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 (NOx) Annual Trading Program and CAIR NOx Ozone Season Trading Program model rules, as a means of mitigating the interstate transport of fine particulates ($PM_{2.5}$) and NOx. The amendments also adopt and incorporate by reference the CAIR Sulfur Dioxide (SO_2) Trading Program model rules as a means of mitigating the interstate transport of $PM_{2.5}$ and SO_2. The amendments establish general provisions and the applicability, allowance and supplemental monitoring, recordkeeping and reporting provisions and make other related amendments. The CAIR NOx trading programs in the amendments supercede the Commonwealth's existing NOx Budget Trading Program.

This order was adopted by the Board at its meeting of _____(blank)_____.

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 NOx and SO_2 from electric generating facilities of 25 megawatts or greater. This final-form rulemaking also extends existing NOx emission permit limits for certain boilers, stationary combustion turbines and stationary internal combustion engines; retains the non-EGU NOx 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 NOx Budget Trading Program; provides for the allocation of CAIR NOx allowances to certain units that did not receive SO_2 allowances under the Federal Acid Rain Program; and provides for the allocation of CAIR NOx annual allowances and CAIR NOx 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 $PM_{2.5}$ 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 $PM_{2.5}$ and ozone and emission precursors for both (namely, NOx as a precursor for $PM_{2.5}$ and ozone, and SO_2 as a precursor for $PM_{2.5}$) 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 $PM_{2.5}$ 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 $PM_{2.5}$ 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 $PM_{2.5}$ 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_2 or NOx, or both, that significantly contribute to nonattainment of the $PM_{2.5}$ 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_2 and NOx emissions for $PM_{2.5}$ 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_2 cap and trade program, to streamline that program and facilitate its interaction with the CAIR model SO_2 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 $PM_{2.5}$, 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 $PM_{2.5}$ 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 $PM_{2.5}$ 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 NOx and SO_2 reductions in the CAIR, which are addressed in this final-form rulemaking. The first phase of NOx reductions begins in 2009 (covering 2009-2014) and the first phase of SO_2 reductions starts in 2010 (covering 2010-2014). The second phase of reductions for both NOx and SO_2 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 NOx SIP Call model trading rules in 40 CFR Part 96 (relating to NOx budget trading program and CAIR NOx and SO_2 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_2 cap and trade program will rely upon Title IV SO_2 allowances that have already been issued, although a state may provide CAIR SO_2 allowances to an opt-in source. Pre-2010 Title IV SO_2 allowances can be used for compliance with the CAIR. SO_2 reductions are achieved under the model rules by requiring sources to retire more than one allowance for each ton of SO_2 emissions. The emission value of an SO_2 allowance is independent of the year in which it is used, but is based upon its vintage. SO_2 allowances of vintage 2009 and earlier will offset one ton of SO_2 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_2 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_2 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_2 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_2 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_2 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_2 allowances, the Department is allocating additional CAIR NOx 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_2 allowances.

The final-form rulemaking establishes general provisions to achieve reductions from EGUs currently covered by the NOx Budget Trading Program in Chapter 145, Subchapter A. The NOx reduction requirements are similar to the existing requirements of the NOx 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 NOx emissions, ozone season NOx emissions and annual SO_2 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 NOx in the five-county Philadelphia area. The final-form rulemaking requires these sources to surrender CAIR NOx annual allowances and CAIR NOx Ozone Season allowances rather than NOx Budget Trading Program allowances if the sources' NOx emissions exceed its NOx emission limits beginning in 2009. A similar change is made for NOx emissions from large stationary internal combustion engines that are not subject to the NOx Budget Trading Program and for NOx emissions from Portland cement kilns. The final-form rulemaking also addresses the transitioning of NOx allowance allocations, NOx emission limitations and NOx monitoring requirements from the NOx Budget Program and addresses certain compliance issues. The final-form rulemaking establishes requirements for non-EGUs that are currently subject to the NOx Budget Trading Program, including new non-EGUs, and also for EGUs that are exempt from CAIR but were subject to the NOx Budget Trading Program.

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

Both the EPA's CAIR NOx model rules and CAIR FIP state that CAIR NOx annual allowances and CAIR NOx 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_2 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_2 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_2 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_2 Trading Program as a means of mitigating the interstate transport of fine particulates and SO_2. 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_2 Trading Program," "CAIR SO_2 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_2 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 NOx allowances if NOx 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 NOx unit to a non-CAIR NOx 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 NOx allowance allocations) addresses timing requirements for CAIR NOx allowance allocations under the CAIR NOx Annual Trading Program. The timing requirements replace the timing requirements in the EPA's CAIR NOx 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 NOx Trading Budget for each annual control period for allocation to the IPP facilities that are subject to the SO_2 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 NOx 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 NOx 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 NOx allowance allocations for the CAIR NOx 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 NOx 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 NOx allowances that can be allocated to qualifying resources as a whole. The Board specifically sought comment on the proposed approach to allocating CAIR NOx 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 NOx emission would not be eligible for an allocation.

Units exempted under the EPA's Acid Rain Program, and which therefore did not receive SO_2 allowances and yet are subject to the CAIR SO_2 Trading Program, may receive an additional amount of CAIR NOx allowances under subsection (f), based on a ratio of one CAIR NOx allowance to every eight tons of SO_2 emitted. This ratio is derived from historical price data showing a 1:8 price ratio for NOx and SO_2 allowances. Up to 1.3% of the Commonwealth's annual NOx 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 NOx 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 NOx allowance for every eight tons of SO_2 that were not covered. The final-form rulemaking also amends the equation used to pro-rate the additional NOx allocations if more than 1.3% of the Commonwealth's CAIR NOx 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 NOx 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 (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 NOx SIP Call requirements that currently exist for non-EGUs. The EPA 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. In response, the Department expanded the proposed transition methodology 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 units to meet the reporting and monitoring requirements of the EPA's CAIR NOx trading programs.

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

Three 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 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 NOx 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 NOx 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 NOx annual allowances and CAIR NOx 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 NOx Ozone Season Trading Program budget and CAIR NOx 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_2 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-exempted 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 NOx 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 SO2 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_2 allowances. The CAIR SO_2 Trading Program has raised the value of all banked SO_2 allowances considerably, and increased the value of new and existing control installations. Thus, the SO_2 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 ___(date)___, 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