



COMMONWEALTH OF KENTUCKY
OFFICE OF THE GOVERNOR

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The Honorable Lisa Jackson
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator Jackson:

In a letter to President Obama dated September 27, 2011, I expressed the necessity for a reasoned and pragmatic approach to regulating the coal industry. With the proposal to regulate greenhouse gases (GHGs) in the form of New Source Performance Standards (NSPS), I once again must express my concerns about the effect on the state and nation's economy.

Kentucky shares and is responsible for the goals of clean air, land, and water. Kentucky also has the objective of ensuring that the Commonwealth has a viable and growing economy with jobs available for our citizens and affordable energy costs. In that regard, we are concerned with the implications and consequences of this proposed rule, which has the potential to eliminate the construction of any affordable new coal-fired electricity generating units. These units currently provide more than 90 percent of Kentucky's electricity needs and a large percentage of the nation's electricity needs. The EPA itself admitted that the proposed rule does not provide any substantive environmental benefit, when it stated in the Regulatory Impact Analysis that the rule "...is expected to have no, or negligible, costs or monetized benefits associated with it."¹

To meet the energy needs of the Commonwealth and our nation, we must have a diverse energy portfolio that utilizes all of our available options, including the use of coal as a viable energy resource. This proposed rule, instead, has the real potential to establish by regulation energy winners and losers at the expense of coal.

Contrary to previously issued standards of performance for EGUs, your proposal does not establish subcategories for new affected sources.² Instead, EPA proposes an output-based CO₂ emission limit for all EGUs, regardless of the technology design of the unit and the fuel type utilized. This approach deviates from the previous manner in which EGUs are regulated under Section 111 of the Clean Air Act (40 CFR 60, Subpart Da and KKKK). Furthermore, the proposed regulatory scheme does not comport to this Administration's framework of the recently finalized Mercury and Air Toxics Standards (MATS), under which emission limitations are based upon fuel types and design technology.

¹ Regulatory Impact Analysis for the Proposed Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units (EPA-452/R12-001, March 2012).

² 77 FR 22406

As a result of requiring a one-size-fits-all approach to electric generation, the proposed regulation effectively closes the door on promoting and establishing "clean coal technology" as an energy option. Setting an extremely inappropriate precedent, the proposed rule requires any and all new coal-fired power plants to install and apply the use of carbon, capture, and sequestration (CCS) technology, an unproven technology that has never been demonstrated on a commercial scale. In fact, the "Report of the Interagency Task Force on Carbon Capture and Storage" issued by EPA in August 2010 indicated that CCS technologies would not be widely utilized in the next 20 years.³ Thus, the emission limitations associated with CCS technologies do not meet the definition of "standard of performance" listed in Section 111(a) of the Clean Air Act due to the fact that the Administrator has not determined the CCS technologies to be adequately demonstrated.

In Kentucky, Louisville Gas and Electric (LG&E) operates a 750 MW (nominal net) supercritical pulverized coal unit that includes a suite of control technology including: selective catalytic reduction (SCR); pulse jet fabric filters (PJFF) and hydrated lime injection; wet flue gas desulfurization (WFGD); wet electrostatic precipitator; (WESP); dry electrostatic precipitator (DESP); powdered activated carbon (PAC) injection; and low-NOx, burners. Although the unit is one of the cleanest, most efficient EGUs in operation today, the LG&E unit would not be allowed to construct under EPA's proposed GHG NSPS. As older coal-fired EGUs are retired, the necessity to construct units such as the LG&E unit referenced above is paramount for Kentucky's economy and the economic future of these United States of America.

In conclusion, the proposed GHG NSPS effectively eliminates the construction of any new coal-fired EGU by proposing unrealistic, unattainable emission limits for CO₂, regardless of the state-of-the-art air pollution control technologies. This *de facto* construction ban of new coal-fired EGUs will result in devastating impacts on Kentucky's economy and jeopardize the nation's ability to meet its energy needs. In accordance with Section 111(f)(3) of the Clean Air Act, I encourage you to consult with me and other governors prior to promulgating any regulations with such devastating and lasting impacts on our economies.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven L. Beshear". The signature is fluid and cursive, with a large initial "S" and "B".

Steven L. Beshear

³ http://www.epa.gov/climatechange/policy/ccs_task_force.html

Standards of Performance for Greenhouse Gas Emissions for Electric Utility Generating Units

Comments from the Kentucky Division for Air Quality (Division)

I. General Comments

- A. Pursuant to Executive Order 13563, signed by President Obama on January 18, 2011, the agency "...must measure, and seek to improve, the actual results of regulatory requirements." In addition, President Obama's Executive Order requires an agency to:

(1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

After reviewing the Regulatory Impact Analysis of the GHG NSPS rule, the Division determines that this proposed rule is in direct contrast with Executive Order 13563. The Regulatory Impact analysis states the following: "As a result, this proposed rule is expected to have no, or negligible, costs or monetized benefits associated with it."¹

- B. *"This proposed standard is based on the degree of emission limitation achievable through natural gas combined cycle generation. NGCC qualifies as the "best system of emission reduction (BSER) that the EPA has determined has been adequately demonstrated." 77 FR 22394*

The proposed regulation "redefines" and mandates the basic fundamental design of EGUs. Natural Gas Combined Cycle (NGCC) is the process to generate

¹ Regulatory Impact Analysis for the Proposed Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units (EPA-452/R12-001, March 2012).

electricity and is not the control system designed to reduce emissions. Later in the preamble, EPA contradicts the earlier statement of requiring a particular technology design referenced above by explaining:

Generally, the EPA does not prescribe a particular technological system that must be used to comply with a standard of performance.

77 FR 22402

The Division notes that requirement for Carbon, Capture and Storage (CCS) technology applies only to affected EGUs that utilize coal or petcoke and is not required for all EGUs.

As mentioned above, the proposed rule requires any and all new coal-fired power plant to install and apply the use of carbon, capture, and sequestration (CCS) technology, an unproven technology that has never been demonstrated on a commercial scale. In August 2010, EPA issued the "Report of the Interagency Task Force on Carbon Capture and Storage" and indicated that CCS technologies would not be widely utilized in the next 20 years.¹ The requirement to deploy CCS technologies does not meet the definition of "standard of performance" listed in Section 111(a) of the Clean Air Act due to the fact that the Administrator has not determined the CCS technologies to be adequately demonstrated.

- C. Contrary to current regulations applying to EGUs, the proposed rule does not establish subcategories for new affected sources², as allowed under Section 111(b)(2) of the Clean Air Act (CAA). Instead, the proposal establishes an output-based CO₂ emission limit for all EGUs, regardless of the technology design of the unit and the fuel type usage. This approach deviates from the existing manner in which EGUs are regulated under Section 111 of the Clean Air Act (40 CFR 60, Subpart Da and KKKK). Furthermore, the proposed regulatory scheme is not congruent with EPA's framework of the recently promulgated Mercury and Air Toxics Standards (MATS), where emission limitations are based upon fuel types and design technology.

Rather than creating another Subpart under Section 111, the Division finds that amending existing standards of performance for EGUs would be more appropriate. The regulatory framework is already established and used in practice by industry, state and local agencies, and interested citizens. Creating a separate Subpart complicates the regulatory assessment and applicability determination by permitting agencies and regulated community.

- D. By requiring CCS and establishing unattainable emission limitations for coal-fired EGUs, the proposed rule eliminates the use of coal as a fuel source. In areas where natural gas is not readily accessible or available, integrated gasification combined cycle (IGCC) or supercritical coal-fired units may be necessary to meet

¹ http://www.epa.gov/climatechange/policy/ccs_task_force.html

² 77 FR 22406

the electricity demands of an area. This regulation effectively eliminates the construction EGUs using coal as a fuel source and creates an untenable position for areas in the Commonwealth.

- E. The proposed rule relies on the results from an Intergrated Planning Model (IPM) that projects an abundance of natural gas and a continued decline in natural gas prices. The Division questions whether the IPM model accounted for the effects on natural gas prices and availability resulting from future EPA rulemaking for the production and processing of natural gas (such as fracturing or “fracking” rules).
- F. The Division requests EPA to clarify whether the promulgation of the GHG NSPS triggers Title V emission fee requirements for GHGs under the CAA. As defined by Section 502(b)(3)(B)(ii) of the CAA, each pollutant regulated under Section 111 of the CAA is a “regulated pollutant” for purposes of Title V fee requirements.

II. Modifications

- A. The Division seeks clarification on applicability issues associated with modifications in these regulations. Unlike previously promulgated NSPS, this proposed regulation does not propose requirements for modifications at existing facilities. In essence, this proposed rule amends the definition of “new source” as defined under Section 111 of the CAA.
- B. If modifications are excluded or exempt from this GHG NSPS, will modifications be subject to the standards for existing sources under the Section 111(d) program that EPA is currently developing?
- C. Specific to modifications relating to simple cycle turbines, the Division requests clarification on the applicability of a simple cycle EGU that is converted to a combined cycle EGU. Does EPA consider the conversion to be defined and regulated as a modification under this proposed regulation?

III. Emission Standard

In the preamble at 76 FR 22431, the “parasitic loads” for EGUs are explained to vary from source to source. “In general, less than 7.5 percent of coal-fired station power output, and about 2.5 percent of a combined cycle station power output, is used internally by parasitic energy demands, but the amount of these parasitic loads vary from source to source.” The Division notes that currently no coal-fired EGU is currently operating a CCS system and that the parasitic load of CCS will be far greater than 7.5%.

Given the predicted high parasitic load of a CCS, it is conceivable that a “super-critical” EGU without CCS would out perform a conventional unit equipped with CCS; however, either design may not be able to meet the emission limitations

established is in this regulation. The emission standards established by this rulemaking should factor and consider the parasitic load associated with CCS technologies, along with the source-specific parasitic loads at each facility.

Additionally, the Division expresses concerns about the use gross output as the basis for the standard and the proposed structure of regulatory applicability for co-generation units. The standard as currently written applies to an EGU as one that is "...constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net-electrical output to any utility power distribution system for sale," (76 FR 22439).

The Division finds that terms such as "constructed for the purpose" are not easily enforceable. The Division requests clarification on the applicability of co-generation units. Without clear applicability determination language, the Division is concerned that the permitting process for co-generation facilities will become complicated and overly burdensome.

IV. Compliance Requirements

- A. To the extent possible, all monitoring, recordkeeping, and reporting requirements should be streamlined and consistent with other applicable air quality programs, such as the Acid Rain program.
- B. If an EGU is not subject to 40 CFR 75.10(a)(3)(i), what are the available methods, other than CO₂ CEMS, to demonstrate compliance in accordance with 40 CFR 60.5525(c)? Is fuel monitoring an available method as indicated in 40 CFR 60.5540(b)?
- C. As proposed in 40 CFR 60.5560 (a)(1), eliminating the requirement to maintain stack tests reports pursuant to 40 CFR 60.7 if the results are recorded in EPA's WebFIRE database creates an additional burden on state and local enforcement agencies and may result in the loss of critical compliance data. State and local air pollution control agencies may have access to WebFIRE test results; however, these results may not include all data of processes, production rates, test methodologies, special circumstances, and written narratives normally associated with a stack test.

The normal NSPS scheme of requiring a source to maintain compliance demonstration data records does not place an additional burden on the source. By not maintaining records required by 40 CFR 60.5555(a)(1), the potential loss of critical information not captured in a database negatively impacts the ability of state and local air pollution control agencies to make appropriate compliance determinations.

- D. The averaging times used in the 40 CFR 60.5520 and 40 CFR 60.5525(c) are not identical (i.e. "12-operating month rolling average" versus "12 month rolling

average). The Division requests that the averaging times be consistent throughout the rule.

- E. The compliance demonstration methods listed in 60.5540(c)(1) through (5) should be clarified.

IV. Periods of Startup, Shutdown and Malfunctions.

The NSPS that the EPA is proposing in this action would apply at all times, including during startups and shutdowns. (76 FR 22407)

The Division expresses concerns regarding the practical ability to monitor emissions during periods of startup, shutdown and malfunctions.