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# Regulatory Analysis Form

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INDEPENDENT REGULATORY  
REVIEW COMMISSION

IRRC Number: 2607

(1) Agency  
Environmental Protection

(2) I.D. Number (Governor's Office Use)  
7-411

(3) Short Title  
Clean Air Interstate Rule

(4) PA Code Cite  
25 Pa. Code Chapters 121, 129  
and 145

(5) Agency Contacts & Telephone Numbers  
Primary Contact: Michele Tate, 783-8727  
Secondary Contact: Kelly J. Heffner, 783-8727

(6) Type of Rulemaking (Check One)  
 Proposed Rulemaking  
 Final Order Adopting Regulation  
 Final Order, Proposed Rulemaking Omitted

(7) Is a 120-Day Emergency Certification Attached?  
 No  
 Yes: By the Attorney General  
 Yes: By the Governor

(8) Briefly explain the regulation in clear and non-technical language.

The final-form rulemaking is designed to meet the requirements of the Clean Air Interstate Rule (CAIR), promulgated by the United States Environmental Protection Agency (EPA) on May 12, 2005, with several subsequent amendments.

The federal CAIR requires 28 states (including Pennsylvania) and the District of Columbia to adopt and submit revisions to their state implementation plans (SIPs). The SIP revisions are required under Clean Air Act (CAA) section 110(a)(2)(D), to reduce SO<sub>2</sub> and NO<sub>x</sub> emissions that EPA has found significantly contribute to nonattainment of the fine particulate matter (PM<sub>2.5</sub>) and ozone national ambient air quality standards (NAAQS) in downwind states. Each state may independently determine which emissions sources to subject to controls, and which control measures to adopt. Pennsylvania's final-form rulemaking adopts the general provisions of the existing Federal Implementation Plan (FIP) that achieve the reductions from electric generating units (EGUs) that are currently covered by the Commonwealth's NO<sub>x</sub> Budget Trading Program, found in 25 Pa. Code Ch. 145, Subchapter A (relating to NO<sub>x</sub> Budget Trading Program). The provisions in the final-form rulemaking are similar to those in the NO<sub>x</sub> Budget Trading Program. The final-form rulemaking contains requirements for designated representatives, permitting, allowances, emission monitoring, and opt-in provisions for three CAIR trading programs and establishes the three CAIR trading programs in the Commonwealth: an annual NO<sub>x</sub> trading program, an ozone season NO<sub>x</sub> trading program, and an annual SO<sub>2</sub> trading program. The final-form rulemaking also addresses the transition for small sources of NO<sub>x</sub> regulated under 25 Pa. Code §§ 129.201 to 129.205, from using NO<sub>x</sub> allowances issued under the NO<sub>x</sub> Budget Trading Program for compliance purposes to using CAIR NO<sub>x</sub> allowances\* beginning in 2009. The final-form rulemaking sunsets the NO<sub>x</sub> Budget Trading Program after 2008 and establishes emission limits for non-EGUs and other sources exempted from CAIR that continue to be required under the NO<sub>x</sub> SIP Call.

## Regulatory Analysis Form

EPA's CAIR NO<sub>x</sub> Ozone Season Federal Implementation Plan (FIP) has superseded the existing NO<sub>x</sub> Budget Trading Program in 2009, and this final-form rulemaking will supersede the FIP in 2010.

The final-form rulemaking, when adopted, will be submitted to the EPA as a revision to the SIP.

*\* For purposes of this Regulatory Analysis Form, the term "CAIR NO<sub>x</sub> allowance" will include both CAIR NO<sub>x</sub> allowances (which are issued for the CAIR Annual NO<sub>x</sub> Trading Program) and CAIR NO<sub>x</sub> Ozone Season allowances (which are issued for the CAIR NO<sub>x</sub> Ozone Season Trading Program).*

(9) State the statutory authority for the regulation and any relevant state or federal court decisions.

This final-form rulemaking is authorized under Section 5 of the Pennsylvania Air Pollution Control Act (35 P.S. § 4005.) Section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P.S. § 4005(a)(1)) grants the Environmental Quality Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in the Commonwealth.

(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

Yes. In the CAIR, EPA requires 28 states (including Pennsylvania) and the District of Columbia to adopt and submit revisions to their SIPs. The SIP revisions are required under Clean Air Act (CAA) section 110(a)(2)(D), to reduce SO<sub>2</sub> and NO<sub>x</sub> emissions that significantly contribute to nonattainment of the fine particulate matter (PM<sub>2.5</sub>) and ozone national ambient air quality standards (NAAQS) in downwind states. The deadline for submission was September 11, 2006; however, the first effective date of any requirements contained in the federal regulations is not until 2008. The Commonwealth did not submit a CAIR SIP revision by the deadline. The Commonwealth will submit this final-form regulation, once adopted, to EPA as the SIP revision to satisfy EPA's CAIR SIP requirements.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

The facilities covered by the CAIR programs were found by EPA to significantly contribute to nonattainment of the PM 2.5 and the 8-hour ozone NAAQS in downwind states. Controlling their emissions under this final-form rulemaking will provide the most cost effective means of reducing the impact of these sources on the Commonwealth and downwind states. This final-form regulation is reasonably necessary to achieve and maintain the national ambient air quality standards.

(12) State the public health, safety, environmental or general welfare risks associated with non-regulation.

Failure to adopt a regulatory program to replace the Federal CAIR FIP would partially impede the electric power market competition, thereby reducing the Commonwealth's overall economic productivity and general welfare, and the amount of environmental benefits per compliance dollar invested.

## Regulatory Analysis Form

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

The citizens of the Commonwealth and regulated community are the major benefactors of these regulatory provisions. CAIR NO<sub>x</sub> allowances are distributed based on ongoing production and service activities in a manner that promotes more efficient use of remaining fossil fuel resources while imposing as little influence on the energy market as possible. In contrast, the FIP provides permanent allocations to entities whether or not they choose to provide economically beneficial production or services, and it rewards past inefficiency of a subset of older units at the expense of all other market participants and the Commonwealth's economy. This is partially mitigated by this final-form rulemaking through the distribution of allowances to the full range of energy resources that compete in the energy market in order to minimize the rule's economic influence.

Allowances permit emissions that have adverse health impacts and costs to the Commonwealth. The fastest and greatest cost savings to both existing unit's and the Commonwealth's economy will be made by speeding the transition to lower emitting technologies.

Fossil generation technologies receive allocation rates that are higher than all others, and allocations are provided in full and on a first priority basis to new fossil units. This recognizes the inherent thermal conversion limitations of current combustion technologies. This approach is necessary to allow the current use of fossil generation units and resources, while providing a way to not have allocations result in slowing the gradual transition to new more efficient, generation fossil and non-fossil energy resources. Existing generating units have already received the entire pool of SO<sub>2</sub> allowances from the federal government and thereby retain a competitive advantage over alternative resources under this final-form rulemaking.

Fossil unit competitiveness is enhanced from an allowance perspective when alternative resources enter the market to meet demand, since alternative resources create twice as much of a reduction in allowance demand as new fossil units. More allowances become available to allocate to existing units, and less expensive allowances become available on the market as well. A recent analysis from the Energy Information Administration of the United States Department of Energy (EIA) of a national carbon cap proposal affecting the power sector confirms that increasing efficiency and renewables in the power system that is under a historically-based cap (which CAIR is) reduces the compliance burden for the conventional power units. Increased alternatives such as efficiency measures can also yield compound economic savings as they reduce the need for high cost peaking generation.

Fuel costs are another benefit. Alternatives and new units will reduce demand for fossil fuels and will serve to moderate price increases, even more greatly if replacement of inefficient fossil units with more fuel efficient units occurs.

These regulatory provisions help to ensure that new clean and efficient fossil energy generators, and alternative energy resources, will be built in Pennsylvania; whereas, the Commonwealth's Alternative Energy Portfolio Standard law does not constrain these resources to the Commonwealth.

Twenty-eight other Eastern states must adopt a similar program. Many of the states have adopted programs that do not provide these benefits. Therefore, it is anticipated that this final-form rulemaking will place Pennsylvania units at a competitive advantage.

## Regulatory Analysis Form

(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effect as completely as possible and approximate the number of people who will be adversely affected.)

No adverse effects are anticipated. The CAIR-affected units must comply with a Federal Implementation Plan (FIP) until EPA approves the final-form regulation as a revision to the State Implementation Plan.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

The final-form regulation will affect owners and operators of large EGUs and non-EGUs. Approximately 65 power stations owned and operated by large multi-state corporate entities will be regulated and the owners and operators of 11 non-EGUs will be provided ozone season alternative emission limits to replace the requirements of the existing Chapter 145 NOx Budget Trading Program. These limits can be met by buying CAIR allowances should a facility exceed the limit. The EGUs are already regulated by the CAIR FIP and the non-EGUs and several exempt EGUs are still regulated by the existing NOx Budget Trading Program.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

The Air Quality Technical Advisory Committee reviewed the final-form rulemaking revisions on July 26, 2007 and September 20, 2007. On September 20, 2007, the AQTAC concurred with the Department's recommendation that the Board approve the final-form rulemaking, provided changes were made to the definitions and use of the terms "Tier 1 renewable energy qualifying resource" and "Tier II demand side management energy efficiency qualifying resource," provided changes were made to the public notice provisions for contacts for additional information, and provided the Department clarified the text and equations for allocations and corrected miscellaneous typographical errors. At the request of the AQTAC, the terms "Tier I" and "Tier II" were deleted from the defined terms in order to avoid confusion with the AEPS Act definitions. Under § 145.211(d), the Department will publish notice of the proposed CAIR NOx allowance allocations in the *Pennsylvania Bulletin* and will publish the final allocations after a 15-day public comment period. The section was modified to meet Federal timing requirements and to address AQTAC concerns regarding access to additional information. In addition, the final-form rulemaking was discussed with the Air Committee of the Citizens Advisory Council on October 15, 2007.

## Regulatory Analysis Form

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required.

The CAIR FIP, not this final-form regulation, has already established the requirement to account for emissions and surrender allowances, therefore the potential cost associated with these requirements is not ascribable to this final-form rulemaking. This rulemaking provides the same number of allowances to electric power market participants in a manner that increases productivity in the Commonwealth and includes several cost savings as outlined in the benefits section relating to fuel and allowance costs. The FIP may represent a cost savings to many affected Pennsylvania generating units as it is now more cost effective for large uncontrolled units that emit the majority of the emissions to install scrubbers and sell previously issued SO<sub>2</sub> allowances. The CAIR SO<sub>2</sub> Trading Program has raised the value of all banked SO<sub>2</sub> allowances considerably, and increased the value of new and existing control installations. Thus, the SO<sub>2</sub> controls could not only pay for themselves with allowance sales, but could also yield unforeseen revenues. The final-form rulemaking does not affect these aspects of the federal program.

It is not possible to estimate the degree of savings accruing to this final-form rulemaking with any useful degree of certainty. To estimate with any precision the amount of accrued cost savings associated with a market based regulatory scheme requires a modeled analysis of the Commonwealth's energy economy, a predictable set of future energy prices and surrounding law and policies. The energy market and surrounding regulatory environment is undergoing rapid change. It is safe, however, to estimate that the benefits of efficiency enhancing rules will only increase with increased upward pressure on fuel prices.

The final-form rulemaking allocates the entire federal budget and virtually the same amounts of NO<sub>x</sub> allowances to each unit as does the federal program. It also provides added potential for savings and revenues from the NO<sub>x</sub> portion of the federal program. Electricity generation companies that turn over their fleets toward both more efficient fossil units and renewable resources that have no emissions will receive an increased share of allowances over that which would occur under the FIP. Entities that invest in more efficient technologies will experience greater cost savings under this regulation.

Holding companies of electricity generators will receive allowances from subsidiaries that are engaged in providing energy efficiency and other alternatives mandated under the Commonwealth's Advance Energy Portfolio Standard (AEPS) law. As outlined in the benefits section, the overall net effect of the rule will reduce costs for the regulated entities as well as consumers who will experience these effects in lower energy costs than would occur under the FIP.

(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures which may be required.

The final rulemaking is expected to impose no additional direct costs on local governments.

### Regulatory Analysis Form

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting or consulting procedures which may be required.

The Commonwealth will incur an increase in the costs of administering emission trading programs of approximately \$500,000 per year in legal, accounting and consulting activity.

(20) In the table below, provide an estimate of the fiscal savings and cost associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
<b>SAVINGS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Savings</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>COSTS:</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Regulated Community</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>	0.00	200000.00	300000.00	500000.00	500000.00	500000.00
<b>Total Costs</b>	0.00	200000.00	300000.00	500000.00	500000.00	500000.00
<b>REVENUE LOSSES:</b>						
<b>Regulated Community</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Revenue Losses</b>	0.00	0.00	0.00	0.00	0.00	0.00

(20a) Explain how the cost estimates listed above were derived.

Costs for the existing emission trading program that has been in existence since 1999 were used to derive estimates for the final-form program.

## Regulatory Analysis Form

(20b) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY-3	FY-2	FY-1	Current FY
Clean Air Fund – Major Emission Facilities 20077	\$ 24,533,000	\$ 24,290,000	\$ 26,218,000	\$ 24,434,000

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

The savings associated with the reduction in premature mortality and health care costs yield economic benefits are twenty times greater than costs.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

A nonregulatory alternative is not an option. The owners and operators of EGUs must comply with a federally enforceable regulatory program or continue to be governed by the FIP. The FIP as outlined in the cost and benefits sections is more costly to regulated entities and the Commonwealth's economy. However, the FIP would reduce costs to state government because the program would be directly administered by EPA. The Commonwealth is unwilling to cede control of the program to the Federal government EPA because EPA will not administer and enforce certain aspects of the Commonwealth's program, which regulates exempt CAIR units and non-EGUs.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

The Department considered including a regulatory provision for auctioning the CAIR NOx allowances, as this would provide for the greatest degree of economic efficiency and avoid inequitable and negative distributional effects. This was not pursued, however, due to the absence of legislative authority to collect and dispose of revenues through this mechanism. Fully deregulating air resources to an auction or competitive bidding process would have allowed for the most efficient use of the resources, and assisted in the fastest transition to new more efficient technologies. However, since so many other aspects of the resource are not open to competition, the effects are relatively small compared to the methodology included in this final-form rulemaking.

The Department also considered pursuing a regulatory revision to adopt the FIP with revisions pertaining to allocation of allowances. The Department dismissed this option because of the possible negative consequences described in response to Question No. 22, above.

## Regulatory Analysis Form

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

Certain provisions vary from the federal model rules, but none is more stringent.

(25) How does the regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

Twenty-eight other Eastern states must adopt a similar program. Some have regulated electric markets. Although NO<sub>x</sub> allowances are a small portion of the equation, the allocation method in the final-form rulemaking provides a positive synergistic means of accelerating the desired benefits of market competition and remove intrinsic disbenefits imposed by the CAIR FIP. Some of the states have either adopted programs similar to EPA's CAIR program or EPA's CAIR FIP in a manner that does not provide this benefit. Therefore, it is anticipated that this final-form rulemaking will place Pennsylvania at a competitive advantage.

(26) Will the regulation affect existing or final-form regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

Yes. The final-form amendments revise Title 25, Chapters 121, 129 and 145, and add new provisions relating to the CAIR trading programs.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

No.

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports, which will be required as a result of implementation, if available.

Yes. The final-form rulemaking will change current paperwork requirements, but the requirements will be consistent with the federal requirements.



## Regulatory Analysis Form

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

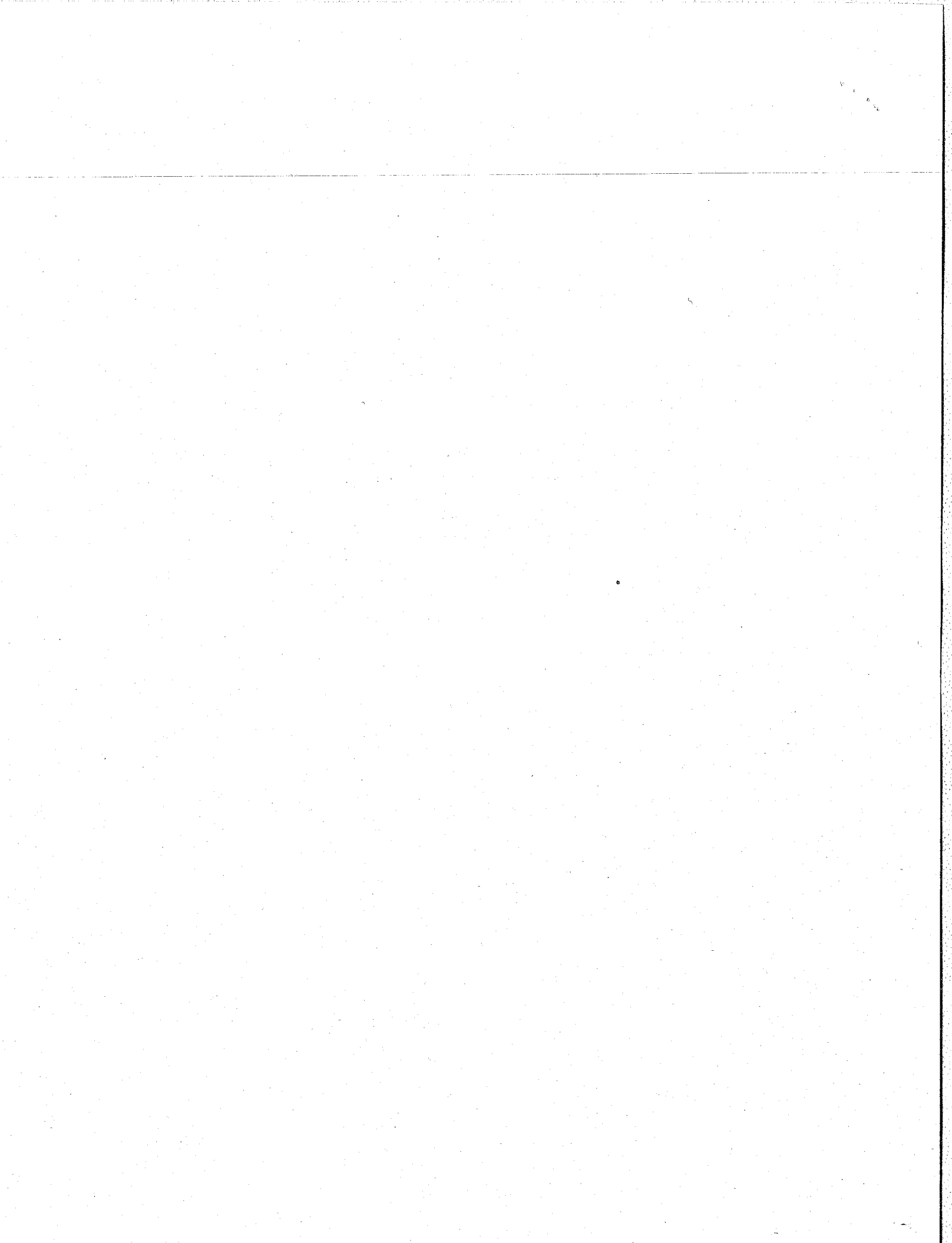
The regulations will provide additional CAIR NO<sub>x</sub> allowances to waste coal generators that did not receive SO<sub>2</sub> allowances from the Federal government under the Federal Acid Rain Program. Not receiving SO<sub>2</sub> allowances puts these facilities at a distinct competitive disadvantage in the CAIR program. The same is true for new electric power resources; however, many of those have no production-related SO<sub>2</sub> emissions so the disadvantages are smaller.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The Department anticipates publication of the final-form rulemaking in February 2008. The regulation will be effective on the date of publication as a final rulemaking in the *Pennsylvania Bulletin*.

(31) Provide the schedule for continual review of the regulation.

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.



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REVIEW COMMISSION

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Copy below is hereby approved as to form and legality.  
Attorney General

By: \_\_\_\_\_  
(Deputy Attorney General)

DATE OF APPROVAL

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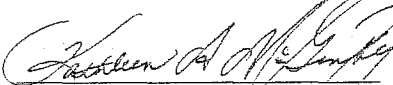
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DEPARTMENT OF ENVIRONMENTAL  
PROTECTION  
ENVIRONMENTAL QUALITY BOARD

(AGENCY)

DOCUMENT/FISCAL NOTE NO. 7-411

DATE OF ADOPTION December 18, 2007

BY 

TITLE KATHLEEN A. MCGINTY  
CHAIRPERSON

EXECUTIVE OFFICER CHAIRMAN OR SECRETARY

Copy below is hereby approved as to form and legality  
Executive of Independent Agency

BY   
Andrew C. Clark

JAN 22 2008  
DATE OF APPROVAL

(Deputy General Counsel)  
(~~Chief Counsel - Independent Agency~~)  
(~~Strike inapplicable title~~)

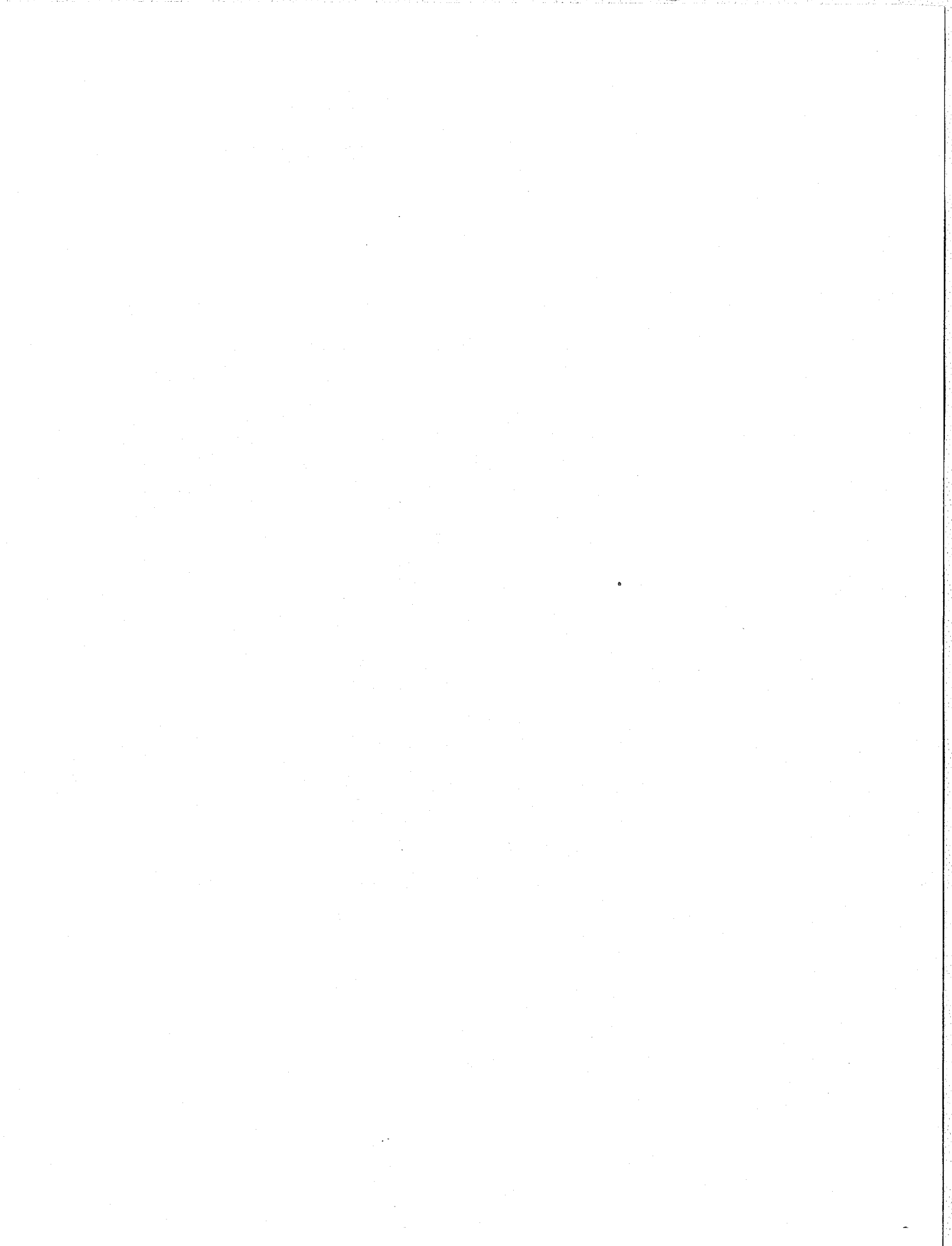
Check if applicable. No Attorney General Approval  
or objection within 30 days after submission.

NOTICE OF FINAL RULEMAKING

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL QUALITY BOARD

Clean Air Interstate Rule

25 Pa. Code, Chapters 121, 129 and 145



**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	√	√	
2	Reid T. Clemmer Supervisor Environmental Management PPL Services Corp. Allentown, PA 18101	√		

<b>ID</b>	<b>Name/Address</b>	<b>Submitted one page Summary for distribution to EQB</b>	<b>Provided Testimony</b>	<b>Requested Final Rulemaking following EQB Action</b>
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			
12	Elizabeth Salerno Manager of Policy Analysis American Wind Energy Association Washington, DC 20005			

<b>ID</b>	<b>Name/Address</b>	<b>Submitted one page Summary for distribution to EQB</b>	<b>Provided Testimony</b>	<b>Requested Final Rulemaking following EQB Action</b>
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 <sup>th</sup> 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 NOx trading programs by reference, with some amendments. The Department has minimized amendments to EPA's NOx 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 NOx SIP Call requirements that currently exist for non-EGUs. EPA Region III stated that the units subject to the NOx SIP Call, which have been covered under the Commonwealth's NOx 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 NOx SIP Call, while maintaining the non-EGU budget cap of the NOx 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 NOx trading programs.

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

**5. Comment:** The commentators suggested that the regulation should allow non-NOx Budget Trading Program units to buy and retire CAIR NOx allowances to account for their NOx 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 NOx 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 NOx 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<sub>x</sub> allowances (annual program) and CAIR NO<sub>x</sub> 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<sub>x</sub> Ozone Season Trading Program budget and CAIR NO<sub>x</sub> 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<sub>x</sub> 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 NOx 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 NOx 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> allowances equal to 1.3% of the Commonwealth’s CAIR NO<sub>x</sub> 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<sub>x</sub> Ozone Season allowances should be issued to these units. Issuing CAIR NO<sub>x</sub> 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<sub>x</sub> Ozone Season allowances to PURPA units would impose an unfair additional cost for controlling NO<sub>x</sub> 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 NOx 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<sub>x</sub> trading programs, by carrying over the non-EGU trading budget from the NO<sub>x</sub> 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)

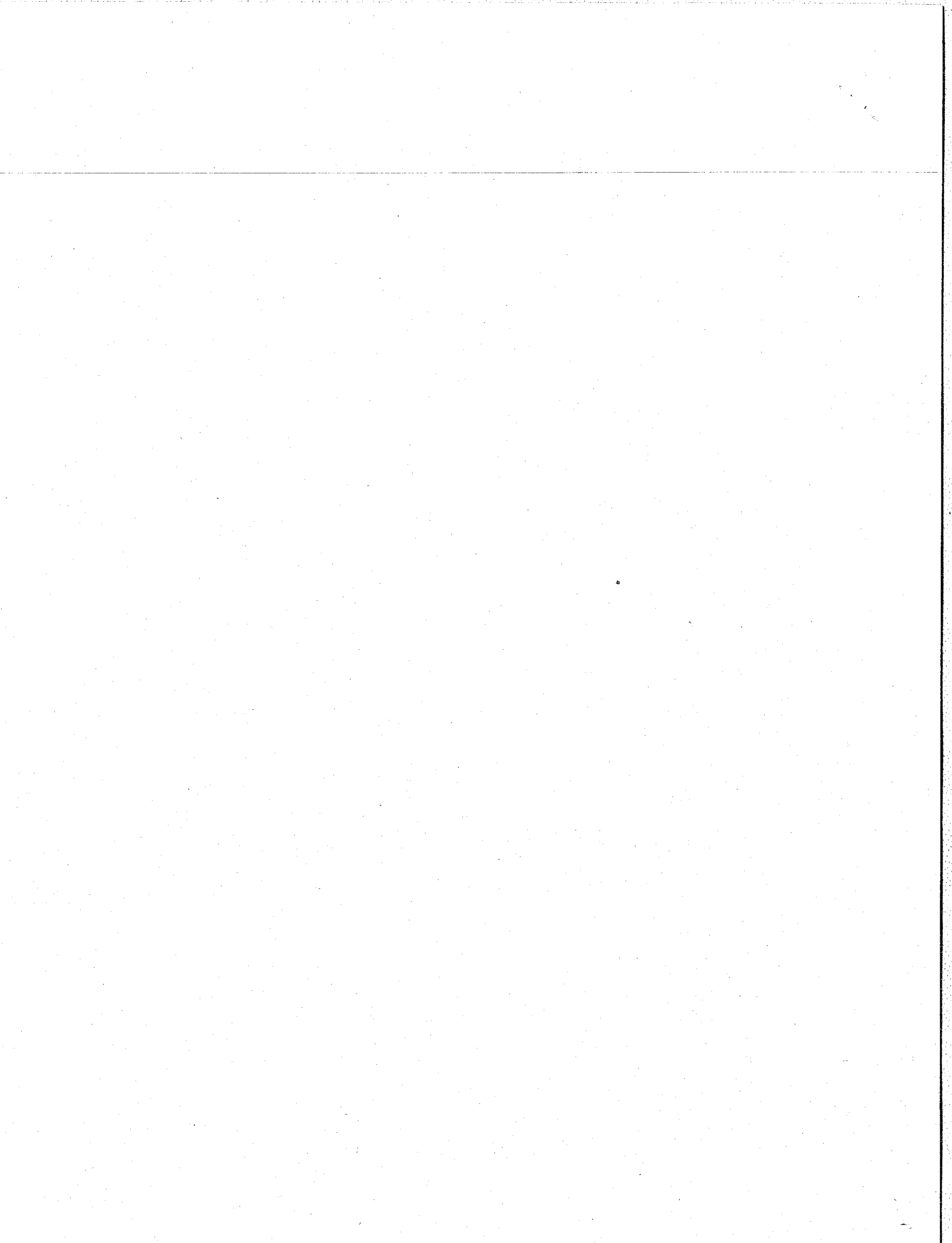
**23. Comment:** EPA Region III advised the Department to clarify and correct inconsistencies in Section 145.212(b), (c), (d), (f) and (g) along with Section 145.222(a) - (g). The commentator advised the Department to include the order of the allocation procedures, timing requirements, clarifying terms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



**Notice of Final Rulemaking**  
**Department of Environmental Protection**  
**Environmental Quality Board**  
**(25 Pa. Code, Chapters 121, 129 and 145)**  
**Clean Air Interstate Rule**

**Order**

The Environmental Quality Board (Board) by this order amends 25 Pa. Code, Chapters 121, 129 and 145 (relating to general provisions; standards for sources; and interstate pollution transport reduction) to read as set forth in Annex A.

The amendments adopt and incorporate by reference, with some exceptions, the Clean Air Interstate Rule (CAIR) nitrogen oxides (NO<sub>x</sub>) Annual Trading Program and CAIR NO<sub>x</sub> Ozone Season Trading Program model rules, as a means of mitigating the interstate transport of fine particulates (PM<sub>2.5</sub>) and NO<sub>x</sub>. The amendments also adopt and incorporate by reference the CAIR Sulfur Dioxide (SO<sub>2</sub>) Trading Program model rules as a means of mitigating the interstate transport of PM<sub>2.5</sub> and SO<sub>2</sub>. The amendments establish general provisions and the applicability, allowance and supplemental monitoring, recordkeeping and reporting provisions and make other related amendments. The CAIR NO<sub>x</sub> trading programs in the amendments supercede the Commonwealth's existing NO<sub>x</sub> Budget Trading Program.

This order was adopted by the Board at its meeting of December 18, 2007.

**A. Effective Date**

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final rulemaking.

**B. Contact Persons**

For further information contact James A. Stoner, Chief, Stationary Sources Section, Bureau of Air Quality, P.O. Box 8468, Rachel Carson State Office Building, Harrisburg, PA 17105-8468, (717) 772-3921; or Kristen Campfield, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users). This final-form rulemaking is available electronically through the DEP Web site (<http://www.depweb.state.pa.us>).

**C. Statutory Authority**

The final-form rulemaking is being made under the authority of section 5 of the Air Pollution Control Act (APCA) (35 P.S. § 4005). Section 5(a)(1) of the APCA grants the Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth.

#### **D. Background of the Amendments**

The purpose of this final-form rulemaking is to establish a program to limit the emission of NO<sub>x</sub> and SO<sub>2</sub> from electric generating facilities of 25 megawatts or greater. This final-form rulemaking also extends existing NO<sub>x</sub> emission permit limits for certain boilers, stationary combustion turbines and stationary internal combustion engines; retains the non-EGU NO<sub>x</sub> Trading Program budget to serve as a statewide ozone season emissions cap for new and existing non-EGUs and for CAIR-exempt EGUs that were subject to the NO<sub>x</sub> Budget Trading Program; provides for the allocation of CAIR NO<sub>x</sub> allowances to certain units that did not receive SO<sub>2</sub> allowances under the Federal Acid Rain Program; and provides for the allocation of CAIR NO<sub>x</sub> annual allowances and CAIR NO<sub>x</sub> Ozone Season allowances to certain renewable energy and energy efficiency units.

The Clean Air Act (CAA) (42 U.S.C.A. §§ 7401--7642) contains a number of requirements to address PM<sub>2.5</sub> and eight-hour ozone National ambient air quality standards (NAAQS), including requirements that states address interstate transport that contributes to nonattainment. The United States Environmental Protection Agency (EPA) concluded that emissions in certain upwind states result in amounts of transported PM<sub>2.5</sub> and ozone and emission precursors for both (namely, NO<sub>x</sub> as a precursor for PM<sub>2.5</sub> and ozone, and SO<sub>2</sub> as a precursor for PM<sub>2.5</sub>) that contribute significantly to nonattainment in downwind states. The EPA determined that this Commonwealth is both an upwind and downwind state.

Section 110(a)(1) of the CAA (42 U.S.C.A. § 7410(a)(1)) requires that states submit State Implementation Plans (SIP) to meet the applicable requirements of section 110(a)(2) of the CAA within three years after the promulgation of a new or revised NAAQS or within a shorter period as the EPA may provide. Under section 110(a)(1) of the CAA, states are required to submit SIPs that satisfy the requirements of section 110(a)(2)(D)(i) of the CAA, regarding interstate transport of pollution. In 1997, the EPA adopted a NAAQS for PM<sub>2.5</sub> at 62 FR 38652 (July 18, 1997) and eight-hour ozone at 62 FR 38855 (July 18, 1997). On April 25, 2005, the EPA made National findings that states failed to submit the required SIPs to address interstate transport with respect to the PM<sub>2.5</sub> and eight-hour ozone NAAQS. 70 FR 21147 (April 25, 2005). Publication of the EPA's findings started a 2-year time clock under section 110(c)(1) of the CAA in which the EPA would promulgate a Federal Implementation Plan (FIP) for a state that failed to submit a SIP approved by the EPA that satisfies the interstate transport requirements in section 110(a)(2)(D)(i) of the CAA within the two years.

On May 12, 2005, the EPA published the final CAIR rule in which the EPA issued findings that 28 states and the District of Columbia contribute significantly to nonattainment of the PM<sub>2.5</sub> or eight-hour ozone NAAQS, or both, in downwind states. 70 FR 25162 (May 12, 2005), as amended at 71 FR 25328 (April 28, 2006). The EPA required these states and the District of Columbia to submit revised SIPs that include control measures to reduce emissions of SO<sub>2</sub> or NO<sub>x</sub>, or both, that significantly contribute to nonattainment of the PM<sub>2.5</sub> and eight-hour ozone NAAQS in downwind states. A state subject to the CAIR may independently determine which emissions sources to subject to controls and which control measures to adopt. The EPA included statewide emission reduction levels in the final rulemaking, as well as model rules for multi-state cap and trade programs for annual SO<sub>2</sub> and NO<sub>x</sub> emissions for PM<sub>2.5</sub> and for seasonal

NOx emissions for ozone. In the rulemaking, the EPA also revised the Acid Rain Program regulations, particularly the regulatory provisions governing the SO<sub>2</sub> cap and trade program, to streamline that program and facilitate its interaction with the CAIR model SO<sub>2</sub> cap and trade program. The EPA also specified that the NOx SIP Call cap and trade program, known as the NOx Budget Trading Program, will be replaced by the CAIR NOx Ozone Season Trading Program.

By way of background, the NOx SIP Call was promulgated in 1998 as the EPA's principal effort to reduce interstate transport of precursors for both the 1-hour and 8-hour ozone NAAQS. 63 FR 57356 (October 27, 1998). The NOx SIP Call followed on the heels of the Ozone Transport Commission's (OTC) NOx Budget Trading Program, which was developed and adopted by the OTC member states, including the Commonwealth, as a regional approach to reducing NOx from large fossil-fuel-fired combustion units. The Commonwealth adopted the OTC NOx Budget Trading Program in §§ 123.101--123.121 (relating to NOx allowance requirements). In the EPA's NOx SIP Call, the EPA imposed seasonal NOx reduction requirements on 22 states in the eastern part of the country (including the Commonwealth) and the District of Columbia. States subject to the NOx SIP Call submitted SIPs incorporating the NOx SIP Call requirements. The Commonwealth adopted the NOx Budget Trading Program in Chapter 145, Subchapter A (relating to NOx budget trading program) in response to the EPA's NOx SIP Call.

When ground-level ozone is present in concentrations in excess of the Federal health-based standard, public health is adversely affected. The EPA concluded that there is an association between ambient ozone concentrations and premature mortality, and increased hospital admissions for respiratory ailments, such as asthma. Further, although children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to ambient ozone while engaged in activities that involve physical exertion. Though the symptoms are often temporary, repeated exposure could result in permanent lung damage. The implementation of measures to address ozone air quality nonattainment in this Commonwealth is necessary to protect the public health.

In addition to causing adverse health effects, the EPA concluded that ozone affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields; reduced growth and survivability of tree seedlings; and increased plant susceptibility to disease, pests and other environmental stresses, such as harsh weather. In long-lived species, these effects may become evident only after several years or even decades and have the potential for long-term adverse impacts on forest ecosystems. Ozone damage to the foliage of trees and other plants can also decrease the aesthetic value of ornamental species used in residential landscaping, as well as the natural beauty of parks and recreation areas. The economic value of some welfare losses due to ozone can be calculated, such as crop yield loss from both reduced seed production and visible injury to some leaf crops, such as lettuce, spinach, tobacco, as well as visible injury to ornamental plants, such as grass, flowers or shrubs. Other types of welfare loss may not be quantifiable, such as reduced aesthetic value of trees growing in heavily visited parks.

Fine particles, or PM<sub>2.5</sub>, are associated with a number of serious health effects, including premature mortality, aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work and restricted activity days), lung disease, decreased lung function, asthma attacks and certain cardiovascular problems such as heart attacks and cardiac arrhythmia. The EPA estimated that attainment of the PM<sub>2.5</sub> standards would prolong tens of thousands of lives and would prevent, each year, tens of thousands of hospital admissions as well as hundreds of thousands of doctor visits, absences from work and school and respiratory illnesses in children. Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease and children.

EPA tightened the 24-hour PM<sub>2.5</sub> standard in October 2006 and proposed a more protective eight-hour ozone standard on July 11, 2007, which it is expected to be finalized by March 12, 2008.

A number of petitions for review have been filed in the Federal Court of Appeals for the District of Columbia Circuit challenging various aspects of the CAIR. The cases have been consolidated into *State of North Carolina v. EPA*, Case No. 05-1244, which addresses CAIR-specific issues, and *Sierra Club v. EPA*, Case No. 06-1221, which addresses the EPA's response to North Carolina's petition to reduce interstate transport of fine particulate matter and ozone. It is possible that a ruling by the Court will lead to revisions to the CAIR by the EPA.

The EPA set two phases of NO<sub>x</sub> and SO<sub>2</sub> reductions in the CAIR, which are addressed in this final-form rulemaking. The first phase of NO<sub>x</sub> reductions begins in 2009 (covering 2009-2014) and the first phase of SO<sub>2</sub> reductions starts in 2010 (covering 2010-2014). The second phase of reductions for both NO<sub>x</sub> and SO<sub>2</sub> starts in 2015 (covering 2015 and thereafter). The EPA's emissions reduction requirements are based on controls that the EPA identified as being highly cost effective for electric generating units (EGUs).

Under the CAIR, states' SIP revisions were due by September 11, 2006. The Commonwealth intends to submit the final-form rulemaking, once adopted, to the EPA as a SIP revision to satisfy the EPA's CAIR SIP requirements.

In the event that a state did not submit its SIP revision on time, the EPA issued a FIP for each state covered by the CAIR on April 28, 2006 (71 FR 25328). The FIPs are designed to regulate EGUs in affected states and to achieve emission reduction requirements established by the CAIR until states have approved SIPs to achieve the reductions. As the control requirement for FIPs, the EPA adopted the model trading rules provided in the CAIR, with minor changes to account for Federal rather than state implementation. The EPA stated that there are no sanctions associated with being subject to a CAIR FIP.

The EPA designed the model rules in the CAIR to parallel the NO<sub>x</sub> SIP Call model trading rules in 40 CFR Part 96 (relating to NO<sub>x</sub> budget trading program and CAIR NO<sub>x</sub> and SO<sub>2</sub> trading programs for state implementation plans) and to coordinate with the Acid Rain Program. To have the EPA administer the trading programs and for sources to be able to trade allowances with sources in other states, the EPA requires states to adopt the model rules, with

flexibility to modify sections regarding NOx allowance allocations and determine whether to include individual unit opt-in provisions. The EPA will no longer administer the NOx SIP Call trading program in 2009.

Under the model rules, states will allocate the CAIR NOx annual allowances and the CAIR NOx Ozone Season allowances. The Department of Environmental Protection's (Department) final-form rulemaking specifies how allowances will be calculated. The NOx Budget Trading Program allowances and CAIR NOx Ozone Season allowances cannot be used for compliance with the annual CAIR NOx emission reduction requirement. Pre-2009 NOx Budget Trading Program allowances can be banked into the program and used by CAIR sources for compliance with the CAIR NOx Ozone Season program. NOx Budget Trading Program allowances of vintages (namely, the first year for which the allowance may be applied against emissions) 2009 and later cannot be used for compliance with CAIR or the CAIR FIP and will be superseded.

The CAIR SO<sub>2</sub> cap and trade program will rely upon Title IV SO<sub>2</sub> allowances that have already been issued, although a state may provide CAIR SO<sub>2</sub> allowances to an opt-in source. Pre-2010 Title IV SO<sub>2</sub> allowances can be used for compliance with the CAIR. SO<sub>2</sub> reductions are achieved under the model rules by requiring sources to retire more than one allowance for each ton of SO<sub>2</sub> emissions. The emission value of an SO<sub>2</sub> allowance is independent of the year in which it is used, but is based upon its vintage. SO<sub>2</sub> allowances of vintage 2009 and earlier will offset one ton of SO<sub>2</sub> emissions. Vintages 2010-2014 will offset 0.5 ton of emissions and vintages 2015 and beyond will offset 0.35 ton of emissions.

The CAIR provides each state with a share of the compliance supplement pool, which is comprised of 200,000 CAIR NOx annual allowances of vintage 2009. For the Commonwealth, the compliance supplement pool will be allocated by the EPA under the FIP in 2009.

Sources will monitor and report their emissions using 40 CFR Part 75 (relating to continuous emission monitoring). Compliance for the annual and ozone season NOx cap and trade programs, as well as the SO<sub>2</sub> program, will be determined separately. A source found to have excess emissions must surrender allowances sufficient to offset the excess emissions and surrender allowances from the next control period equal to three times the excess emissions.

If a state chooses to control EGUs in its CAIR program, as the Commonwealth is doing in the final-form rulemaking, then the state must establish a budget for EGUs. The EPA established Statewide budgets for the Commonwealth's CAIR trading programs that include only EGUs as follows: (1) an annual EGU NOx budget of 99,049 tons per year for 2009-2014 and 82,541 tons per year for 2015 and thereafter; (2) a compliance supplement pool of 16,009 tons of CAIR NOx annual allowances; (3) an Ozone Season EGU NOx budget of 42,171 tons per year for 2009-2014 and 35,143 tons per year for 2015 and thereafter; and (4) an annual EGU SO<sub>2</sub> budget of 275,990 tons per year for 2010-2014 and 193,193 tons per year for 2015 and thereafter. The EPA calculated the amount of each state's EGU emissions cap, or budget, based on reductions that the EPA determined to be highly cost effective. The final-form rulemaking adopts EPA's budgets.

SO<sub>2</sub> allowances are allocated to sources by the EPA under the Acid Rain Program. Certain independent power production (IPP) facilities that are subject to the SO<sub>2</sub> emission control requirements of the CAIR, however, were exempted from the Acid Rain Program. Most of these IPP facilities are waste coal-fired facilities in this Commonwealth that combust coal mining refuse. Since states cannot allocate CAIR SO<sub>2</sub> allowances to these facilities, the owners and operators of these facilities will have to purchase or otherwise obtain the necessary allowances. To provide some relief for the lack of SO<sub>2</sub> allowances, the Department is allocating additional CAIR NO<sub>x</sub> allowances to these facilities, the proceeds from the sale of which the owners and operators of the IPP facilities may use to purchase CAIR SO<sub>2</sub> allowances.

The final-form rulemaking establishes general provisions to achieve reductions from EGUs currently covered by the NO<sub>x</sub> Budget Trading Program in Chapter 145, Subchapter A. The NO<sub>x</sub> reduction requirements are similar to the existing requirements of the NO<sub>x</sub> Budget Trading Program and contain provisions regarding designated representatives of covered units, permitting, allowances, monitoring and opting-in. This final-form rulemaking establishes three CAIR trading programs which cover annual NO<sub>x</sub> emissions, ozone season NO<sub>x</sub> emissions and annual SO<sub>2</sub> emissions, respectively. Each of the three CAIR trading programs in the final-form rulemaking contains similar provisions.

The final-form rulemaking also makes minor changes to the requirements that already apply to small sources of NO<sub>x</sub> in the five-county Philadelphia area. The final-form rulemaking requires these sources to surrender CAIR NO<sub>x</sub> annual allowances and CAIR NO<sub>x</sub> Ozone Season allowances rather than NO<sub>x</sub> Budget Trading Program allowances if the sources' NO<sub>x</sub> emissions exceed its NO<sub>x</sub> emission limits beginning in 2009. A similar change is made for NO<sub>x</sub> emissions from large stationary internal combustion engines that are not subject to the NO<sub>x</sub> Budget Trading Program and for NO<sub>x</sub> emissions from Portland cement kilns. The final-form rulemaking also addresses the transitioning of NO<sub>x</sub> allowance allocations, NO<sub>x</sub> emission limitations and NO<sub>x</sub> monitoring requirements from the NO<sub>x</sub> Budget Program and addresses certain compliance issues. The final-form rulemaking establishes requirements for non-EGUs that are currently subject to the NO<sub>x</sub> Budget Trading Program, including new non-EGUs, and also for EGUs that are exempt from CAIR but were subject to the NO<sub>x</sub> Budget Trading Program.

Non-EGUs will continue to be covered for 2007 and 2008 by the NO<sub>x</sub> allowances already allocated by the Department under the NO<sub>x</sub> Budget Trading Program. Beginning in 2009 and continuing thereafter, the EPA will no longer administer the NO<sub>x</sub> SIP Call. The EPA does not consider an allowance issued for 2009 or later in accordance with the NO<sub>x</sub> SIP Call to be a CAIR NO<sub>x</sub> Ozone Season allowance. Consequently, allowances for years 2009 and later allocated under the Commonwealth's NO<sub>x</sub> Budget Trading Program are terminated and cannot be used for compliance with the CAIR NO<sub>x</sub> Annual Trading Program or the CAIR NO<sub>x</sub> Ozone Season Trading Program.

Both the EPA's CAIR NO<sub>x</sub> model rules and CAIR FIP state that CAIR NO<sub>x</sub> annual allowances and CAIR NO<sub>x</sub> Ozone Season allowances do not constitute property rights. 40 CFR 96.106(c)(6), 96.306(c)(6), 97.106(c)(6) and 97.306(c)(6) (relating to standard requirements). The same is true of CAIR SO<sub>2</sub> allowances. 40 CFR 96.206(c)(6) and 97.206(c)(6) (relating to standard requirements). These provisions also provide that no provision of the CAIR programs,



a CAIR permit application, a CAIR permit or the retired unit exemption and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit authorization. The final-form rulemaking incorporates by reference these Federal provisions.

As the Department stated in its 2005 allocation of NOx allowances, action at the Federal or State level could affect the Department's allocations, and " . . . it is possible that NOx allowances allocated for 2008--2012 would be terminated, limited or otherwise affected." 35 *Pennsylvania Bulletin* 1714 (March 12, 2005). A NOx allowance allocated by the Department under the NOx Budget Trading Program does not constitute a property right. See § 145.6(b)(7) (relating to standard requirements). A "NOx allowance" is defined in § 145.2 (relating to definitions) as:

“An authorization by the Department under the NOx Budget Trading Program to emit up to 1 ton of NOx during the control period of the specified year or of any year thereafter, except as provided under § 145.54(f) (relating to compliance). No provision of the NOx Budget Trading Program, any permit, or an exemption under § 145.4(b) or § 145.5 and no provision of law will be construed to limit the authority of the Department or the Administrator to terminate or limit the authorization, which does not constitute a property right. For purposes of all sections of this subchapter except §§ 145.41--145.43 and 145.88, NOx allowance also includes an authorization to emit up to 1 ton of NOx during the control period of the specified year or of any year thereafter by the Department or the Administrator.”

Under the transition provisions in the final-form rulemaking, non-EGUs currently subject to the NOx Budget Trading Program, including new non-EGUs, and CAIR-exempt EGUs will continue to be subject to the Commonwealth's NOx Trading Program budget. The transition provisions are designed such that a unit must surrender CAIR NOx annual allowances and CAIR NOx Ozone Season allowances if the statewide budget is exceeded and the NOx emissions from the unit exceed the unit's allowable emissions.

The CAIR NOx Ozone Season allowances allocated in November, 2007 by the EPA to EGU owners and operators under the FIP replace the NOx allowances already allocated to EGUs by the Department under the NOx Budget Trading Program for 2009. EPA has also allocated CAIR NOx annual allowances to EGUs for 2009 under the FIP. The Department expects that EGU owners and operators will receive CAIR NOx annual allowances and CAIR NOx Ozone Season allowances for 2010 and beyond from the Department under this final-form rulemaking, since the final-form rulemaking, once approved as a SIP revision, will replace the FIP.

The Department consulted with the Air Quality Technical Advisory Committee (AQTAC) on the final-form rulemaking on July 26, 2007, and September 20, 2007. On September 20, 2007, the AQTAC concurred with the Department's recommendation that the Board approve the final-form rulemaking, providing changes were made to the definitions and use of the terms "Tier 1 renewable energy qualifying resource" and "Tier II demand side management energy efficiency qualifying resource," providing changes were made to the public notice provisions for contacts for additional information, and providing the Department clarified

the text and equations for allocations, and corrected miscellaneous typographical errors. The Department also consulted with the Air Committee of the Citizens Advisory Council on October 15, 2007.

The final-form rulemaking is reasonably necessary to achieve and maintain the NAAQS and to satisfy related CAA requirements. The final-form rulemaking, when adopted, will be submitted to the EPA as a revision to the Commonwealth's SIP.

**E. Summary of Regulatory Requirements in the Final-Form Rulemaking and Major Changes from the Proposed Rulemaking**

The final-form rulemaking amends § 121.1 (relating to definitions) to add a definition of "vintage or vintage year." The term is defined to refer to the calendar year assigned to an allowance by the issuing authority that designates the first year in which the allowance is valid to be applied against emissions. The definition has been amended in the final rulemaking for clarity.

The final-form rulemaking amends sections 129.201 and 129.202 (relating to boilers; and stationary combustion turbines) to account for the transition provisions regarding the NOx Budget Trading Program and the CAIR NOx trading programs.

The final-form rulemaking amends § 129.204 (relating to emission accountability) by changing "NOx allowance" to "CAIR NOx allowance" and "CAIR NOx Ozone Season allowance." This amendment will require the small sources of NOx in the five-county Philadelphia area to surrender allowances from the annual and ozone season CAIR NOx trading programs if the sources' NOx emissions exceed their NOx emission limits, beginning in 2009. Surrender of both allowances is now required in order to avoid double emissions since during the ozone season both CAIR trading programs are active.

A similar change is proposed for NOx emissions from large stationary internal combustion engines that are not subject to the NOx Budget Program and for NOx emissions from Portland cement kilns in §§ 145.113 and 145.143 (relating to standard requirements), respectively.

The final-form rulemaking also clarifies the existing provisions in § 129.204 regarding alternative calculation and recordkeeping procedures for the calculation of actual emissions from small sources of NOx in the five-county Philadelphia area.

The final-form rulemaking addresses the transition from the NOx Budget Trading Program to the CAIR NOx trading programs. New § 145.8 (relating to transition to CAIR NOx trading programs) provides that the final year for NOx allowance allocations to be made under the NOx Budget Trading Program will be 2008. It also indicates that allowance allocations made beyond 2008 are terminated, and retires the Department's non-EGU NOx Trading Program Budget of 3619 allowances established in § 145.40 (relating to state trading program budget). Allocations in 2009 will be made in accordance with the FIP. CAIR NOx Ozone Season allowance allocations for the control period starting May 1, 2010, and for each control period

thereafter, will be distributed in accordance with the CAIR NOx trading programs. New § 145.8 provides that the emission limitations and monitoring requirements established in the NOx Budget Trading Program are replaced by the requirements in Chapter 145, Subchapter D (relating to CAIR NOx and SO<sub>2</sub> trading programs) pertaining to the CAIR NOx Ozone Season Trading Program beginning with the May 1, 2010, control period. This section also addresses compliance.

Proposed § 145.101 (relating to transition requirements for nonelectric generating units) was eliminated in the final-form rulemaking as the EPA commented that neither proposed transition methodology in it was as stringent as the NOx Budget Trading Program. The section addressed the transition for non-EGUs from the NOx Budget Trading Program to the CAIR NOx Ozone Season Trading Program. The EPA requires that states continue to meet their NOx SIP Call obligations. The EPA explains that if a state achieves all of its required CAIR emissions reductions by capping EGUs, then the state must modify its existing NOx SIP Call program to require that non-EGUs in the state that are currently participating in the NOx Budget Trading Program conform to the requirements of the CAIR Ozone Season NOx Trading Program with a trading budget that is the same as or more stringent than the budget in the state's currently approved SIP. 70 FR 25256 (May 12, 2005).

Section 145.8(d) was added to address the transition. It caps all units covered under the NOx Budget Trading Program that do not transition into the CAIR NOx trading programs to 3,619 tons of emissions. Included in this group are any units that did not participate in the NOx Budget Trading Program even though it was an applicable requirement. Of this 3,619 ton emission cap, 5% (189 tons) is retired in order to allow for annual corrections and rounding issues and to cover units exempted under the NOx Budget program. This subsection establishes a mechanism for determining allowable emissions caps for each unit based upon the previous ozone season's heat input. Units under this subsection will not be required to surrender allowances for emissions unless the total emissions for the ozone season from all units subject to the subsection exceed 95% of the cap or 3,438 allowances. If the total emissions exceed the cap, then each unit must turn in one CAIR NOx Ozone Season allowance and one CAIR NOx annual allowance for each ton of emissions the unit emits above its allowable. Units that emit less than their allowable will be able to use excess emissions for units regulated under §§ 129.201 – 129.204, 145.113 (relating to standard requirements) and 145.143 (relating to standard requirements). This section also addresses timing and compliance.

Chapter 145, Subchapter D of the final-form rulemaking incorporates by reference the EPA's CAIR NOx Annual Trading Program, CAIR NOx Ozone Season Trading Program and CAIR SO<sub>2</sub> Trading Program, with modifications.

Section 145.201 (relating to purpose) describes the purpose of Subchapter D. This section explains that Chapter 145, Subchapter D incorporates by reference the CAIR NOx Annual Trading Program and CAIR NOx Ozone Season Trading Program as a means of mitigating the interstate transport of fine particulates and NOx and incorporates the CAIR SO<sub>2</sub> Trading Program as a means of mitigating the interstate transport of fine particulates and SO<sub>2</sub>. The section also explains that Chapter 145, Subchapter D establishes general provisions and applicability, allowance and supplemental monitoring, recordkeeping and reporting provisions.

The final-form rulemaking amends proposed § 145.202 (relating to definitions) to ensure that consistency with the Federal definitions is maintained. This section incorporates by reference the Federal definitions. The section also includes definitions specific to Subchapter D that are not included in the Federal programs.

The proposed definitions of the following terms have been eliminated: "Acid Rain Program," "Administrator," "bottoming-cycle cogeneration unit," "CAIR NOx allowance," "CAIR NOx Annual Trading Program," "CAIR NOx Ozone Season allowance," "CAIR NOx Ozone Season Trading Program," "CAIR NOx Ozone Season unit," "CAIR NOx unit," "CAIR SO<sub>2</sub> Trading Program," "CAIR SO<sub>2</sub> unit," "cogeneration unit," "combustion turbine," "commence commercial operation," "control period," "operator," "owner," "ozone season," "topping-cycle cogeneration unit," "unit," "useful power" and "useful thermal energy."

Several definitions in § 145.202 are derived from or relate to the Alternative Energy Portfolio Standards Act (AEPS Act) (73 P. S. §§ 1648.1--1648.8), as amended, including the term "Pennsylvania Alternative Energy Portfolio Standard." The term "renewable energy qualifying source" is derived from the definition of "Tier I alternative energy source" in the AEPS Act, but includes only those sources included in the definition of "renewable energy" in this final-form rulemaking. The term "demand side management energy efficiency qualifying resource" is derived from the definition of "Tier II alternative energy resource" in the AEPS Act, but is limited by the definition of "demand side management" in this final-form rulemaking. At the request of the AQTAC, the terms "Tier I" and "Tier II" were deleted from the defined terms in order to avoid confusion with the AEPS Act definitions. The term "demand side management," which is also derived from the AEPS Act, does not include industrial by-product technologies to prevent double allocation of allowances under the CAIR NOx trading programs. The Department notes that a "demand side management energy efficiency qualifying resource" is a demand side energy efficiency measure with no associated NOx emissions.

Section 145.202 also includes a definition of "EIA," "gross electrical output," "MWh--Megawatt-hour," "renewable energy" and "renewable energy certificate."

Section 145.203 (relating to applicability) describes the applicability of Chapter 145, Subchapter D. Section 145.203 states that this subchapter will apply to CAIR NOx units, CAIR NOx Ozone Season units and CAIR SO<sub>2</sub> units. The language extending applicability to Tier I renewable energy qualifying resources and Tier II demand side management energy efficiency qualifying resources was deleted as those resources are not subject to the EPA's CAIR programs.

Section 145.204 (relating to incorporation of Federal regulations by reference) establishes the incorporation by reference of the Federal CAIR regulations. This section specifies that the incorporation by reference includes appendices, future amendments and supplements to the Federal regulations. This is consistent with the existing Commonwealth law on incorporation by reference set forth in 1 Pa.C.S. § 1937(a) (relating to references to statutes and regulations). The section also incorporates the Federal definitions.

Section 145.205 (relating to emission reduction credit provisions) requires that the Department permanently reduce the Commonwealth's CAIR NOx trading budgets (annual and

ozone season) and that the owner or operator of a unit subject to Chapter 145, Subchapter D surrender NO<sub>x</sub> allowances if NO<sub>x</sub> emission reduction credits or creditable emission reductions are considered in an applicability determination under Chapter 127, Subchapter E (relating to new source review) for a unit not subject to Chapter 145, Subchapter D, or if an emission trade under Chapter 127 (relating to construction, modification, reactivation and operation of sources) is authorized for a unit not subject to Chapter 145, Subchapter D, whenever the emission reduction credits, creditable emission reductions or emission trade are from a unit subject to Chapter 145, Subchapter D. An example of an emission trade under Chapter 127 is a trade at a facility under a plantwide applicability limit from a CAIR NO<sub>x</sub> unit to a non-CAIR NO<sub>x</sub> unit at the same facility. Section 145.205 carries over the requirements of §§ 145.40(b) and 145.90 (relating to State Trading Program budget; and emission reduction credit provisions). Though the wording is modified in the final-form rulemaking to reflect comment from EPA, the meaning and requirements remain the same.

Section 145.211 (relating to timing requirements for CAIR NO<sub>x</sub> allowance allocations) addresses timing requirements for CAIR NO<sub>x</sub> allowance allocations under the CAIR NO<sub>x</sub> Annual Trading Program. The timing requirements replace the timing requirements in the EPA's CAIR NO<sub>x</sub> Annual Trading Program. Minor modifications were made in the final-form rulemaking in response to the EPA's comment regarding compliance with the EPA's CAIR regulations. Under the final-form rulemaking, the Department will issue allowances for 2010 – 2012 by April 30, 2008, will issue allowances for 2013 by April 30, 2009 and will issue allowances by April 30 each year thereafter for the next control period. In the final-form rulemaking, a provision is added for the Department to reserve 1.3% of the CAIR NO<sub>x</sub> Trading Budget for each annual control period for allocation to the IPP facilities that are subject to the SO<sub>2</sub> emission control requirements of the CAIR but were exempted from the Acid Rain Program.

Under § 145.211(c), the Department will submit to the Administrator CAIR NO<sub>x</sub> allowance allocations to new units by April 30 each year, beginning with 2011. Section 145.211(c) cross-references § 145.212(e), which states that the allocations to new units will be made for the fifth year after the year of the NO<sub>x</sub> emissions. Section 145.211(c) states that the Department will base the allocations to new units on actual emissions in the calendar year preceding the year of the submission. Under the EPA's model rule in 40 CFR 96.141(c), the Department would make CAIR NO<sub>x</sub> allowance allocations for the CAIR NO<sub>x</sub> Annual Trading Program to new units out of a new unit set-aside every year for the year of the allocation. The EPA explains in the CAIR NO<sub>x</sub> Annual Trading Program SIP submission requirements in 40 CFR 51.123(o)(2)(ii)(C) that a state may adopt provisions that differ substantively from the EPA's allowance allocation provisions and still receive SIP approval as long as the state's methodology provides, among other things, that the state notifies the EPA regarding the amount of allowances to be allocated to new units by October 31 of the year of the allocation. The final-form rulemaking meets this notification requirement and provides new units with more advance notice of their allocations than does EPA's model rule. Under the final-form rulemaking, new units will receive future year allowances as compensation to cover their compliance obligations. Unit operators will be able to make an inter-company swap, or external trade or sale of the future vintage year allowances for current vintage year allowances that the operators will require for the new unit's compliance obligations.

Under § 145.211(d), the Department will publish notice of the proposed CAIR NOx allowance allocations in the *Pennsylvania Bulletin* and will publish the final allocations after a 15-day public comment period. The section was modified to meet Federal timing requirements and to address AQTAC concerns regarding access to additional information.

The Department added § 145.211(e) for clarity in the allocation order. Under § 145.211(e), the Department describes the order in which allowances are issued, as commentators found that issue confusing under the proposed rule.

Section 145.212 (relating to CAIR NOx allowance allocations) addresses allocation procedures for CAIR NOx allowance allocations under the CAIR NOx Annual Trading Program. Subsection (a) explains that the allocation requirements in the final-form rulemaking replace the allocation requirements in the EPA's CAIR NOx Annual Trading Program.

The procedure for issuing CAIR NOx allowances to new and existing units under the final-form rulemaking is based on the "new unit" allocation methodology in the CAIR model rules and FIP. The EPA's model rules and FIP would provide existing units with a permanent allocation based on historical operations. The EPA's method has several negative aspects. It rewards past inefficiency, does nothing to pay back efficiency improvements and in states like this Commonwealth with deregulated markets gives existing units an unwarranted and counterproductive competitive advantage. It could also fail to provide more productive units with an equitable share of allowances when market forces change the level of output from particular units. Using the EPA's new unit allocation method with an updating component remedies these deficiencies. The CAIR NOx allocations described in subsections (c) and (d) are modified under the final-form rulemaking to provide clarity, but the methodology has not changed.

This Commonwealth has a deregulated electric market that seeks to achieve the economic and environmental benefits of competition and that is better served by the allocation method in the final-form rulemaking. This approach will allow for the timely integration of new sources into the general allocation pool, and provide allowances for energy efficiency/renewable energy resources on a regular and equitable basis so that these resources will not be placed at a competitive disadvantage. Commentators generally supported this approach.

Subsection (b) addresses the determination of baseline heat input for existing units in a manner that is consistent with the EPA's model rule approach for new units. No changes were made to this section and comments, which were specifically requested in the Preamble, supported this updating allocation methodology.

Subsection (c) explains that allocations will be made to existing units, qualifying resources and new units using baseline heat input data as determined under subsection (b) from a baseline year that is six calendar years before the vintage year of the allowances that are allocated. Subsection (c) also explains that the allocations for each control period beginning with 2010 will equal the number of CAIR NOx allowances remaining in the Commonwealth's trading budget under 40 CFR 96.140 (relating to state trading budgets). This section was modified to address clarity and timing issues but the procedure was not modified.

Under the EPA model rule, a state would maintain a set-aside of 5% of the budget of CAIR NOx allowances for allocation to new units. The Department is not proposing a set-aside for new units; instead, the Department proposes under § 145.212(c) that new unit allowances be allocated from the same pool of allowances as those allocated to other units and qualifying resources to prevent the problem of over-subscription of the new source set-aside experienced under the NOx Budget Trading Program. The Board specifically requested comment on the proposed approach of allocating future CAIR NOx allowances to new units rather than allocating CAIR NOx allowances to new units under a new unit set-aside. The new source allocation methodology was not changed as comments were generally favorable.

Subsection (d) further describes the allocation calculation process for existing units and qualifying resources and states that the Department will make CAIR NOx allowance allocations under this subsection after the Department makes CAIR NOx allowance allocations to new units under subsection (e). In the final-form rulemaking this section was modified for clarity but remains basically as proposed.

Subsection (e) explains that the Department will allocate CAIR NOx allowances to new units by March 31, 2011, and March 31 each year thereafter. A unit may receive a "new unit" allocation under subsection (e) in the same year it receives an allocation based on qualifying converted baseline heat input for regular sources. These concurrent allocations will continue until the unit has already received allowances of the same vintage year as the year in which the emissions that support the "new unit" allocation were generated. At that point, the unit will have transitioned into regular source status and will no longer be eligible for new unit allocations. NOx allowance allocations to new units will be made for the fifth year after the year of the emissions. For example:

A unit that begins operations in 2010 will be allocated 2015 CAIR NOx allowances in 2011, based on 2010 emissions.

In 2012, the unit in the example will be allocated, as a new unit, 2016 CAIR NOx allowances based on 2011 emissions and 2016 CAIR NOx allowance allocations using baseline heat input for 2010

This pattern continues. At the end of 2015, the unit loses its new source status since it has been issued 2016 allowances using 2010 baseline heat input. It will be allocated as a source under § 145.212 (b) each year thereafter.

Subsection (e) remains unchanged in the final-form rulemaking except for a minor clarification, as it was unaffected by timing requirement changes in other subsections.

Allocations to new units in 2009 will be made directly by the EPA under the FIP.

Subsection (f) applies to allocations to qualifying resources and units exempted under the EPA's Acid Rain Program. Qualifying resources may be issued allowances under this provision if they submit an application that meets the requirements of subsection (f). The number of allowances allocated to them will be determined by converting the certified quantity of electric

energy production, useful thermal energy and energy equivalent value of the measures approved under the Pennsylvania Alternative Energy Portfolio Standard to equivalent thermal energy. The term "equivalent thermal energy" is clarified as the baseline heat input to be used in the allocation process in the final-form rulemaking. The final-form rulemaking does not limit the CAIR NO<sub>x</sub> allowances that can be allocated to qualifying resources as a whole. The Board specifically sought comment on the proposed approach to allocating CAIR NO<sub>x</sub> allowances on the basis of new renewable energy sources in this Commonwealth and demand-side management under the Pennsylvania Alternative Energy Portfolio Standard, including the appropriateness of including load shifting as a demand side management measure. The Department reviewed the issue carefully and determined that by definition any demand side management that results in a NO<sub>x</sub> emission would not be eligible for an allocation.

Units exempted under the EPA's Acid Rain Program, and which therefore did not receive SO<sub>2</sub> allowances and yet are subject to the CAIR SO<sub>2</sub> Trading Program, may receive an additional amount of CAIR NO<sub>x</sub> allowances under subsection (f), based on a ratio of one CAIR NO<sub>x</sub> allowance to every eight tons of SO<sub>2</sub> emitted. This ratio is derived from historical price data showing a 1:8 price ratio for NO<sub>x</sub> and SO<sub>2</sub> allowances. Up to 1.3% of the Commonwealth's annual NO<sub>x</sub> budget is available for allocation to these units for each control period from 2010 through 2015, as described in subsections (f)(2) and (4). This allocation will be reduced by any excess NO<sub>x</sub> allowances a unit received over its actual emissions for the control period. The final-form rulemaking specifies that if a unit opts-in to the Acid Rain Program, the owner or operator will get allowances equal to the emissions not covered by the opt-in at a ratio of one CAIR NO<sub>x</sub> allowance for every eight tons of SO<sub>2</sub> that were not covered. The final-form rulemaking also amends the equation used to pro-rate the additional NO<sub>x</sub> allocations if more than 1.3% of the Commonwealth's CAIR NO<sub>x</sub> Trading Budget is requested by these units, partly in response to the AQTAC's recommendation. Although the proposed rulemaking proposed the first allocation of these additional allowances would be made in 2008, timing constraints require that in the final-form rulemaking the first allocation is made in 2011 for the 2010 control period. This pattern continues until the last allocation in 2017 for the 2016 control period. Subsection (f)(5) provides that the Department may extend, terminate or otherwise modify the allocation after providing public notice and a 30-day public comment period. The allocation of NO<sub>x</sub> allowances to these units is discussed more completely under Section D of this Order. The Department also clarified this subsection by eliminating the term "cost equivalent."

Section 145.213 (relating to supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.170--96.175) contains monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units that are subject to the monitoring and reporting requirements of the EPA's CAIR rules. These requirements in the final-form rulemaking are in addition to the requirements in the CAIR rules, and are included to ensure that allocations are made on an equitable basis. This can only be accomplished by requiring all units to collect and report data that meets a standard level of accuracy, consistency and accountability. Most units already have the necessary instrumentation and recordkeeping measures in place. No changes have been made in the final-form rulemaking.



The provisions in the proposed rulemaking that relate to the CAIR NOx Ozone Season Trading Program are nearly identical to those regarding the CAIR NOx Annual Trading Program. The differences relate to the different control periods (May through September, versus entire year) and different Federal cross-references. Consequently, the discussion of §§ 145.211--145.213 pertain also to §§ 145.221--145.223 (relating to additional requirements for CAIR NOx ozone season trading program), with the relevant Federal citations being specified in Annex A. No provision is made in § 145.222 (relating to CAIR NOx Ozone Season allowance allocations) as in § 145.212 for units exempted under the EPA's Acid Rain Program.

#### **F. Summary of Major Comments and Responses on the Proposed Rulemaking**

The Board approved publication of the proposed rulemaking at its meeting on February 20, 2007. The proposed rulemaking was published at 37 *Pennsylvania Bulletin* 2063 (April 28, 2007). Public hearings were held on May 29 in Pittsburgh, May 30 in Harrisburg, and May 31 in Norristown.

The Board received comments from 18 commentators. The Department prepared a Comment and Response document in which the Department responds to comments received during the public comment period. The Comment and Response document is available on the Department's website at [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (Quick Access: Public Participation). The Comment and Response document provides detailed responses to these comments and explains the Department's position.

The following is a discussion of the major comments received during the public comment period.

##### *Adoption of Federal Program*

Several commentators urged Pennsylvania to adopt the EPA's CAIR program with the fewest exceptions. The final-form rulemaking adopts the EPA's CAIR NOx trading programs by reference, with some amendments. The Department minimized amendments to the EPA's NOx trading programs to accommodate Pennsylvania's deregulated electric generation market.

##### *Adjusted heat input allocation methodology*

A number of commentators expressed support or indifference to Pennsylvania's allocation methodology. One commentator believed the allocation methodology did not incorporate the EPA's allocation methodology. In the final-form rulemaking, the Department did not follow the EPA's allocation methodology because it is not the best methodology for a deregulated electricity market; it would limit competition and discourage efficiency.

##### *Transition of non-EGUs*

Several commentators stated that new non-EGUs should not get allocations from the EGU program. One commentator expressed its interest in the DEP's unit choice methodology of transferring non-EGUs into CAIR. EPA Region III advised the Department that neither of the

transition methodologies in the proposed rulemaking would be approved as the EPA believes they are not as stringent as the NO<sub>x</sub> SIP Call requirements that currently exist for non-EGUs. The EPA stated that the units subject to the NO<sub>x</sub> SIP Call, which have been covered under the Commonwealth's NO<sub>x</sub> 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. In response, the Department expanded the proposed transition methodology to cover new non-EGUs and CAIR-exempted EGUs that are subject to the NO<sub>x</sub> SIP Call, while maintaining the non-EGU budget cap of the NO<sub>x</sub> Budget Trading Program. The final-form rulemaking requires the units to meet the reporting and monitoring requirements of the EPA's CAIR NO<sub>x</sub> trading programs.

#### *Using CAIR NO<sub>x</sub> Allowances to Account for NO<sub>x</sub> Emissions from Non-NO<sub>x</sub> Budget Trading Program Units*

Three commentators suggested that the regulation should allow non-NO<sub>x</sub> Budget Trading Program units to buy and retire CAIR NO<sub>x</sub> allowances to account for their NO<sub>x</sub> emissions. The commentators recommend expansion of this type of program to account for emissions from High Electric Demand Day (HEDD) units. 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<sub>x</sub> emissions from HEDD units and other sources may be considered along with other options at a later date.

#### *Addressing ERC Provisions in CAIR*

Four commentators felt that it was unnecessary to link the ERC and the allowance programs and that the provision requiring the surrender of NO<sub>x</sub> allowances would make those ERCs too expensive for a non-affected source to procure. They argued that the real consequence would be that non-affected industries would have a more difficult time if there were some future economic development of primary industries in the Commonwealth. 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. 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, § 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 ERC generating unit must surrender both CAIR NO<sub>x</sub> annual allowances and CAIR NO<sub>x</sub> Ozone Season allowances, unless there is a restriction on using the ERCs during ozone season. This is also designed to prevent double emissions. Once the ERC generating unit surrenders the allowances, the Department will adjust the Commonwealth's CAIR NO<sub>x</sub> Ozone Season Trading Program budget and CAIR NO<sub>x</sub> Annual Trading Program budget. The ERC generating unit does not need to continue

surrendering allowances. Hence, the provisions in the final-form rulemaking avoid penalizing the ERC generating unit by spreading the allowance reduction burden evenly across all sources participating in the CAIR NOx trading programs.

Many commentators indicated support for maintaining the ERC provision in the CAIR rule. EPA Region III suggested revised language to clarify the ERC provision. The Department agrees with these commentators and the final-form rulemaking incorporates the EPA's suggested revisions, with minor modifications.

#### *Allocation Timing Consistent with Federal Program*

The EPA and several other commentators asserted that the proposed allocation timing methodology did not meet the Federal requirements in CAIR. The timing and new source allowance allocation provisions have been modified in the final-form rulemaking to track the requirements in the EPA's CAIR programs.

#### *Allowance Allocation to Qualifying Resources*

Many 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. 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.

Several commentators commented on the allocations to renewable resources, variously recommending limiting the allocation, asking for the cost impact and an explanation as to why a cap is unnecessary, recommending against allocating allowances to renewables because they do not have NOx emissions and indicating that 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. The Department disagrees, except as to the conversion rate. 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. Furthermore, 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. 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.

#### *Allocation of NOx Allowances to PURPA Units*

Support was expressed for providing allowances to the independent IPPs that did not receive SO<sub>2</sub> allowances under the Acid Rain Program. One commentator thought an additional allocation equal to 1.3% of the seasonal CAIR budget should be added. EPA Region III

requested clarification of this subsection and specifically of the term “cost equivalent.” The Department appreciates and agrees with the supportive comments. Allocation of CAIR NOx allowances equal to 1.3% of the Commonwealth’s CAIR NOx 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 allocation period. The use of waste coal to generate electricity provides Pennsylvania with valuable environmental benefits. The Department disagrees, however, that CAIR NOx Ozone Season allowances should be issued to these units. Issuing CAIR NOx 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. The Department has clarified the language in this section, but has left the basic mechanics and allocation process intact.

#### *Allocation of Allowances to New Sources*

Many commentators 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 supportive of the Department’s proposed methodology. The Department responds that 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*

Three commentators recommended that the Department change the definition of “vintage or vintage year.” The Department has changed the definition to address the commentators’ concerns.

These commentators also recommended that the Department change or eliminate the definition of “demand side management,” since some demand side management activities do not eliminate NOx emissions. The activities of concern mentioned by the commentators, however, 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.

The same commentators recommended that the Department change the definition of “renewable energy” if the intent of the definition was to exclude electric energy generated from certain fuels. 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.

### *Applicability*

EPA Region III commented that renewable energy and energy efficiency units should be removed from the applicability section; the Department has deleted them from § 145.203 in the final-form rulemaking.

### *General Comments*

One commentator suggested that the monitoring requirements for non-EGUs should not reference output parameters. The Department agrees. The final-form rulemaking does not require non-EGUs to provide for this type of monitoring

EPA Region III commented that the transitional provision for non-EGUs into the CAIR NOx programs does not meet the Federal requirements. The commentator asserted that the transitional provision must specify that new non-EGUs and CAIR-exempt EGUs must be included. In response, the final-form rulemaking contains new methodology that includes new non-EGU units and CAIR-exempt EGUs.

One commentator expressed concern that § 145.212 was inconsistent and needed clarification concerning subsections (d) and (f). The final-form rulemaking addresses the commentator’s concerns and clarifies § 145.212.

EPA Region III advised the Department that the EPA will not approve the proposed methodology for transitioning non-EGU’s into the CAIR program due to the inclusion of compliance options that the Federal rules do not allow. The Department amended the non-EGU transition methodology in the final-form rulemaking 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 NOx trading programs, by carrying over the non-EGU trading budget from the NOx Budget Trading Program.

EPA Region III and the IRRC recommended that since the proposed rule incorporates the EPA’s CAIR by reference, it should not include definitions of words already defined in the 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. The final-form rulemaking has been amended not to include those definitions already defined under the Federal requirements.

EPA Region III commented that renewable energy and energy efficiency units should be removed from the applicability section. The Department has removed them from this section in the final-form rulemaking.

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. 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 §§ 145.212 and 145.222 for clarity.

EPA Region III advised the Department that the allowance timing requirements as proposed were not approvable by the EPA. The Department adjusted the timing requirements in the final-form rulemaking to meet the Federal CAIR's timing requirements.

## **G. Costs and Compliance**

### **Benefits**

The citizens of the Commonwealth and regulated community are the major benefactors of these regulatory provisions. CAIR NO<sub>x</sub> allowances are distributed based on ongoing production and service activities in a manner that promotes more efficient use of remaining fossil fuel resources while imposing as little influence on the energy market as possible. In contrast, the FIP provides permanent allocations to entities whether or not they choose to provide economically beneficial production or services, and it rewards past inefficiency of a subset of older units at the expense of all other market participants and the Commonwealth's economy. This is partially mitigated by this final-form rulemaking through the distribution of allowances to the full range of energy resources that compete in the energy market in order to minimize the rule's economic influence.

Allowances permit emissions that have adverse health impacts and costs to the Commonwealth. The fastest and greatest cost savings to both existing unit's and the Commonwealth's economy will be made by speeding the transition to lower emitting technologies.

Fossil generation technologies receive allocation rates that are higher than all others, and allocations are provided in full and on a first priority basis to new fossil units. This recognizes the inherent thermal conversion limitations of current combustion technologies. This approach is necessary to allow the current use of fossil generation units and resources, while providing a way to not have allocations result in slowing the gradual transition to new more efficient generation fossil and non-fossil energy resources. Existing generating units have already received the entire pool of SO<sub>2</sub> allowances from the federal government and thereby retain a competitive advantage over alternative resources under this final-form rulemaking.

Fossil unit competitiveness is enhanced from an allowance perspective when alternative resources enter the market to meet demand, since alternative resources create twice as much of a reduction in allowance demand as new fossil units. More allowances become available to allocate to existing units, and less expensive allowances become available on the market as well. A recent analysis from the Energy Information Administration of the United States Department of Energy (EIA) of a national carbon cap proposal affecting the power sector confirms that increasing efficiency and renewables in the power system that is under a historically-based cap (which CAIR is) reduces the compliance burden for the conventional power units. Increased alternatives such as efficiency measures can also yield compound economic savings as they reduce the need for high cost peaking generation.

Fuel costs are another benefit. Alternatives and new units will reduce demand for fossil fuels and will serve to moderate price increases, even more greatly if replacement of inefficient fossil units with more fuel efficient units occurs.

These regulatory provisions help to ensure that new clean and efficient fossil energy generators and alternative energy resources will be built in Pennsylvania; whereas, the Commonwealth's Alternative Energy Portfolio Standard law does not constrain these resources to the Commonwealth.

Twenty-eight other Eastern states must adopt a similar program. Many of the states have adopted programs that do not provide these benefits. Therefore, it is anticipated that this final-form rulemaking will place Pennsylvania units at a competitive advantage.

### **Compliance Costs**

The CAIR FIP, not this final-form rulemaking, has already established the requirement to account for emissions and surrender allowances, therefore the potential cost associated with these requirements is not ascribable to this final-form rulemaking. This rulemaking provides the same number of allowances to electric power market participants in a manner that increases productivity in the Commonwealth and includes several cost savings as outlined in the benefits section relating to fuel and allowance costs.

The FIP may represent a cost savings to many affected Pennsylvania generating units as it is now more cost effective for large uncontrolled units that emit the majority of the emissions to install scrubbers and sell previously issued SO<sub>2</sub> allowances. The CAIR SO<sub>2</sub> Trading Program has raised the value of all banked SO<sub>2</sub> allowances considerably, and increased the value of new and existing control installations. Thus, the SO<sub>2</sub> controls could not only pay for themselves with allowance sales, but could also yield unforeseen revenues. The final-form rulemaking does not affect these aspects of the federal program.

It is not possible to estimate the degree of savings accruing to this final-form rulemaking with any useful degree of certainty. To estimate with any precision the amount of accrued cost savings associated with a market based regulatory scheme requires a modeled analysis of the Commonwealth's energy economy, a predictable set of future energy prices and surrounding law and policies. The energy market and surrounding regulatory environment is undergoing rapid

change. It is safe, however, to estimate that the benefits of efficiency enhancing rules will only increase with increased upward pressure on fuel prices.

The final-form rulemaking allocates the entire federal budget and virtually the same amounts of NOx allowances to each unit as does the federal program. It also provides added potential for savings and revenues from the NOx portion of the federal program. Electricity generation companies that turn over their fleets toward both more efficient fossil units and renewable resources that have no emissions will receive an increased share of allowances over that which would occur under the FIP. Entities that invest in more efficient technologies will experience greater cost savings under this regulation.

Holding companies of electricity generators will receive allowances from subsidiaries that are engaged in providing energy efficiency and other alternatives mandated under the Commonwealth's Advance Energy Portfolio Standard (AEPS) law. As outlined in the benefits section, the overall net effect of the rule will reduce costs for the regulated entities as well as consumers who will experience these effects in lower energy costs than would occur under the FIP.

### **Compliance Assistance Plan**

The Department plans to educate and assist the regulated community and the public with understanding these new regulatory requirements through various means, including field inspector contacts, mailings and the Small Business Compliance Assistance Program.

### **Paperwork Requirements**

This final-form rulemaking utilizes the existing Federal recordkeeping and reporting requirements, as expanded slightly under the CAIR model rules. The EPA will not administer the allowance tracking portion of the program for a state nor allow a state to engage in interstate allowance trading unless the state's CAIR program includes these recordkeeping and reporting requirements. In addition, the final-form rulemaking specifies reporting of electrical and useful thermal output to ensure the producing facilities receive the correct amount of allowances.

### **H. Pollution Prevention (if applicable)**

The Federal Pollution Prevention Act of 1990 established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally-friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This final-form rulemaking incorporates the following pollution prevention incentives:



The final-form rulemaking modestly increases the cost of emissions from fossil-fired power generators and thereby encourages fewer polluting power supply options to be adopted. The NOx portion of the final-form rulemaking includes provisions for the owners of alternative power generation resources to receive NOx allowances in proportion to the pollution prevention benefits the resources provide. These resources include wind, solar and energy efficiency projects. Because the NOx allowances for these resources are based on the output, on par with fossil generation, the final-form rulemaking gives no competitive advantage to one form of energy production over the other in the energy market. In this way, the final-form rulemaking increases the potential for the adoption of less polluting resources.

**I. Sunset Review**

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

**J. Regulatory Review**

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on April 17, 2007, the Department submitted a copy of the notice of proposed rulemaking, published at 37 *Pennsylvania Bulletin* 2063, to the IRRC and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing this final-form rulemaking, the Department has considered all comments from the IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), on (blank) , the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act (71 P.S. § 745.5a(e)), the IRRC met on (blank) and approved the final-form rulemaking.

**K. Findings of the Board**

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 *Pennsylvania Code* §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law, and all comments were considered.

(3) These regulations do not enlarge the purpose of the proposed rulemaking published at 37 *Pennsylvania Bulletin* 2063 (April 28, 2007).

(4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

(5) These regulations are necessary for the Commonwealth to achieve and maintain ambient air quality standards and to satisfy related CAA requirements.

**L. Order of the Board**

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department of Environmental Protection, 25 Pa. Code, Chapters 121, 129 and 145, are amended by amending §§ 121.1, 129.201, 129.202, 129.204, 145.113 and 145.143; and by adding §§ 145.8, 145.201 – 145.205, 145.211-145.213 and 145.221 – 145.223 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson of the Board shall submit this order and Annex A to the IRRC and the Senate and House Committees as required by the Regulatory Review Act.

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

BY:

KATHLEEN A. MCGINTY  
Chairperson  
Environmental Quality Board

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in section 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

\* \* \* \* \*

*Vintage or vintage year*--The calendar year assigned to an allowance by the issuing authority that designates the first year in which it is valid [for use in meeting an emission limit] **TO BE APPLIED AGAINST EMISSIONS.**

\* \* \* \* \*

CHAPTER 129. STANDARDS FOR SOURCES

ADDITIONAL NO<sub>x</sub> REQUIREMENTS

§ 129.201. Boilers.

\* \* \* \* \*

(c) The owner or operator shall calculate allowable emissions by multiplying the unit's cumulative heat input for the period by the applicable emission rate set forth in paragraph (1) or (2).

\* \* \* \* \*

(2) The emission rate for a boiler with a nameplate rated capacity of greater than 250 million Btu/hour that is not subject to ~~§145.8 (c) OR (d) (RELATING TO TRANSITION TO CAIR NO<sub>x</sub> TRADING PROGRAMS) [§§ 145.1—145.7, 145.10—145.14, 145.30, 145.31, 145.40—145.43, 145.50—145.57, 145.60—145.62 and 145.70—145.76]~~ shall be 0.17 pounds NO<sub>x</sub> per

million Btu heat input. ~~[The owner or operator may demonstrate compliance with this paragraph through the provisions of §§ 145.80-145.88 (relating to opt-in process).]~~

\* \* \* \* \*

**§ 129.202. Stationary combustion turbines.**

\* \* \* \* \*

(c) The owner or operator shall calculate allowable emissions by multiplying the unit's cumulative heat input for the period by the applicable emission rate set forth in paragraph (1) or (2).

\* \* \*

(2) The emission rate for a stationary combustion turbine with a nameplate rated capacity of greater than 250 million Btu/hour that is not subject to §145.8 (c) OR (d) (RELATING TO TRANSITION TO CAIR NO<sub>x</sub> TRADING PROGRAMS) ~~[§§ 145.1-145.7, 145.10-145.14, 145.30, 145.31, 145.40-145.43, 145.50-145.57, 145.60-145.62 and 145.70-145.76]~~ shall be 0.17 pounds NO<sub>x</sub> per million Btu heat input. ~~[The owner or operator may demonstrate compliance with this paragraph through the provisions of §§ 145.80-145.88 (relating to opt-in process).]~~

\* \* \* \* \*

**§ 129.204. Emission accountability.**

\* \* \* \* \*

(b) The owner or operator shall determine actual emissions in accordance with one of the following:

\* \* \* \* \*

(2) If the owner or operator of the unit is not required to monitor NO<sub>x</sub> emissions with a CEMS, one of the following shall be used to determine actual emissions of NO<sub>x</sub>:

\* \* \* \* \*

(iv) An alternate calculation and recordkeeping procedure based upon emissions testing and correlations with operating parameters. The operator of the unit shall demonstrate that the alternate procedure does not underestimate actual emissions throughout the allowable range of operating conditions. In regard to obtaining the Department's approval for an alternate calculation method and recordkeeping procedure for actual emissions, the owner or operator may request an adjustment to the allowable emissions calculations set forth in §§ 129.201--129.203. An allowable emission adjustment may not overestimate a unit's

**allowable emissions and must be based upon the parameters and procedures proposed in the alternate calculation method for actual emissions.** The alternate calculation and recordkeeping procedures must be approved by the Department, in writing, prior to implementation.

(c) The owner or operator of a unit subject to this section shall surrender to the Department one **CAIR NO<sub>x</sub> ALLOWANCE AND ONE CAIR NO<sub>x</sub> Ozone Season** allowance, as defined in [§] ~~[145.2]~~ **40 CFR 96.102 AND 96.302** (relating to definitions), for each ton of NO<sub>x</sub> by which the combined actual emissions exceed the allowable emissions of the units subject to this section at a facility from May 1 through September 30. The surrendered ~~[NO<sub>x</sub>]~~ allowances shall be of current year vintage. For the purpose of determining the amount of allowances to surrender, any remaining fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

\* \* \* \* \*

## CHAPTER 145. INTERSTATE POLLUTION TRANSPORT REDUCTION

### Subchapter A. NO<sub>x</sub> BUDGET TRADING PROGRAM

#### GENERAL PROVISIONS

*(Editor's Note: The following section is new. It has been printed in regular type to enhance readability.)*

#### § 145.8. Transition to CAIR NO<sub>x</sub> trading programs.

(a) **ALLOWANCES.** The final year for NO<sub>x</sub> allowance allocations to be made by the Department under §§ 145.41 and 145.42 (relating to timing requirements for NO<sub>x</sub> allowance allocations; and NO<sub>x</sub> allowance allocations) will be 2008. Allocations in 2009 will be made in accordance with the Federal CAIR Ozone Season Trading Program, 40 CFR Part 97 (relating to Federal NO<sub>x</sub> Budget Trading Program and CAIR NO<sub>x</sub> and SO<sub>2</sub> Trading Programs). CAIR NO<sub>x</sub> Ozone Season allowance allocations for the control period starting May 1, 2010, and for each control period thereafter, will be distributed in accordance with Subchapter D (relating to CAIR NO<sub>x</sub> and SO<sub>2</sub> trading programs).

**(b) TERMINATION AND RETIREMENT OF ALLOWANCES. NO<sub>x</sub> ALLOWANCES ALREADY ALLOCATED UNDER THIS SUBCHAPTER FOR 2009 OR LATER ARE TERMINATED AND MAY NOT BE USED FOR COMPLIANCE WITH THE CAIR NO<sub>x</sub> ANNUAL TRADING PROGRAM OR THE CAIR NO<sub>x</sub> OZONE SEASON TRADING PROGRAM, AS THOSE TERMS ARE DEFINED IN 40 CFR 96.102 AND 96.302 (RELATING TO DEFINITIONS). BY JANUARY 1, 2009, THE DEPARTMENT WILL PERMANENTLY RETIRE THE COMMONWEALTH'S NON-EGU NO<sub>x</sub> TRADING PROGRAM BUDGET OF 3619 ALLOWANCES ESTABLISHED IN § 145.40 (RELATING TO STATE TRADING PROGRAM BUDGET).**

(c) REQUIREMENTS REPLACED. The emission limitations and monitoring requirements established in Subchapter A are replaced by the requirements in Subchapter D pertaining to the CAIR NO<sub>x</sub> Ozone Season Trading Program beginning with the May 1, 2010, control period. If the owner or operator of a NO<sub>x</sub> budget unit or CAIR NO<sub>x</sub> Ozone Season unit, as defined in ~~§ 145.202~~ **40 CFR 96.302** (relating to definitions), has failed to demonstrate compliance with § 145.54 (relating to compliance), the provisions in 40 CFR 96.354 (relating to compliance with CAIR NO<sub>x</sub> emissions limitation) shall be used to withhold CAIR NO<sub>x</sub> Ozone Season allowances, **AS THAT TERM IS DEFINED IN 40 CFR 96.302**, in calendar year 2010 and beyond. If no CAIR NO<sub>x</sub> Ozone Season allowances are provided to the unit under § 145.221 (relating to timing requirements for CAIR NO<sub>x</sub> Ozone Season allowance allocations), the owner or operator of the unit shall acquire and retire a number of CAIR NO<sub>x</sub> Ozone Season allowances as specified in 40 CFR 96.354.

(d) NON-EGU NO<sub>x</sub> TRADING PROGRAM BUDGET. FOR UNITS SUBJECT TO THE APPLICABILITY REQUIREMENTS OF § 145.4 (RELATING TO APPLICABILITY), BUT NOT SUBJECT TO THE CAIR NO<sub>x</sub> OZONE SEASON TRADING PROGRAM REQUIREMENTS OF SUBCHAPTER D (RELATING TO CAIR NO<sub>x</sub> AND SO<sub>2</sub> TRADING PROGRAMS), THE FOLLOWING REQUIREMENTS APPLY:

(1) STATEWIDE LIMITATION. THE SUM OF NO<sub>x</sub> OZONE SEASON EMISSIONS FROM ALL UNITS SUBJECT TO THIS SUBSECTION SHALL NOT EXCEED THE COMMONWEALTH'S NON-EGU NO<sub>x</sub> TRADING PROGRAM BUDGET OF 3,619 TONS DURING ANY OZONE SEASON.

(2) CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES. ALL UNITS SUBJECT TO THIS SUBSECTION SHALL MONITOR AND REPORT NO<sub>x</sub> EMISSIONS IN ACCORDANCE WITH 40 CFR PART 96, SUBPART HHHH, AND ESTABLISH A CAIR AUTHORIZED ACCOUNT REPRESENTATIVE AND GENERAL ACCOUNT, IN ACCORDANCE WITH 40 CFR PART 96, SUBPARTS BBBB AND FFFF (RELATING TO CAIR DESIGNATED REPRESENTATIVE FOR CAIR NO<sub>x</sub> OZONE SEASON SOURCES; AND CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCE TRACKING SYSTEM), INCORPORATED INTO SUBCHAPTER D BY REFERENCE, FOR THE PURPOSES OF ENSURING CONTINUED COMPLIANCE WITH THE NON-EGU NO<sub>x</sub> TRADING PROGRAM BUDGET LIMITATION OF PARAGRAPH (1) AND OF RETIRING CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES.

(3) CAIR NO<sub>x</sub> ALLOWANCES. ALL UNITS SUBJECT TO THIS SUBSECTION SHALL ESTABLISH A CAIR AUTHORIZED ACCOUNT REPRESENTATIVE AND GENERAL ACCOUNT IN ACCORDANCE WITH 40 CFR PART 96, SUBPARTS BB AND FF (RELATING TO CAIR DESIGNATED REPRESENTATIVE FOR CAIR NO<sub>x</sub> SOURCES; AND CAIR NO<sub>x</sub> ALLOWANCE TRACKING SYSTEM), INCORPORATED INTO SUBCHAPTER D BY REFERENCE, FOR THE PURPOSE OF RETIRING CAIR NO<sub>x</sub> ALLOWANCES.

(4) EMISSIONS BELOW STATEWIDE LIMITATION. IF THE TOTAL OZONE SEASON EMISSIONS FROM ALL UNITS SUBJECT TO THIS SUBSECTION ARE

LESS THAN 3,438 TONS OF NO<sub>x</sub>, THE DEPARTMENT'S PERMANENT RETIREMENT OF ALLOWANCES COVERS ALL APPLICABLE EMISSIONS AND NO ADDITIONAL ACCOUNT TRANSACTIONS ARE REQUIRED BY THE UNITS COVERED UNDER THIS SUBSECTION.

(5) ALLOWABLE EMISSIONS PER UNIT. BY JANUARY 31, 2009, AND BY JANUARY 31 OF EACH YEAR THEREAFTER, THE DEPARTMENT WILL DETERMINE THE ALLOWABLE AMOUNT OF NO<sub>x</sub> EMISSIONS FOR THE NEXT OZONE SEASON FOR EACH UNIT SUBJECT TO THIS SUBSECTION, AS FOLLOWS:

ALLOWABLE EMISSION RATE X EACH UNIT'S HEAT INPUT

WHERE "ALLOWABLE EMISSION RATE" =

3438 TONS OF NO<sub>x</sub>

COMBINED HEAT INPUT OF ALL UNITS DURING

THE MOST RECENT OZONE SEASON

(6) ALLOWANCE SURRENDER FOR EXCESS EMISSIONS. IF THE COMBINED NO<sub>x</sub> EMISSIONS FROM ALL UNITS SUBJECT TO THIS SUBSECTION EXCEED 3,438 TONS IN AN OZONE SEASON, THEN A UNIT WHOSE ACTUAL EMISSIONS EXCEED THE UNIT'S ALLOWABLE EMISSIONS FOR THAT OZONE SEASON, AS DETERMINED UNDER PARAGRAPH (5), SHALL SURRENDER TO THE DEPARTMENT BY APRIL 30 OF THE YEAR FOLLOWING THE OZONE SEASON 1 CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCE AND 1 CAIR NO<sub>x</sub> ALLOWANCE FOR EACH TON OF EXCESS EMISSIONS. A UNIT WHOSE EXCESS EMISSIONS ARE 0.5 TONS OR GREATER OF THE NEXT EXCESS TON SHALL SURRENDER 1 FULL TON OF CAIR NO<sub>x</sub> ALLOWANCES (BANKED OR CURRENT) FOR THAT EXCESS EMISSION. UNITS UNDER COMMON OWNERSHIP MAY INCLUDE THE ALLOWABLE AND ACTUAL EMISSIONS FROM MULTIPLE UNITS TO DETERMINE WHETHER A UNIT MUST SURRENDER ALLOWANCES.

(7) SURRENDER PROCEDURE. TO SURRENDER ALLOWANCES UNDER PARAGRAPH (6), AN OWNER OR OPERATOR OF A UNIT SHALL SURRENDER THE REQUIRED CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES AND CAIR NO<sub>x</sub> ALLOWANCES TO THE DEPARTMENT'S DESIGNATED NO<sub>x</sub> ALLOWANCE TRACKING SYSTEM ACCOUNT AND PROVIDE TO THE DEPARTMENT, IN WRITING, THE FOLLOWING:

(i) THE SERIAL NUMBER OF EACH ALLOWANCE SURRENDERED.

(ii) THE CALCULATIONS USED TO DETERMINE THE QUANTITY OF ALLOWANCES REQUIRED TO BE SURRENDERED.

(8) FAILURE TO SURRENDER ALLOWANCES. IF AN OWNER OR OPERATOR FAILS TO COMPLY WITH PARAGRAPH (6), THE OWNER OR OPERATOR SHALL BY JUNE 30 SURRENDER 3 CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES AND 3 CAIR NO<sub>x</sub> ALLOWANCES OF THE CURRENT OR LATER YEAR VINTAGE FOR EACH TON OF EXCESS EMISSIONS AS CALCULATED UNDER PARAGRAPH (6).

(9) LIABILITY NOT AFFECTED. THE SURRENDER OF CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES AND CAIR NO<sub>x</sub> ALLOWANCES UNDER PARAGRAPH (6) DOES NOT AFFECT THE LIABILITY OF THE OWNER OR OPERATOR OF THE UNIT FOR ANY FINE, PENALTY OR ASSESSMENT, OR AN OBLIGATION TO COMPLY WITH ANY OTHER REMEDY FOR THE SAME VIOLATION, UNDER THE CAA OR THE ACT.

(i) FOR PURPOSES OF DETERMINING THE NUMBER OF DAYS OF VIOLATION, IF A FACILITY HAS EXCESS EMISSIONS FOR THE PERIOD MAY 1 THROUGH SEPTEMBER 30, EACH DAY IN THAT PERIOD (153 DAYS) CONSTITUTES A DAY IN VIOLATION UNLESS THE OWNER OR OPERATOR OF THE UNIT DEMONSTRATES THAT A LESSE NUMBER OF DAYS SHOULD BE CONSIDERED.

(ii) EACH TON OF EXCESS EMISSIONS IS A SEPARATE VIOLATION.

(10) ALLOWANCE RETIREMENT. THE DEPARTMENT WILL PERMANENTLY RETIRE TO THE DEPARTMENT'S CAIR NO<sub>x</sub> RETIREMENT ACCOUNT THE ALLOWANCES SURRENDERED UNDER PARAGRAPHS (6) – (9).

(11) ACTUAL EMISSIONS BELOW ALLOWABLE EMISSIONS. IF A FACILITY'S ALLOWABLE EMISSIONS EXCEED THE FACILITY'S ACTUAL EMISSIONS FOR AN OZONE SEASON, THE OWNER OR OPERATOR MAY DEDUCT THE DIFFERENCE OR ANY PORTION OF THE DIFFERENCE FROM THE ACTUAL EMISSIONS OF UNITS UNDER THE FACILITY'S COMMON CONTROL THAT ARE SUBJECT TO §§ 129.201 – 129.203 (RELATING TO BOILERS; STATIONARY COMBUSTION TURBINES; AND STATIONARY INTERNAL COMBUSTION ENGINES).

(12) CORRECTIONS. 181 TONS OF ALLOWABLE NO<sub>x</sub> EMISSIONS ARE AVAILABLE TO THE DEPARTMENT ANNUALLY FOR ACCOUNTING CORRECTIONS.

#### [INTERSTATE POLLUTION TRANSPORT REDUCTION REQUIREMENTS

~~—(Editor's Note: The following section is new. It has been printed in regular type to enhance readability.)~~



~~§ 145.101. Transition requirements for nonelectric generating units.~~

~~—(a) Beginning May 1, 2009, the applicability requirements in § 145.4(a)(2) (relating to applicability) will no longer apply to nonelectric generating units.~~

~~—(b) Beginning May 1, 2009, nonelectric generating units will be subject to one of the following:~~

~~—(1) *Ozone Season NOx permit limit.* The Department will establish an Ozone Season NOx permit limit effective May 1, 2009, equal to the most recent Ozone Season NOx allowance allocation for each nonelectric generating unit that meets the applicability requirements of a NOx budget unit under § 145.4(a)(2) before May 1, 2009.~~

~~—(2) *NOx allowance allocation.* If the Department approves a plan approval application by May 1, 2008, for a nonelectric generating unit to be subject to CAIR NOx Ozone Season requirements under §§ 145.221–145.223 (relating to timing requirements for CAIR NOx Ozone Season allowance allocations; CAIR NOx Ozone Season allowance allocations; and supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.370–96.375), the Ozone Season NOx permit limit described in paragraph (1) will not apply to the nonelectric generating unit. The unit will receive CAIR NOx Ozone Season allowances for the duration of the CAIR NOx Ozone Season Trading Program or for the life of the unit, whichever is shorter, under the allocation cycle described in § 145.221. The amount of CAIR NOx Ozone Season allowances allocated to a nonelectric generating unit under this paragraph will equal the unit's 2008 NOx allowance allocation under Subchapter A (relating to NOx Budget Trading Program). The Department will amend the unit's permit to subject the unit to §§ 145.221–145.223 for the duration of the CAIR NOx Ozone Season Trading Program.~~

~~—(c) A nonelectric generating unit may meet the limit in subsection (a) or (b) by retiring CAIR NOx Ozone Season allowances.~~

~~—(d) A nonelectric generating unit may opt in to the CAIR NOx Ozone Season program in accordance with 40 CFR Part 96, Subpart III (relating to CAIR NOx Ozone Season opt in units).~~

~~—(e) A nonelectric generating unit shall comply with the 40 CFR Part 75 (relating to continuous emission monitoring) monitoring requirements specified under 40 CFR Part 96, Subpart HHHH (relating to monitoring and reporting) to demonstrate compliance with this section. Alternatively, if approved by the Department in writing, a nonelectric generating unit may meet the monitoring requirements of this section by complying with the most recent version of the Department's continuous emissions monitoring system program manual.]~~

**Subchapter B. EMISSIONS OF NO<sub>x</sub> FROM STATIONARY INTERNAL COMBUSTION ENGINES**

**§ 145.113. Standard requirements.**

\* \* \* \* \*

(d) The owner or operator of a unit subject to this section shall surrender to the Department one CAIR NO<sub>x</sub> ALLOWANCE AND ONE CAIR NO<sub>x</sub> Ozone Season allowance, as defined in [§] [145.2][~~145.202~~] 40 CFR 96.102 AND 96.302 (relating to definitions), for each ton of NO<sub>x</sub> by which the combined actual emissions exceed the allowable emissions of the units subject to this section at a facility from May 1 through September 30. The surrendered [CAIR] [NO<sub>x</sub>] [Ozone Season] allowances shall be of current year vintage. For the purposes of determining the amount of allowances to surrender, any remaining fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

\* \* \* \* \*

**Subchapter C. EMISSIONS OF NO<sub>x</sub> FROM CEMENT MANUFACTURING**

**§ 145.143. Standard requirements.**

\* \* \* \* \*

(d) The owner or operator of a Portland cement kiln subject to this section shall surrender to the Department one CAIR NO<sub>x</sub> ALLOWANCE AND ONE CAIR NO<sub>x</sub> Ozone Season allowance, as defined in [§] [145.2][~~145.202~~] 40 CFR 96.102 AND 96.302 (relating to definitions), for each ton of NO<sub>x</sub> by which the combined actual emissions exceed the allowable emissions of the Portland cement kilns subject to this section at a facility from May 1 through September 30. The surrendered [CAIR] [NO<sub>x</sub>] [Ozone Season] allowances shall be of current year vintage. For the purposes of determining the amount of allowances to surrender, any remaining fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

\* \* \* \* \*

*(Editor's Note: The following subchapter is new. It has been printed in regular type to enhance readability.)*

**Subchapter D. CAIR NO<sub>x</sub> AND SO<sub>2</sub> TRADING PROGRAMS**

**GENERAL PROVISIONS**

- 145.201. Purpose.
- 145.202. Definitions.
- 145.203. Applicability.
- 145.204. Incorporation of Federal regulations by reference.

#### ADDITIONAL REQUIREMENTS FOR CHAPTER 127 EMISSION REDUCTION CREDIT PROVISIONS

- 145.205. Emission reduction credit provisions.

#### ADDITIONAL REQUIREMENTS FOR CAIR NO<sub>x</sub> ANNUAL TRADING PROGRAM

- 145.211. Timing requirements for CAIR NO<sub>x</sub> allowance allocations.
- 145.212. CAIR NO<sub>x</sub> allowance allocations.
- 145.213. Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.170--96.175.

#### ADDITIONAL REQUIREMENTS FOR CAIR NO<sub>x</sub> OZONE SEASON TRADING PROGRAM

- 145.221. Timing requirements for CAIR NO<sub>x</sub> Ozone Season allowance allocations.
- 145.222. CAIR NO<sub>x</sub> Ozone Season allowance allocations.
- 145.223. Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.370--96.375.

### GENERAL PROVISIONS

#### § 145.201. Purpose.

This subchapter incorporates by reference the CAIR NO<sub>x</sub> Annual Trading Program and CAIR NO<sub>x</sub> Ozone Season Trading Program as a means of mitigating the interstate transport of fine particulates and nitrogen oxides, and the CAIR SO<sub>2</sub> Trading Program as a means of mitigating the interstate transport of fine particulates and sulfur dioxide. This subchapter also establishes general provisions and the applicability, allowance and supplemental monitoring, recordkeeping and reporting provisions.

#### § 145.202. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

~~[Acid Rain Program—A multistate sulfur dioxide and nitrogen oxides air pollution control and emission reduction program established by the Administrator under Title IV of the~~

Clean Air Act (42 U.S.C.A. §§ 7651–7651o), regarding acid deposition control, and 40 CFR Parts 72–78.

~~—Administrator—The Administrator of the EPA or the Administrator's authorized representative.~~

~~—Bottoming-cycle cogeneration unit—A cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.~~

~~—CAIR NO<sub>x</sub> allowance—A limited authorization issued by a permitting authority or the Administrator under provisions of a state implementation plan that are approved under 40 CFR 51.123(o)(1), (2) or (p) (relating to findings and requirements for submission of State implementation plan revisions relating to emissions of oxides of nitrogen pursuant to the Clean Air Interstate Rule), or under 40 CFR Part 97, Subpart EE (relating to CAIR NO<sub>x</sub> allowance allocations) or 40 CFR 97.188 (relating to CAIR NO<sub>x</sub> allowance allocations to CAIR NO<sub>x</sub> opt-in units), to emit 1 ton of nitrogen oxides during a control period of the specified calendar year for which the authorization is allocated or of any calendar year thereafter under the CAIR NO<sub>x</sub> Program. An authorization to emit nitrogen oxides that is not issued under provisions of a state implementation plan that are approved under 40 CFR 51.123(o)(1), (2) or (p) or 40 CFR Part 97, Subpart EE or 40 CFR 97.188 will not be a CAIR NO<sub>x</sub> allowance.~~

~~—CAIR NO<sub>x</sub> Annual Trading Program—A multistate nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with 40 CFR Part 96, Subparts AA–II and 40 CFR 51.123 or established by the Administrator in accordance with 40 CFR Part 97, Subparts AA–II and 40 CFR 51.123(p) and 52.35 (relating to what are the requirements of the Federal Implementation Plans (FIPs) for the Clean Air Interstate Rule relating to emissions of nitrogen oxides?), as a means of mitigating interstate transport of fine particulates and nitrogen oxides. The term refers to the program as adopted in §§ 145.201–145.205, 145.211–145.213 and 145.221–145.223.~~

~~—CAIR NO<sub>x</sub> Ozone Season allowance—A limited authorization issued by a permitting authority or the Administrator under provisions of a state implementation plan that are approved under 40 CFR 51.123(aa)(1) or (2) (and (bb)(1)), (bb)(2), (dd) or (ee), or under 40 CFR Part 97, Subpart EEEE (relating to CAIR NO<sub>x</sub> Ozone Season allowance allocations) or 40 CFR 97.388 (relating to CAIR NO<sub>x</sub> Ozone Season allowance allocations to CAIR NO<sub>x</sub> Ozone Season opt-in units), to emit 1 ton of nitrogen oxides during a control period of the specified calendar year for which the authorization is allocated or of any calendar year thereafter under the CAIR NO<sub>x</sub> Ozone Season Trading Program or a limited authorization issued by a permitting authority for a control period during 2003 through 2008 under the NO<sub>x</sub> Budget Trading Program in accordance with 40 CFR 51.121(p) (relating to findings and requirements for submission of State implementation plan revisions relating to emissions of oxides of nitrogen) to emit 1 ton of nitrogen oxides during a control period, provided that the provision in 40 CFR 51.121(b)(2)(ii)(E) may not be used in applying this~~

~~definition and the limited authorization may not have been used to meet the allowance-holding requirement under the NO<sub>x</sub> Budget Trading Program. An authorization to emit nitrogen oxides that is not issued under provisions of a state implementation plan approved under 40 CFR 51.123(aa)(1) or (2) (and (bb)(1)), (bb)(2), (dd) or (cc) or 40 CFR Part 97, Subpart EEEE or 40 CFR 97.388 or under the NO<sub>x</sub> Budget Trading Program as described in the prior sentence will not be a CAIR NO<sub>x</sub> Ozone Season allowance.~~

~~*CAIR NO<sub>x</sub> Ozone Season Trading Program*—A multistate nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with 40 CFR Part 96, Subparts AAAA–III and 40 CFR 51.123 or established by the Administrator in accordance with 40 CFR Part 97, Subparts AAAA–III and 40 CFR 51.123(cc) and 52.35 as a means of mitigating interstate transport of ozone and nitrogen oxides. The term refers to the program as adopted in §§ 145.201–145.204 (relating to general provisions) and §§ 145.221–145.223 (relating to additional requirements for CAIR NO<sub>x</sub> Ozone Season trading program).~~

~~*CAIR NO<sub>x</sub> Ozone Season unit*—A unit that is subject to the CAIR NO<sub>x</sub> Ozone Season Trading Program under 40 CFR 96.304 (relating to applicability) and, except for purposes of 40 CFR 96.305 (relating to retired unit exemption) and 40 CFR Part 96, Subpart EEEE, a CAIR NO<sub>x</sub> Ozone Season opt-in unit under 40 CFR Part 96, Subpart III.~~

~~*CAIR NO<sub>x</sub> unit*—A unit that is subject to the CAIR NO<sub>x</sub> Annual Trading Program under 40 CFR 96.104 (relating to applicability) and, except for purposes of 40 CFR 96.105 (relating to retired unit exemption) and 40 CFR Part 96, Subpart EE (relating to CAIR NO<sub>x</sub> allowance allocations), a CAIR NO<sub>x</sub> opt-in unit under 40 CFR Part 96, Subpart II (relating to CAIR NO<sub>x</sub> opt-in units).~~

~~*CAIR SO<sub>2</sub> Trading Program*—A multistate sulfur dioxide air pollution control and emission reduction program approved and administered by the Administrator in accordance with 40 CFR Part 96, Subparts AAA–III and 40 CFR 51.124 (relating to findings and requirements for submission of State implementation plan revisions relating to emissions of sulfur dioxide under the Clean Air Interstate Rule) or established by the Administrator in accordance with 40 CFR Part 97, Subparts AAA–III and 40 CFR 51.124(r) and 52.36 (relating to what are the requirements of the Clean Air Interstate Rule Federal Implementation Plans relating to emissions of sulfur dioxide?), as a means of mitigating interstate transport of fine particulates and sulfur dioxide.~~

~~*CAIR SO<sub>2</sub> unit*—A unit that is subject to the CAIR SO<sub>2</sub> Trading Program under 40 CFR 96.204 (relating to applicability) and, except for purposes of 40 CFR 96.205 (relating to retired unit exemption), a CAIR SO<sub>2</sub> opt-in unit under 40 CFR Part 96, Subpart III (relating to CAIR SO<sub>2</sub> opt-in units).~~

~~*Cogeneration unit*—A stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine meeting both of the following requirements:~~

~~—(i) Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy.~~

~~—(ii) Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after the calendar year in which the unit first produces electricity, the following:~~

~~—(A) For a topping-cycle cogeneration unit, both of the following:~~

~~—(I) Useful thermal energy not less than 5% of total energy output.~~

~~—(II) Useful power that, when added to one-half of useful thermal energy produced, is not less than 42.5% of total energy input, if useful thermal energy produced is 15% or more of total energy output, or not less than 45% of total energy input, if useful thermal energy produced is less than 15% of total energy output.~~

~~—(B) For a bottoming-cycle cogeneration unit, useful power not less than 45% of total energy input.~~

~~—Combustion turbine—~~

~~—(i) An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.~~

~~—(ii) If the enclosed device is combined cycle, the term includes any associated duct burner, heat recovery steam generator, and steam turbine.~~

~~—Commence commercial operation—~~

~~—(i) For purposes of the CAIR NO<sub>x</sub> Annual Trading Program, the term "commence commercial operation" means, with regard to a unit, the following:~~

~~—(A) To have begun to produce steam, gas or other heated medium used to generate electricity for sale or use, including test generation, except as provided in 40 CFR 96.105 and 40 CFR 96.184(h) (relating to opt-in process).~~

~~—(I) For a unit that is a CAIR NO<sub>x</sub> unit under 40 CFR 96.104 on the later of November 15, 1990, or the date the unit commences commercial operation as defined in this subparagraph and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), the date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.~~

~~—(II) For a unit that is a CAIR NO<sub>x</sub> unit under 40 CFR 96.104 on the later of November 15, 1990, or the date the unit commences commercial operation as defined in this subparagraph and that is subsequently replaced by a unit at the same source (in other~~

~~words, repowered), the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in this clause or clause (B), as appropriate.~~

~~—(B) Notwithstanding clause (i)(A) and except as provided in 40 CFR 96.105, for a unit that is not a CAIR NO<sub>x</sub> unit under 40 CFR 96.104 on the later of November 15, 1990, or the date the unit commences commercial operation as defined in clause (i)(A), the unit's date for commencement of commercial operation shall be the date on which the unit becomes a CAIR NO<sub>x</sub> unit under 40 CFR 96.104.~~

~~—(I) For a unit with a date for commencement of commercial operation as defined in this subparagraph and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), the date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.~~

~~—(II) For a unit with a date for commencement of commercial operation as defined in this subparagraph and that is subsequently replaced by a unit at the same source (in other words, repowered), the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in this clause or clause (A), as appropriate.~~

~~—(ii) For purposes of the CAIR NO<sub>x</sub> Ozone Season Trading Program, the term "commence commercial operation" means, with regard to a unit, the following:~~

~~—(A) To have begun to produce steam, gas or other heated medium used to generate electricity for sale or use, including test generation, except as provided in 40 CFR 96.305 and 96.384(h) (relating to opt-in process).~~

~~—(I) For a unit that is a CAIR NO<sub>x</sub> Ozone Season unit under 40 CFR 97.304 (relating to applicability) on the later of November 15, 1990, or the date the unit commences commercial operation as defined in this subparagraph and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), the date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.~~

~~—(II) For a unit that is a CAIR NO<sub>x</sub> Ozone Season unit under 40 CFR 96.304 on the later of November 15, 1990, or the date the unit commences commercial operation as defined in this subparagraph and that is subsequently replaced by a unit at the same source (in other words, repowered), the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in this clause or clause (B), as appropriate.~~

~~—(B) Notwithstanding clause (A) and except as provided in 40 CFR 96.305, for a unit that is not a CAIR NO<sub>x</sub> Ozone Season unit under 40 CFR 96.304 on the later of November 15, 1990, or the date the unit commences commercial operation as defined in clause (A), the unit's date for commencement of commercial operation shall be the date on which the unit becomes a CAIR NO<sub>x</sub> Ozone Season unit under 40 CFR 96.304.~~

~~—(I) For a unit with a date for commencement of commercial operation as defined in this subparagraph and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), the date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.~~

~~—(II) For a unit with a date for commencement of commercial operation as defined in this subparagraph and that is subsequently replaced by a unit at the same source (in other words, repowered), the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in this clause or clause (A), as appropriate.~~

~~—Control period—For purposes of the:~~

~~—(i) CAIR NO<sub>x</sub> Annual Trading Program, the period beginning January 1 of a calendar year, except as provided in 40 CFR 96.106(e)(2) (relating to standard requirements), and ending on December 31 of the same year, inclusive.~~

~~—(ii) CAIR NO<sub>x</sub> Ozone Season Trading Program, the period beginning May 1 of a calendar year, except as provided in 40 CFR 96.306(e)(2) (relating to standard requirements), and ending on September 30 of the same year, inclusive.]~~

*Demand side management*—The management of customer consumption of electricity or the demand for electricity through the implementation of any of the following:

(i) Energy efficiency technologies, management practices or other strategies in residential, commercial, institutional or government customers that reduce electricity consumption by those customers.

(ii) Load management or demand response technologies, management practices or other strategies in residential, commercial, industrial, institutional and government customers that shift electric load from periods of higher demand to periods of lower demand.

(iii) Industrial by-product technologies consisting of the use of a by-product from an industrial process, including the reuse of energy from exhaust gases or other manufacturing by-products that are used in the direct production of electricity at the facility of a customer.

**DEMAND SIDE MANAGEMENT ENERGY EFFICIENCY QUALIFYING RESOURCE—**  
**A DEMAND SIDE MANAGEMENT ENERGY EFFICIENCY MEASURE THAT HAS**



**NO ASSOCIATED NOX EMISSIONS AND THAT GENERATES CERTIFIED ALTERNATIVE ENERGY CREDIT.**

*EIA*--The Energy Information Administration of the United States Department of Energy or its successor.

~~[Gross electrical output--The total electrical output from an electric generating unit before making any deductions for energy output used in any way related to the production of energy. For an electric generating unit generating only electricity, the gross electrical output is the output from the turbine/generator set.]~~

*MWh*-Megawatt-hour--One million watt-hours.

~~[Operator--~~

~~—(i) For purposes of the CAIR NO<sub>x</sub> Annual Trading Program, any person who operates, controls or supervises a CAIR NO<sub>x</sub> unit, CAIR NO<sub>x</sub> source, CAIR NO<sub>x</sub> Ozone Season unit or CAIR NO<sub>x</sub> Ozone Season source.~~

~~—(ii) The term includes a holding company, utility system or plant manager of the unit or source.~~

~~—Owner--Any of the following persons:~~

~~—(i) With regard to a CAIR NO<sub>x</sub> source, CAIR NO<sub>x</sub> unit at a source, CAIR NO<sub>x</sub> Ozone Season source or CAIR NO<sub>x</sub> Ozone Season unit at a source, respectively, any of the following persons:~~

~~—(A) A holder of any portion of the legal or equitable title in a CAIR NO<sub>x</sub> unit at the source, the CAIR NO<sub>x</sub> unit, the CAIR NO<sub>x</sub> Ozone Season unit at the source or the CAIR NO<sub>x</sub> Ozone Season unit.~~

~~—(B) A holder of a leasehold interest in a CAIR NO<sub>x</sub> unit at the source, the CAIR NO<sub>x</sub> unit, a CAIR NO<sub>x</sub> Ozone Season unit at the source or the CAIR NO<sub>x</sub> Ozone Season unit.~~

~~—(C) A purchaser of power from a CAIR NO<sub>x</sub> unit at the source, the CAIR NO<sub>x</sub> unit, a CAIR NO<sub>x</sub> Ozone Season unit at the source or the CAIR NO<sub>x</sub> Ozone Season source under a life-of-the-unit, firm power contractual arrangement; provided that, unless expressly provided for in a leasehold agreement, the term "owner" does not include a passive lessor, or a person who has an equitable interest through a passive lessor, whose rental payments are not based (either directly or indirectly) on the revenues or income from the CAIR NO<sub>x</sub> unit or CAIR NO<sub>x</sub> Ozone Season unit.~~

~~—(ii) With regard to any general account, a person who has an ownership interest with respect to the CAIR NO<sub>x</sub> allowances or CAIR NO<sub>x</sub> Ozone Season allowances held in the general account and who is subject to the binding agreement for the CAIR authorized~~

~~account representative to represent the person's ownership interest with respect to CAIR NOx allowances or CAIR NOx Ozone Season allowances.~~

~~—Ozone Season—The period beginning May 1 of a calendar year and ending on September 30 of the same year, inclusive.]~~

*Pennsylvania Alternative Energy Portfolio Standard*--An applicable standard promulgated under the Alternative Energy Portfolio Standards Act, **AS AMENDED** (73 P. S. §§ 1648.1--1648.8).

*Renewable energy*--~~[Energy generated:]~~

(i) **RENEWABLE ENERGY GENERATED [B]**By one or more of the following fuels, energy resources or technologies, and that does not emit NOx or SO<sub>2</sub>:

- (A) Solar photovoltaic or solar thermal energy.
- (B) Wind energy.
- (C) Fuel cells that do not employ a fuel processor that emits NOx.
- (D) Ocean thermal, wave or tidal energy.
- (E) Low-impact hydro energy.
- (F) Geothermal energy.

(ii) **RENEWABLE ENERGY DOES NOT INCLUDE ENERGY GENERATED [F]**From nuclear fuel, biomass, landfill gas, fuel cells that employ a fuel processor that emits NOx, or hydro using pumped storage ~~[is not renewable energy]~~.

*Renewable energy certificate*--The tradable alternative energy credit instrument **GENERATED UNDER, AND** used to establish, verify and monitor compliance with, the Pennsylvania Alternative Energy Portfolio Standard. A unit of credit shall equal 1 megawatt-hour of electricity from an alternative energy source.

~~[Tier I-r]~~*Renewable energy qualifying REsource*--A renewable energy measure that generates renewable energy certificates ~~[under the applicable Pennsylvania Alternative Energy Portfolio Standard]~~.

~~[Tier II demand side management energy efficiency qualifying source~~--A demand side management energy efficiency measure that has no associated NOx emissions and that generates certified alternative energy credit under the applicable Pennsylvania Alternative Energy Portfolio Standard.]

~~[Topping-cycle cogeneration unit—A cogeneration unit in which the energy input to the unit is first used to produce useful power, including electricity, and at least some of the reject heat from the electricity production is then used to provide useful thermal energy.~~

~~—Unit—A stationary, fossil-fuel-fired boiler, combustion turbine or other stationary, fossil-fuel-fired combustion device.~~

~~—Useful power—With regard to a cogeneration unit, electricity or mechanical energy made available for use, excluding any such energy used in the power production process (which process includes any onsite processing or treatment of fuel combusted at the unit and any onsite emission controls).~~

~~—Useful thermal energy—With regard to a cogeneration unit, thermal energy that is any of the following:~~

~~—(i) Made available to an industrial or commercial process (not a power production process), excluding heat contained in condensate return or makeup water.~~

~~—(ii) Used in a heating application (for instance, space heating or domestic hot water heating).~~

~~—(iii) Used in a space cooling application (in other words, thermal energy used by an absorption chiller).]~~

### **§ 145.203. Applicability.**

This subchapter applies to CAIR NO<sub>x</sub> units, CAIR NO<sub>x</sub> Ozone Season units and CAIR SO<sub>2</sub> units. ~~[This subchapter also applies to tier I renewable energy qualifying sources and tier II demand side management energy efficiency qualifying sources.]~~

### **§ 145.204. Incorporation of Federal regulations by reference.**

(a) Except as otherwise specified in this subchapter, the provisions of the CAIR NO<sub>x</sub> Annual Trading Program, found in 40 CFR Part 96 (relating to NO<sub>x</sub> budget trading program and CAIR NO<sub>x</sub> and SO<sub>2</sub> trading programs for state implementation plans), including all appendices, future amendments and supplements thereto, are incorporated by reference.

(b) Except as otherwise specified in this subchapter, the provisions of the CAIR SO<sub>2</sub> Trading Program, found in 40 CFR Part 96, including all appendices, future amendments and supplements thereto, are incorporated by reference.

(c) Except as otherwise specified in this subchapter, the provisions of the CAIR NO<sub>x</sub> Ozone Season Trading Program, found in 40 CFR Part 96, including all appendices, future amendments and supplements thereto, are incorporated by reference.

(d) In the event of a conflict between Federal regulatory provisions incorporated by reference in this subchapter and Pennsylvania regulatory provisions, the provision expressly set out in this subchapter shall be followed unless the Federal provision is more stringent. Federal regulations that are cited in this subchapter or that are cross-referenced in the Federal regulations incorporated by reference include any Pennsylvania modifications made to those Federal regulations.

## **ADDITIONAL REQUIREMENTS FOR CHAPTER 127 EMISSION REDUCTION CREDIT PROVISIONS**

### **§ 145.205. Emission reduction credit provisions.**

~~[A permit or plan approval will not be issued to the owner or operator of a unit not subject to this subchapter for which emission reduction credits (ERCs) or creditable emission reductions were considered in an applicability determination under Chapter 127, Subchapter E (relating to new source review) or for which any emission trade under Chapter 127 (relating to construction, modification, reactivation and operation of sources) is authorized, if the ERCs or creditable emission reductions were, or will be, generated by a unit subject to this subchapter, unless the following conditions are satisfied:~~

~~—(1) Prior to issuing the permit or plan approval, the Department permanently reduces the Commonwealth's applicable CAIR NO<sub>x</sub> trading budget beginning six control periods after the date the unit will be authorized in the permit or plan approval to commence operation or increase emissions. The Department will reduce the trading budget for each control period by an amount of allowances equal to the amount that would be required to be surrendered under this subchapter if the allowable emissions stemming from the ERCs or creditable emission reductions were emitted.~~

~~—(2) The permit or plan approval contains a condition prohibiting the owner or the operator of the unit from commencing operation or increasing emissions until the owner or the operator of the unit that generated the ERCs or creditable emission reductions surrenders to the Department an amount of allowances equal to the amount that would be required to be surrendered under this subchapter if the allowable emissions stemming from the ERCs or creditable emission reductions were emitted for five consecutive control periods beginning with that date. The allowances surrendered must be of present or past vintage years.]~~

**THE FOLLOWING CONDITIONS MUST BE SATISFIED IN ORDER FOR THE DEPARTMENT TO ISSUE A PERMIT OR PLAN APPROVAL TO THE OWNER OR OPERATOR OF A UNIT NOT SUBJECT TO THIS SUBCHAPTER THAT IS RELYING ON EMISSIONS REDUCTION CREDITS (ERCS) OR CREDITABLE EMISSIONS REDUCTIONS IN AN APPLICABILITY DETERMINATION UNDER CHAPTER 127, SUBCHAPTER E (RELATING TO NEW SOURCE REVIEW), OR IS SEEKING TO ENTER INTO AN EMISSIONS TRADE AUTHORIZED UNDER CHAPTER 127 (RELATING TO CONSTRUCTION, MODIFICATION, REACTIVATION AND OPERATION OF SOURCES), IF THE ERCS OR CREDITABLE EMISSION**

**REDUCTIONS WERE, OR WILL BE, GENERATED BY A UNIT SUBJECT TO THIS SUBCHAPTER.**

**(1) PRIOR TO ISSUING THE PERMIT OR PLAN APPROVAL, THE DEPARTMENT WILL PERMANENTLY REDUCE THE COMMONWEALTH'S CAIR NO<sub>x</sub> TRADING BUDGET OR CAIR NO<sub>x</sub> OZONE SEASON TRADING BUDGET, OR BOTH, AS APPLICABLE, BEGINNING WITH THE SIXTH CONTROL PERIOD FOLLOWING THE DATE THE PLAN APPROVAL OR PERMIT TO COMMENCE OPERATIONS OR INCREASE EMISSIONS IS ISSUED. THE DEPARTMENT WILL PERMANENTLY REDUCE THE APPLICABLE CAIR NO<sub>x</sub> BUDGET(S) BY AN AMOUNT OF ALLOWANCES EQUAL TO THE ERCS OR CREDITABLE EMISSION REDUCTIONS RELIED UPON IN THE APPLICABILITY DETERMINATION FOR THE NON-CAIR UNIT SUBJECT TO CHAPTER 127, SUBCHAPTER E OR IN THE AMOUNT EQUAL TO THE EMISSIONS TRADE AUTHORIZED UNDER CHAPTER 127, AS IF THESE EMISSIONS HAD ALREADY BEEN EMITTED.**

**(2) THE PERMIT OR PLAN APPROVAL MUST PROHIBIT THE OWNER OR OPERATOR FROM COMMENCING OPERATION OR INCREASING EMISSIONS UNTIL THE OWNER OR OPERATOR OF THE CAIR UNIT GENERATING THE ERC OR CREDITABLE EMISSION REDUCTION SURRENDERS TO THE DEPARTMENT AN AMOUNT OF ALLOWANCES EQUAL TO THE ERCS OR EMISSION REDUCTION CREDITS RELIED UPON IN THE APPLICABILITY DETERMINATION FOR THE NON-CAIR UNIT UNDER CHAPTER 127, SUBCHAPTER E OR THE AMOUNT EQUAL TO THE ERC TRADE AUTHORIZED UNDER CHAPTER 127, FOR EACH OF THE FIVE CONSECUTIVE CONTROL PERIODS FOLLOWING THE DATE THE NON-CAIR UNIT COMMENCES OPERATION OR INCREASES EMISSIONS. THE ALLOWANCES SURRENDERED MUST BE OF PRESENT OR PAST VINTAGE YEARS.**

**ADDITIONAL REQUIREMENTS FOR CAIR NO<sub>x</sub> ANNUAL TRADING PROGRAM**

**§ 145.211. Timing requirements for CAIR NO<sub>x</sub> allowance allocations.**

(a) *Provisions not incorporated by reference.* The requirements of 40 CFR 96.141 (relating to timing requirements for CAIR NO<sub>x</sub> allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.141, the requirements set forth in this section apply.

(b) *Regular allocations.* The Department will make regular allocations of CAIR NO<sub>x</sub> allowances as follows:

(1) Except for allocations made under subsection (c), by April 30, 2008, the Department will submit to the Administrator the CAIR NO<sub>x</sub> allowance allocations made in accordance with § 145.212 (relating to CAIR NO<sub>x</sub> allowance allocations) for the control periods in 2010 ~~and 2011~~– 2012 in a format prescribed by the Administrator.

(2) Except for allocations made under subsection (c), by April 30, 2009, the Department will submit to the Administrator the CAIR NO<sub>x</sub> allowance allocations made in accordance with § 145.212 for the control period[s] in ~~2012 and~~ 2013 in a format prescribed by the Administrator. By April 30 every [2] year[s] after 2009, the Department will submit the allocations for the next [~~two~~] consecutive control period[s].

**(3) THE DEPARTMENT WILL RESERVE 1.3% OF THE CAIR NO<sub>x</sub> TRADING BUDGET FOR EACH ANNUAL CONTROL PERIOD FOR ALLOCATION TO UNITS AS PROVIDED UNDER § 145.212(f)(2).**

(c) *New CAIR NO<sub>x</sub> unit allowance allocations.* By April 30, 2011, and by April 30 every year thereafter, the Department will submit to the Administrator the CAIR NO<sub>x</sub> allowance allocations made in accordance with § 145.212(e). The Department will base the allocations on actual emissions in the calendar year preceding the year of the submission.

(d) *Publication.* The Department will publish notice of the proposed CAIR NO<sub>x</sub> allowance allocations in the *Pennsylvania Bulletin* [~~as follows,~~] and will publish the final allocations after a 15-day public comment period[~~s~~]. **THE DEPARTMENT WILL INCLUDE IN THE NOTICE THE NAME AND TELEPHONE NUMBER OF A PERSON TO CONTACT FOR ACCESS TO ADDITIONAL INFORMATION. THE DEPARTMENT WILL PUBLISH NOTICE ACCORDING TO THE FOLLOWING SCHEDULE:**

([i]1) For allocations made under subsection (b)(1), by April 1, 2008.

([ii]2) For allocations made under subsection (b)(2), by April 1, 2009, and by April 1 every [2] year[s] thereafter.

([iii]3) For allocations made under subsection (c), by March 1 each year, beginning in 2011.

**(e) ORDER OF BUDGET ALLOWANCE WITHDRAWAL. THE DEPARTMENT WILL ISSUE CAIR NO<sub>x</sub> ALLOWANCES FROM THE CAIR NO<sub>x</sub> TRADING BUDGET ESTABLISHED IN 40 CFR 96.140 (RELATING TO STATE TRADING BUDGETS) IN THE FOLLOWING ORDER:**

**(1) TO NEW UNITS PURSUANT TO § 145.212(e).**

**(2) TO UNITS PURSUANT TO § 145.212(f)(2).**

**(3) TO UNITS PURSUANT TO § 145.212(c).**

**§ 145.212. CAIR NO<sub>x</sub> allowance allocations.**

(a) *Provisions not incorporated by reference.* The requirements of 40 CFR 96.142 (relating to CAIR NO<sub>x</sub> allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.142, the requirements set forth in this section apply.

(b) *Baseline heat input.* [~~Except for new unit allocations made under subsection (e) based on a previous year's emissions, and except for allocations made to subsection (f)(1) qualifying resources, the control period baseline heat input (in mmBtu) used with respect to CAIR NO<sub>x</sub> allowance allocations under subsection (e)~~] BASELINE HEAT INPUT for each CAIR NO<sub>x</sub> unit will be converted as follows:

(1) A unit's control period heat input and a unit's status as coal-fired or oil-fired for a calendar year under this paragraph will be determined in one of the following two ways:

(i) In accordance with 40 CFR Part 75 (relating to continuous emission monitoring), to the extent that the unit was otherwise subject to 40 CFR Part 75 for the year.

(ii) Based on the best available data reported to the Department for the unit, to the extent the unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year.

(2) Except as provided in subparagraphs (iv) and (v), a unit's converted control period heat input for a calendar year shall be determined as follows:

(i) The control period gross electrical output of the generators served by the unit multiplied by 7,900 Btu/kWh if the unit is coal-fired for the year, and divided by 1,000,000 Btu/mmBtu.

(ii) The control period gross electrical output of the generators served by the unit multiplied by 6,675 Btu/kWh if the unit is not coal-fired for the year, and divided by 1,000,000 Btu/mmBtu.

(iii) If a generator is served by two or more units, the gross electrical output of the generator will be attributed to each unit in proportion to the share of the total control period heat input from each of the units for the year.

(iv) For a unit that is a boiler and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the total heat energy (in Btu) of the steam produced by the boiler during the annual control period, divided by 0.8 and by 1,000,000 Btu/mmBtu.

(v) For a unit that is a combustion turbine and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the annual control period gross electrical output of the enclosed device comprising the compressor, combustor and turbine multiplied by 3,413 Btu/KWh, plus the total heat energy (in Btu) of the steam produced by any associated heat recovery steam generator during the annual control period divided by 0.8, and with the sum divided by 1,000,000 Btu/mmBtu.

(vi) Calculations will be based on the best output data available on or before January 31 of the year the allocations are published. If unit level electrical or steam output data are not available from EIA, or submitted by this date by the owner or operator of the CAIR NO<sub>x</sub> unit, then heat input data for the period multiplied by 0.25 and converted to MWh will be used to determine total output.

~~[(vii) If the total allowances calculated for all eligible recipients exceeds the CAIR NOx annual budget, the Department will adjust allocations on a prorata basis to meet the budget.]~~

(c) *Existing unit, new unit and subsection (f)(1) qualifying resource allocation baseline.* For each control period beginning with January 1, 2010, and each year thereafter, the Department will allocate to qualifying resources and CAIR NOx units, including CAIR NOx units issued allowances under subsection (e), a total amount of CAIR NOx allowances equal to the number of CAIR NOx allowances remaining in the Commonwealth's **CAIR NOx TRADING** budget under 40 CFR 96.140 (relating to state trading budgets) for those control periods using **SUMMED** baseline heat input data as determined under subsection (b) **AND (f)(1)** from a baseline year that is **[5] 6 CALENDAR** years before the control period.

(d) *Proration of allowance allocations.* ~~[Except for allocations made under subsections (e) and (f)(2), t]~~ The Department will allocate CAIR NOx allowances to each existing CAIR NOx unit and qualifying resource in an amount determined by multiplying the amount of CAIR NOx allowances ~~[allocated]~~ **IN THE COMMONWEALTH'S CAIR NOx TRADING BUDGET AVAILABLE FOR ALLOCATION** under subsection (c) ~~[or (f), as applicable,]~~ by the ratio of the baseline heat input of the existing CAIR NOx unit or qualifying resource to the ~~[amount]~~ **SUM** of **THE** baseline heat input of existing CAIR NOx units and **OF THE** qualifying resources ~~[and]~~, rounding to the nearest whole allowance as appropriate. ~~[The Department will make CAIR NOx allowance allocations under this subsection after the Department makes CAIR NOx allowance allocations to units under subsection (e).]~~

(e) *Allocations to new CAIR NOx units.* By March 31, 2011, and March 31 each year thereafter, the Department will allocate CAIR NOx allowances under § 145.211(c) (relating to timing requirements for CAIR NOx allowance allocations) to CAIR NOx units equal to the previous year's emissions at each unit, unless the unit has been issued allowances of the previous year's vintage in a regular allocation under § 145.211(b). The Department will allocate CAIR NOx allowances under this subsection of a vintage year that is 5 years later than the year in which the emissions were generated. The number of CAIR NOx allowances allocated may not exceed the actual emission of the year preceding the year in which the Department makes the allocation. The allocation of these allowances to the new unit will not reduce the number of allowances the unit is entitled to receive under ~~[§ 145.211(b)]~~ **ANOTHER PROVISION OF THIS SUBCHAPTER.**

(f) *Allocations to qualifying resources and units exempted by section 405(g)(6)(A) of the Clean Air Act.* For each ~~[two]~~ control period~~[s]~~ beginning with 2010 and thereafter, the Department will allocate CAIR NOx allowances to qualifying resources under paragraph (1) in this Commonwealth that are not also allocated CAIR NOx allowances under ~~[subsection (e)]~~ **ANOTHER PROVISION OF THIS SUBCHAPTER** and to existing units under paragraph (2) that were exempted at any time under section 405(g)(6)(A) of the Clean Air Act (42 U.S.C.A. § 7651d(g)(6)(A)), regarding phase II sulfur dioxide requirements, and that commenced operation prior to January 1, 2000, but did not receive an allocation of SO<sub>2</sub> allowances under the EPA's Acid Rain program, as follows:



(1) The Department will allocate CAIR NOx allowances to a ~~[tier-I]~~ renewable energy qualifying resource or ~~[tier-II]~~ demand side management energy efficiency qualifying resource in accordance with subsections (c) and (d) upon receipt by the Department of an application, in writing, **ON OR BEFORE JUNE 30 OF THE YEAR FOLLOWING THE CONTROL PERIOD, EXCEPT FOR VINTAGE YEAR 2011 AND 2012 NOX ALLOWANCE ALLOCATIONS WHOSE APPLICATION DEADLINE WILL BE PRESCRIBED BY THE DEPARTMENT,** meeting the requirements of this paragraph. The number of allowances allocated to the qualifying resource will be determined by converting the certified quantity of electric energy production, useful thermal energy, and energy equivalent value of the measures approved under the Pennsylvania Alternative Energy Portfolio Standard to equivalent thermal energy. **EQUIVALENT THERMAL ENERGY IS A UNIT'S BASELINE HEAT INPUT FOR ALLOCATION PURPOSES. THE CONVERSION RATE FOR CONVERTING ELECTRICAL ENERGY TO EQUIVALENT THERMAL ENERGY IS 3,413 Btu/kWh.** To receive allowances under this subsection, the qualifying resource must have commenced operation after January 1, 2005, must be located in this Commonwealth and may not be a CAIR NOx unit. The following procedures apply:

**(i) THE OWNER OF A QUALIFYING RENEWABLE ENERGY RESOURCE SHALL APPOINT A CAIR AUTHORIZED ACCOUNT REPRESENTATIVE AND FILE A CERTIFICATE OF REPRESENTATION WITH EPA AND THE DEPARTMENT.**

(ii) The Department will transfer the allowances into an account designated by the owner's **CAIR AUTHORIZED ACCOUNT REPRESENTATIVE** ~~[or operator]~~ of the qualifying resource, or into an account designated by an aggregator approved by the Public Utility Commission or its designee.

(iii) The applicant shall provide the Department with the corresponding renewable energy certificate serial numbers.

~~(iii)iv~~ At least one whole allowance must be generated per owner, operator or aggregator for an allowance to be issued.

(2) The Department will allocate CAIR NOx allowances to the owner or operator of a CAIR SO<sub>2</sub> unit that commenced operation prior to January 1, 2000, that has not received an SO<sub>2</sub> allocation for that compliance period, as follows:

(i) **BY JANUARY 31, 2011 AND EACH YEAR THEREAFTER, [F]The owner or operator of a unit may apply, in writing, to the Department under this subsection to receive [a cost-equivalent additional amount of] EXTRA CAIR NOx allowances\_ [that were needed during each CAIR NOx allowance allocation cycle to be allocated in the following allocation cycle].**

(ii) The ~~[cost-equivalent additional amount of CAIR NOx allowances an]~~ owner or operator may request under this paragraph ~~[is]~~ 1 CAIR NOx allowance for every 8 tons of SO<sub>2</sub> emitted from a qualifying unit during the **PRECEDING** control period. **AN OWNER OR OPERATOR OF A UNIT COVERED UNDER THIS PARAGRAPH THAT HAS OPTED**

INTO THE ACID RAIN PROGRAM MAY REQUEST 1 CAIR NO<sub>x</sub> ALLOWANCE FOR EVERY 8 TONS OF SO<sub>2</sub> EMISSIONS THAT HAVE NOT BEEN COVERED BY THE SO<sub>2</sub> ALLOWANCES RECEIVED AS A RESULT OF OPTING INTO THE ACID RAIN PROGRAM.

(iii) If the original CAIR NO<sub>x</sub> allowance allocation for the unit for the [eyele] CONTROL PERIOD exceeded [its] THE UNIT'S actual emissions of NO<sub>x</sub> for the [eyele] CONTROL PERIOD, the [value-of] OWNER OR OPERATOR SHALL ALSO DEDUCT the excess CAIR NO<sub>x</sub> allowances [will not be included in the amount of CAIR NO<sub>x</sub> allowances allocated] FROM THE UNIT'S REQUEST UNDER SUBPARAGRAPH (ii). THIS AMOUNT IS THE UNIT'S ADJUSTED ALLOCATION AND WILL BE ALLOCATED UNLESS THE PRORATION DESCRIBED IN SUBPARAGRAPH (iv) APPLIES.

(iv) THE DEPARTMENT WILL MAKE ANY NECESSARY CORRECTIONS AND THEN SUM THE REQUESTS. If the total number of NO<sub>x</sub> allowances requested by all qualified units under this paragraph, AS ADJUSTED BY SUBPARAGRAPH (iii), IS LESS THAN 1.3% OF THE COMMONWEALTH'S CAIR NO<sub>x</sub> TRADING BUDGET, THE DEPARTMENT WILL ALLOCATE THE CORRECTED AMOUNTS. IF THE TOTAL NUMBER OF NO<sub>x</sub> ALLOWANCES REQUESTED BY ALL QUALIFIED UNITS UNDER THIS PARAGRAPH exceeds 1.3% of the [Pennsylvania] COMMONWEALTH'S [annual] CAIR NO<sub>x</sub> TRADING budget, [units will receive a] THE DEPARTMENT WILL prorate[d] THE allocationS based upon the following equation:

~~[(A unit's requested cost-equivalent CAIR NO<sub>x</sub> allowance allocation — facility excess allowances for the control period) × (0.013 × number of CAIR NO<sub>x</sub> allowances in Pennsylvania CAIR NO<sub>x</sub> budget for the control period)~~

~~Total number of CAIR NO<sub>x</sub> allowances requested from all units requesting allowances under this paragraph]~~

$$A_A = [E_A \times (0.013 \times B_{NA})] / T_{RA}$$

WHERE,

A<sub>A</sub> IS THE UNIT'S PRORATED ALLOCATION,

E<sub>A</sub> IS THE ADJUSTED ALLOCATION THE UNIT MAY REQUEST UNDER SUBPARAGRAPH (iii),

B<sub>NA</sub> IS THE TOTAL NUMBER OF CAIR NO<sub>x</sub> ALLOWANCES IN THE COMMONWEALTH'S CAIR NO<sub>x</sub> TRADING BUDGET,

T<sub>RA</sub> IS THE TOTAL NUMBER OF CAIR NO<sub>x</sub> ALLOWANCES REQUESTED BY ALL UNITS REQUESTING ALLOWANCES UNDER THIS PARAGRAPH.

~~[(v) Owners and operators of previously exempted units that opt in to [or are opted in to] the Acid Rain Program will also reduce the number of NO<sub>x</sub> allowances requested each year under this section by 1 NO<sub>x</sub> allowance for every 8 SO<sub>2</sub> allowances they are issued under the opt-in provisions of the Acid Rain Program.]~~

(3) The Department will review each CAIR NO<sub>x</sub> allowance allocation request under this subsection and will allocate CAIR NO<sub>x</sub> allowances for each control period under a request as follows:

(i) The Department will accept an allowance allocation request only if the request meets, or is adjusted by the Department as necessary to meet, the requirements of this section.

(ii) On or after January 1 of the year of allocation, the Department will determine the sum of the CAIR NO<sub>x</sub> allowances requested.

(4) Up to 1.3% of the Commonwealth's ~~[annual]~~ **CAIR NO<sub>x</sub> TRADING** budget is available for allocation in each ~~[control period from]~~ **ALLOCATION CYCLE FROM 2011—2016 TO ALLOCATE 2010—2015 ALLOWANCES** for the purpose of offsetting SO<sub>2</sub> emissions ~~[under]~~ **FROM UNITS DESCRIBED IN** paragraph (2). Beginning January 1, 201~~6~~**7**, **AND FOR EACH ALLOCATION CYCLE THEREAFTER**, the units will no longer be allocated CAIR NO<sub>x</sub> allowances under paragraph (2). **ANY ALLOWANCES REMAINING AFTER THIS ALLOCATION WILL BE ALLOCATED TO UNITS UNDER § 145.212(c) DURING THE NEXT ALLOCATION CYCLE.**

(5) Notwithstanding the provisions of paragraphs (2)--(4), the Department may extend, terminate or otherwise modify the allocation of NO<sub>x</sub> allowances made available under this subsection for units exempted under section 405(g)(6)(A) of the Clean Air Act after providing notice in the *Pennsylvania Bulletin* and at least a 30-day public comment period.

(g) **THE DEPARTMENT WILL CORRECT ANY [E]Errors in allocations MADE BY THE DEPARTMENT AND discovered after FINAL allocations are made BUT BEFORE THE NEXT ALLOCATION CYCLE, [shall be corrected] in [a] THE subsequent allocation cycle USING FUTURE ALLOWANCES THAT HAVE NOT YET BEEN ALLOCATED.**

**§ 145.213. Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.170--96.175.**

(a) By January 1, ~~[2008]~~**2009**, or by the date of commencing commercial operation, whichever is later, the owner or operator of the CAIR NO<sub>x</sub> unit shall install, calibrate, maintain and operate a wattmeter, measure gross electrical output in megawatt-hours on a continuous basis and record the output of the wattmeter. If a generator is served by two or more units, the information to determine the heat input of each unit for that control period shall also be recorded, so as to allow each unit's share of the gross electrical output to be determined. If heat input data are used, the owner or operator shall comply with the applicable provisions of 40 CFR Part 75 (relating to continuous emission monitoring).

(b) By September 1, 2008, for a CAIR NO<sub>x</sub> unit that is a cogeneration unit, and for a CAIR NO<sub>x</sub> unit with cogeneration capabilities, the owner or operator shall install, calibrate, maintain and operate meters for steam flow in lbs/hr, temperature in degrees Fahrenheit, and pressure in PSI, to measure and record the useful thermal energy that is produced, in mmBtu/hr, on a continuous basis. The owner or operator of a CAIR NO<sub>x</sub> unit that produces useful thermal energy but uses an energy transfer medium other than steam, such as hot water or glycol, shall install, calibrate, maintain and operate the necessary meters to measure and record the data necessary to express the useful thermal energy produced, in mmBtu/hr, on a continuous basis. If the unit ceases to produce useful thermal energy, the owner or operator may cease operation of the meters, but operation of the meters shall be resumed if the unit resumes production of useful thermal energy.

(c) Beginning with ~~2008~~2009, the designated representative of the unit shall submit to the Department an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year.

(d) The owner or operator of a CAIR NO<sub>x</sub> unit shall maintain onsite the monitoring plan detailing the monitoring system and maintenance of the monitoring system, including quality assurance activities. The owner or operator of a CAIR NO<sub>x</sub> unit shall retain the monitoring plan for at least 5 years from the date that it is replaced by a new or revised monitoring plan. The owner or operator of a CAIR NO<sub>x</sub> unit shall provide the Department with a written copy of the monitoring plan by January 1, ~~2008~~2009, and thereafter within 3 calendar months of making updates to the plan.

(e) The owner or operator of a CAIR NO<sub>x</sub> unit shall retain records for at least 5 years from the date the record is created or the data collected as required by subsections (a) and (b), and the reports submitted to the Department and the EPA in accordance with subsections (c) and (d).

## **ADDITIONAL REQUIREMENTS FOR CAIR NO<sub>x</sub> OZONE SEASON TRADING PROGRAM**

### **§ 145.221. Timing requirements for CAIR NO<sub>x</sub> Ozone Season allowance allocations.**

(a) *Provisions not incorporated by reference.* The requirements of 40 CFR 96.341 (relating to timing requirements for CAIR NO<sub>x</sub> Ozone Season allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.341, the requirements in this section apply.

(b) *Regular allocations.* The Department will make regular allocations of CAIR NO<sub>x</sub> Ozone Season allowances as follows:

(1) Except for allocations made under subsection (c), by April 30, 2008, the Department will submit to the Administrator the CAIR NO<sub>x</sub> Ozone Season allowance allocations made in accordance with § 145.222 (relating to CAIR NO<sub>x</sub> Ozone Season allowance allocations) for the control periods in 2010 ~~and 2011~~ **THROUGH 2012** in a format prescribed by the Administrator.

(2) Except for allocations made under subsection (c), by April 30, 2009, the Department will submit to the Administrator the CAIR NO<sub>x</sub> Ozone Season allowance allocations made in accordance with § 145.222 for the control period[s] in ~~[2012 and]~~ 2013 in a format prescribed by the Administrator. By April 30 every ~~[2]~~ year[s] after 2009, the Department will submit the allocations for the next ~~[two]~~ consecutive control period[s].

(c) *New CAIR NO<sub>x</sub> unit allowance allocations.* By April 30, 2011, and by April 30 every year thereafter, the Department will submit to the Administrator the CAIR NO<sub>x</sub> Ozone Season allowance allocations made in accordance with § 145.222(e). The Department will base the allocations on actual emissions in the Ozone Season in the calendar year preceding the year of the submission.

(d) *Publication.* The Department will publish notice of the proposed CAIR NO<sub>x</sub> Ozone Season allowance allocations in the *Pennsylvania Bulletin* ~~[as follows,]~~ and will publish the final allocations after a 15-day public comment period[=]. **THE DEPARTMENT WILL INCLUDE IN THE NOTICE THE NAME AND TELEPHONE NUMBER OF A PERSON TO CONTACT FOR ACCESS TO ADDITIONAL INFORMATION. THE DEPARTMENT WILL PUBLISH NOTICE ACCORDING TO THE FOLLOWING SCHEDULE:**

(1) For allocations made under subsection (b)(1), by April 1, 2008.

(2) For allocations made under subsection (b)(2), by April 1, 2009, and by April 1 every ~~[2]~~ year[s] thereafter.

(3) For allocations made under subsection (c), by March 1 each year, beginning in 2011.

**(e) ORDER OF BUDGET ALLOWANCE WITHDRAWAL. THE DEPARTMENT WILL ISSUE CAIR NO<sub>x</sub> OZONE SEASON ALLOWANCES FROM THE CAIR NO<sub>x</sub> OZONE SEASON TRADING BUDGET ESTABLISHED IN 40 CFR 96.240 (RELATING TO STATE TRADING BUDGETS) IN THE FOLLOWING ORDER:**

**(1) TO NEW UNITS PURSUANT TO § 145.222(e).**

**(2) TO UNITS PURSUANT TO § 145.222(c).**

### **§ 145.222. CAIR NO<sub>x</sub> Ozone Season allowance allocations.**

(a) *Provisions not incorporated by reference.* The requirements of 40 CFR 96.342 (relating to CAIR NO<sub>x</sub> Ozone Season allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.342, the requirements in this section apply.

(b) *Baseline heat input.* ~~[Except for new unit allocations made under subsection (e) based on a previous year's emissions, and except for allocations made to subsection (f) qualifying resources, the control period baseline heat input (in mmBtu) used with respect to CAIR NO<sub>x</sub> Ozone Season allowance allocations under subsection (e)]~~ **BASELINE HEAT INPUT** for each CAIR NO<sub>x</sub> Ozone Season unit will be converted as follows:

(1) A unit's control period heat input and a unit's status as coal-fired or oil-fired for the Ozone Season portion of a calendar year under this paragraph will be determined in one of the following two ways:

(i) In accordance with 40 CFR Part 75 (relating to continuous emission monitoring), to the extent that the unit was otherwise subject to the requirements of 40 CFR Part 75 for the control period.

(ii) Based on the best available data reported to the Department for the unit, to the extent the unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year.

(2) Except as provided in subparagraphs (iv) and (v), a unit's converted control period heat input for the ozone season portion of a calendar year shall be determined as follows:

(i) The control period gross electrical output of the generators served by the unit multiplied by 7,900 Btu/kWh if the unit is coal-fired for the ozone season control period, and divided by 1,000,000 Btu/mmBtu.

(ii) The control period gross electrical output of the generators served by the unit multiplied by 6,675 Btu/kWh if the unit is not coal-fired for the ozone season control period, and divided by 1,000,000 Btu/mmBtu.

(iii) If a generator is served by 2 or more units, the gross electrical output of the generator will be attributed to each unit in proportion to the share of the total control period heat input from each of the units for the ozone season control period.

(iv) For a unit that is a boiler and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the total heat energy (in Btus) of the steam produced by the boiler during the ozone season control period, divided by 0.8 and by 1,000,000 Btu/mmBtu.

(v) For a unit that is a combustion turbine and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the control period gross electrical output of the enclosed device comprising the compressor, combustor and turbine multiplied by 3,413 Btu/kWh, plus the total heat energy (in Btu) of the steam produced by any associated heat recovery steam generator during the ozone season control period divided by 0.8, and with the sum divided by 1,000,000 Btu/mmBtu.

(vi) Calculations will be based on the best output data available on or before January 31 of the year the allocations are published. If unit level electrical or steam output data are not available from EIA, or submitted by this date by the owner or operator of the CAIR NO<sub>x</sub> Ozone Season unit, then heat input data for the period multiplied by 0.25 and converted to MWh will be used to determine total output.

~~[(vii) If the total allowances calculated for all eligible recipients exceeds the CAIR NOx Ozone Season budget, the Department will adjust allocations on a prorata basis to meet the budget.]~~

(c) *Existing unit, new unit and subsection (f)(1) qualifying resource allocation baseline.* For each control period beginning with the 2010 control period and thereafter, the Department will allocate to qualifying resources and CAIR NOx Ozone Season units, including CAIR NOx Ozone Season units issued allowances under subsection (e), a total amount of CAIR NOx Ozone Season allowances equal to the number of CAIR NOx Ozone Season allowances remaining in the Commonwealth's **CAIR NOx OZONE SEASON** trading budget under 40 CFR 96.140 (relating to state trading budgets) for those control periods using **SUMMED** baseline heat input data as determined under subsection (b) **AND (f)(1)** from an ozone season control period in a baseline year that is **[5] 6 CALENDAR** years before the control period.

(d) *Proration of allowance allocations.* ~~[Except for allocations made under subsection (e),~~ ~~†]The Department will allocate CAIR NOx Ozone Season allowances to each existing CAIR NOx Ozone Season unit and qualifying resource in an amount determined by multiplying the amount of CAIR NOx Ozone Season allowances ~~[allocated]~~ **IN THE COMMONWEALTH'S CAIR NOx OZONE SEASON TRADING BUDGET AVAILABLE FOR ALLOCATION** under subsection (c) ~~[or (f), as applicable,]~~ by the ratio of the baseline heat input of the existing CAIR NOx Ozone Season unit or qualifying resource to the ~~[amount]~~ **SUMS** of **THE** baseline heat input of existing CAIR NOx Ozone Season units and **OF THE** qualifying resources, ~~[and]~~ rounding to the nearest whole allowance as appropriate. ~~[The Department will make CAIR NOx Ozone Season allowance allocations under this subsection after the Department makes CAIR NOx Ozone Season allowance allocations to units under subsection (e).]~~~~

(e) *Allocations to new CAIR NOx Ozone Season units.* By March 31, 2011, and March 31 each year thereafter, the Department will allocate CAIR NOx Ozone Season allowances under § 145.221(c) (relating to timing requirements for CAIR NOx Ozone Season allowance allocations) to CAIR NOx Ozone Season units equal to the previous year's emissions at each unit, unless the unit has been issued allowances of the previous year's vintage in a regular allocation under § 145.221(b). The Department will allocate CAIR NOx allowances under this subsection of a vintage year that is 5 years later than the year in which the emissions were generated. The number of CAIR NOx Ozone Season allowances allocated shall not exceed the actual emission of the year preceding the year in which the Department makes the allocation. The allocation of these allowances to the new unit will not reduce the number of allowances the unit is entitled to receive under ~~[§ 145.221(b)]~~ **ANOTHER PROVISION OF THIS SUBCHAPTER.**

(f) *Allocations to qualifying resources.* For each ~~[two]~~ control period~~[s]~~ beginning with the 2010 control period, and thereafter, the Department will allocate CAIR NOx Ozone Season allowances to qualifying resources in this Commonwealth that are not also allocated CAIR NOx Ozone Season allowances under ~~[subsection (e)]~~ **ANOTHER PROVISION OF THIS SUBCHAPTER**, as follows:

(1) The Department will allocate CAIR NOx Ozone Season allowances to a ~~[tier-I]~~ renewable energy qualifying resource or ~~[tier-II]~~ demand side management energy efficiency qualifying resource in accordance with subsections (c) and (d) upon receipt by the Department of an application, in writing, **ON OR BEFORE JUNE 30 OF THE YEAR FOLLOWING THE CONTROL PERIOD, EXCEPT FOR VINTAGE YEAR 2011 AND 2012 NOX OZONE SEASON ALLOWANCE ALLOCATIONS WHOSE APPLICATION DEADLINE WILL BE PRESCRIBED BY THE DEPARTMENT,** meeting the requirements of this paragraph. The number of allowances allocated to the qualifying resource will be determined by converting the certified quantity of electric energy production, useful thermal energy, and energy equivalent value of the measures approved under the Pennsylvania Alternative Energy Portfolio Standard to equivalent thermal energy. **EQUIVALENT THERMAL ENERGY IS A UNIT'S BASELINE HEAT INPUT FOR ALLOCATION PURPOSES. THE CONVERSION RATE FOR CONVERTING ELECTRICAL ENERGY TO EQUIVALENT THERMAL ENERGY IS 3,413 Btu/kWh.** To receive allowances under this subsection, the qualifying resource must have commenced operation after January 1, 2005, must be located in this Commonwealth and may not be a CAIR NOx Ozone Season unit. The following procedures apply:

**(i) THE OWNER OF A QUALIFYING RENEWABLE ENERGY RESOURCE SHALL APPOINT A CAIR AUTHORIZED ACCOUNT REPRESENTATIVE AND FILE A CERTIFICATE OF REPRESENTATION WITH EPA AND THE DEPARTMENT.**

(ii) The Department will transfer the allowances into an account designated by the owner's ~~or operator~~ **CAIR AUTHORIZED ACCOUNT REPRESENTATIVE** of the qualifying resource, or into an account designated by an aggregator approved by the Public Utility Commission or its designee.

(iii) The applicant shall provide the Department with the corresponding renewable energy certificate serial numbers.

~~(iii)iv~~ (iv) At least one whole allowance must be generated per owner, operator or aggregator for an allowance to be issued.

~~(2) The Department will review each CAIR NOx Ozone Season allowance allocation request under this subsection and will allocate CAIR NOx Ozone Season allowances for each control period under a request as follows:~~

~~(i) The Department will accept an allowance allocation request only if the request meets, or is adjusted by the Department as necessary to meet, the requirements of this section.~~

~~(ii) On or after January 1 of the year of allocation, the Department will determine the sum of the CAIR NOx Ozone Season allowances requested.]~~

(g) **THE DEPARTMENT WILL CORRECT ANY [E]Errors in allocations MADE BY THE DEPARTMENT AND discovered after FINAL allocations are made BUT BEFORE THE NEXT ALLOCATION CYCLE, [shall be corrected] in [a] THE subsequent allocation cycle USING FUTURE ALLOWANCES THAT HAVE NOT YET BEEN ALLOCATED.**



**§ 145.223. Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.370--96.375.**

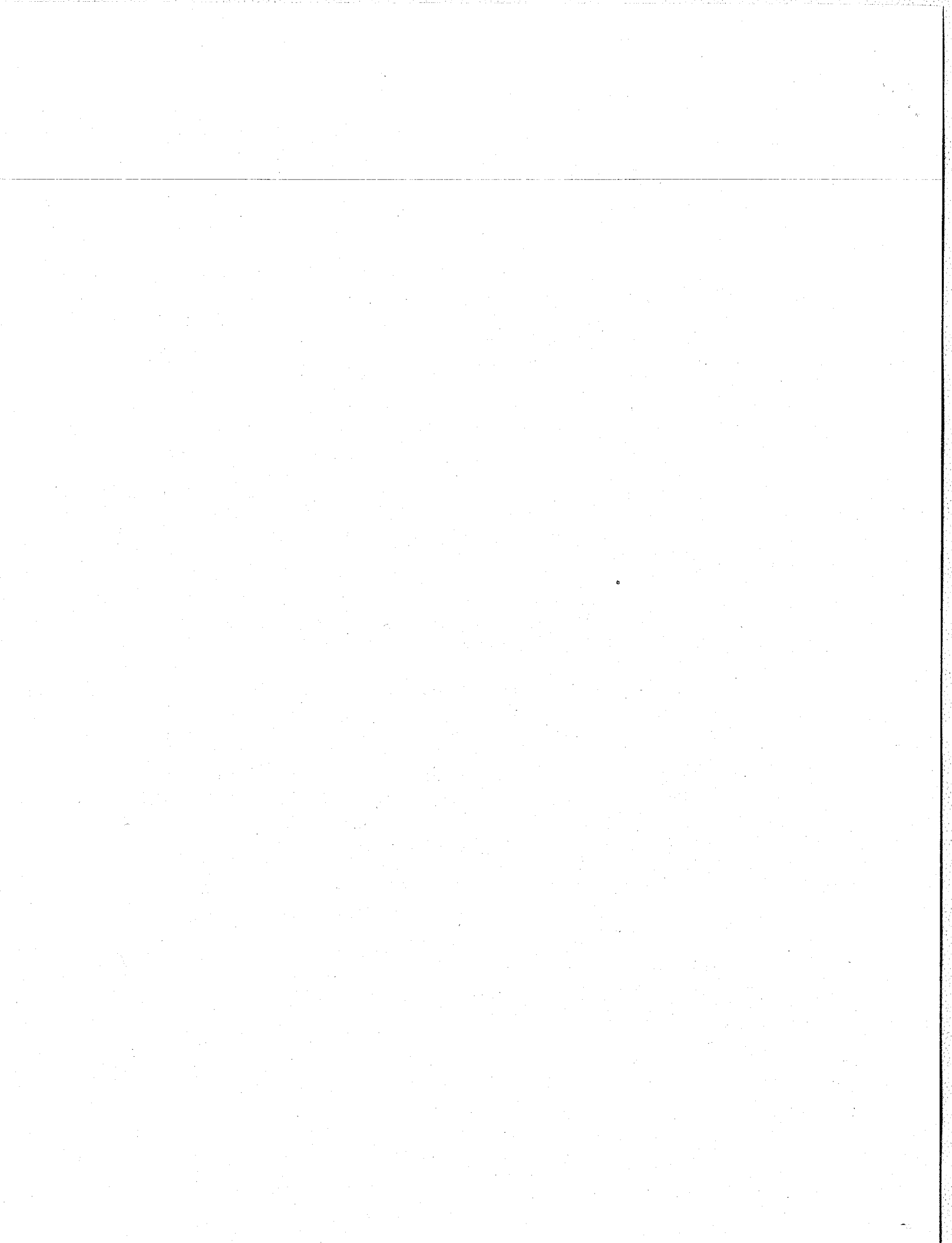
(a) By January 1, ~~2008~~2009, or by the date of commencing commercial operation, whichever is later, the owner or operator of the CAIR NO<sub>x</sub> Ozone Season unit shall install, calibrate, maintain and operate a wattmeter, measure gross electrical output in megawatt-hours on a continuous basis and record the output of the wattmeter. If a generator is served by two or more units, the information to determine the heat input of each unit for that control period shall also be recorded, so as to allow each unit's share of the gross electrical output to be determined. If heat input data are used, the owner or operator shall comply with the applicable provisions of 40 CFR Part 75 (relating to continuous emission monitoring).

(b) By September 1, 2008, for a CAIR NO<sub>x</sub> Ozone Season unit that is a cogeneration unit, and for a CAIR NO<sub>x</sub> Ozone Season unit with cogeneration capabilities, the owner or operator shall install, calibrate, maintain and operate meters for steam flow in lbs/hr, temperature in degrees Fahrenheit and pressure in PSI, to measure and record the useful thermal energy that is produced, in mmBtu/hr, on a continuous basis. The owner or operator of a CAIR NO<sub>x</sub> Ozone Season unit that produces useful thermal energy but uses an energy transfer medium other than steam, such as hot water or glycol, shall install, calibrate, maintain and operate the necessary meters to measure and record the data necessary to express the useful thermal energy produced, in mmBtu/hr, on a continuous basis. If the unit ceases to produce useful thermal energy, the owner or operator may cease operation of the meters, but operation of the meters shall be resumed if the unit resumes production of useful thermal energy.

(c) Beginning with ~~2008~~2009, the designated representative of the unit shall submit to the Department an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year.

(d) The owner or operator of a CAIR NO<sub>x</sub> Ozone Season unit shall maintain onsite the monitoring plan detailing the monitoring system and maintenance of the monitoring system, including quality assurance activities. The owner or operator of a CAIR NO<sub>x</sub> Ozone Season unit shall retain the monitoring plan for at least 5 years from the date that it is replaced by a new or revised monitoring plan. The owner or operator of a CAIR NO<sub>x</sub> Ozone Season unit shall provide the Department with a written copy of the monitoring plan by January 1, ~~2008~~2009, and thereafter within 3 calendar months of making updates to the plan.

(e) The owner or operator of a CAIR NO<sub>x</sub> Ozone Season unit shall retain records for at least 5 years from the date the record is created or the data collected as required by subsections (a) and (b), and the reports submitted to the Department and the EPA in accordance with subsections (c) and (d).





Pennsylvania Department of Environmental Protection

Rachel Carson State Office Building

P.O. Box 2063

Harrisburg, PA 17105-2063

January 22, 2008

Policy Office

2607

717-783-8727

Kim Kaufman, Executive Director  
Independent Regulatory Review Commission  
14th Floor, Harrisstown #2  
333 Market Street  
Harrisburg, PA 17120

Re: Final-Form Rulemaking -- Clean Air Interstate Rule (CAIR) (#7-411)

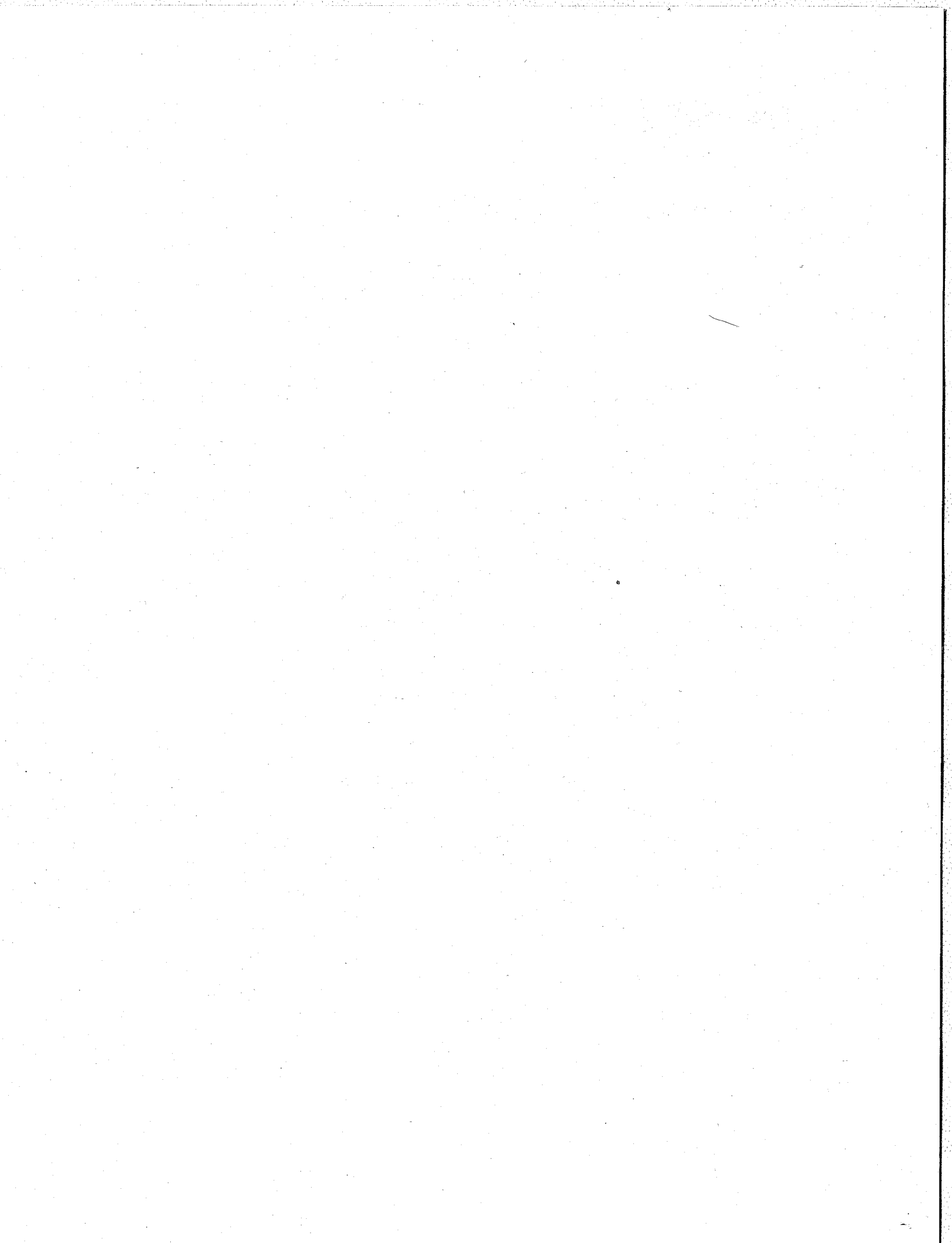
Dear Mr. Kaufmann:

Pursuant to Section 5.1(a) of the Regulatory Review Act, please find enclosed a copy of a final-form rulemaking for review and comment by the Independent Regulatory Review Commission. The Environmental Quality Board (EQB) approved this final-form rulemaking at its December 18, 2007, meeting.

The amendments included in the final rulemaking establish requirements necessary for the implementation and enforcement of the federal Clean Air Interstate Rule (CAIR), which was promulgated by EPA on May 12, 2005, as amended. The CAIR requires 28 states, including Pennsylvania, and the District of Columbia to adopt and submit revisions to their State Implementation Plans (SIP) that include control measures to reduce emissions of SO<sub>2</sub> or NO<sub>x</sub>, or both, that significantly contribute to nonattainment of the PM<sub>2.5</sub> and eight-hour ozone NAAQS in downwind states. In the final federal CAIR rulemaking, the EPA included statewide emission reduction levels, as well as model rules for multi-state cap and trade programs for annual SO<sub>2</sub> and NO<sub>x</sub> emissions for PM<sub>2.5</sub> and for seasonal NO<sub>x</sub> emissions for ozone.

This final rulemaking establishes a program to limit NO<sub>x</sub> and SO<sub>2</sub> emissions from electric generating units (EGU) of 25 megawatts or greater. The regulations extend existing NO<sub>x</sub> emission permit limits for certain boilers, stationary combustion turbines, stationary internal combustion engines and Portland cement kilns. The rulemaking also establishes three CAIR trading programs, which cover annual NO<sub>x</sub> emissions, ozone season NO<sub>x</sub> emissions and annual SO<sub>2</sub> emissions, respectively. The rulemaking provides for the allocation of NO<sub>x</sub> allowances to certain renewable energy and energy efficiency units and to cogeneration units that did not receive SO<sub>2</sub> allowances under the Federal Acid Rain Program. The CAIR NO<sub>x</sub> trading programs will supercede the existing NO<sub>x</sub> Budget Trading Program in Chapter 145, Subchapter A and the CAIR Federal Implementation Plan (FIP). The proposed amendments are reasonably necessary to achieve and maintain the NAAQS, including the 8-hour ozone and fine particulate standards, to satisfy related Federal Clean Air Act requirements and to avoid the imposition of sanctions under the Federal Clean Air Act.






The proposed regulation was published in the *Pennsylvania Bulletin* on April 28, 2007, with provision for a 60-day public comment period, and three public hearings, which were held on May 29, 2007, in Pittsburgh, May 30, 2007, in Harrisburg, and May 31, 2007, in Norristown. Eighteen commentators, including EPA Region III, provided comments to the Department on the rulemaking. Comments received by the Department are addressed in the Comment and Response document which was developed as a part of the final rulemaking.

The Department presented the final-form rulemaking to the Air Quality Technical Advisory Committee (AQTAC) on July 26, and September 20, 2007. On September 20, 2007, AQTAC concurred with the Department's recommendation that the EQB approve the final-form rulemaking. In addition, the final-form rulemaking was discussed with the Air Committee of the Citizens Advisory Council on October 15, 2007.

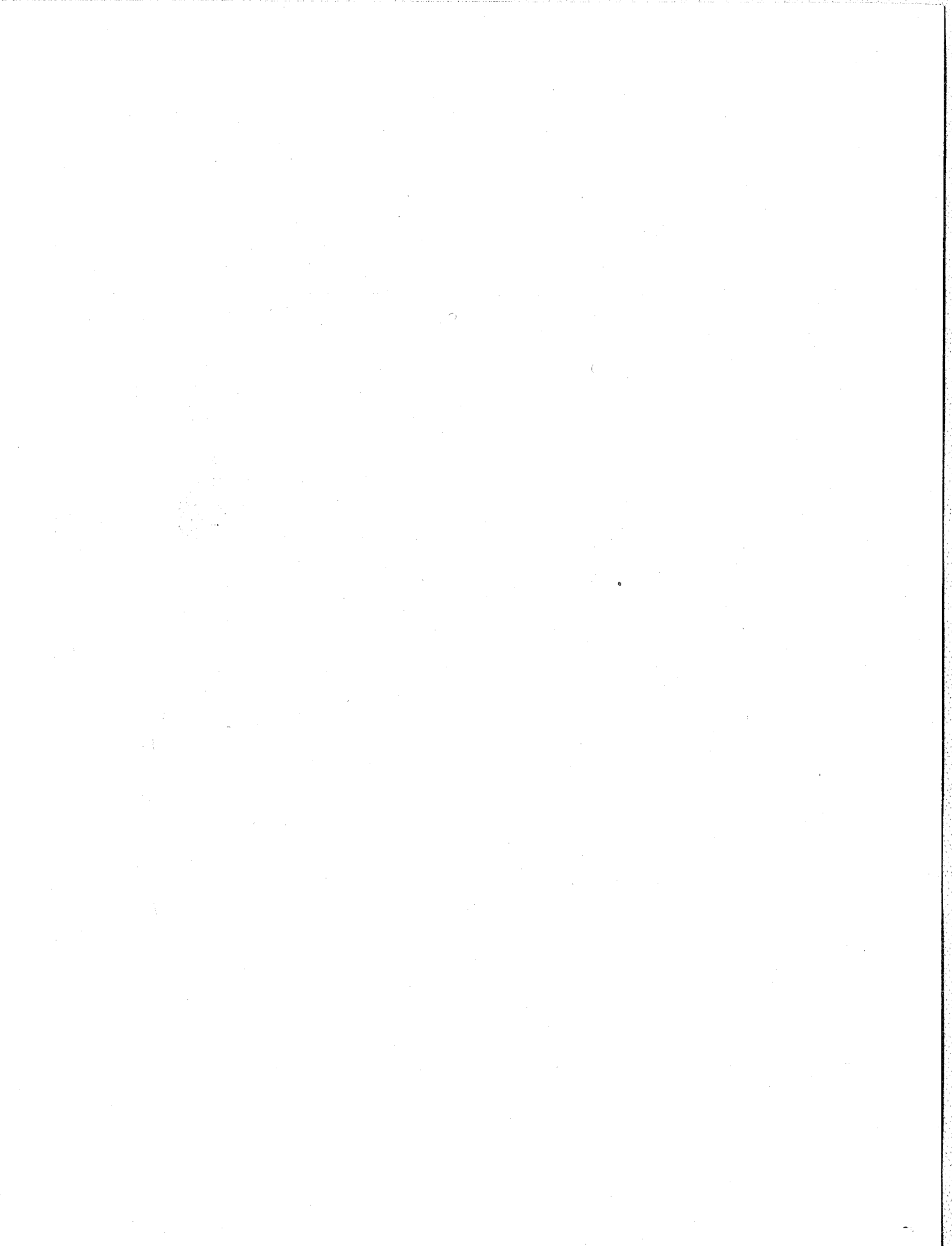
The Department will provide assistance as necessary to facilitate the Commission's review of this final-form rulemaking under Section 5.1(e) of the Regulatory Review Act. Please contact me at the number above if you have any questions or need additional information.

Sincerely,



Michele L. Tate  
Regulatory Coordinator

Enclosures





**TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO  
THE REGULATORY REVIEW ACT**

I.D. NUMBER: 7- 411

SUBJECT: Clean Air Interstate Rule

AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

**TYPE OF REGULATION**

- Proposed Regulation
- Final Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor
- Delivery of Tolloed Regulation
  - a.  With Revisions
  - b.  Without Revisions

RECEIVED  
 2008 JAN 22 AM 11:04  
 INDEPENDENT REGULATORY  
 REVIEW COMMISSION

**FILING OF REGULATION**

DATE	SIGNATURE	DESIGNATION
1-22-08		Majority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
1-22-08		Minority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
1-22-08 WDO		Majority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
1-22-08		Minority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
1-22-08		INDEPENDENT REGULATORY REVIEW COMMISSION
_____	_____	ATTORNEY GENERAL (for Final Omitted only)
_____	_____	LEGISLATIVE REFERENCE BUREAU (for Proposed only)

