KANSAS CITY POWER & LIGHT COMPANY (KCP&L)

2013 ANNUAL RENEWABLE ENERGY STANDARD COMPLIANCE PLAN

May 28, 2013

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SECTION 1: INTRODUCTION

Kansas City Power & Light Company ("KCP&L"), a Missouri Corporation, has filed its 2013 Annual Renewable Energy Standard Compliance Plan ("2013 Plan") in compliance with the Missouri Public Service Commission's ("Commission") Electric Utility Renewable Energy Standard Requirements [4 CSR 240-20.100]. Section (7) of the rule requires that each public utility file with the Commission a Renewable Energy Standard (RES) Compliance Plan by April 15 of each year.

Specifically, Section 7 (B) of the rule requires that the plan shall cover the current year and the immediately following two (2) calendar years. The RES compliance plan shall include, at a minimum:

A. A specific description of the electric utility's planned actions to comply with the RES;

B. A list of executed contracts to purchase Renewable Energy Credits (RECs) (whether or not bundled with energy), including type of renewable energy resource, expected amount of energy to be delivered, and contract duration and terms;

C. The projected total retail electric sales for each year;

D. Any differences, as a result of RES compliance, from the utility's preferred resource plan as described in the most recent electric utility resource plan filed with the commission in accordance with 4 CSR 240-22, Electric Utility Resource Planning;

E. A detailed analysis providing information necessary to verify that the RES compliance plan is the least cost, prudent methodology to achieve compliance with the RES;

F. A detailed explanation of the calculation of the RES retail impact limit calculated in accordance with section (5) of this rule. This explanation should include the pertinent information for the planning interval which is included in the RES compliance plan; and

G. Verification that the utility has met the requirements for not causing undue adverse air, water, or land use impacts pursuant to subsection 393.1030.4. RSMo, and the regulations of the Department of Natural Resources.

The 2013 Plan presents KCP&L's planned renewable compliance efforts and purchases that are currently underway and that will continue through 2013-2015 to achieve the requirements of 4 CSR 240-20.100.

SECTION 2: RES COMPLIANCE PLAN

Rule (7) (B) 1: The plan shall cover the current year and the immediately following two (2) calendar years. The RES compliance plan shall include, at a minimum -

2.1 RULE (7) (B) 1 A:

A specific description of the electric utility's planned actions to comply with the RES;

2.1.1 NON-SOLAR COMPLIANCE

KCP&L generates renewable energy at its Spearville 1 wind facility located in Kansas, and will continue to do so during the 2013-2015 RES Compliance Plan period. The Spearville 1 facility, installed in 2006, is wholly owned by KCP&L and has a capacity of 100.5 MW. An additional 48 MW of capacity was installed in 2010 (Spearville 2). The Spearville facility has created a bank of renewable energy credits (RECs), with approximately 988,000 RECs attributable to Missouri customers as of December 31, 2012. KCP&L intends to use banked RECs to comply with its 2013 RES requirements shown in Table 2.

Additionally, KCP&L has procured two long-term Power Purchase Agreements (PPAs) totaling approximately 230 MW of installed wind capacity. The wind facilities supplying these contracts entered service during 2012. One PPA is with a subsidiary of Duke Energy Renewables for 131.1 MW from the Cimarron II wind project located in Gray County, Kansas. The other PPA is with Spearville 3 LLC, whose parent company is enXco Development, to purchase energy from a 100.8 MW wind project located in Ford County, Kansas.

Additionally, KCP&L entered into a PPA with Hampton Alternative Energy Products, LLC in early 2012 for the net generation output from the Confined Animal Feedlot Operation (CAFO) facility in Triplett, Missouri, in which an anaerobic digester will capture methane from manure and utilize gen-sets to

convert the captured methane into electricity. The expected power output from the facility is 300 kW. The output from this facility, which is not needed to meet RES requirements in the 2013-2015 RES Compliance Plan period, may generate qualified RECs after internal energy needs are met.

Accordingly, KCP&L expects to have banked RECs available to meet its RES requirements in 2014 and 2015 based on RECs unexpired at the end of 2013, in addition to the RECs created from wind facilities' generation. The estimated Missouri jurisdictional share of KCP&L's wind generation is approximately 306,000 MWh per year from Spearville 1 and 2, approximately 296,000 MWh from Cimarron II, and approximately 242,000 MWh from Spearville 3. The RECs generated from these renewable resources in addition to the banked RECs will fulfill KCP&L's Missouri RES non-solar requirements for the RES Compliance Plan period shown in Table 2 below.

2.1.2 SOLAR COMPLIANCE

KCP&L continues to monitor the feasibility and economics of constructing and operating utility scale solar generation. KCP&L uses multiple sources to identify general cost trends as well as specific project costs, including data from the Electric Power Research Institute (EPRI) and the SNL Energy website. While solar technology costs have decreased significantly over the past several years, the cost of complying by purchasing Solar Renewable Energy Credits (SRECs) remains a fraction of what it would cost to build and operate a solar facility. Therefore, KCP&L plans to continue to utilize SRECs for compliance during the RES Compliance Plan period as shown in Table 2 below.

In addition, as part of its SmartGrid project, in late 2010 KCP&L completed installation of a 3.15 kW residential installation referred to as the Demo Home (Project Living Proof). The largest solar generating system, 100 kW, was installed at the Paseo Academy of Fine and Performing Arts in October 2011. Additionally, in October 2012 KCP&L completed installation of a 5 kW solar facility at the Midtown Substation (Innovation Park). These solar installations

are part of the plan to install 180 kW of solar by the end of 2013 in the SmartGrid demonstration project area. The generation from these facilities will be distributed to KCP&L's service territory. The Paseo facility will generate qualified SRECs; the other facilities may also generate qualified SRECs. All remaining solar installations will be in the range of 3, 5 or 10 kW and will be placed on commercial buildings, the local university, churches and residential home(s).

2.1.3 STANDARD OFFER CONTRACT

KCP&L does not have a Standard Offer Contract tariff in place at this time.

2.2 RULE (7) (B) 1 B:

A list of executed contracts to purchase RECs (whether or not bundled with energy), including type of renewable energy resource, expected amount of energy to be delivered, and contract duration and terms;

Table 1 below provides the details of KCP&L's executed contracts to purchase wind energy.

Table 1: KCP&L List of Executed Contracts for Renewable Wind Energy

Project Name	Contracting Parent Company	Contract Type	Project Size (MW)	COD Date	Term (Yrs)	Expected Energy (2013 MWh)
Cimarron II	Duke Energy	Energy & RECs	131.1	6/1/2012	20	516,700
Spearville 3	enXco Development	Energy & RECs	100.8	10/1/2012	20	423,000

It should be noted that the expected generating output in Table 1 does not match the Missouri portion of generation provided in Section 2.1.1 as the expected energy listed above reflects the total (100%) expected output of each facility in 2013.

To comply with the Missouri 2013-15 solar RES requirements, KCP&L expects to purchase SRECs from qualified facilities likely located outside of Missouri. The purchases are expected to be for SRECs only with no delivered energy. The SRECs will be registered in WREGIS (Western Renewable Energy Generation Information System) and will have been transferred to NARR (North American Renewables Registry). Please see Section 2.5.1 for information concerning 2013 SREC puchases.

2.3 RULE (7) (B) 1 C:

The projected total retail electric sales for each year;

KCP&L's forecasted Missouri retail electric sales, associated RES requirements, and KCP&L's compliance shown in terms of RECs are provided in Table 2 below. This forecast is taken from KCP&L's 2012 IRP filing.

Table 2: KCP&L Retail Sales, RES Requirements and Compliance Plan

Year	Retail Electric Sales (MWh)	Non-Solar Req. (MWh)	Solar Req. (MWh)
2013	9,098,780	178,336	3,640
2014	9,167,827	449,224	9,168
2015	9,209,583	451,270	9,210

2.4 RULE (7) (B) 1 D:

Any differences, as a result of RES compliance, from the utility's preferred resource plan as described in the most recent electric utility resource plan filed with the commission in accordance with 4 CSR 240-22, Electric Utility Resource Planning;

There are no differences from KCP&L's preferred resource plan filed on April 9, 2012 as a result of RES compliance during the 2013-15 RES Compliance Plan period as no additional renewable resources are required for compliance.

2.5 RULE (7) (B) 1 E

A detailed analysis providing information necessary to verify that the RES compliance plan is the least cost, prudent methodology to achieve compliance with the RES;

The existing Spearville 1 wind generating facility being utilized for non-solar compliance was installed prior to passage of the RES rules and was justified and constructed as part of KCP&L's Comprehensive Energy Plan. Since this facility is already in place, the wind energy provided by this facility represents the least cost approach for achieving non-solar compliance for the 2013-2015 RES Compliance Plan period.

KCP&L submitted a Request for Proposal (RFP) to meet future wind requirements in November 2010. Additionally, in August 2011, a single RFP was issued to cover both KCP&L and GMO non-solar requirements. A complete evaluation of both sets of proposals received was conducted and resulted in consummation of two separate PPAs. As mentioned above, one PPA is with Duke Energy Renewables for the Cimarron II wind farm, and the other with enXco for the Spearvillle 3 wind farm. These PPAs were entered into to take advantage of low-cost energy prices and will be used to meet future KCP&L non-solar RES requirements.

2.5.1 THIRD PARTY SOLAR SREC PROCUREMENT

For solar compliance, the purchase of SRECs through an industry broker is currently the least expensive alternative. For 2013, KCP&L has purchased 3,044 SRECs at a cost that is significantly less than the projected cost to add new solar capacity based on EPRI and SNL industry solar cost data. The SRECs were purchased from 3Degrees. The cost of the SRECs purchased for 2013 compliance is approximately $14,400, or about $4.74 per SREC. Note that 1 SREC represents 1 MWh of solar generation. The cost for compliance under a solar PPA option is approximately $130 - $140 per MWh.

2.6 RULE (7) (B) 1 F

A detailed explanation of the calculation of the RES retail impact limit calculated in accordance with section (5) of this rule. This explanation should include the pertinent information for the planning interval which is included in the RES compliance plan;

See Section 3 of this RES Compliance Plan for a description of the retail rate impact calculation.

2.7 RULE (7) (B) 1 G

Verification that the utility has met the requirements for not causing undue adverse air, water, or land use impacts pursuant to subsection 393.1030.4. RSMo, and the regulations of the Department of Natural Resources.

The solar facility from which the SRECs will be purchased to achieve 2013 solar RES compliance is expected to be located outside of the State of Missouri. The SRECs will be registered in WREGIS (Western Renewable Energy Generation Information System) and have been transferred to NARR (North American Renewables Registry), and are also National Green-e Certified.

Wind generation specifically conforms to the eligible renewable energy resources listed in section (2) of Missouri Department of Natural Resources (MDNR) rule 10.CSR 140-8.010. The Spearville 1 and 2 wind facilities are located within Kansas. The Cimarron II and Spearville 3 wind facilities are located in Kansas and are not owned by KCP&L, and the owner-operator would be responsible for ensuring that they have not caused any undue adverse air, water, or land use impacts.

All generating facilities utilized by KCP&L to meet the requirements of the Missouri RES have, to its knowledge, received all necessary environmental and operational permits and are in compliance with any necessary federal, state and/or local requirements related to air, water and land use.

KCP&L will submit additional information as required by the MDNR in order to review the energy sources and environmental impact so long as there are appropriate provisions for confidential treatment of any sensitive information. KCP&L will grant or obtain access to facility sites and records for MDNR.

SECTION 3: RATE ANALYSIS

PURPOSE: This report demonstrates compliance with 4 CSR 240-20.100(5) and determines the average rate impact within a ten-year period and incorporating the effects of future GHG legislation and costs.

3.1 RETAIL RATE IMPACT

Rule (5)(A): The retail rate impact, as calculated in subsection (5)(B), may not exceed one percent (1%) for prudent costs of renewable energy resources directly attributable to RES compliance. The retail rate impact shall be calculated on an incremental basis for each planning year that includes the addition of renewable generation directly attributable to RES compliance through procurement or development of renewable energy resources, averaged over the succeeding ten (10)-year period, and shall exclude renewable energy resources owned or under contract prior to the effective date of this rule.

The retail rate impact was calculated by comparing a non-renewable generation and purchased power portfolio to a RES-compliant portfolio with sufficient renewable resources to achieve the renewable standards. For each year of the 2013-2015 RES Compliance Plan period, the annual retail rate impact is limited to a maximum of 1% of the 10-year average non-RES compliant revenue requirement. Wind investments completed prior to the 2013-2015 RES Compliance Plan period, including both owned wind assets and PPAs, were not removed from the non-RES compliant portfolio revenue requirement as they were not directly attributable to meeting the RES. These projects were determined to have been economic and would have been completed absent the RES.

For any year in the succeeding ten (10)-year period where wind builds were required for RES compliance, the solar rebate payments were reduced or eliminated to avoid exceeding the 1% cap. When wind or solar resources are

required for compliance, KCP&L models the addition of renewable generating resources required to meet the RES as these resources would provide benefits to all retail customers as compared to investing the renewable funding available under the 1% cap for projects that benefit a limited number of retail customers (i.e., solar rebates).

If the retail rate impact still exceeded one percent (1%) after eliminating solar rebates, the amount of new wind builds was reduced until the costs did not exceed the 1% maximum. The annual retail rate impacts for KCPL for the 2013-2015 RES Compliance Plan period are show in Table 3 below. KCP&L has assumed that the solar requirements will be met with SREC purchases.

Table 3: KCP&L Annual Retail Rate Impacts

KCP&L-MO Annual Retail Rate Impact	
Year	Rate Impact
2013	1.00%
2014	1.00%
2015	1.00%

3.2 TOTAL REVENUE REQUIREMENTS

Rule (5)(B): The RES retail rate impact shall be determined by subtracting the total retail revenue requirement incorporating an incremental non-renewable generation and purchased power portfolio from the total retail revenue requirement including an incremental RES compliant generation and purchased power portfolio. The non-renewable generation and purchased power portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio additional

non-renewable resources sufficient to meet the utility's needs on a least-cost basis for the next ten (10) years. The RES-compliant portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio an amount of renewable resources sufficient to achieve the standard set forth in section (2) of this rule and an amount of least-cost non-renewable resources, the combination of which is sufficient to meet the utility's needs for the next ten (10) years.

The following table shows the projected RES expenditures and retail rate impact based on an average of the next ten years of non-renewable portfolio revenue requirements.

Table 4: KCP&L Annual RES Expenditure Limits

KCP&L-MO Annual Rate Impact			
Year	Rev Requirement (Succeeding 10-Yr Avg)	Plan Year RES Exp ($M)	Rate Impact
2013	$ 1,096.3	$ 11.0	1.00%
2014	$ 1,126.0	$ 11.3	1.00%
2015	$ 1,153.7	$ 11.5	1.00%

3.3 RESOURCE PLAN SOURCES

Rule (5)(B): These renewable energy resource additions will utilize the most recent electric utility resource planning analysis.

The KCP&L RES Compliance Plan is based upon the assumptions used in the 2012 KCP&L IRP Case EO-2012-0323 filed on April 9, 2012.

3.4 ANALYSIS DATA SOURCE

Rule (5)(B): These comparisons will be conducted utilizing projections of the incremental revenue requirement for new renewable energy resources,

less the avoided cost of fuel not purchased for nonrenewable energy resources due to the addition of renewable energy resources. In addition, the projected impact on revenue requirements by non-renewable energy resources shall be increased by the expected value of greenhouse gas emissions compliance costs, assuming that such costs are made at the expected value of the cost per ton of greenhouse gas emissions allowances, cost per ton of a greenhouse gas emissions tax (e.g., a carbon tax), or the cost per ton of greenhouse gas emissions reductions for any greenhouse gas emission reduction technology that is applicable to the utility's generation portfolio, whichever is lower. Calculations of the expected value of costs associated with greenhouse gas emissions shall be derived by applying the probability of the occurrence of future greenhouse gas regulations to expected level(s) of costs per ton associated with those regulations over the next ten (10) years. Any variables utilized in the modeling shall be consistent with values established in prior rate proceedings, electric utility resource planning filings, or RES compliance plans, unless specific justification is provided for deviations.

During the 2013-2015 RES Compliance Plan period, no additional renewable resource are required for compliance. The 10-year average non-RES compliant revenue requirement is based on the 2012 KCP&L IRP that includes the expected value of greenhouse gas compliance costs. The variables used are those from the 2012 IRP.

3.5 RATE IMPACT COMPARISON

Rule (5)(B): The comparison of the rate impact of renewable and non-renewable energy resources shall be conducted only when the electric utility proposes to add incremental renewable energy resource generation directly attributable to RES compliance through the procurement or development of renewable energy resources.

While KCP&L is not proposing to add any incremental renewable energy resources directly attributable to RES compliance during the 2013-2015 RES Compliance Plan period, the retail rate impact was calculated for each year and is provided in Table 4 above.

3.6 REBATES

Rule (5)(C) Rebates made during any calendar year in accordance with section (4) of this rule shall be included in the cost of generation from renewable energy resources.

Solar rebates have been included in the analysis and are provided in the following table, along with Solar Renewable Energy Credit (S-RECs) costs and administrative costs. Since KCP&L is projected to exceed the 1% retail rate impact in 2013, 2014 and 2015 due to solar rebates, solar rebate payments assumptions were limited to maintain the 1% cap. Any solar rebates not honored in a given year would be the first rebates considered for payment in the following year.

Table 5: KCP&L Solar Compliance & Rebates

KCP&L COMPLIANCE EXPENDITURES						
Year	S-RECs	S-REC Price	S-REC Cost	Admin Cost (NAR)	Solar Rebates	Total
2013	3,640	$ 5.18	$ 18,861	$ 76,145	$ 10,809,154	$ 10,904,160
2014	9,168	$ 3.90	$ 35,745	$ 78,429	$ 11,093,032	$ 11,207,206
2015	9,210	$ 4.87	$ 44,891	$ 80,782	$ 11,362,991	$ 11,488,664

3.7 ADJUSTMENTS

Rule (5)(D) For purposes of the determination in accordance with subsection (B) of this section, if the revenue requirement including the RES-compliant resource mix, averaged over the succeeding ten (10)-year period, exceeds the revenue requirement that includes the non-renewable resource mix by more than one percent (1%), the utility shall adjust downward the proportion of renewable resources so that the average annual revenue requirement differential does not exceed one percent (1%). In making this adjustment, the solar requirement shall be in accordance with subsection (2)(F) of this rule. Prudently incurred costs to comply with the RES standard, and passing this rate impact test, may be recovered in accordance with section (6) of this rule or through a rate proceeding outside or in a general rate case.

For the 2013-2015 RES Compliance Plan period, no additional renewable resources are required to meet the RES requirements, therefore no adjustments are necessary.

3.8 FEDERAL PROGRAM COSTS

Rule (5) (E) Costs or benefits attributed to compliance with a federal renewable energy standard or portfolio requirement shall be considered as part of compliance with the Missouri RES if they would otherwise qualify under the Missouri RES without regard to the federal requirements.

KCP&L does not have a federal obligation at this time.