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Sent: Friday, December 23, 2016 11:16 AM
To: A-AND-R-DOCKET
Cc: Montgomery, Jane E.; Risley, David
Subject: Petition for Reconsideration of final CSAPR Update Rule: EPA-HQ-OAR-2015-0500
Attachments: PSGC CSAPR Update Rule EPA-HQ-OAR-2015-0500 Petition for Reconsideration 12_23_2016.PDF

Importance: High

Dear Administrator McCarthy,

On behalf of Prairie State Generating Company, attached please find a Petition for Reconsideration of the Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, EPA-HQ-2015-0500, final rule (Oct. 26, 2015). If you have any questions pertaining to this petition, please feel free to contact me at (312) 258-5550.

Thank you,

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December 23, 2016

U.S. Environmental Protection Agency
EPA West (Air Docket)
Room 3334
1301 Constitution Avenue, NW
Washington, D.C. 2004

Electronic filing via Email to A-and-R-Docket@epa.gov

**Re: CSAPR Update Rule Petition for Reconsideration; EPA DOCKET ID
No. EPA-HQ-OAR-2015-0500.**

Dear Administrator McCarthy:

On behalf of Prairie State Generating Company, LLC (PSGC or Prairie State), the undersigned asks the U.S. Environmental Protection Agency (“EPA”) to reconsider aspects of the final Cross-State Air Pollution Rule Update Rule (CSAPR Update Rule). You signed the CSAPR Update Rule on August 30, 2016, and the final rule was published in the *Federal Register* on October 26, 2016. *Cross-State Air Pollution Rule Update for the 2008 Ozone National Ambient Air Quality Standards*, 81 Fed. Reg. 74504 (Oct. 26, 2016) (CSAPR Update Rule). The rule becomes effective 60 days after the date of publication in the Federal Register, or on December 27, 2016.

PSGC now petitions EPA to reconsider a key aspect of the rulemaking as it applies to PSGC and Illinois. Failure to do so would violate the CAA (42 U.S.C. § 7607(d)(7)(B)) and the Administrative Procedure Act (APA), 5 U.S.C. § 551 *et seq.*, 5 U.S.C. § 701 *et seq.* Specifically, EPA handicapped newer units such as PSGC in the final rule by not taking into account their heat input under normal operating conditions for purposes of calculating allowances under the CSAPR. Indeed, the allocations for these newly constructed units hamper operation of this efficient unit compared to less efficient units in the state. The Administrator must therefore “convene a proceeding for reconsideration of the rule[s] and provide the same procedural rights as would have been afforded had the information been available at the time the rule[s] [were] proposed.” 42 U.S.C. § 7606(d)(7)(B). In light of the final rule’s significant flaw with respect to a matter of central relevance, the Administrator should grant this request for reconsideration and reissue the rule with adjusted state and unit allocations as they apply to Illinois and PSGC.

I. INTRODUCTION

PSGC is the operating company of the Prairie State Energy Campus (PSEC), a stand-alone, technologically advanced energy facility located in Washington County,

Illinois, approximately 60 miles southeast of St. Louis, Missouri. The PSEC is comprised of two approximately 800 MW coal-fired, supercritical steam electric generating units and an adjacent underground coal mine. Six public power entities and three electric cooperatives, own the PSEC.¹ One hundred percent of PSEC's member-owners are community-owned, non-profit utilities that are committed to providing clean, reliable, and affordable base load electricity to 2.5 million families in hundreds of communities in the Midwest and Mid-Atlantic regions, across eight states (Illinois, Indiana, Kentucky, Michigan, Missouri, Ohio, Virginia, and West Virginia).

PSEC's power plant design incorporates spiral-wound supercritical pulverized coal (SCPC) boiler technology and \$1 billion of emissions control equipment, consuming less coal to produce more energy, while achieving one of the best levels of pollution control in the country. PSEC utilizes domestic Illinois bituminous coal as its sole fuel source, derived from its adjacent underground coal mine, eliminating the carbon dioxide (CO₂) emissions associated with coal transportation. With its combined design efficiencies, PSEC's carbon foot print is significantly smaller than the typical U.S. coal plant.

PSEC's units have been designed and constructed with some of the most advanced heat rate optimization measures in the industry, including a neural network, intelligent soot-blowing, combustion optimization, an air heater leakage control monitoring system, and real-time instrumentation health monitoring and diagnostic software to continually monitor and adjust operations both automatically and manually for efficient and effective operational performance. The latest equipment design is employed for maximum efficiency, such as updated airfoil technology for turbine blades and nozzles, variable pitch axial induced draft and forced draft fans sized for optimal performance, advanced packing in the cooling tower system, optimized feedwater heater surface area, and rectifier beams for better airflow distribution and increased performance of the flue gas desulfurization (scrubber) systems. By incorporating this technology, PSEC's technology resulted in the plant having the 11th lowest heat rate in the nation in 2014.²

PSEC was built with the Best Available Control Technology (BACT)³ for criteria pollutants and Maximum Achievable Control Technology (MACT) for hazardous air pollutants and achieves one of the best levels of pollution control in the industry.

¹ American Municipal Power, Inc., Illinois Municipal Electric Agency, Indiana Municipal Power Agency, Missouri Public Utility Alliance, Prairie Power, Inc., Southern Illinois Power Cooperative, Kentucky Municipal Power Agency, Northern Illinois Municipal Power Agency, and Wabash Valley Power Association.

² See e.g. <http://www.power-eng.com/articles/print/volume-119/issue-12/features/2014-operating-performance-coal-s-utilization-increases-a-little-natural-gas-use-climbs-more-in-2014.html>.

³ EPA's final Section 111(b) BSER determination for reconstructed fossil fuel-fired utility boilers (large sources) (New, Modified, and Reconstructed Source Rule) is what PSGC was permitted to construct in 2006.

PSGC's units utilize both combustion (ultra-low nitrogen oxides (NO_x) burners and combustion optimization systems) and post-combustion (selective catalytic reduction (SCR)) NO_x control technologies to control emissions of NO_x, dry and wet electrostatic precipitators to control particulate matter (PM) emissions, and wet flue gas desulfurization to control emissions of sulfur dioxide (SO₂). PSEC emissions profile is one of best in the nation, and in 2014, PSEC ranked as having the 15th lowest NO_x emission rate among coal-fired generators.⁴

Post shakedown normal commercial operations just began in 2014, so PSEC has only begun returning the operating revenues necessary to repay the significant capital commitments made by the owners to develop this state-of-the-art facility.

Prairie State should not be required to achieve any further reductions of NO_x at its units or have to purchase a higher percentage of allocations necessary to achieve normal operation on the market than older coal-fired power plants in the state with longer operating histories.

II. PSEC MEETS THE REQUIREMENTS FOR RECONSIDERATION

The CAA directs that the Administrator "shall convene a proceeding for reconsideration" if two showings are made: first, that it was either impracticable to raise the relevant objection during the comment period or the grounds for such objection arose after the period for public comment (but within the timeframe allowed for judicial review), and, second, that the objection is of central relevance to the outcome of the rule. 42 U.S.C. 4607(d)(7)(B). The elements necessary to support reconsideration are satisfied here.

The final rule changed the method of determining baseline heat input for all units, but did not address issues specific to newer units related to achieving normal operations late in the baseline period. The final rule also does not adequately account for PSEC's already very low NO_x rates. This disadvantages, compared to other states and units, Illinois and PSEC. Because the final rule changed the approach from the proposal in ways that could not have been anticipated, the grounds for this objection arose after the period for public comment in the final CSAPR Update Rule, published in the *Federal Register* on October 26, 2016. Moreover, PSEC objects to an issue of central relevance to the outcome of the rule because it impacts how NO_x allowances are allocated to the state in a way that disadvantages the state of Illinois and PSEC.

⁴ See e.g. <http://www.power-eng.com/articles/print/volume-119/issue-12/features/2014-operating-performance-coal-s-utilization-increases-a-little-natural-gas-use-climbs-more-in-2014.html>.

III. THE ILLINOIS STATE BUDGET UNDERESTIMATES THE FULL HEAT INPUT FOR THE NEWEST AND LARGEST UNITS IN THE STATE, AND THEREFORE UNFAIRLY PENALIZES THE STATE.

EPA's calculated heat input for PSGC in the final CSAPR Update Rule is not a logical outgrowth of the proposal. EPA's approach was not available until issuance of the Notice of Data Availability (NODA) and final rule such that PSGC could not "have anticipated that the change was possible." *CSX Transportation, Inc. v. Surface Transportation Board*, 584 F.3d 1076, 1079-1080 (D.C. Cir. 2009); *Availability of Data on Allocations of Cross-State Air Pollution Rule Allowances to Existing Electricity Generating Units*, EPA-HQ-OAR-2015-0500-0386 (Sept. 30, 2016). Rather, "the final rule was surprisingly distant from the proposed rule." *Id.* Federal courts have enjoined agencies from enforcing two recently promulgated environmental rules for failing the "logical outgrowth" test. In *State of North Dakota, et al. v. U.S. EPA*, Civil No. 3:15-cv-59 (D.N.D. 2015), the court struck down EPA's Waters of the United States final rule because it was "different in degree and kind" from the proposal, holding that an agency cannot "transmogrify" its final rule. In *States of Wyoming, et al. v. U.S. Dept. of the Interior, et al.*, Case No. 2:15-CV-04-SWS (D. Wyo. 2015), the court struck down the Bureau of Land Management's (BLM's) federal hydraulic fracturing rule, citing the rule's failure to pass the "logical outgrowth" test in several key areas. The features of the Illinois power market demonstrate that CSAPR fails to pass the logical outgrowth test with respect to the PSGC's estimated heat input at its Washington County energy center.

A. The Final CSAPR Update Rule Only Partially Addresses the Dilemma PSGC Raised in its February 2016 Comment and EPA's Partial Fix Results in Further Inequities for the State's Budget.

In the CSAPR Update Rule, EPA requires ozone season NO_x reductions from EGUs to address the interstate transport of ozone. Specifically, the rule quantifies near term ozone season NO_x emission reductions to reduce interstate emission transport for the 2008 ozone NAAQS to assist downwind states with timely attaining the 2008 ozone NAAQS by the deadline, which is July 20, 2018 for areas designated as Moderate. 81 Fed. Reg. 74516 (Oct. 26, 2016).

Treatment of units transitioning from new to existing status cannot be done in one fell swoop when the "on" switch is flipped. Shakedown takes time and is generally fraught with ups and downs in performance. Under the original CSAPR, EPA treated PSGC as new units that would acquire ozone season allowances through the New Unit Set-Aside (NUSA) pool. Specifically, PSGC in its February 2016 Comment advised EPA that design parameters should be used for newer units, rather than parameters achieved during "shakedown" years that inaccurately represent future expected operations and, between that change and the other changes made between the proposed and final versions, PSGC could not have anticipated the outcome of the final rule.

The changes between the original CSAPR and the proposed CSAPR Update Rule purportedly allow more uniform treatment of EGUs. However, for newer existing units like those at PSEC, the approach in the Final Update Rule does not fix the problem originally identified. To be treated on a par with other existing units, the heat input

used should be the “design” heat input, not an average that includes start-up years. Under the proposed CSAPR Update Rule, EPA categorized PSEC’s units as “existing.”⁵ While categorizing PSEC as “existing,” the final rule “adjustments” could not have been foreseen and work an injustice on the State of Illinois’ budget and PSEC’s allowance allocation.

The allowance allocations were issued in final form in a NODA published in the Federal Register on September 30, 2016. In the NODA, as explained in the final CSAPR Update Rule, EPA revised its approach. EPA uses a unit level average of the three highest non-zero ozone season heat inputs from 2011 to 2015 to calculate the percentage share of the state’s ozone season heat input. EPA then uses this heat input to calculate a unit’s emission allowance allocation. Though EPA’s evaluation focuses on a more recent timeframe for analysis, it still does not adequately represent the normal operating conditions of newer units.

Twenty-one coal-fired steam generating plants, including PSEC, came on-line in 2010 or after and prior to January 1, 2015; 12 coal-fired steam generating plants, including PSEC, came on-line in 2011 or 2012 and prior to January 1, 2015. For these 21 coal-fired steam generating plants, located across the country, EPA should use, at a minimum, only the single highest unit non-zero ozone season heat input between 2011 and 2015 heat input values (rather than a three-year average) to allocate allowances OR use the design values. Almost all of these units are already meeting limits that are lower than or nearly as low as the proposed 2018 IPM emission rate for their respective states and have already spent hundreds of millions of dollars on installing state-of-the-art combustion and post-combustion NO_x control equipment.

EPA reasons that allocating allowances based on historic heat input is “fuel-neutral, control-neutral, transparent,” and “based on reliable data.” 81 Fed. Reg. 74564. While this may be the case for units with long operating histories, it is not so for units which have just begun normal operations. Consequently, units like PSEC, now categorized as existing units, require an allocation method that more appropriately recognizes their heat input under normal operating conditions. PSEC asks that, for these “new units,” EPA use a unit level average based on the single highest unit non-zero ozone season heat input between 2011 and 2015, rather than a three-year average of heat inputs between 2011 and 2015 to treat newly operating units. Not including the shakedown/start-up periods for these “newer units” will allow comparability to units with longer operating histories. PSEC understands that in normal circumstances “[s]electing the three highest, non-zero ozone season heat input values within the five-year baseline reduces the likelihood that any particular single year’s operations (which might be negatively affected by outages or other unusual events) [to] determine a unit’s

⁵ “For the 23 states included in this proposed rulemaking for the 2008 ozone NAAQS, the EPA proposes to identify an ‘existing unit’ as one that commenced commercial operation prior to January 1, 2015.” 80 Fed. Reg. 75742-43.

allocation”⁶ is more equitable; however, for newly operating units with unusual shutdown/startup periods during this timeframe, EPA’s approach has a negative effect. In an ironic twist that certainly this rule didn’t intend to make, the newest, cleanest units are the most disadvantaged by this failure to recognize early operational issues.

B. The NO_x Emission Budget Does Not Recognize Illinois’ Early NO_x Reductions Under State Law.

EPA refined its methodology for establishing emission budgets that reflect EGU NO_x reduction potential by using historical state-level NO_x emission rates adjusted by modeled NO_x reduction potential (modeled by IPM). 81 Fed. Reg. 74547. EPA started with 2015 state level monitored and reported EGU NO_x emissions and heat input and then adjusted the dataset to account for known changes in the final rule budget setting methodology (81 Fed Reg 74547). The dataset was adjusted for three categories of known changes in the power sector occurring between 2015 and 2017: (1) announced new SCR at existing EGUs; (2) announced coal-to-gas conversions; and (3) announced retirements. As discussed above, PSEC asks for another, separate adjustment for the 21 newer units so that heat input is based on the design values or the single highest unit non-zero ozone season heat input between 2011 and 2015 to treat these newest cleanest units equitably with existing units.

EPA intended the adjustments to ensure that the emission budgets established by this rule reflect EGU NO_x reductions both from already announced power sector changes and further EGU NO_x reductions quantified in the EPA’s EGU NO_x reduction potential analysis.

These adjustments do not recognize the requirements that new units, having gone through a PSD permitting process, operate at extremely low NO_x emissions rates, invested heavily in NO_x removal equipment, particularly SCRs, and already have significant annual costs necessary to operate and maintain such equipment. Instead, EPA lumps these “best performers” in the same category as other units, thus impacting the state budget overall.

Most Illinois units have been operating under stringent NO_x emission limits for years. Since the calendar year of 2012, the Illinois Multi-Pollutant Standard (MPS) and Combined Pollutant Standard (CPS) require compliance with an overall NO_x annual emission rate of not more than 0.11 lb/mmBtu as averaged over all units in each group. 35 Ill. Adm. Code 225.233(e)(3)(B)(iii); 35 Ill. Adm. Code 225.295(a)(2). PSGC has a stringent 0.07 lb/mmBtu BACT NO_x limit and was required to comply with this limit from the moment it commenced operations. PSGC’s two coal-fired units 2015 annual and ozone season NO_x emissions both average around 0.067 lb/mmBtu, already significantly lower than Illinois’ effective NO_x emission rate for this final rule of 0.075

⁶ Technical Support Document (TSD) for the Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS Docket ID No. EPA-HQ-OAR-2015-0500, Allowance Allocation Final Rule TSD, USEPA, Office of Air and Radiation, August 2016, page 7.

lb/mmBtu.⁷ Despite having implemented technologies to achieve these reductions already, PSEC will nonetheless be required to make further reductions and purchase additional allowances to comply with the statewide budget because the final CSAPR Update Rule includes both a non-representative heat input and non-representative emission rate. The proposed CSAPR Update Rule, therefore, penalizes early adopters in Illinois that have already spent billions of dollars in air pollution control equipment to construct a state-of-the-art plant. It creates an unequal economic playing field with unit owners in other states that have not yet widely implemented NO_x pollution control—such as ultra-low-NO_x burners and post-combustion (SCR) control technologies.

The final rule provides individual treatment for Alabama, Missouri and New York, so PSGC is not asking for something that is difficult for EPA to do. Those states followed the methodology for allocating ozone season NO_x allowances under the current CSAPR NO_x Ozone Season Trading Program in adopting state regulations and submitting them to EPA for approval in a state SIP revision. 81 Fed. Reg. 74564. Similarly, Illinois adopted state regulations requiring early and incrementally increasing NO_x reductions over time in the Illinois MPS and CPS. These regulations have likewise been incorporated into the Illinois SIP.⁸ While EPA recognizes the MPS and CPS in finalizing the Illinois baseline, it does not factor the NO_x reductions already made as a result of these regulations in applying the uniform cost threshold (of \$1,400 per ton reduced) to Illinois units. As it has done for other states, the final CSAPR Update Rule should acknowledge these SIP-approved state regulations and accordingly adjust the NO_x budget to reflect reasonable cost-effective reductions available to Illinois units.

Again, this methodology treats PSEC inequitably and must be reconsidered. PSEC requests that EPA allocate allowances to newer existing units using the single highest unit non-zero ozone season heat input between 2011 and 2015, rather than a three-year average. PSEC could not have anticipated that EPA would have revised its method for setting the emissions budgets without addressing PSGC's complete comment. By not properly recognizing heat input for units during normal operating conditions and failing to recognize newer units' state-of-the-art NO_x combustion controls, EPA is not allocating allowances on an equitable basis with existing units. Moreover, treating the other newer units across the country similarly will be more equitable and better incentivize adoption of new technologies as early as possible.

⁷ Relying on the Ozone Transport Policy Analysis TSD Appendix E, EPA-HQ-OAR-2015-0500-0516; Despite operating at this low NO_x emission rate, PSGC will have to achieve an even lower NO_x emission rate (or purchase allowances on the open market) because it was allocated allowances based on an artificially low three-year average total heat input for both units. This is not equitable for PSGC and economically disadvantages PSGC compared to other existing units.

⁸ These were adopted as part of the Illinois SIP for NAAQS compliance for regional haze purposes.

C. The Final Allocation May Cause Illinois to Exceed its Variability Limit, Negatively Impacting Illinois Units.

The final rule, by inequitably applying the adjustment and allocation process, reduces the total pool of allowances for Illinois, creating a much tighter pool in Illinois than EPA estimated. Consequently, the variability limit may be exceeded, causing a statewide increase in allowance cost, lack of allowances at any cost within the state, and no guarantee of the ability to purchase allowances on the market.

The final CSAPR Update Rule includes variability limits which define the amount by which a state's emissions may exceed the level of that state's budget during a certain time period. This variability limit is intended to account for changes in EGU operations while still ensuring that the necessary emission reductions are achieved in each state. The final CSAPR Update rule set this as 21 percent of each state's budget. 81 Fed. Reg. 74521 (Oct. 26, 2016). If a state exceeds the variability limit, this triggers additional allowance surrenders (a total of 3 allowances are required per ton of emissions above the assurance level).

EPA's intent was to treat all existing units the same, but PSGC is not given the same benefit. EPA's inaccurate heat input assignment to PSGC matters because it will impact state-wide NO_x allowance availability. As such, the heat input data included in the final Rule directly impacts PSGC's per-unit NO_x allocation. Underestimating PSGC's expected heat input will put certain pressure on the Illinois allowance market and the result may be that PGSC and other units in the cause the state to exceed its assurance limit in order to operate at already low NO_x emission rates at a 3-1 basis cost.

PSGC recognizes that the final CSAPR provides a mechanism for states to replace the FIP allocations for vintage year 2018 or later through specific procedures (see Preamble, Section VII.F). Though this inequity could hypothetically be addressed at the state level, the initial inaccuracy sets a precedent that fails to recognize already low emission rates in newly constructed plants, thereby "punishing" those units owners through inadequate allowance allocation and does not meet EPA's criteria of "control-neutral" and could deprive PSGC of the opportunity to present more appropriate criteria in state proceedings. The final rule does not go far enough to recognize the efforts that the owners of newer, state-of-the-art, coal-fired power plants have taken to construct highly efficient and low NO_x-emitting EGUs.

IV. CONCLUSION

For the foregoing reasons and in light of the fundamental and central relevance of the issues raised in this Petition which arose after the close of the comment period, the Administrator should reconsider the final rule pursuant to Section 307(d)(7)(B) of the CAA and should conduct a new notice-and-comment rulemaking on the final CSAPR Update Rule.

Respectfully Submitted,

Prairie State Generating Company, LLC

A handwritten signature in black ink, appearing to read "P. Casey", is written over a horizontal line.

Phillip Casey
General Counsel, V.P. Ethics & Compliance
Prairie State Generating Company