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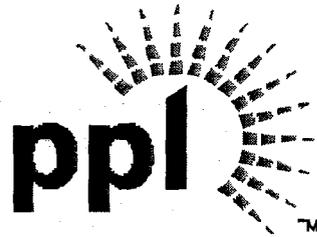
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INDEPENDENT REGULATORY
REVIEW COMMISSION

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June 28, 2007

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

Re: **Proposed Rulemaking, Environmental Quality Board**
[25 PA. CODE CHS. 121, 129 AND 145]
Clean Air Interstate Rule
[37 Pa.B. 2063]
[Saturday, April 28, 2007]

Dear Sirs and Madams:

The following are comments are submitted on behalf of PPL Generation, LLC ("PPL") on the draft final rulemaking for 25 PA. Code CHS. 121, 129 and 145 regarding PA State implementation of EPA's Clean Air Interstate Rule (CAIR). PPL Corporation's subsidiary, PPL Generation, LLC, owns and operates over 5,000 megawatts of fossil fuel fired generation that will be affected by this rulemaking.

The Department's Proposed Rule is the Appropriate Action for the Commonwealth to Address the Transport of Ozone and Fine Particulate.

In developing the Clean Air Interstate Rule EPA determined the level of emissions reductions needed to reduce the significant contribution to downwind non-attainment areas. It also determined that the level of emission reductions from Electric Generating Units (EGU) would be "highly cost effective." Additionally, its analysis of the availability of boilermaker labor needed to install flue gas desulphurization units and selective catalytic reduction units showed that the emission caps and associated schedules that it put forth could not be made materially more stringent and still allow for the timely installation of enough emission control equipment to meet the emission budgets. We agree with the EPA's assessment on this issue, and that the Department should implement the budgets put forth by EPA. In fact, there have already been significant cost increases announced by power generators associated with acute shortages of engineering resources, labor and materials for projects already in progress. Consequently, the Department should not go forward with additional or accelerated reductions such as those considered by the Ozone Transport Commission's "CAIR - Plus" proposal.

NOx Allowance Allocation Method Response to Specific EQB Questions

The board has asked for comments specific to the NOx allowance allocation method for both existing and new affected sources.



PPL supports a generation output, based on gross generation, updating allowance allocation method. This method provides an incentive for more efficient electric generation.

Allocating NOx allowances from future years to new units to cover emissions from operating during years before a new unit qualifies for regular allocations is preferable to the new source set aside in EPA's model rule. New source set aside provisions present the risk that they will be oversubscribed and not have enough allowances available to cover the emissions for the years prior to when the source receives a regular allocation. Allocating future year allowances to cover emissions in a past year removes the risk of a source not getting enough allowances to meet its needs, and therefore would reduce uncertainty that might inhibit the financing of new generators. We therefore endorse this method of making allocations for new sources. We would, however suggest one change. Rather than allocating allowances equal to "the previous year's emissions at each unit" we would recommend allocating allowances equal to "the previous year's emissions, to the extent that those emissions are less than or equal to the unit's allowable emissions." This change would eliminate allocating allowances for emissions violating an emission standard or limit.

§ 121.1

Issue: The definition of "Vintage or Vintage year."

Recommendation:

The definition should be clarified to recognize that allowances are not used to meet an emission limit. The cap and trade programs do not establish limits, but rather require that emissions be accounted for through the surrender of allowances. This definition should be changed to be "The calendar year assigned to an allowance by the issuing authority that designates the first year in which it is valid to be applied against emissions."

§ 145.101(b)(2)

Issue: New Non-Electric Generating Units should not be allocated NOx allowances from the Electric Generating Unit CAIR Budget.

Recommendation:

Under the NOx SIP call, sources were included that are not affected by EPA's CAIR rule. Under CAIR, EPA requires states to modify their existing State Implementation Plan (SIP) to require those non-CAIR affected sources currently participating in the NOx SIP Call budget trading program to either conform to the requirements of the CAIR ozone season NOx trading program with a trading budget that is the same or tighter than the budget in the currently approved SIP, or as proposed in Section 145.101 (b)(1), to establish an Ozone Season NOx permit limit equal to the most recent Ozone Season NOx allowance allocation for existing non-electric generating units. Either of these options satisfies the EPA criteria for SIP approval. The Department has also proposed the option of allocating NOx emission allowances to new non-electric generating units to account for their emissions. However, the Department does not propose to expand the emission budgets to account for inclusion of this category of sources. Not expanding the budget

to account for this category of sources would inappropriately reduce the emission budget that EPA has identified for the EGUs. Therefore, the Department should either withdraw Section 145.101(b)(2) or increase the NOx allowance budget to account for source categories that were not originally included in the EGU budget.

§ 145.202. Definitions

Issue: The definition of “Demand side management” provides for NOx emitting activities.

Recommendation:

The definition of “Demand side management” includes, under (ii), load shifting. This activity does not eliminate electric energy consumption. It simply shifts the time when electric energy is consumed. That action may have no effect on the formation of ozone on a subsequent day. This activity should be excluded from the definition in this regulation because “Demand side management” activities can receive NOx allowance allocations. The Independent System Operator (PJM) is already offering programs which reward this load shifting activity. Because the environmental benefit of this load shifting activity is questionable, it should be clear that it does not qualify for allowance allocations by removal from the definition or specifically disallowing the activity.

The definition of “Demand side management” includes, under (iii), the use of industrial byproducts to produce electricity. This activity does not eliminate electric energy consumption or emissions. Further, it is generated by sources which likely do not have a requirement to surrender allowances to account for NOx emissions. Consequently, emissions from those sources may negate the emission reductions achieved by the regulated CAIR affected sources which are being relied upon to achieve and maintain ozone attainment. Providing allowances to these sources results in the unintended consequence of shifting the generation of electricity away from sources which are operating under an emission budget to those with emissions outside of the budget. This rewards them for an activity which is contrary to the goals of the HEDD effort. Simply stated, they are unaccounted for on those days which need NOx emissions accounted for the most. As noted above, PJM is already offering programs which reward this activity. Because the environmental benefit of this activity is questionable, it should be clear that it does not qualify for allowance allocations by removal from the definition or specifically disallowing the activity.

Issue: The definition of “Renewable energy (ii)” is confusing.

Recommendation:

The definition of “Renewable energy” should be clarified to state “Renewable energy—electric energy generated.” If the intent of this definition is to exclude electric energy generated from certain fuels from the definition of “Renewable energy” then the wording should be changed to ensure clarity. Our suggested change is “(ii) electric energy generated from nuclear fuel, biomass, landfill gas, fuel cells that employ a fuel processor that emits NOx and hydro using pumped storage is not renewable energy.”

§145.211

Issue: The Department should change the timing of its NOx allocation to meet EPA's requirement that allocations must be made for the fourth year after the year of the allocation.

Recommendation:

In the preamble, the Department acknowledges the EPA requirement that to be approvable a SIP must provide allowance allocations four years in advance. However, the Department proposes to provide some allocations every second year that are only three years in advance. Providing the allocation only three years in advance would appear to risk EPA disapproval. In 2008, The Department should provide allocations for 2012 and if it wants to continue to provide allocations in two year blocks also for 2013. That the Department is proposing to allocate in 2008 for 2010 and 2011 would also seem to place the SIP at risk of disapproval, although the EPA had specified that the 2009 allocations be provided three years in advance, i.e. in 2006. Changing the timing of the allocations would require a conforming change in the baseline year for each year's allocation.

§145.212 (f)

Issue: This provision provides for the allocation of annual CAIR NOx allowances to a tier I renewable energy qualifying resource or tier II demand side management qualifying resource.

Recommendation:

The Department should not allocate any CAIR NOx allowances to tier I renewable energy qualifying resources or tier II demand side management energy efficiency qualifying facilities under section 145.212. (f).

In the preamble the Department claims that providing allowances for renewable energy resources and or energy efficiency is needed to prevent those generators or efficiency measures from being placed at a competitive disadvantage. This claim is incorrect. One of the values of a cap and trade program is that it allows the most cost-effective means to achieve emission reductions. Under CAIR, EPA has established a cap of NOx emissions that can be emitted and still meet environmental objectives. Allocations are then granted to NOx sources based on a NOx emission rate and their proportion of generation to the total generation from NOx emitting sources. All sources that emit more NOx than the allowances allocated to them must either pay to install controls to reduce emissions and/or purchase allowances from others that have more cost-effectively reduced emissions. Sources that don't emit NOx are not being placed at any competitive disadvantage as they will not be required to incur any cost. Specifically, renewable energy resources do not emit NOx, and so they have no inherent need for NOx emission allowances. That is, there is no need for them to hold or to purchase allowances in order for them to operate. As a result, there is no inherent cost disadvantage. Sources that emit NOx need NOx allowances to continue to operate, and so it is appropriate that all of the allocation be given to them and none of it directed to sources that do not emit NOx. The only use that non-emitting generators would have for NOx allowances is for them to sell them to sources that emit NOx, a transaction that has the net result of NOx emitting sources subsidizing non-emitting generators.

In many instances renewable energy resources already receive tax incentives that subsidize their operation. There is no justification for NOx emitting sources to subsidize their competitors. Allocating NOx allowances to renewable energy generators will do nothing to improve the environment because it does not reduce NOx allowance budgets but merely shifts the distribution of allowances, and it will only serve to increase the market prices of allowances due to increased demand from those sources that emit NOx and need the allowances to continue to operate.

Should the Department decide to retain the NOx allowance subsidy to renewable energy generators it should place a cap on the number of NOx allowances that may be allocated annually to renewable energy generators, similar to the cap proposed to be placed on compensatory NOx allowances to SO2 emitting sources that do not receive an SO2 allowance allocation under EPA's Acid Rain Program (we comment on the allocation to those sources below). We would propose a cap equivalent to 1% of the NOx budget. This cap is necessary to avoid a potential hardship on NOx emitting sources that need NOx allowances to continue operation. At the January 4, 2007 Air Quality Technical Advisory Committee, the Department told the Committee that the Department estimates that the allocation to renewable energy generators would be about 2 percent to 3 percent of the budget. However, in its PowerPoint presentation to the Environmental Quality Board the Department states that "Renewables could affect only 15% of the NOx budget." It is unclear to us why the Department revised its estimate. However, the Department has cited the report "Economic Impact of Renewable Energy in Pennsylvania" March 5, 2004 by Black and Veatch as a source of estimates for the development of renewable energy. Information in that report shows that in 2010, 10% of electric generation will be from renewable energy generators, and that roughly 80% of that would be generated from types of generation to which the Department is proposing to allocate NOx allowances. If these projections materialize and the Department makes the allocation proportional to generation, about 8% of the NOx budget would be allocated to non-emitting generators. Such a high percentage of NOx allowances being removed from the allocation to NOx emitting generators would significantly and unreasonably increase the costs to NOx emitting generators which would be required to purchase NOx allowances from non-emitting generators.

Also, the Department does not specify the factor to be used for converting renewable energy to the equivalent heat input baseline. The Department specifies a factor of 7,900 Btu/kWh for coal-fired generators, a factor of 6,675 Btu/kWh for non coal-fired generators, and a factor of 3,413 Btu/kWh for a combustion turbine that produces electricity and thermal energy. If the Department decides that it will allocate NOx allowances to renewable energy generators, it should use a factor of no more than 3,413 Btu/kWh because that factor represents the most efficient means of energy conversion.

The Department proposes to allocate NOx allowance to demand side management energy efficiency measures. For the same reason that the Department should not allocate allowances to non-emitting renewable energy generators, it should not allocate allowances to demand side management energy efficiency measures. However, particularly unqualified to be allocated NOx allowances are measures that "shift electric load from periods of higher demand to periods of lower demand." Such load shifting may do nothing to reduce the quantity of NOx emitted, and therefore should not be eligible for a NOx allowance allocation.

§145.212(f)(2)

Issue: Providing compensatory NOx allowances to CAIR affected units that are exempted by section 405(g)(6)(A) of the Clean Air Act.

Recommendation:

The proposal to allocate compensatory NOx allowances to CAIR affected units that are exempted by section 405(g)(6)(A) of the Clean Air Act is reasonable with the constraints proposed by the Department and should not be changed in the final rule. These are the units that are not covered by the Acid Rain Program and have not heretofore been allocated or otherwise been required to surrender SO2 emission allowances.

Requiring generators that were not allocated SO2 allowances under the Clean Air Act to now purchase those allowances to comply with CAIR does add costs to those generators that other generators have mitigated due to their SO2 allowance allocation. Therefore, it would seem reasonable to provide those generators some relief from the new costs, even though that relief comes at the expense of other generators. In applying constraints to that allocation the Department has struck a reasonable balance between the interests of generators who have not been allocated allowances and those who have. The Department should retain the cap of 1.3 % on the allowances available to the generators exempt from the provisions of Title IV of the Clean Air Act. Also, the requirement to exclude from the allocation calculation the difference between a unit's NOx allocation and its actual emissions correctly compensates for any economic advantage already conferred on the unit. Finally, limiting that NOx allocation to 1 NOx allowance for every 8 tons of SO2 emitted provides a justified adjustment for the potential difference between the price of NOx allowances and the price of SO2 allowances.

§145.222(f)

Issue: This provision provides for the allocation of ozone season CAIR NOx allowances to a tier I renewable energy qualifying resource or tier II demand side management qualifying resource.

Recommendation:

The Department should not allocate any CAIR NOx ozone season allowances to tier I renewable energy qualifying resources or tier II demand side management energy efficiency qualifying facilities under Section 145.222. (f).

In the preamble the Department claims that providing allowances for renewable energy resources and or energy efficiency is needed to prevent those generators or efficiency measures from being placed at a competitive disadvantage. This claim is incorrect. As previously stated, one of the values of a cap and trade program is that it allows the most cost-effective means to achieve emission reductions. Under CAIR, EPA has established a cap of NOx emissions that can be emitted and still meet environmental objectives. Allocations are then granted to NOx sources based on a NOx emission rate and their proportion of generation to the total generation from NOx emitting sources. All sources that emit more NOx than the allowances allocated to them must either pay to install controls to reduce emissions and/or purchase allowances from others

that have more cost-effectively reduced emissions. Specifically, renewable energy resources do not emit NOx, and so they have no inherent need for NOx emission allowances. That is, there is no need for them to hold or to purchase allowances in order for them to operate. As a result, there is no inherent cost disadvantage. Sources that emit NOx need NOx allowances to continue to operate, and so it is appropriate that all of the allocation be given to them and none of it directed to sources that do not emit NOx. The only use that non-emitting generators would have for NOx allowances is for them to sell them to sources that emit NOx, a transaction that has the net result of NOx emitting sources subsidizing non-emitting generators. In many instances renewable energy resources already receive tax incentives that subsidize their operation. There is no justification for NOx emitting sources to subsidize their competitors. Allocating NOx allowances to renewable energy generators will do nothing to improve the environment because it does not reduce NOx allowance budgets but merely shifts the distribution of allowances, and it will only serve to increase the market prices of allowances due to increased demand from those sources that emit NOx and need the allowances to continue to operate.

Should the Department decide to retain the NOx allowance subsidy to renewable energy generators it should place a cap on the number of NOx allowances that may be allocated annually to renewable energy generators, similar to the cap proposed to be placed on compensatory NOx allowances to SO2 emitting sources that do not receive an SO2 allowance allocation under EPA's Acid Rain Program. We propose a cap equivalent to 1% of the NOx budgets. This cap is necessary to avoid a potential hardship on NOx emitting sources that need NOx allowances to continue operation. At the January 4, 2007 Air Quality Technical Advisory Committee, the Department told the Committee that it estimates that the allocation to renewable energy generators would be about 2 percent to 3 percent of the budget. However, in its PowerPoint presentation to the Environmental Quality Board the Department states that "Renewables could affect only 15% of the NOx budget." It is unclear to us why the Department revised its estimate. However, the Department has cited the report "Economic Impact of Renewable Energy in Pennsylvania" March 5, 2004 by Black and Veatch as a source of estimates for the development of renewable energy. Information in that report shows that in 2010, 10% of electric generation will be from renewable energy generators, and that roughly 80% of that would be generated from types of generation to which the Department is proposing to allocate NOx allowances. If these projections materialize and the Department makes the allocation proportional to generation, about 8% of the NOx budget would be allocated to non-emitting generators. Such a high percentage of NOx allowances being removed from the allocation to NOx emitting generators would significantly and unreasonably increase the costs to NOx emitting generators which would be required to purchase NOx allowances from non-emitting generators.

Also, the Department does not specify the factor to be used for converting renewable energy to the equivalent heat input baseline. The Department specifies a factor of 7,900 Btu/kWh for coal-fired generators, a factor of 6,675 Btu/kWh for non coal-fired generators, and a factor of 3,413 Btu/kWh for a combustion turbine that produces electricity and thermal energy. If the Department decides that it will allocate NOx allowances to renewable energy generators, it should use a factor of no more than 3,413 Btu/kWh because that factor represents the most efficient means of energy conversion.

The Department proposes to allocate NOx allowance to demand side management energy efficiency measures. For the same reason that the Department should not allocate allowances to non-emitting renewable energy generators, it should not allocate allowances to demand side management energy efficiency measures. However, particularly unqualified to be allocated NOx allowances are measures that "shift electric load from periods of higher demand to periods of lower demand." Such load shifting may do nothing to reduce the quantity of NOx emitted, and therefore should not be eligible for a NOx allowance allocation.

PPL appreciates the opportunity to submit these comments. Enclosed is a one page summary for the members of the Environmental Quality Board highlighting PPL's comments. If you have any questions or wish to discuss our comments in greater detail, please call me at (610) 774-5475

Sincerely,

Reid T. Clemmer

Reid T. Clemmer
Environmental Supervisor
Environmental Management Department

Enclosure

**Summary of Comments to
Proposed Rulemaking, Environmental Quality Board
Clean Air Interstate Rule
PPL Generation, LLC**

The Department's Proposed Rule is the Appropriate Action for the Commonwealth to Address the Transport of Ozone and Fine Particulate. EPA determined the level of emissions reductions needed to reduce the significant contribution to downwind non-attainment areas. It also determined that the level of emission reductions from Electric Generating Units (EGU) would be "highly cost effective." The Department should implement the emission budgets put forth by EPA.

NOx Allowance Allocation Method Response to Specific EQB Questions.

PPL supports a generation output based on gross generation, updating allowance allocation method. This method provides an incentive for more efficient electric generation.

New Non-Electric Generating Units should not be allocated NOx allowances from the Electric Generating Unit CAIR Budget.

The Department should either withdraw Section 145.101(b)(2) or increase the NOx allowance budget to account for source categories that were not originally included in the EGU budget.

The Department should not allocate any CAIR NOx allowances to tier I renewable energy qualifying resources or tier II demand side management energy efficiency qualifying facilities under section 145.212. (f) (1), or any CAIR NOx ozone season allowances to tier I renewable energy qualifying resources or tier II demand side management energy efficiency qualifying facilities under section 145.222(f) (1).

In the preamble the Department claims that providing allowances for energy efficiency renewable energy resources is needed to prevent those generators or efficiency measures from being placed at a competitive disadvantage. This claim is incorrect. One of the values of a cap and trade program is that it allows the most cost-effective means to achieve emission reductions. Under CAIR, EPA has established a cap of NOx emissions that can be emitted and still meet environmental objectives. Allocations are then granted to NOx sources based on a NOx emission rate and their proportion of generation to the total generation from NOx emitting sources. All sources that emit more NOx than the allowances allocated to them must either pay to install controls to reduce emissions and/or purchase allowances from others that have more cost-effectively reduced emissions. Specifically, renewable energy resources do not emit NOx, and so they have no inherent need for NOx emission allowances. Renewable energy resources do not emit NOx, and so they have no inherent need for NOx emission allowances. Should the Department decide to retain the NOx allowance subsidy to renewable energy generators it should place a 1 percent cap on the number of NOx allowances that may be allocated annually to renewable energy generators. For the same reason that the Department should not allocate allowances to non-emitting renewable energy generators, it should not allocate allowances to demand side management energy efficiency. There is no cap in the draft rule.

The proposal to allocate compensatory NOx allowances to CAIR affected units that are exempted by section 405(g)(6)(A) of the Clean Air Act is reasonable with the constraints proposed by the Department and should not be changed in the final rule.

In applying constraints to that allocation the Department has struck a reasonable balance between the interests of generators who have not been allocated allowances and those who have. The Department should retain the cap of 1.3 % on the allowances available to the generators exempt from the provisions of Title IV of the Clean Air Act. Also, the requirement to exclude from the allocation calculation the difference between a unit's NOx allocation and its actual emissions correctly compensates for any economic advantage already conferred on the unit. Finally, limiting that NOx allocation to 1 NOx allowance for every 8 tons of SO2 emitted provides a justified adjustment for the potential difference between the price of NOx allowances and the price of SO2 allowances.



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