KCP&L GREATER MISSOURI OPERATIONS COMPANY

2018 ANNUAL RENEWABLE ENERGY STANDARD COMPLIANCE PLAN

April 13, 2018

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SECTION 1: INTRODUCTION

KCP&L Greater Missouri Operations Company ("GMO"), a Delaware Corporation, has filed its 2018 Annual Renewable Energy Standard Compliance Plan ("2018 Plan") in compliance with the Missouri Public Service Commission's ("Commission") Electric Utility Renewable Energy Standard Requirements [4 CSR 240-20.100] that became effective September 30, 2010 and as amended by Missouri House Bill 142 becoming law on August 28, 2013. Section (8) 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 8 (B) of the rule requires that the plan 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 calculation of the RES retail impact limit calculated in accordance with section (5) of this rule. The calculation should be accompanied by workpapers including all the relevant inputs used to calculate the retail impact limits for the planning interval which is included in the RES compliance plan. The electric utility may designate all or part of those calculations as highly confidential, proprietary, or public as appropriate under the commission's rules; 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 2018 Plan presents GMO's planned renewable compliance that are currently underway and that will continue through 2018-2020 to achieve the requirements of 4 CSR 240-20.100.

SECTION 2: RES COMPLIANCE PLAN

Rule (8) (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 (8) (B) 1 A:

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

2.1.1 NON-SOLAR COMPLIANCE

GMO obtains renewable energy generated at the Gray County wind facility located in Kansas under a Power Purchase Agreement (PPA) and will continue to do so during the 2018-2020 RES Compliance Plan period. GMO purchases generation under this PPA based on 60 MW of capacity that was renewed under a new PPA for an additional 15 years starting in November 2016. Additionally, GMO executed a PPA with Ensign Wind, LLC, whose parent company is NextEra, to purchase energy from a 98.9 MW wind project also located in Gray County, Kansas. This facility went into service November 22, 2012.

GMO subsequently also obtained two recent wind resource additions to purchase energy under 20-year PPAs consisting of: the 80 MW of the 200 MW Osborn, and 120 MW of the 300 MW Rock Creek, wind projects. The Osborn facility is located in DeKalb County just east of St. Joseph, Missouri and the PPA is with NextEra Energy Resources. The Rock Creek facility is located in Atchison County near Tarkio, Missouri and the PPA is with Enel Green Power, NA. The Osborn wind facility was completed in December 2016, and the Rock Creek wind facility was completed in November 2017, and all are now commercially operating.

GMO also completed a project in late 2011 to convert methane gas into electricity at the St. Joseph, MO Sanitary Landfill. The output from this 1.6 MW facility qualifies

for RES compliance; the estimated 2017 generation from the facility is approximately 11,000 MWh.

The estimated combined generation from the Gray County, Ensign, Osborn and Rock Creek wind facilities, and the St. Joseph landfill gas facility, is approximately 1,422,000 MWh. The wind generation output could be impacted by available firm transmission service.

GMO expects to have banked RECs available to meet its RES requirements based on RECs unexpired at the end of 2017, in addition to the RECs created from wind and landfill gas facilities' actual generation. Accordingly, the RECs generated from these renewable resources in addition to the banked RECs will fulfill GMO's Missouri RES non-solar requirements for the 2018 to 2020 RES Compliance Plan period shown in Table 2 below.

2.1.2 SOLAR COMPLIANCE

GMO anticipates that the acquisition of Solar Renewable Energy Credits (SRECs), principally from GMO retail customers that have received rebates for solar facility installations, will be sufficient for compliance with the Missouri solar energy requirements for the 2018 to 2020 RES Compliance Plan period. The SRECs will be transferred to GMO from qualified customer-generator's operational solar electric systems as a condition of receiving the solar rebate, a change instituted with Missouri House Bill 142 becoming law on August 28, 2013. SRECs produced from these solar electric systems will be transferred to GMO for a period of 10 years.

Additionally, in 2016 GMO added a 3 MW central station solar facility located at Greenwood, Missouri. Generation from this GMO installation is eligible for application of the additional twenty-five hundredths (0.25) credit as it is in Missouri.

2.1.3 STANDARD OFFER CONTRACT

GMO does not have a Standard Offer Contract tariff in place at this time.

2.2 RULE (8) (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 GMO's executed PPAs for wind energy. Note that the Gray County PPA is a renewed contract that originated in 2001.

Table 1: GMO List of Executed Contracts for Renewable Wind Energy

Project Name	Contracting Parent Company	Contract Type	Project Size (MW)	COD Date	Term (Yrs.)	Expected Annual Energy (MWh)
Gray County	NextEra	Energy & RECs	60	3/13/2001	15	140,000
Ensign	NextEra	Energy & RECs	98.9	11/22/2012	20	430,000
Osborn	NextEra	Energy & RECs	200*	12/15/2016	20	303,000
Rock Creek	Enel Green Power, NA	Energy & RECs	300**	11/8/2017	20	538,000

*GMO Share is 80 MW.

**GMO Share is 120 MW.

This expected annual energy reflects available transmission and interconnection capacity. Note this output is significantly above what is expected to be needed for non-solar RES compliance.

To comply with the Missouri 2018-2020 solar RES requirements, GMO expects to utilize SRECs transferred from qualified customer-generator's operational solar electric systems as a condition of receiving the solar rebate. GMO will also utilize SRECs generated by the 3 MW central station solar facility located at Greenwood, Missouri. The SRECs from both of these sources will be registered through the North American Renewables Registry.

2.3 RULE (8) (B) 1 C:

The projected total retail electric sales for each year;

GMO's projected Missouri retail electric sales and associated RES requirements are provided in Table 2 below.

Table 2: GMO Projected Retail Sales and RES Requirements

Year	Projected Retail Electric Sales (MWh)	Non-Solar Req. (MWh)	Solar Req. (MWh)
2018	8,047,105	788,616	16,094
2019	8,042,675	788,182	16,085
2020	8,020,577	786,017	16,041

2.4 RULE (8) (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;

The RES Compliance Plan detailed in this report, mirrors the renewables plan in the 2018 Integrated Resource Plan on April 2, 2018 under Case EO-2018-0269. This 2018 RES Compliance Plan includes the current status of wind resource additions which are described above, and it reflects the latest retail MWh sales forecasts.

2.5 RULE (8) (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 60 MW Gray County wind PPA being utilized for non-solar compliance was in effect for several years prior to the passage of the RES rules and was justified at the time it was executed. Since this facility was already in place, the wind energy provided by this resource represents the least cost approach for achieving non-solar compliance for the 2018-2020 RES Compliance Plan period.

Additionally, in August 2011 an RFP was issued to cover both KCP&L and GMO non-solar requirements. A complete evaluation of the proposals received was conducted and resulted in execution of a PPA with NextEra Energy for the Ensign wind facility mentioned above. GMO also executed two other 20-year PPAs, one with NextEra Energy Resources for the Osborn wind facility, and one with Enel Green Power, NA for the Rock Creek wind facility.

Note that these wind contracts were entered because of favorable economics and are not directly attributable to RES compliance. These PPAs were entered into to take advantage of low-cost energy prices and will also be used to meet future GMO non-solar RES requirements.

2.5.1 THIRD PARTY SOLAR SREC PROCUREMENT

GMO believes it will not require any additional third party SRECs for the foreseeable future, based on the inclusion of SRECs transferred from qualified customer-generator's operational solar electric systems as a condition of receiving solar rebates, along with SRECs created by the Greenwood solar facility and future solar installations to be owned by GMO.

2.6 RULE (8) (B) 1 F

A calculation of the RES retail impact limit calculated in accordance with section (5) of this rule. The calculation should be accompanied by workpapers including all the relevant inputs used to calculate the retail impact limits for the planning interval which is included in the RES compliance plan. The electric utility may designate all or part of those calculations as highly confidential, proprietary, or public as appropriate under the commission's rules;

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

2.7 RULE (8) (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 division *[Division of Energy, Department of Economic Development]**.***

The qualified customer-generator's solar electric systems from which SRECs will be acquired to achieve solar RES compliance will not be owned by GMO, as customers would be responsible for ensuring that these facilities have not caused any undue adverse air, water, or land use impacts.

The Greenwood solar facility is located in Missouri and is owned and operated by GMO.

Wind and solar generation specifically conforms to the eligible renewable energy resources listed in section (2) of Missouri Department of Economic Development – Division of Energy (MDED-DOE) rule 4 CSR 340-8.010. The Gray County and Ensign wind facilities which are located in Kansas, and the Osborn and Rock Creek wind facilities which are located in Missouri, are not owned by GMO, and the owner-operator would be responsible for ensuring that it has not caused any undue adverse air, water, or land use impacts.

All generating facilities utilized by GMO 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.

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

SECTION 3: RATE ANALYSIS

PURPOSE: This report demonstrates compliance with 4 CSR 240-20.100(5) and determines the rate impact averaged over a ten-year period, and incorporating the effects of future GHG legislation and compliance 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 annually on an incremental basis for each planning year based on procurement or development of renewable energy resources averaged over the succeeding ten- (10-) year period. The retail rate impact shall exclude renewable energy resources owned or under contract prior to September 30, 2010.

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 2018-2020 RES Compliance Plan period, the retail rate impact is limited to a maximum of 1% of the 10-year average non-RES compliant revenue requirement. GMO has presumed that the solar requirements will be met primarily with SRECs transferred from qualified customer-generator's operational solar electric systems as a condition of receiving the solar rebate.

GMO has performed this rate impact calculation in accordance with the methodology as required by the RES rules. The Commission's order in Case No. ET-2014-0059, which is final and non-appealable, also provided that 1) GMO could suspend payment of solar rebates after making solar rebate payments of at least $50 million after August 31, 2012 (which GMO has done), and 2) A consistent retail rate impact methodology is still in dispute among stakeholders but methods have been used within respective cases to address for each company. For 2018, 2019

and 2020, respectively, that calculation produces 0.063%, 0.138% and 0.158%. GMO asserts that the RES rules' methodology does not present an accurate and complete picture of the retail rate impact of GMO's spending on renewables for the following reasons:

- The above retail rate impact calculations do not take into account that GMO has paid more than $50 million in solar rebates which is in excess of the specified level as approved by the MPSC in Case No. ET-2014-0059 and is well in excess of 1% of its revenues.

- GMO initiated a RESRAM in 2014 based on annual recovery of renewable energy costs and reflects recovery of 1% of GMO's revenues reported in its last rate case.

- As shown by comparing Tables 1 and 2, GMO's renewable portfolio far exceeds the requirements of the statute.

When the above reasons are taken into consideration, GMO asserts that the rate impact of RES spending is at or above 1%.

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.

Rule (5)(B)1: The non-renewable generation and purchased power portfolio shall be determined by adding, to the utility's existing generation and purchased power resource portfolio excluding all renewable resources, additional non-renewable resources sufficient to meet the utility's needs on a least-cost basis for the next ten (10) years.

Rule (5)(B)2: The RES-compliant portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio an amount of least cost renewable resources sufficient to achieve the portfolio requirements 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.

Rule (5)(B)3: The cost of the RES-compliant portfolio shall also include the positive or negative cumulative carry-forward amount as determined in subsection (5)(G).

GMO developed projected RES expenditures and calculated the retail rate impact based on procurement or development of renewable energy resources averaged over the succeeding ten- (10-) year period. The details of the revenue requirement and rate impact calculation are provided in accompanying workpapers as required by Section (8) (B) 1 F of the RES rules.

GMO has performed this rate impact calculation in accordance with the methodology as required by the RES rules. The Commission's order in Case No. ET-2014-0059, which is final and non-appealable, also provided that 1) GMO could suspend payment of solar rebates after making solar rebate payments of at least $50 million after August 31, 2012 (which GMO has done), and 2) A consistent retail rate impact methodology is still in dispute among stakeholders but methods have been used within respective cases to address for each Company. For 2018, 2019 and 2020, respectively, that calculation produces 0.063%, 0.138% and 0.158%. GMO asserts that RES rules' methodology does not present an accurate and complete picture of the retail rate impact of GMO's spending on renewables for the following reasons:

- The above retail rate impact calculations do not take into account that GMO has paid more than $50 million in solar rebates which is in excess of the specified level as approved by the MPSC in Case No. ET-2014-0059 and is well in excess of 1% of its revenues.

- GMO initiated a RES RAM in 2014 based on annual recovery of renewable energy costs and reflects recovery of 1% of GMO's revenues reported in its last rate case.

- As shown by comparing Tables 1 and 2, GMO's renewable portfolio far exceeds the requirements of the statute.

When the above reasons are taken into consideration, GMO asserts that the rate impact of RES spending is at or above 1%.

3.3 RESOURCE PLAN SOURCES

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

The GMO RES Compliance Plan includes wind and solar resource additions based upon the assumptions used in the 2018 Integrated Resource Plan filed on April 2, 2018 under Case EO-2018-0269. As indicated above, this 2018 Plan reflects the current status of wind and solar resource additions, and these renewable additions are not required for compliance in this 2018-2020 plan period, as instead they will be used to achieve future RES compliance.

3.4 RATE IMPACT COMPARISON & DATA SOURCE

Rule (5)(B)4 continued: These comparisons will be conducted utilizing incremental revenue requirement for new renewable energy resources, less the avoided cost for non-renewable energy resources due to the addition of renewable energy resources. Such avoided costs shall be limited to those that may be included in a utility's revenue requirement for setting rates In addition, the projected impact on revenue requirements by non-renewable energy resources shall include 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. The impact on revenue requirements by non-renewable energy resources shall also include consideration of environmental risks other than those related to regulation or greenhouse gases. Any costs included to reflect consideration of such risks shall be limited to those that may be included in a utility's revenue requirement for setting rates. 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. In no event shall the calculation of rate impact double count the cost of fuel or environmental compliance cost savings.

During the 2018-2020 RES Compliance Plan period, GMO is not proposing to add any incremental renewable energy resources directly attributable to RES compliance as no additional renewable resources were required for compliance. The 10-year average non-RES compliant revenue requirement is based on the 2018 GMO IRP that includes the expected value of greenhouse gas compliance costs. The variables used are those from the 2018 GMO IRP.

3.5 REBATES

Rule (5)(C) Solar rebates payments 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 were included in the analysis as applicable and are in accordance with the Stipulation and Agreement filed October 3, 2013, Case Number ET-2014-

0059. Per the Order dated May 28, 2014 and effective June 8, 2014, Case Number ET-2014-0277, the Commission granted GMO's application to cease paying rebates for installing solar electric systems.

The following table provides the projected amounts of administrative costs and expenditures associated with the renewable resources and solar rebates during the 2018-2020 RES Compliance Plan period.

Table 3: GMO Compliance Expenditures

GMO COMPLIANCE EXPENDITURES						
Year	**S-REC Cost**	**Solar Rebates**	**NAR Administration & Other**	**Utility Scale Solar Builds Revenue Requirement**	**SJLP LFG Revenue Requirement**	**Total**
2018	N/A	$ -	$ 261,175	$ 1,082,293	$ 362,618	$ 1,706,086
2019	N/A	$ -	$ 55,104	$ 975,042	$ 312,258	$ 1,342,404
2020	N/A	$ -	$ 56,503	$ 894,550	$ 250,307	$ 1,201,361

3.6 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 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)(D) of this rule. Prudently incurred costs to comply with the RES portfolio requirements, 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. When adjusting downward the proportion of renewable energy resources, in accordance with this subsection, the utility shall give first priority to reducing

or eliminating the amount of RECs not associated with electricity delivered to Missouri customers.

For the 2018-2020 RES Compliance Plan period, no additional renewable resources are required to meet the RES requirements, therefore no adjustments are necessary.

3.7 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.

GMO does not have a federal renewable obligation at this time.

3.8 SOLAR REBATE SUSPENSION

Rule (5)(F): If the electric utility determines the maximum average retail rate increase provided for in section (5) will be reached in any calendar year, the electric utility may cease paying rebates to the extent necessary to avoid exceeding the maximum average retail rate increase by filing a request with the commission, at least sixty (60) days in advance, to suspend the solar rebate provisions in its tariff for the remainder of the calendar year.

Per the Commission's order in Case No. ET-2014-0059, GMO could suspend payment of solar rebates after making solar rebate payments of at least $50 million after August 31, 2012 (which GMO has done).

3.9 RES COMPLIANCE CARRY-FORWARD

Rule (5)(G): The utility shall calculate for each actual compliance year an annual carry-forward amount. This amount shall be calculated as the positive or negative difference between the actual costs of RES compliance and an amount equal to the one percent (1%) cap, as calculated in subsection (5)(B),

for the non-renewable generation and purchased power portfolio from its most recent annual RES compliance plan filed pursuant to subsection (7)(B) of this rule. The positive or negative cumulative carry-forward amount shall be calculated by accumulating the annual positive or negative annual carry-forward amounts. The initial cumulative carry-forward amount shall be equal to the sum of the annual carry-forward amounts for the period January 1, 2015, through December 31, 2015. Any annual carry-forward amounts shall be based on the revenue requirements analysis included in the utility's Annual RES Compliance Plan filed pursuant to subsection (8)(B) for each respective year. The positive or negative cumulative carry-forward amount shall be included in the cost of the RES-compliant portfolio for purposes of calculating the retail rate impact, as calculated in subsection (5)(B). Nothing in this subsection shall authorize recovery in excess of the one percent (1%) cap, as defined in subsection (5)(B).

GMO calculated the retail rate impact and carry-forward amount in accordance with these RES rules including the illustration provided as Attachment A to the rules. The details of these calculations are provided in accompanying workpapers (Attachment A) as required by Section (8) (B) 1 F of the RES rules.

3.10 RELIANCE ON RETAIL RATE IMPACT

Rule (5)(H): If in reliance on a calculation of the RRI as provided for herein, an electric utility commits to fund a utility-owned renewable energy resource, or contracts to acquire energy or capacity from a renewable energy resource that, based on the relied-upon RRI calculation would not cause the electric utility to exceed such RRI, then the prudently incurred costs of such renewable energy resource and such energy and capacity shall constitute RES compliance costs even if including such costs in later calculations will cause the electric utility to exceed the RRI calculated at a later time. To the extent the prudently incurred costs of a utility-owned renewable energy resource, or contracted for energy or capacity from a

renewable energy resource, cause an electric utility to exceed the RRI calculated at a later time, such excess sum shall be included in the determination of the carry-forward amount in accordance with subsection (5)(G).

GMO has not committed to fund a utility-owned renewable energy resource, and has not contracted to acquire energy or capacity from a renewable energy resource that would impact the retail rate impact as described in the RES rules.

3.11 ADDITIONAL SOLAR REBATES

Rule (5)(I): Not withstanding anything in subsection (5)(H), until June 30, 2020, if the maximum average retail rate increase, as calculated pursuant to subsection (5)(B) would be less than or equal to one percent (1%) if an electric utility's investment in solar-related projects initiated, owned, or operated by the electric utility is ignored for purposes of calculating the increase, then additional solar rebates shall be made available and included in rates in an amount up to the amount that would produce a retail rate increase equal to the difference between a one percent (1%) retail rate increase and the retail rate increase calculated when ignoring an electric utility's investment in solar projects initiated, owned, or operated by the electric utility.

No additional solar rebates were made available as per the Order dated May 28, 2014 and effective June 8, 2014, Case Number ET-2014-0277, the Commission granted GMO's application to cease paying rebates for installing solar electric systems, and approved the substitute tariff sheets that implement the cessation of payments.

3.12 RATE CALCULATIONS FILING

Rule (5)(J): Each electric utility shall calculate its actual calendar year RRI each year and shall file those calculations as part of its annual RES compliance plan. The electric utility may designate all or part of those

calculations as highly confidential, proprietary, or public as appropriate under the commission's rules.

The details of the revenue requirement and rate impact calculation are provided in workpapers (Attachment A) accompanying this RES Compliance plan as required by the RES rules.