

# ATTACHMENT A

Reply Comments of Peabody Energy Co. to MO PSC, File No. EW-2012-0065

Issues	Ameren Missouri	AMEC (Coops/REAs)	Empire	KCP&L/GMO	Sierra Club
<b>BB1 – 6% Heat Rate Increase</b>	-6% improvement across the Ameren Missouri fleet is not achievable; estimates between 1-1.5% is more realistic -EPA estimates are based on assumptions that don't apply to Ameren Missouri	-6% efficiency improvement is not achievable -EPA uses incorrect methodology to estimate heat rate improvements, may confuse heat rate efficiency with boiler efficiency -New Source Review will likely be triggered for some projects; these rules discourage and prevent utilities from performing plant efficiency projects	-It will be extremely difficult, if not impossible to achieve an additional 6% improvement -Some new heat rate improvement projects would fall under New Source Review, resulting in more onerous and limiting process	- 6% remaining coal fleet heat rate improvement is not reasonably achievable -KCP&L has identified 35 projects that could decrease heat rate at coal-fired EGUs by 1.6% at a cost of \$60 million with \$2.5 million annual O&M costs -No indication of how New Source Review would be addressed for related projects	-EPA's 6% estimate is likely conservative; most EGUs could achieve even greater reductions -EPA should set the standard based on at least 7-10% efficiency improvements
<b>BB2 – NGCC 70% Dispatch</b>	-If there are constraints, RTO would need to re-dispatch the system, build transmission to increase capacity, and/or curtail load, requiring new infrastructure -EPA fails to address that states don't control dispatch of NGCC units in RTO	-Proposed 111(d) rule should not be more stringent than proposed 111(b) rule for new generating units -2012 is not representative of normal plant operations and does not take into account variations in natural gas prices	-Empire's SLCC unit has technical potential to reach 70% capacity factor, but limiting factors such as RTO constraints are outside of Empire's control	-Natural gas transmission constraints will limit increases in gas-fired generation in MO -Pipelines that serve MO were designed to serve winter heating load; do not have the capacity to simultaneously serve winter natural gas heating load and coal-	-EPA should ensure final rule does not incentivize construction of any new fossil fuel-fired generation -New NGCC generation is not an acceptable compliance strategy

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	markets -Independent operator control over dispatch will affect utility's ability to control emissions; utility will need to bid units in a manner that results in RTO dispatching NGCC at 70% capacity	-EPA did not consider constraints to natural gas supplies and constraints to T&D system in requiring 70% capacity -EPA did not account for time required to finance, permit, and construct new NGCC plants -EPA did not consider environmental impacts to historical sites, endangered species and water resources when requiring construction of additional CCNG		fired generation displaced to natural gas -EPA assumes pipeline capacity will be expanded to meet all electric sector needs; ignores realities in natural gas markets	
<b>BB3 – RE/ Nuclear</b>	-Entire “at risk” category in BB3 should be eliminated from target rates -States should be allowed to decide whether to allow 6% of unregulated nuclear generation to go	-EPA doesn't consider constraints to T&D systems in requiring construction of new RE -Transmission system construction timeline does not support	-MO is not the optimum location for wind or solar installations -Utilities that operate in multiple states will have difficulty in complying with the regulation, <i>e.g.</i> the	-Reducing target renewable generation for each category would require ~340 MW of utility-scale solar, 1,200 MW of wind, and 17 MW of biomass capacity additions -Should Callaway in any	-MO can achieve its carbon reduction goal without increasing its reliance on expensive and potentially dangerous energy sources like nuclear -EPA's 12.8 TWh projection for RE is

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	toward compliance -Missouri RPS only applies to investor owned utilities; EPA incorrectly assumes RPS applies to all utilities in state	EPA's 2020 rule start date -EPA estimates RE would only displace coal generation and overestimates emission reductions in BB#3 -EPA does not consider NEPA changes and delays due to federal law in establishing timelines	likelihood for MO, OK, and AR (Empire's operating states) working together is very small -States should be credited for keeping nuclear generation online	year generate less energy than EPA assumes (at 90% capacity factor), the state would need to offset any shortfall -While nuclear, wind and hydro can be considered zero-emitting resources, EPA treats them all differently	achievable
<b>BB4 – 1.5% Annual Load Reductions</b>	-2020-2029 targets in EPA's calculation of CO2 emission rate are "likely unattainable"	-It is unfair for EPA to ignore EE gains already made by the cooperatives -AECI cannot mandate that distribution cooperatives or their members participate in DSM or other consumer-based EE programs	-Achieving EPA's aggressive level of EE savings will be challenging -Utilities cannot guarantee EE savings as it requires customer participation and financial investment from customers, especially in Empire's predominantly rural territory -Industry is facing low load growth and relatively low fuel costs, making it more difficult for EE	-Anticipates it will be short of the 1.5% incremental EE growth target, but cumulative EE savings are projected to exceed the 9.92% cumulative target in 2030. -Unclear whether the 1.5% annual increase in energy savings is reasonable, achievable and sustainable on a national level – this level of performance has not been sustained nationwide	-Utilities are leaving cost-effective EE on the table as they constrain planning and economic models to avoid choosing EE as a resource -EPA will need to ensure some entity – either the state or individual utilities- is required by law to achieve 1.5% savings level starting in 2020

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			programs to pass cost effectiveness tests -Ramping up EE savings to EPA's suggested level would take major shift in customer attitudes toward EE programs		
<b>Cost of EPA Carbon Cap</b>	-Estimates cost of GHG Compliance Plan approximately \$4 billion over the next 20 years -Cost of additional 200-300 MW of wind generation above current RES requirements could cost \$400-\$750 million	-EPA did not but should consider the costs and project delays for obtaining ROWs and constructing natural gas supply pipelines	-Least cost options do not favor RE sources as compared to other options -EPA does not acknowledge the 1% rate increase cap set on the MO RE standard by voters -Alternate does not account for the costs of reaching the benchmark -Coal generating plants are some of the most economical generation resources in the region -Electric prices likely to increase under the rule	-Cost of generation would be significantly higher for generation displaced from coal to natural gas: gas is more expensive than coal and increased demand will further increase gas prices -Estimates renewable capacity additions will cost \$1.2 billion for utility-scale solar, \$2 billion for wind, and \$76 million for biomass (not including transm. upgrade costs) -Adding 1.5 million MWhs of RE from wind will cost \$650-\$700 million	-RE generation and EE measures "are a far more cost-effective means to achieving compliance" than construction of new natural gas combined cycle generation -MO can ensure compliance by investing in EE and RE resources, with an emphasis on wind, while at the same time reducing overall system costs for utilities and ratepayers