,138,390	$4,200,000
2014	$10,722,434	$0
2015	$11,344,965	$0

Q: In general, what drives the solar rebate cap to $0 in 2014 and 2015 under the Staff's method?

A: Since Staff's approach includes a 10-year average view of RES compliance costs, the revenue requirement for future wind additions estimated to be needed for RES compliance is included as a compliance cost. The net costs associated with these future

wind additions essentially consume the funds available under the 1% RRI cap. Since the Company's approach looks at RES compliance cost on an annual basis, these future wind related costs are not included in the Company's 2013, 2014, and 2015 RRI calculations and therefore do not impact the amount of solar rebates that can be paid under the cap.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of KCP&L Greater Missouri	)	
Operations Company's Application	)	File No.
For Authorization To Suspend Payment	)	
of Certain Solar Rebates	)	

AFFIDAVIT OF BURTON L. CRAWFORD

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

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

1. My name is Burton L. Crawford. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Energy Resource Management.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of KCP&L Greater Missouri Operations Company consisting of eleven (11) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Burton L. Crawford

Subscribed and sworn before me this 4th day of September, 2013.

Notary Public

My commission expires: Feb 4 2015

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2015
Commission Number: 11391200