

**Clean Air Interstate Rule
Comment and Response Document**

August 21, 2007

**Bureau of Air Quality
Department of Environmental Protection**

The Environmental Quality Board (Board) published notice of the public comment period and public hearings for the Clean Air Interstate Rule proposed rulemaking in the *Pennsylvania Bulletin* on April 28, 2007 (37 Pa.B. 2063). The Board held three public hearings on the proposal at the following Regional Offices of the Pennsylvania Department of Environmental Protection (DEP):

May 29, 2007

DEP Southwest Regional Office
 400 Waterfront Drive
 Pittsburgh, PA 15222

May 30, 2007

DEP Southcentral Regional Office
 Susquehanna River Conference Room
 909 Elmerton Ave.
 Harrisburg, PA 17110

May 31, 2007

DEP Southeast Regional Office
 2 East Main Street
 Norristown, PA 19401

The public written comment period for the Clean Air Interstate Rule proposed rulemaking closed on July 2, 2007. Testimony received during the public hearings and written comments received during the public comment period are summarized in this comment and response document. The identity of each commentator is indicated by the assigned number(s) in parentheses after each comment.

ID	Name/Address	Submitted one page Summary for distribution to EQB	Provided Testimony	Requested Final Rulemaking following EQB Action
1	Vincent J. Brisini Reliant Energy Canonsburg, PA 15317	√	√	

ID	Name/Address	Submitted one page Summary for distribution to EQB	Provided Testimony	Requested Final Rulemaking following EQB Action
2	Reid T. Clemmer Supervisor Environmental Management PPL Services Corp. Allentown, PA 18101	√		
3	Jeff A. McNelly Executive Director ARIPPA Camp Hill, PA 17011	√		
4	M. Gary Helm Senior Environmental Coordinator Conectiv Energy			
5*	Douglas L. Biden, President Electric Power Generation Association Harrisburg, PA 17102	√		
6	Charles McPhedran Senior Attorney PennFuture Philadelphia, PA 19102			
7	Kevin M. Stewart, Director of Environmental Health American Lung Association of Pennsylvania Lancaster, PA 17603			
8	Michael A. Parker Policy and Outreach Coordinator Group Against Smog and Pollution, Inc. Pittsburgh, PA 15217			
9	Joseph Otis Minott Executive Director Clean Air Council Philadelphia, PA 19103			
10	Eric Thumma Director, Policy and Regulatory Affairs Iberdrola Renewable Energies USA Radnor, PA 19087			
11	David K. Friend VP, Marketing and Sales U.S. Wind Force, LLC Greensburg, PA 15601			

ID	Name/Address	Submitted one page Summary for distribution to EQB	Provided Testimony	Requested Final Rulemaking following EQB Action
12	Elizabeth Salerno Manager of Policy Analysis American Wind Energy Association Washington, DC 20005			
13	Alden Hathaway Senior VP, Business Development Sterling Planet, Inc. Norcross, GA 30092			
14	Debra Jacobson, Owner DJ Consulting LLC McLean, VA 22101			
15	Judith M. Katz Director U.S. Environmental Protection Agency, Region III Air Protection Division Philadelphia, PA 19103-2029			
16	Michael Waslin Merck and Co, Inc. – West Point West Point, PA 19486	√		
17	John Hamp Principal Env. Specialist FPL Juno Beach, FL			
18	Independent Regulatory Review Commission (IRRC) 333 Market Street, 14 th Floor Harrisburg, PA 17101			

* This commentator provided testimony and written comments.

Program Design

Adoption of Federal CAIR Program

1. Comment: The commentators urged Pennsylvania to adopt EPA's CAIR program with the fewest exceptions. (1, 2, 4, 5, 16 and 18)

Response: The final-form rulemaking adopts and incorporates EPA's CAIR NO_x trading programs by reference, with some amendments. The Department has minimized amendments to EPA's NO_x trading programs to accommodate Pennsylvania's deregulated electric generation market.

Adjusted Heat Input Allocation Methodology and General Allocation Methodology

2. Comment: The commentators expressed support or indifference to Pennsylvania's adjusted heat input allocation methodology. (1, 2, 5, 6, 8, 9, 10, 11, 12, 13, 14 and 17)

Response: The Department followed EPA's allocation methodology for new units because it was the best methodology for a deregulated electricity market; the proposed methodology used by EPA for older units would limit competition and discourage efficiency.

3. Comment: One commentator believed the allocation methodology did not incorporate EPA's allocation methodology and that definitional issues concerning the allocation of allowances to new and existing units needed to be addressed. (4)

Response: The allocation language in the final-form rulemaking addresses the allocation of allowances without the need for definitions of new units and existing units. The Department carefully chose the regulatory language in the final-form rulemaking so as to ensure that units with converted baseline heat input will receive an allocation of allowances for a particular vintage year. Units that operate but have not established a converted baseline heat input are eligible to receive future year allowances. These regulatory provisions in the final-form rulemaking replace EPA's existing unit and new unit provisions.

Transition of Non-EGUs

4. Comment: Commentators (1, 2, 4, and 5) stated that new non-EGUs should not get allocations from the EGU program. One commentator (16) expressed its interest in DEP's unit choice methodology of transferring non-EGUs into CAIR. EPA (15) advised the Department that neither of the transition methodologies in the proposed rulemaking would be approved as EPA believes they are not as stringent as the NO_x SIP Call requirements that currently exist for non-EGUs. EPA Region III stated that the units subject to the NO_x SIP Call, which have been covered under the Commonwealth's NO_x Budget Trading Program, would need to continue to monitor using 40 CFR part 75, and

that each unit would need to maintain an account and an authorized account representative. (1, 2, 4, 5, 15, 16 and 18)

Response: The Department has expanded the proposed transition method to cover new non-EGUs and CAIR-exempted EGUs that are subject to the NO_x SIP Call, while maintaining the non-EGU budget cap of the NO_x Budget Trading Program. The final-form rulemaking requires the affected owners and operators of the units to meet the reporting and monitoring requirements of EPA's CAIR NO_x trading programs.

Using CAIR NO_x Allowances to Account for NO_x Emissions from Non-NO_x Budget Trading Program Units

5. Comment: The commentators suggested that the regulation should allow non-NO_x Budget Trading Program units to buy and retire CAIR NO_x allowances to account for their NO_x emissions. The commentators recommended expansion of this type of program to account for emissions from High Electric Demand Day (HEDD) units. (1, 2 and 5)

Response: While the Department supports market-based programs as a method to improve air quality, the final-form rulemaking does not include the commentators' recommended revisions. The methods suggested by the commentators to account for NO_x emissions from HEDD units and other sources may be considered along with other options at a later date.

Addressing ERC Provisions in CAIR

6. Comment: It is unnecessary to link the ERC and the allowance program. The provision requiring the surrender of NO_x allowances will make those ERCs too expensive for a non-affected source to procure. While the intent of this requirement is to prevent "double emissions," the real consequence is that non-affected industries will have a more difficult time if there is some future economic development of primary industries in the Commonwealth. As we provide for more industries to use these allowances as an alternative to installing emission controls it becomes more unnecessary. This provision should be eliminated. (1, 3, 5 and 18)

Response: The Department disagrees that this provision should be eliminated. The provision is a necessary component of an allowance trading program and already exists in current regulations. The provision is needed to prevent "double emissions" from occurring as a result of the overlap of the allowance and ERC provisions that cover the same emissions. A CAIR unit is able to generate ERCs and sell them to a non-CAIR unit if the ERCs are surplus, permanent, quantified and enforceable, as provided under *25 Pa. Code* § 127.207(1)(i)-(iv) (relating to ERC generation and creation). Typically, ERCS are created through shutdown, curtailment or installation of control measures, which must be memorialized in the permit to be enforceable under *25 Pa. Code* § 127.207(5)(i)-(iii). If an ERC meets these requirements and is approved by the Department, it is

available for use and transfer, as provided under 25 Pa. Code § 127.208 (relating to ERC use and transfer requirements). There is no provision under 25 Pa. Code Chapter 127 (relating to construction, modification, reactivation and operation of sources), however, requiring the CAIR unit to retire the allowances that are no longer needed to cover the emissions rendered available for use as ERCs. If those excess allowances are not retired, the CAIR unit can sell them to another CAIR unit, which could in turn increase its emissions through the use of those allowances. As a result, section 145.205 is necessary to ensure that the reductions continue to remain permanent.

The final-form rulemaking does not require the ERC generating unit to surrender more allowances than it was allocated. Under the final-form rulemaking, however, for the non-CAIR unit to be able to commence operation or increase emissions, the owner or operator of the ERC generating unit must surrender both CAIR NO_x allowances (annual program) and CAIR NO_x Ozone Season allowances, unless there is a restriction on using the ERCs during ozone season. This approach is also designed to prevent double emissions. Once the ERC generating unit owner or operator surrenders the allowances, the Department will adjust the Commonwealth's CAIR NO_x Ozone Season Trading Program budget and CAIR NO_x Annual Trading Program budget. The ERC generating unit owner or operator does not need to continue surrendering allowances. Hence, the provisions in the final-form rulemaking avoid penalizing the ERC generating unit owner or operator by spreading the allowance reduction burden evenly across all sources participating in the CAIR NO_x trading programs.

7. Comment: Commentators indicated support for maintaining the ERC provision in the CAIR rule. (6, 7, 8, 9, 10, 11, 12, 13 and 14) EPA Region III (15) suggested revised language to clarify the ERC provision. (6, 7, 8, 9, 10, 11, 12, 13, 14 and 15)

Response: The Department agrees with these commentators. The final-form rulemaking incorporates EPA's suggested revisions, with minor modifications.

Allocation Timing Consistent with Federal Program

8. Comment: EPA and other commentators asserted that the proposed allocation timing methodology did not meet the Federal requirements in CAIR. (1, 3, 4, 5 and 18)

Response: The timing and new source allowance allocation provisions have been modified in the final-form rulemaking to track the requirements in EPA's CAIR programs.

Allowance Allocation to Qualifying Resources

9. Comment: The commentators expressed strong support for the provisions that allow for an allocation to new energy efficiency and new renewable energy resources without a limitation or set-aside. (4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16 and 17)

Response: The Department appreciates the support. The allocation of allowances will improve air quality and energy efficiency. Allowance allocations should be based upon market decisions made by utilities and consumers rather than derived by limits and set-asides. Providing for allowance allocation to these resources will also build useful market flexibility into the cap and trade program. The definitions of “Tier I renewable energy qualifying source” and “Tier II demand side management energy efficiency qualifying source” were also changed to distinguish them from the Pennsylvania Advanced Energy Portfolio Standards Act, to provide exclusive meaning to qualifying renewable resources in the Commonwealth’s CAIR regulation.

10. Comment: Three commentators recommended limiting the allocation to renewables to 3% of the CAIR NOx Seasonal and annual budgets. (1, 2, 5 and 18) One commentator recommended that the Board consider a limit on the number of NOx allowances that qualifying resources can receive and asked for the cost impact and an explanation as to why a cap is unnecessary. (18) One commentator recommended that renewables should not be allocated allowances, as such units do not have NOx emissions and do not need allowances to cover emissions. (2) The commentator stated that if such units were allocated emissions, the allocations should be limited to 3% of the annual and seasonal budgets. This commentator also indicated that at a minimum, the fuel adjustment methodology allocating such units 3,413 Btu/kWh, the equivalent thermal energy for converting electrical output to heat input, should be used in the allocation process as proposed. (1, 2, 5 and 18)

Response: The Department disagrees, except as to the conversion rate. There is no need to limit the allocations of CAIR NOx allowances or CAIR NOx Ozone Season allowances to renewables to 3% of the overall budgets. Three percent was mentioned at an Air Quality Technical Advisory Committee meeting as an estimate of the impact of renewable resources based upon a report by Black&Veatch that was used to inform the AEPS adoption process. The market determines the mix of generation resources needed to meet growing demand. Not allocating NOx allowances, or limiting the amount of the allocation, to renewable resources would be anti-competitive in light of the fact that the allocation methodology in EPA’s CAIR programs makes higher fuel adjusted allocations to different types of fossil fuel fired units. In the future, zero emission fossil fuel fired plants and new ultra-low emissions fossil fuel fired units will not need, or will need very few, allowances, but such units will be allocated in accordance with the fuel adjustment factor of the fuel they burn. These units will gain a competitive advantage over their renewable competitors since they will receive NOx allowance allocations.

If the market decides to meet growing demand for electricity by the construction of new fossil fuel generation, the NOx allowance cost to all fossil units will be double the NOx allowance cost of meeting that demand with renewable generation due to the fuel adjustment process by which renewables get 3,413 Btu/kWh as an adjustment factor,

non-coal fossil units get 6,775 Btu/kWh and coal fired fossil units get 7,900 Btu/kWh. These adjustment factors ensure that the market decreases the cost of compliance for fossil units over time even if demand increases. A new renewable energy unit with an output of 600 MW-hrs will have about half the impact on the CAIR NO_x Trading Program budgets as a new natural gas unit with an output of 600 MW-hrs. The Department has clarified the fuel adjustment and standard adjustment issue in the final-form rulemaking, including adding the 3,413 Btu/kWh conversion for electrical output to heat input. The Department retains the allocation to renewable resources. Energy efficiency and renewable energy are limited resources, just like oil and gas, and at some point, at any given price of electricity, given the same level of technology, the cost of each unit of production increases incrementally. Thus, no artificial limit is required, as the market will ultimately determine the correct limit.

To meet year over year growth in electric demand, the market will choose the generation type that is best able to meet the growth in demand. The regulation provides no benefit to one type of generation (such as renewable, fossil units, or energy efficiency initiatives) over another. It treats all new fossil and renewable generation resources, those installed after January 1, 2005, the same through the use of conversion factors as discussed above.

Allocation of NO_x Allowances to PURPA Units

11. Comment: Comments supported and no comments opposed providing allowances to the PURPA units that did not receive Acid Rain Program SO₂ allowances prior to 2000. Several commentators support the proposed apportionment (1.3%) and methodology of allocation to these units. The commentators also suggested support for exempting waste coal units from the CAIR SO₂ Trading Program. (1, 2, 4, 5 and 18)

A commentator requested clarification of this subsection, and specifically of the term “cost equivalent.” (15)

Response: The Department agrees with the commentators’ comments and made several clarifying revisions.

12. Comment: One commentator supported providing allowances to the PURPA units that did not receive Acid Rain Program allowances prior to 2000. The commentator thought that allocating 1.3% of the Commonwealth’s CAIR NO_x Trading budget to these sources was adequate for now but should be re-evaluated in the future and an additional allocation equal to 1.3 % of the seasonal CAIR budget should be added as part of that compensation. The commentator included a list of quotes supporting the use of waste coal and its environmental benefits. The commentator suggested an alternate allocation methodology for distributing these CAIR NO_x allowances. (3) One commentator requested clarification of this subsection, and specifically of the term “cost equivalent.” (15)

Response: The Department agrees with the commentator’s position that the use of waste coal to generate electricity provides Pennsylvania with valuable environmental benefits.

The Department also believes that the allocation of CAIR NO_x allowances equal to 1.3% of the Commonwealth's CAIR NO_x Trading budget is an equitable method to provide assistance to units that could have received allowances under the Acid Rain Program but did not because they were exempted during the Acid Rain Program allowance allocation period.

The Department disagrees that CAIR NO_x Ozone Season allowances should be issued to these units. Issuing CAIR NO_x Ozone Season allowances would have a greater impact on units that operate primarily in the ozone season, such as natural gas fired units that do not need to retire Acid Rain Program allowances but that were also not allocated Acid Rain Program allowances. Allocating CAIR NO_x Ozone Season allowances to PURPA units would impose an unfair additional cost for controlling NO_x emissions on such units.

The Department disagrees with the alternate allocation methodology suggested by the commentator. The commentator's approach does not reflect the fact that banked allowances can be used for compliance and the costs of compliance can be shifted and adjusted outside of any control period. The suggested methodology does not allow for effective administration of the allocation process. PURPA units are issued up to 1.3% of each budget.

The Department has clarified the language in this section, some as recommended by this commentator, but has left the basic mechanics and allocation process intact. The Department removed the term "cost equivalent," as it was not needed for this allocation process and it created confusion rather than clarity.

Allocation of Allowances to New Sources

13. Comment: Commentators in general supported or were indifferent to the Department's approach of allocating allowances to new units rather than establishing a set aside. One commentator was concerned with the liquidity of allowances under the proposed method but was supportive of the Department's proposed methodology. (1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15)

Response: Bringing new units into the regular allocation quickly without oversubscription of a new unit set-aside benefits the market and air quality. In addition, any liquidity issues of future allowances will also affect banked allowances. This means the price of future allowances would be expected to respond almost proportionately to banked allowance prices. This happens because there is no longer any progressive flow control and banked allowances no longer lose compliance value. The Department does not believe there can be a liquidity problem with regard to future allowances unless that liquidity issue is shared by current and banked allowances as well.

Definition Recommendations

14. Comment: Commentators recommended that the Department change the definition of “vintage or vintage year.” The commentators suggested that the definition should be clarified to recognize that allowances are not used to meet an emission limit. The commentators wrote that the cap and trade programs do not establish limits, but rather require that emissions be accounted for through the surrender of allowances. They suggested that this definition should be changed as follows: “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.*” (1, 2 and 5)

Response: The Department has changed the definition of “vintage or vintage year” to address the commentators’ concerns.

15. Comment: Commentators recommended that the Department change or eliminate the definition of “demand side management,” since some demand side management activities do not eliminate NOx emissions. (1, 2 and 5)

Response: The activities of concern mentioned by the commentators, namely load shifting and use of industrial byproducts, would not qualify as demand side qualifying resources. The definition in the final-form rulemaking of “demand side management energy efficiency qualifying resource” is, “a demand side management energy efficiency measure that has no associated NOx emission and that generates certified alternative energy credit under the applicable Pennsylvania Alternative Energy Portfolio Standard.” There is no need, therefore, to change or eliminate the definition.

16. Comment: Commentators recommended that the Department change the definition of “renewable energy.” The commentators suggested that the definition of “renewable energy” should be clarified to state, “*Renewable energy—electric energy generated:*” The commentators wrote that 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. The commentators’ 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.*””

(1, 2 and 5)

Response: The Department disagrees with the suggested change as it would limit renewable energy and energy efficiency to that which is “electric energy generated” and would eliminate qualified energy efficiency that reduces electric demand and thermal energy that may displace electric demand. The Department has not revised the final-form rulemaking in response to the comment, although the Department made clarifying revisions in response to a request from AQTAC.

General Comments

17. Comment: The commentator suggested that the monitoring requirements for non-EGUs should not reference output parameters. (16)

Response: The Department agrees. The final-form rulemaking does not require non-EGUs to provide for this type of monitoring

18. Comment: EPA Region III indicated that the transitional provision for non-EGUs into the CAIR NO_x programs does not meet the Federal requirements. The commentator asserted that the transitional provision must specify that new non-EGUs and CAIR-exempted EGUs must be included. (15)

Response: The final-form rulemaking contains new methodology that includes new non-EGU units and CAIR-exempt EGUs.

19. Comment: The commentator expressed concern that Section 145.212 was inconsistent and needed clarification concerning subsections (d) and (f). The commentator provided specific recommendations. (3)

Response: The final-form rulemaking addresses the commentator's concerns and clarifies Section 145.212

20. Comment: EPA Region III advised the Department that EPA will not approve the proposed methodology for transitioning non-EGUs into the CAIR program due to the inclusion of compliance options that the Federal rules do not allow. (15)

Response: The non-EGU transition methodology in the final-form rulemaking has been amended to include a compliance option that addresses the commentator's concern and is designed to meet a preference expressed by industry and the AQTAC not to transition the non-EGUs into the CAIR trading program. The new transition methodology prevents certain issues from arising, like backsliding from progressive flow control to double emission credits due to overlapping of the two CAIR NO_x trading programs, by carrying over the non-EGU trading budget from the NO_x Budget Trading Program.

21. Comment: EPA Region III and IRRC recommended that since the proposed rule incorporates EPA's CAIR by reference, it should not include definitions of words already defined in EPA's CAIR. The commentators offered that the Department may include definitions it needs for its rule's allocation procedures and recommends defining various words. (15 and 18)

Response: The final-form rulemaking has been amended not to include those definitions already defined under the Federal requirements.

22. Comment: EPA Region III commented that renewable energy and energy efficiency units should be removed from the applicability section. (15)

Response: The Department has removed renewable energy and energy efficiency units from the applicability section. (15)

23. Comment: EPA Region III advised the Department to clarify and correct inconsistencies in Section 145.212(b), (c), (d), (f) and (g) along with Section 145.222(a) - (g). The commentator advised the Department to include the order of the allocation procedures, timing requirements, clarifying terms and the meaning of certain provisions. (15).

Response: The Department amended the final-form rulemaking to address the commentator's concerns. Sections 145.211(e) and 145.221(e) were added to ensure that the order of allocation from the allowance budgets to various types of resources is clear. The Department amended supporting language in Sections 145.212 and 145.222 for clarity.

24. Comment: EPA Region III advised the Department that the allowance timing requirements as proposed were not approvable by EPA. (15)

Response: The Department has adjusted the timing requirements in the final-form rulemaking to meet the federal CAIR's timing requirements.