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Electric Power Generation Association

June 27, 2014

Environmental Quality Board
P. O. Box 8477
Harrisburg, Pennsylvania 17105-8477

Re: Additional EPGA Comments on CHAPTER 129 STANDARDS FOR SOURCES "Additional RACT Requirements for Major Sources of NOx and VOCs"

To Whom It May Concern:

The Electric Power Generation Association ("EPGA") respectfully submits comments below in the above captioned rulemaking regarding the additional RACT requirements for major sources of NOx and VOCs.

The comments provided herein are a supplement to the oral testimony offered by EPGA at the Environmental Quality Board's public hearing on the same matter, which was held on May 29, 2014.

Further, in accordance with the requirements set forth in the proposed rulemaking as published at 44 Pa.B. 2392 (April 19, 2014), EPGA also attaches a one page summary of our additional comments to this submittal.

On behalf of the members of the Electric Power Generation Association, who strive each day to produce electricity in a safe, reliable and economic manner, I wish to thank you for your consideration of our views.

Sincerely,

JACOB G. SMELTZ, President
Electric Power Generation Association

cc: Various Members of the General Assembly

417 Walnut Street | Harrisburg, PA 17101 | 717.909.3742 | Fax 717.909.1941 | www.epga.org

THE ELECTRIC POWER GENERATION ASSOCIATION

The Electric Power Generation Association ("EPGA") is a regional trade association headquartered in Harrisburg, Pennsylvania, whose membership includes major electric generating companies that supply wholesale power in Pennsylvania and surrounding states.

EPGA member companies own and operate more than 125,000 megawatts of generating capacity, approximately half of which is located in the mid-Atlantic region. EPGA members engage in marketing the energy, capacity, and ancillary services from their generating facilities in wholesale markets in interstate commerce and make wholesale electric sales through PJM Interconnection, LLC ("PJM").

One of the primary functions of EPGA is to promote the benefits of the competitive electric markets and to promote the safe and reliable generation of electricity.

EPGA appreciates the opportunity to review and comment on the Pennsylvania Department of Environmental Protection ("DEP") Additional RACT Requirements for Major Sources of NOx and VOCs.

THE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S APPROACH TO RACT

DEP noted in the Pennsylvania Bulletin the federal requirement to propose RACT following adoption of the 2008 National Ambient Air Quality Standards (NAAQS) for ozone. DEP's rigorous evaluation of the applicable technologies and associated compliance options benefits sources in the Commonwealth and will generate significant reductions in NOx emissions.

The presumptive RACT options, based on factors such as emission rates for source categories, will simplify compliance options for a large number of affected facilities. The averaging options provide sources and fleets with the operational and compliance flexibility needed during current market and fuel pricing conditions as well as the ongoing fuel transition in the electric generation industry towards increased utilization of natural gas. Additionally, the case-by-case compliance option provides sources with the ability to comply with RACT when individual circumstances do not fit the other categories.

DEP predicts substantial reductions in NOx emissions resulting from the regulation and this, along with the ongoing transition to natural gas, will further improve Pennsylvania's air quality and reduce both the number of, and significance of, ozone exceedences.

COMPLIANCE FLEXIBILITY PROTECTS THE ENVIRONMENT AND GRID RELIABILITY

EPGA supports the department's decision in the proposal to provide compliance flexibility to the regulated sources. As noted above, implementation flexibility is critical in this transitional market and recognizes the widely varying circumstances that apply to

individual companies and units while not compromising the NOx reductions available to the Commonwealth. Providing compliance flexibility will also help ensure that individual controlled sources are not replaced by less regulated, and generally uncontrolled, higher emitting sources, such as those unregulated electric generation resources (in most case standby emergency diesel generators) that are participating in Demand Response programs. These sources are often operating on exactly the days when ozone formation may be of greatest concern.

In addition to increasing the number of NAAQS exceedences as noted above, the absence of compliance flexibility impacts grid reliability. The sources participating in Demand Response programs do not have the same reliability standards and requirements that major sources fulfill to participate in PJM, resulting in a larger number of higher emitting less reliable sources.

ALTERNATIVE CASE-BY-CASE RACT PROPOSALS

EPGA also supports the department's case-by-case alternative RACT proposal and petition process. Due to the wide variety of uses and types of equipment proposed for regulation under the NOx RACT proposed rule, there may be instances where certain types of equipment, or equipment uses in certain applications, could warrant consideration of alternative NOx RACT emission limits.

EPGA does note that the case-by-case RACT option is only available if the plant operator can demonstrate that they cannot meet the presumptive RACT requirements or if system averaging option does not work. There may be instances where averaging may work, but not on a 30-day rolling average basis among a fleet or among different source types, which would necessitate a hybrid averaging/case-by-case approach. Such a situation would be difficult to administer and could create operational difficulties for the affected plants and operators. As such, the case-by-case RACT option should not be predicated upon the inability to comply under the averaging provisions of the rule.

EPGA also suggests that the department further outline the case-by-case process, as well as update and define dollar per ton cost thresholds against which case-by-case RACT petitions will be required to rank technology options. DEP provided similar detail in the first RACT implementation program in 1994 and, for example, could include implementation guidance and a reference to the updated EPA cost manual.

COAL-FIRED COMBUSTION UNITS CAN ACHIEVE SIGNIFICANT DECREASES WITH LOW NOX BURNERS

With regard to coal-fired combustion units with a rated heat input equal to or greater than 250 mmBtu/hour heat input, we believe that the department should consider what can be achieved by the latest generation of low NOx burner technologies, based on various boiler configurations, as being the basis for updated NOx RACT standards, with current and future transport rules identifying additional NOx emission reduction needs across the eastern states in the form of lowered regional and state emission budgets.

Such an approach would allow for the most cost effective application of any additional needed post-combustion controls (e.g., NOx SNCR or SCR) by incentivizing the operators with the lowest cost incremental control options to deploy additional NOx controls beyond those already in existence or those that might be required by this updated NOx RACT regulation. The latest generation low NOx burner technologies are likely to greatly reduce the NOx emission rate compared to the early versions installed in the 1990's.

SIGNIFICANT NOX REDUCTIONS DUE TO UPCOMING REGULATIONS

RACT is one of several upcoming regulatory requirements that will reduce NOx emissions in the Commonwealth. Some of these requirements are overlapping or will achieve reductions through different methods. Achieving NOx reductions in an overly prescriptive manner in RACT can counter efforts to achieve cost effective compliance with the other regulations.

For example, the recent Cross State Air Pollution ("CSAPR") Supreme Court ruling sets the stage for additional NOx reductions at the federal level. If CSAPR is implemented as finalized, the rule provides substantial reductions in both Phase I and Phase II. The EPA is also likely to soon propose updates to its transport regulations to address the 2008 ozone NAAQS since the current CSAPR was designed to address the 1997 ozone NAAQS. Further, the controls required by both the ICI MACT and MATS rules result in some NOx and VOC reductions as a co-benefit.

EPGA notes that on June 26, 2014, the EPA filed a motion with the DC Circuit Court of Appeals to lift the stay on the Cross State Air Pollution Rule (CSAPR). EPA's intention is to toll deadlines for three years, so that Phase 1 of the rule would start in 2015 rather than 2012 and Phase 2 would start in 2017 rather than 2014. An attached declaration documents emissions data for each state for 2012, 2013 and 2014 and shows what each state's budget would have been for those years under the rule. Most states' actual emissions were below what their emissions budget would have been, and the agency notes that for many remaining states, had unused or underutilized pollution control equipment that is already installed on facilities been used they also could have had far lower covered emissions.

EPGA raises this issue because some opponents to the proposed NOx RACT rule are seeking to use RACT as alternative form of stricter environmental control regulation. Not only would that be inappropriate, it is unnecessary.

MAINTENANCE OF THE PROPOSED AVERAGING PERIODS

Some testimony provided during the recent public hearings on the proposal focused on the effectiveness of the 30-day rolling average in maintaining emission rates consistent with RACT.

The DEP implemented RACT in 1994 using 30-day rolling averages, including emissions during startups, shutdowns and malfunctions. This methodology acknowledges that a

unit's average emissions profile will trend near the unit's controlled emissions rate and that startup and shutdown emissions are inevitable and of short duration.

Since RACT is technology dependent, implementing shorter averaging periods would require the department to establish alternative emission standards applicable to, or exempt during periods such as startup, shutdown and malfunction when the specific controls are not functional for each source category.

For continuously monitored systems, shorter averaging periods would require the department to establish the monitoring framework, emissions requirements and report structure for the additional averaging periods for each of the affected sources. Likewise, the affected units would undertake a substantial effort to determine the appropriate averages to implement and to report the averages.

Ultimately, since a unit's operations are primarily in the controlled state, average emissions will still trend around the controlled emission rate regardless of shorter term average limits. A 30-day rolling average achieves the same result and remains protective of human health and the environment.

Further, it is the mass emissions rate that drives NAAQS impact and not the NOx lb/mmbtu rate. A unit's production rate (mmbtu heat input), followed by its mass emission rate, are greatly reduced during startup and shutdown. Elevated emission rates during the limited startup and shutdown periods result in substantially lower mass emission rates than during normal operations with the heat input many times higher.

A 30-day rolling average does not "weight" the daily averages based on heat input so that long periods of startup or shutdown actually increase the average and require the unit to operate at lower rates during normal operation. Should a unit extend startup or shutdown it would actually lower the overall mass emission rate during normal operation, further supporting the use of a 30-day rolling average as a protective measure.

EPGA notes that the rule's equation for calculating the 30-day rolling average should reflect what the rule's actual text provides for: that the value for the 30-day rolling average is calculated by taking the total mass NOx emissions for the sources under the plan (over the 30-day period) and comparing that with the total mass of NOx that the sources could have emitted by using the emission rates under the presumptive RACT. In such instances, the actual value of emissions must then be less than or equal to the allowable emissions over the 30 day period.

Further, EPGA invites the department to consider alternatives to the approach to system averaging in the proposed rule, which imposes a tighter mass limit the less electric generation units operate. Other states, for example New York, New Jersey and New Hampshire, have taken a fixed mass approach which provides much greater flexibility while simultaneously providing for concomitant reductions in emissions. To the extent that alternative averaging options could be available and would result in emissions reductions, the department should consider those as additional ways to promote flexibility.

Finally, EPGA recognizes that the proposed rule requires that the averaging option be exercised if the presumptive RACT cannot be met. As is outlined above, there may be instances where averaging may work, but not using the methodology incorporated into the proposed rule, which would result in situations where a hybrid averaging/case-by-case approach would be needed. Such a situation would be difficult to administer and could create operational difficulties for the affected plants and operators. As such, the case-by-case RACT option should not be predicated upon the inability to comply under the averaging provisions of the rule.

LOCALIZED AREAS WITH ELEVATED NOX

Testimony at the public hearings was also provided that local areas could experience elevated NOx due to short term "spikes" in emissions. Those testimonies provided a somewhat simplified view that increases in ambient ozone could be attributed to emissions from controlled major sources operating during the time periods associated with increased ozone.

Short term increases in ambient ozone concentrations are complex in nature and are significantly affected by meteorological conditions such as temperature and wind speed, sunlight and the receptors proximity to emissions sources such as motor vehicles and high emitting uncontrolled sources that operate predominantly on those days. The largest RACT affected sources are also the best controlled sources and their impact during these time periods may not be the primary factors in elevated ozone when compared to the other factors.

RACT IS NOT BACT OR LAER

EPGA would like to reiterate its stated position from the May 29, 2014 hearing that RACT is not BACT or LAER, and it should not be viewed as such.

As stated in the preamble to the proposal rule, "RACT is defined as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility."

The term "reasonably available" is intended to indicate greater flexibility for states to take into account the remaining economic life of a unit as well as factors that could increase the cost of installing a technology on an existing unit. As a result, it is accompanied by a cost-to-achieve determination in addition to technological feasibility.

RACT is not "Best available technology" ("BAT"), "Best available control technology" ("BACT") or "Lowest Achievable Emissions Rate" ("LAER"), and RACT is usually less demanding than BAT, BACT or LAER. In fact, specific emission reductions are not required when a RACT re-evaluation is done – however under the proposed rule, actual emission reductions will occur. The Department has estimated that the rule will result in emissions reductions of 158,421 tons/year.

FINALIZING THE REGULATION EXPEDITIOUSLY

Finalizing this regulation as proposed quickly benefits the Commonwealth and the regulated community. The Commonwealth benefits by implementing a new structure that fulfills EPA's SIP requirements and maintains the Commonwealth's compliance with regulatory requirements. Emission reductions would begin to occur as soon as mid-2015.

The regulated community benefits from certainty in the ability to plan and implement these requirements in a similar timeframe as additional regulations are implemented such as ICI MACT, MATS and potentially CSAPR, as well as changes in the market structure due to the current fuels transition.

EPGA recommends that the department proceed expeditiously and without significant structural or emissions changes as are enumerated in the current proposed rulemaking.

SUMMARY OF COMMENTS
PROVIDED BY THE
ELECTRIC POWER GENERATION ASSOCIATION

The Electric Power Generation Association ("EPGA") is a Pennsylvania-based, regionally-focused association of electric power generation companies that own and operate more than 125,000 MWs of generating capacity.

The proposed rulemaking regarding the additional RACT requirements for major sources of NOx and VOCs directly impacts the members of the EPGA and their facilities.

EPGA supports the proposed rulemaking because it has been rigorously developed by the Department of Environmental Protection ("DEP") over an extended period and it reflects a balanced, appropriate approach to the further reduction of NOx and VOCs in the Commonwealth.

DEP has included in the proposal presumptive RACT options, which will necessarily achieve reductions in the emissions of NOx and VOCs while simultaneously preserving the ability of electric power generators to continue to operate in the current wholesale electric marketplace, which is under significant and extraordinary transition.

Specifically, DEP has included provisions in the proposed rule that electric power generators require for continued successful operation while reducing emissions. For example, the averaging options provide sources and fleets with operational and compliance flexibility that will provide for the overall result of additional reductions in a manner that can allow the affected sources to manage their operations in an economically. EPGA suggests that the department conform its equation of the averaging provision to the actual text provided in the rule. EPGA also encourages DEP to consider other alternative averaging options which have been utilized successfully in other states.

Further, the case-by-case compliance option provides affected sources with the ability to comply with RACT when individual circumstances do not provide for other viable alternatives. EPGA does not believe that, however, that the averaging option should have to be exercised prior to being eligible for a case-by-case option.

EPGA notes that RACT is only one of several upcoming and ongoing rulemakings that will reduce NOx emissions in the Commonwealth and that RACT should not be considered to be the same as BACT or LAER. In fact, specific emission reductions are not required when a RACT re-evaluation is undertaken.

EPGA also wishes to highlight the value in maintaining the proposed averaging periods (30 day rolling average), a methodology which has been historically utilized and that reflects a unit's controlled emissions rate. Additionally, we note that elevated "spikes" in emissions in certain local areas on a short term basis cannot necessarily be attributed to RACT affected sources.

Finally, EPGA urges that, given the pendency of other rules and the necessity for certainty for the regulated community, DEP move expeditiously to complete the proposed rulemaking so that emission reductions can occur and that affected sources can properly plan and manage their operations.