

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

In the Matter of the Resource Plan of )  
KCP&L Greater Missouri Operations )  
Company )

File No. EO-2013-0538

## REPLY COMMENTS OF SIERRA CLUB

Intervenor Sierra Club respectfully submits these reply comments regarding KCP&L Greater Missouri Operations Company's ("GMO") 2013 Integrated Resource Plan ("IRP") Annual Update Report in order to correct certain erroneous statements in GMO's response to Sierra Club's initial comments, and to address information first provided by GMO after the comment deadline. As explained in Sierra Club's initial comments and the accompanying technical memorandum from Synapse Energy Economics, GMO's 2013 IRP does not satisfy the requirements of 4 CSR 240 Chapter 22 because the company failed to select the least-cost plan as its preferred resource plan, and provided only an inadequate and misleading excuse for doing so. The 2013 IRP also underestimates the environmental compliance costs facing its Sibley Generating Station, provides little explanation for why other likely lower cost plans were not evaluated, and ignores the declining costs of wind resources. GMO's September 13 response only cursorily discusses some of the deficiencies identified in Sierra Club's initial comments. That response includes a couple of critical misstatements, and largely fails to address the substance of the points raised in Sierra Club's comments, much less remedy the deficiencies that have been identified.<sup>1</sup> In light of these continuing deficiencies, and those identified by other

<sup>1</sup> These reply comments only address a subset of the points raised by GMO in its September 13 response and documents produced after the initial comment deadline. The lack of discussion in this document of any point raised by GMO should not be construed to constitute Sierra Club's agreement with that point, and Sierra Club specifically reserves the right to address additional issues or arguments in any future filings.

intervenors, discovery and a hearing should be held so that the Commission can ensure that GMO faithfully carries out the least-cost resource planning required by Missouri's IRP rules.

**I. GMO Has Not Justified Its Failure to Select the Least-Cost Resource Plan.**

Missouri's IRP rules make clear that a utility is required to "use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing the preferred resource plan." 4 CSR 240-22.010(2)(B) (emphasis added). A utility is able to avoid this requirement only if it demonstrates that "other considerations," such as risk, justify selecting a resource plan that does not minimize NPVRR. 4 CSR 240-22.010(2)(C). If a utility seeks to select a resource plan that is not the lowest cost, it must:

Explicitly identify and, where possible, quantitatively analyze any other considerations which are critical to meeting the fundamental objective of the resource planning process, but which may constrain or limit the minimization of the present worth of expected utility costs. The utility shall describe and document the process and rationale used by decision-makers to assess the tradeoffs and determine the appropriate balance between minimization of expected utility costs and these other considerations in selecting the preferred resource plan and developing the resource acquisition strategy.

(*Id.*) In its September 13 response, GMO continues to fail to "describe and document the process and rationale" it used to select a higher cost resource plan. Instead, GMO merely reiterates that it "prefers to convert Lake Road 4/6 to natural gas/fuel oil as opposed to retirement" because conversion would "reduce[ ] the amount of capacity GMO would need to purchase for several years." (GMO Resp. at 12). But purchasing such capacity is a lower cost option to conversion of Lake Road 4/6. And while GMO raises the risk of higher than projected capacity prices, it still fails to explain why it is appropriate to select a higher cost resource plan to hedge against that risk even as GMO continues to ignore the possibility of lower than projected capacity prices.

GMO also appears to have over-estimated the revenue that would be generated by a converted Lake Road 4/6 by unreasonably projecting that the plant would have a capacity factor increasing to \*\*\_\_\_\_\_\*\* by 2033. (SC Comments at 4, Attachment A at 17-19). Such a high capacity factor is unusual for a peaking plant such as Lake Road 4/6, and suggests that GMO failed to correctly update in its modeling the generation cost to reflect the higher fuel costs for the plant after conversion. (*Id.*) In response, GMO claims that it assumed a significantly lower capacity factor for a gas-fired Lake Road 4/6 than if that plant were fueled by coal. (GMO Resp. at 12). GMO's model, however, does not sustain that claim. For example, the same GMO file that was used to determine that Lake Road 4/6 would have an expected capacity factor of \*\*\_\_\_\_\_\*\* in 2033 under GMO's preferred plan, AICGA, shows that if Lake Road 4/6 were to continue burning coal, it would have a capacity factor of \*\*\_\_\_\_\_\*\* under plan AAAGA.<sup>2</sup> Such capacity factors are unlikely, and suggest that GMO's modeling overstates the amount of revenue that a converted Lake Road 4/6 would be likely to generate, thereby reducing the extent to which the conversion scenario is more costly than the retirement scenario.

## **II. GMO's Preferred Resource Plan Underestimates the Likely Environmental Compliance Costs at Sibley Station.**

GMO assumes in the 2013 IRP that it can bring the Sibley Station into compliance with the mercury and particulate matter ("PM") limits in the Mercury and Air Toxics Standard ("MATS") rule for a capital expenditure of approximately \*\*\_\_\_\_\_\*\* (GMO 2013 IRP Update at 124.) Such spending would be for the installation of an Activated Carbon Injection ("ACI") system and upgrade of the plant's Electro-Static Precipitators ("ESP") by April 2016.

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<sup>2</sup> Capacity factors were calculated by compiling the annual generation at Lake Road from the spreadsheet provided by the Company, GMO Gen & Emissions Plan Summaries\_Final.xlsx, and dividing this by the maximum potential energy produced from the 90MW facility on an annual basis.

With respect to the separate MATS requirement to reduce acid gas emissions, GMO states that use of “low-chlorine coal,” rather than installation of Dry Sorbent Injection (“DSI”), will be sufficient to achieve compliance. (*Id.*) The 2013 IRP, however, includes no data, such as stack test results, supporting that contention, even though the company’s MEGA study specifically recommended that “GMO perform stack testing to confirm whether the Sibley units are natively compliant or require DSI to meet the MATS HCL limit as assumed herein.” (SC Comments at 5-7, *citing* MEGA Study at p. 2-8).

In its September 13 response, GMO attempts to dismiss this issue by reporting that it carried out stack testing at Sibley on May 16-17 and 29-30. (GMO Resp. at 14). What GMO did not do, however, was present the results of such stack testing, even though it was carried out more than three-and-a-half months ago. As such, GMO has still provided no basis for concluding that its low-chlorine coal strategy will be sufficient to achieve compliance with the MATS HCL limit.

This continued deficiency is critical for at least two reasons. First, GMO’s own MEGA Study suggests that low-chlorine coal may not be sufficient to bring the Sibley units into compliance with the HCL limit. In particular, the MEGA Study estimates, based on the expected range of chloride in PRB coal, that the current HCL emissions rate at Sibley ranges between \*\*\_\_\_\_\_\*\*. (MEGA Study at p. 2-8). If accurate, GMO would have to reduce its HCL emissions by \*\*\_\_\_\_\_\*\* to achieve the 0.002 lb/mmBtu HCL MATS limit, which seems a questionable feat given that GMO claims that it plans to use the same type of coal that it is currently using.<sup>3</sup> (GMO Resp. at 13). Second, if the stack testing shows that

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<sup>3</sup> As Sierra Club explained in its initial comments, the 2013 IRP fails to account for any operational and fuel cost increases related to any change in the type of coal burned at Sibley Station that may be necessitated by GMO’s low-chlorine coal strategy. (SC Comments at 6-7). In its September 13 response, GMO contends that no additional costs need to be assessed because the coal that the company would be burning under the low-chlorine coal strategy

low-chlorine coal is not sufficient to achieve HCL MATS compliance, then GMO would need to install DSI at Sibley by April 2016 at an estimated capital cost of \*\*. (MEGA Study at p. 4-18). Such additional, unaccounted for cost could be reduced or eliminated, however, under a resource plan that retires some or all of Sibley Units 1, 2, and 3 in 2016.<sup>4</sup>

The 2013 IRP may also significantly underestimate the cost of achieving PM MATS compliance. The \*\* figure assumed in the 2013 IRP for MATS compliance includes \*\* to rebuild ESPs on Units 1 and 2, and \*\* to rebuild the ESP on Sibley Unit 3. (GMO 2013 IRP at p. 124 Table 65). The Phase 1 MEGA Study, however, identifies ESP rebuilds, at an installed cost of \*\* as necessary to achieve the “significant PM reductions” needed for PM MATS compliance. (MEGA Study at p. 1-7, Table 1.2, p. 2-8 and Table 2.4). The \*\* figures for Sibley ESP rebuilds included in the 2013 IRP appear to come from a separate spreadsheet titled “Sibley MEGA Phase 2 ESP.” No explanation is provided regarding the differences between the ESP cost estimates provided in the Phase 1 MEGA Study versus the Phase 2 MEGA spreadsheet, or why the latter is purportedly adequate to achieve PM MATS compliance when Burns & McDonnell had previously determined that a far more costly ESP rebuild would be needed.<sup>5</sup>

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is the same as the company is currently burning. (GMO Resp. at 13). That unsupported contention, however, appears to be inconsistent with the MEGA Study, \*\*

\*\* in assessing MATS compliance at Sibley Station. (MEGA Study at p. 2-7). Regardless, GMO does not dispute in its response that the 2013 IRP fails to account for the fact that the use of low-chlorine coal increases operating costs for the ACI system that the company plans to use to achieve compliance with MATS mercury limits. (SC Comments at 7 and Attachment A at 12).

<sup>4</sup> The 2013 IRP inexplicably fails to evaluate any resource plan in which Sibley Unit 3 would be retired in 2016, before the costs of MATS compliance would need to be incurred. (SC Comments at 5). In its technical comments, Synapse explained that such Sibley Unit 3 2016 retirement scenarios could lead to a lower cost resource plan and, therefore, should have been evaluated. (SC Comments, Attachment A at 20-23). In response, GMO provides no substantive reason for failing to evaluate such scenarios, instead simply asserting that its consideration of other scenarios was sufficient. (GMO Resp. at 12).

<sup>5</sup> GMO promised during the stakeholder meetings on the 2012 IRP to provide the MEGA Study to the stakeholders, but it did not do so until August 20, the day before the comment deadline on the 2013 IRP, and then only after Sierra Club specifically requested that study in an August 9 letter. (See SC Comments, Attachment B.) GMO’s delay in

### **III. GMO's September 13 Filing Confirms that the Company Has Failed to Evaluate Least-Cost Wind Resources.**

As Sierra Club has explained, GMO erroneously assumed in its modeling that wind resources would cost **\*\* \_\_\_\_ \*\*** per MWh, which is significantly higher than the price of wind power purchase agreements ("PPAs"), which have fallen to as low as \$31 per MWh. (SC Comments at p. 11, Attachment A at 16.) GMO's use of an inflated wind power cost also ignores the fact that wind costs have increasingly dropped year-on-year over time and are projected to continue doing so. (*Id.*). As such, GMO has failed to satisfy its duty to "collect generic cost and performance information sufficient to fairly analyze and compare" wind resources to other supply-side alternatives. 4 CSR 240-22.040(1).

In its September 13 filing, GMO contends that its use of a **\*\* \_\_\_\_ \*\*** per MWh cost for wind was appropriate because it reflects the higher cost of owning a wind resource, which has a "completely different financial structure" than a PPA for wind power. (GMO Resp. at 15). GMO has provided no explanation for why the "completely different financial structure" of wind power ownership would cause such ownership to cost **\*\* \_\_\_\_\_ \*\*** as a wind PPA. But, regardless, if PPAs offer a lower-cost approach for obtaining wind power, then prudent and least-cost planning requires the company to evaluate PPAs rather than only the apparently higher cost ownership option. GMO's September 13 filing admits that the company did not do so.

### **IV. The Commission Should Allow For Further Fact-Finding and Evaluation By Holding a Hearing, Preceded by Discovery, on GMO's Deficient IRP.**

In light of the deficiencies and errors identified above, in Sierra Club's initial comments, and in filings by other parties, the Commission should allow for discovery and schedule a

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producing the March 2013 MEGA Study until August 20 hindered the ability of Sierra Club to identify in its initial comments all of the shortcomings and inconsistencies in GMO's 2013 IRP.

hearing regarding GMO's IRP to ensure that the company's resource planning fully conforms to the requirements of 4 CSR 240 Chapter 22. (SC Comments at 12). In response, GMO suggests that a hearing is not needed because the company is not planning to make any "significant generating resource decisions" in the near future. (GMO Resp. at 6). In reality, however, GMO is making such decisions, as GMO must start expending resources soon to bring Sibley Station into compliance with the MATS rule if the potentially lower-cost option of retiring all three Sibley units in April 2016 is not pursued. As such, this IRP comes at a critical time for GMO and its ratepayers, and a hearing is necessary to ensure that the company's planning around these resource issues fully complies with Missouri's IRP rules.

## **V. Conclusion**

For the reasons set forth above, Sierra Club respectfully requests that the Commission issue an order pursuant to 4 CSR 240-22.080(16) that establishes a procedural schedule for discovery and a hearing on the numerous deficiencies and concerns with GMO's 2013 IRP analysis identified by Sierra Club and the other intervenors.

Respectfully submitted,

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### **CERTIFICATE OF SERVICE**

I hereby certify that a true and correct PDF version of the foregoing was filed on EFIS and sent by email on this 23rd day of September, 2013, to all counsel of record.

/s/ Shannon Fisk  
Shannon Fisk