

Using DAQ's Emission Trading Program General Guidance

PURPOSE & OVERVIEW

The purpose of 45CSR28, "Air Pollutant Emissions Banking and Trading", is to establish a voluntary statewide air pollutant emissions trading program which provides incentives to make progress towards:

- *Attainment or maintenance of air quality standards;*
- while operating with safeguards to ensure:
- *Reduction or prevention of hazardous air pollutants (HAPs); and*
 - *Protection of human health, welfare, and the environment.*

The 1990 Clean Air Act Amendments (CAAA) encourage the use of market-based approaches, including emission trading, to assist in attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. Open-Market Air Emissions Trading is one of United States Environmental Protection Agency's (EPA's) reinvention activities using market incentives to help the environment and the economy. EPA describes the emission trading program concept as:

"Emissions trading is a way of reducing pollutant emissions to the environment by applying pollution reduction measures at the places where reductions are the most cost effective. A facility can avoid costly compliance measures by reducing emissions at points where it is most cost effective to do so, rather than apply controls where costs are more expensive, so long as equivalent or greater reductions are made. (EPA Factsheet)"

Sources that produce more cost-effective pollution control techniques and which over-comply with state and federal air standards can generate Emission Reduction Credits (ERCs) and market them to sources with high costs of compliance so they may realize a cheaper compliance option that achieves equivalent or greater overall emission reductions on a statewide basis. Ten percent (10%) of any ERCs registered must be retired as a benefit to the environment

Operating an emissions trading program provides the Division of Air Quality (DAQ) with another mechanism to implement the federal NAAQS while maximizing flexibility and cost effectiveness. NAAQS are established for all of the criteria pollutants: particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x) expressed as nitrogen dioxide (NO₂), carbon monoxide (CO), ozone expressed as volatile organic compound (VOC) precursors, and lead (Pb).

DAQ's Emission Trading Program pursuant to 45CSR28 provides for the generation, trade, and use of ERCs for VOCs as a class of compounds, oxides of nitrogen as an ozone precursor, and all criteria pollutants, excluding ozone. ERCs for one pollutant shall not be used to allow overages for another pollutant.

ERCs are discrete quantities of actual emissions expressed in tons of pollutant reduced during a specified calendar year or ozone season (for NO_x and VOCs), and which are entered into the Emission Trading Registry. ERCs are purchased and used in discrete amounts for specific uses. When the purchased quantity of ERCs are used up to cover the particular overage, additional ERCs must be purchased in order to continue emitting in excess of the underlying applicable requirement. In order to continue to operate continuously, a source choosing to using ERCs should make provisions to either obtain additional ERCs before the purchased amount is depleted, or to comply with the underlying applicable requirements without the use of ERCs.

As recognized by EPA, when functioning with the safeguards required by rule, an emissions trading program can encourage sources to:

- *Find less expensive methods to reduce emissions;*
- *Meet emissions reductions targets earlier than required;*
- *Go beyond emissions reductions targets;*
- *Develop new technologies for reducing emissions;*
- *Develop and implement new pollution prevention strategies;*
- *Develop more accurate means for measuring emissions;*
- *Minimize the adverse health and environmental effects on communities of concern; and*
- *Consider the environmental effects of emissions and the cost to society when making business decisions.*

Improving Air Quality with Economic Incentive Programs (EPA-452/R-01-001) contains EPA's final January 2001 policy on such discretionary economic incentive programs (EIPs) as open-market emissions trading. In addition to EPA guidelines, DAQ's implementation of an emissions banking and trading program is based on §§22-5-18 of the West Virginia State Code.

STATUS

While 45CSR28 became effective on August 31, 2000, this rule has not yet been approved by EPA as part of the state implementation plan (SIP) in West Virginia (WV). While sources may use this program to bank, trade, and use ERCs, all such activities are at the source's own risk until final EPA SIP approval of 45CSR28. Implementation of the Emission Trading Program before EPA approves it, and use of ERCs associated with the program, instead of directly complying with SIP-approved requirements, may result in EPA taking enforcement action against participating sources for failing to comply with their SIP-approved requirements. Additionally, citizens may sue sources, state agencies, or federal agencies who participate in an unapproved Emission Trading Program for failing to properly comply with, enforce, or oversee, respectively the SIP-approved requirements.

Inter-sector use of emission reduction credits among mobile sources, stationary sources, and area sources may occur, to the extent allowed by rule and the federal clean air act. However, DAQ's Emission Trading Program is initially focusing on stationary source generation, trading, and use of ERCs.

BASIC DATA NEEDS

Before a state can creditably allow the use of banked ERCs, the state must collect and maintain information on their ERCs, including, the name of the source that generated the ERCs, the quantity of ERCs generated by this source, the specific action that created the ERCs (e.g. a shutdown of a unit, process change, add-on controls), the date that the ERCs were generated, and enough other information to determine the creditability of the ERCs. Such a level of information is necessary to prevent the introduction of inaccurate data into the air quality management process, which may lead to endangering the State's ability to meet the other requirements of the CAAA, including the primary and secondary NAAQS. Inaccurate data can also lead to counterfeit credits within the registry, that would subsequently expose both the generator and user, along with any traders, to enforcement action.

It is important to note that while high quality data is required to participate in this voluntary program, this affords both a means to ensure protection of WV's SIP (which in turn allows DAQ to remain the delegated and approved implementing authority for state and federal air pollution programs), as well as to protect the economic investment of the sources who use this program.

Quantification Protocols

An integral concept of the Emission Trading Program is the “quantification protocol.” The methodology used to quantify emissions and emissions rates for the purpose of determining the emission baseline, ERCs to be generated, and ERCs to be used must meet certain criteria, including the use of the most representative, accurate, and reliable process and emission data available for the source, process, or process equipment. Where required by an applicable requirement, or where such measurement is practicable and reasonable, continuous emissions monitoring, or other direct measurement, parametric monitoring, or other surrogates for the measurement of emissions must be used.

ERC GENERATION

Before ERCs can be used by a source, they must first be generated by another source and listed in the registry. While ERCs to be generated in the future may be registered, use of such ERCs must be after these ERCs are generated (not before).

There are many ways ERCs may be generated under the Program. Several acceptable emission reduction measures include the following:

- *Installation or modification of air pollution control equipment;*
- *Modification of process or process equipment;*
- *Reformulation of fuels, raw materials or products;*
- *Implementation of energy conservation programs;*
- *Implementation of operational changes;*
- *Implementation of pollution prevention programs;*
- *Curtailment or shutdown of a source, process, or process equipment;*
- *Implementation of area and mobile source controls; or*
- *Early compliance with future emission reduction requirements.*

In order to be considered to be creditable under the Program, all emission reductions must be:

- *Real, in that all emission reductions have actually occurred;*
- *Surplus, in that reductions are not required by any applicable requirement;*
- *Quantifiable, in that all reductions can be measured and are replicable;*
- *Enforceable, in that they can be enforced by both DAQ and EPA; and*
- *Permanent, in that the reductions were continuous during the time the ERCs were generated.*

All sources proposing to generate ERCs under the Program must be included in WV’s Emission Inventory. Only emissions reductions that have occurred after January 1, 1991 are creditable under the Program. Ten percent (10%) of any ERCs registered must be retired as a benefit to the environment. ERCs have a 10-year life after the year of generation. ERCs that are not used before they expire are retired by the state as an environmental benefit.

ERCs Generated via Shutdowns

All sources generating emissions reductions via shutdown between January 1, 1991 and the August 31, 2000 effective date of 45CSR28 were required to notify DAQ of their intent to register these credits within sixty (60) days of the rule effective date (October 30, 2000). Fifty percent (50%) of all such ERCs generated via shutdowns prior to the rule effective date of August 31, 2000 must be retired from future use.

Shutdown credits cannot be generated from load-shifting activities that simply transfer operations (and emissions) to another location.

ERC TRADE

An ERC must be generated and procured before it may be traded or used. An ERC within the registry may be traded or transferred in whole or in part. Third-party traders, as well as ERC generators and end-users, are obligated to ensure and certify to the accuracy of the ERCs being traded or transferred.

ERC USE

To ensure that the Program is used in a manner consistent with attainment and maintenance of NAAQS and state and federal requirements, ERCs **may not** be used to avoid or comply with the following requirements:

- *New Source Performance Standards (NSPS);*
- *National Emission Standards for Hazardous Air Pollutants (NESHAPs);*
- *Maximum Achievable Control Technology (MACT);*
- *Best Available Technology (BAT);*
- *Best Available Control Technology (BACT);*
- *Lowest Achievable Emission Rate (LAER); or*
- *Synthetic Minor permits/Natural Minor sources: Such sources may not use ERCs to exceed major source or major modification thresholds without following the proper permit and rule requirements. No “temporary major sources” or “temporary major modifications” are allowed.*
- *ERCs may not be used to avoid the requirement to obtain a permit under the provisions of 45CSR13, 45CSR14, 45CSR19, and 45CSR30.*

Additionally, ERC use may not result in an actual increase of *any* individual HAP at a facility (e.g. no actual emissions increase of any HAP may result from the use of VOC or PM_{10} ERCs that may contain HAP(s)). Further, HAPs are prohibited from being traded within the 45CSR28 program.

ERCs **may** be used to ensure compliance with certain applicable requirements, provide operational flexibility, and promote economic growth. Several potential uses under the Program include the following:

- *Offsets for major new or modified sources in nonattainment areas (as allowed by 45CSR19);*
- *Delayed or alternative compliance with RACT requirements;*
- *Compliance with certain air permit or rule requirements;*
- *Operational flexibility;*
- *Temporary increases in emissions below major source or major modification thresholds;*
- *Compliance margin: A source may purchase excess ERCs in advance for use to ensure compliance;*
- *The state could purchase and retire ERCs to assure attainment and maintenance of NAAQS;*
- *State agencies could promote economic development by purchasing and donating ERCs to businesses to reduce the offset requirement burdens;*
- *Purchase by environmental groups or others to improve air quality; or*
- *As a Supplemental Environmental Project (SEP) component to mitigate enforcement action.*

All ERCs not used within ten (10) years of generation will be retired as a benefit to the environment. Safeguards built into 45CSR28 (such as for data collection and accuracy, recordkeeping, etc.) protect

sources using ERCs while adding operational flexibility. All ERCs must be held in **advance** of actual use and all appropriate notifications required by rule must be met.

A key use of ERCs in WV in the near-term is likely to be for meeting state reasonably available control technology (RACT) and SIP requirements such as in 45CSR6, 45CSR7, and 45CSR10, and 45CSR21. Emissions offsets resulting from permanent shutdowns as required by lowest achievable emission rate (LAER) standards may be used in conjunction with data in the registry to the extent allowed by 45CSR19.

In addition to using ERCs to meet state RACT and SIP requirements, another potential use of ERCs that can provide the regulated community with enhanced facility operating flexibility is as a compliance margin. Such ERCs may be used as a contingency to counterbalance “unplanned” emission excursions over permitted limits. Examples of such “unplanned” emission exceedances can result from unexpected changes in process operations, steam or electrical output requirements or malfunction of pollution control devices; or inconsistencies in raw material or fuel content. While persistent exceedances would be dealt with via the enforcement route, *occasional* excursions from permitted limits may be eligible for using ERCs. Although holding ERCs to provide a compliance margin for “unplanned” emission excursions is a potential use, as with all ERCs, such credits must be held in advance of use. Therefore, the source must be able to anticipate the proposed ERC use with enough specificity to demonstrate that any uses would meet the rule requirements.

Air quality analyses employing procedures approved by the Director must be supplied by the applicant if a proposed ERC use will result in actual emissions or overages equivalent to the amounts set forth in 45CSR28.4.1. If such air quality analyses involves air dispersion modeling, the standards and procedures set forth in EPA’s Guideline on Air Quality Models (GAQM) found at 40 CFR 51, Appendix W, are to be used. Air dispersion modeling submittals are to be based on a protocol previously approved by DAQ.

ERCs used in an attainment area must not cause a violation of a NAAQS, a prevention of significant deterioration (PSD) increment, or an applicable attainment area maintenance plan. The use of ERCs in a nonattainment area must result in emissions *reductions* consistent with the requirements for reasonable further progress (RFP) for the nonattainment area and the attainment demonstration specified in the SIP.

NOTICE SUBMITTAL & REVIEW

A source or person must submit a notice for the generation of emission reductions in order to register them as ERCs. All notices must be accompanied by a certification that all information contained in the notice is true, accurate, and complete.

The DAQ has sixty (60) days to review a notice and make a completeness determination. If the notice is deemed to be complete, then the registering source is notified and a fee invoice is sent to the source. ERCs are registered upon receipt of the fee. At the time of registration, DAQ will permanently retire ten (10) percent of all ERCs to provide for an air quality benefit.

A source must also submit a notice and certification to DAQ in order to use or trade ERCs. Again, DAQ has sixty (60) days to review a notice and make a completeness determination. If the source is deemed complete, then the registering source is notified, and the use is entered into the Registry. The methods used and the operational changes made to generate or use ERCs become legally enforceable operating requirements when the DAQ makes a written determination of completeness.

An application to use a new or alternate quantification protocol must be submitted to the DAQ and US EPA Region III *at least thirty (30) days* PRIOR to submission of a notice of generation or use of ERCs if an existing federally approved emission monitoring and quantification protocol is not proposed for use. Concurrent with submittal of this application to the DAQ, a copy must be submitted to US EPA Region III.

45CSR28 requires that anyone who decides to participate in the Emission Trading Program keep records of ERC generation, trades, and uses. Sufficient monitoring, recordkeeping, reporting, and testing for all reductions or uses must be kept in order to meet the rule requirement for enforceable ERCs, as well as for underlying applicable requirements. All prospective ERCs to be generated must be corrected with the DAQ as necessary immediately following the period of actual ERC generations. Similarly, all ERCs registered for use are allowed a period of time, not to exceed sixty (60) days, from the end of the use period specified to notify the DAQ of any unused ERCs not used.

The methods used, or operational changes made, to create ERCs for which a complete notice and certification is submitted to DAQ become **legally enforceable operating requirements** upon the start date of the period of ERC generation specified in the complete notice. These continue to be legally enforceable operating requirements throughout the period of ERC generation. Similarly, the methods used, operational changes made, and maximum short-term emission rates established to accommodate the use of ERCs for which a complete notice has been submitted to DAQ become **legally enforceable operating requirements** upon the effective date of the notice of completeness issued by DAQ, or the beginning date of the ERC use period specified in the complete notice. These continue to be legally enforceable operating requirements throughout the period of ERC use.

PROGRAM REGISTRY

Information on the generation and use of ERCs is contained in the publicly available Emission Trading Registry (Registry). The Registry includes the following information:

- *The amount of ERCs that have been generated, used, or retired, by pollutant;*
- *Where and by whom the ERCs were generated or used;*
- *How the ERCs were generated or how the ERCs will be used; and*
- *Contact person.*

FURTHER INFORMATION

If you have questions regarding the DAQ's Emission Trading Program, or if you are interested in participating, further information may be found in the rule itself (45CSR28) as well as in the various forms and flowcharts developed for implementation. You may also contact DAQ directly at (304) 926-0499 ext. 1225.

Please note that should any inconsistencies between program guidance and the rule exist, the rule governs.