

New EPA Policy Allows Emerging and Voluntary Measures in State Implementation Plans

EPA has issued a new policy that gives states another option for meeting federal requirements for attaining national ambient air quality standards (NAAQS), reasonable further progress (RFP), rate of progress (ROP), or NAAQS maintenance. In many states, traditional emission control measures have already been incorporated into the state implementation plan (SIP). To meet or maintain the NAAQS in the future, states may need to implement measures beyond traditional emission controls. EPA's new policy allows states to consider emerging and voluntary measures as supplements to existing control requirements in their SIP. The new policy, "Incorporating Emerging and Voluntary Measures in a State Implementation Plan (SIP)," was released in September 2004, and is designed to encourage consideration of emission reduction options that have not typically been approved in a SIP.

An emerging measure is an emission reduction or pollutant reduction strategy that is more difficult to accurately quantify than traditional SIP emission reduction measures. As indicated by its name, a voluntary measure is a measure or strategy that is not enforceable against an individual source. The September 2004 guidance is intended to address quantification and enforceability issues associated with nontraditional control measures.

The new policy is intended to support and promote the testing of new emission and pollutant control strategies. As such, the policy seeks to:

- Provide flexibility in meeting the enforceability and quantification requirements established for SIPs;
- Provide a process by which new measures can be developed and evaluated;

- Establish appropriate limitations for the application of new measures; and
- Provide provisional pollutant reduction credit upfront for attainment, RFP, ROP, or maintenance requirements to encourage the substantial investment required to implement nontraditional pollutant reduction approaches.

EPA's policy on emerging and voluntary measures does not apply to mobile source emissions, including emissions from both on-road and non-road vehicles. Appropriate emerging and voluntary measures may apply to stationary sources and non-point or area sources. The new policy amends an earlier (January 19, 2001) EPA policy on using voluntary measures to meet SIP emission reduction requirements.

Basic Requirements for SIP Approval

There are five basic requirements that an emission reduction measure must meet in order to receive federal approval in a SIP. To be approvable, emission reduction or control measures must be: surplus, enforceable, quantifiable, and permanent. In addition, EPA's new policy on emerging and voluntary measures requires that proposed control measures meet requirements relating to anti-backsliding. Each requirement is described below in further detail.

Surplus

Emission reductions are considered surplus if they are not relied on in the air quality-related programs of a SIP. Emission reductions are not surplus if they are part of consent decrees, or are required under federal rules that focus on reducing emissions of criteria pollutants or their precursors. Emission reductions required under any of the

following would not be considered surplus:

- Reasonably available control technology (RACT),
- Best available control technology (BACT),
- Best available retrofit technology (BART),
- Lowest achievable emission rate (LAER),
- New source performance standards (NSPS),
- National emission standards for hazardous air pollutants (NESHAP) or maximum achievable control technology (MACT) standards, and
- New source review (NSR) offsets or emission reductions for any emission trading program.

Emission reduction measures that are already used for SIP attainment, RFP, ROP, or maintenance requirements cannot be reused for the same SIP requirement where the emission reductions are cumulative. However, an emission reduction measure may be used to meet more than one SIP requirement, if appropriate.

Enforceable

To be credited in a SIP, emission reductions must be enforceable. EPA policy describes emission reductions and other required actions as enforceable against a source if:

- They can be independently verified,
- Program violations are defined,
- Those liable can be identified,
- Measures are enforceable in accordance with other EPA guidance on practicable enforceability, and
- Citizens are allowed access to the emission-related information.

Quantifiable

Emissions and emission reductions are quantifiable if an independent individual can reliably and replicably measure or determine the emissions and emission reductions. Voluntary measures should meet this provision, unless it is also an emerging measure.

Permanent

The emission reduction strategy must continue throughout the term for which the credit is granted, unless it has been shown that the additional emission reduction is replaced (through a SIP revision), or that it is no longer needed.

Anti-Backsliding

Emerging or voluntary measures approved under EPA's September 2004 policy cannot typically replace existing measures already required in an applicable permit or SIP. This "anti-backsliding" provision is intended to ensure that less certain or less enforceable strategies are not substituted for currently required and enforceable activities.

Emerging and Voluntary Measures

A proposed measure can be either an emerging or voluntary measure, or it may be both an emerging and voluntary measure. An emerging or voluntary measure that has been approved in one state's SIP may also be used by another state.

Emerging Measures

As indicated above, emerging measures are nontraditional emission reduction initiatives that may be more difficult to quantify than traditional SIP control measures. The following are examples of emerging measures being currently considered for SIP use:

- Activities that indirectly reduce emissions, such as using renewable energy sources (e.g., solar or wind power), combined heat and power generation, and education or incen-

tive programs to reduce consumer energy use; and

- Activities that improve air quality by means other than emission reductions, such as heat island measures (steps that increase the reflectivity of roofs, roads, and pavement) that reduce criteria pollutant concentrations by lowering ambient temperatures.

For emerging measures, there must be defined penalties and the ability to secure appropriate corrective actions where applicable. In addition, citizens must be able to file suit for violations of emerging measures. For voluntary measures, EPA and the state must be able to apply penalties and secure appropriate corrective action.

For nontraditional control measures, it is sometimes difficult to quantify emission or pollutant reductions because of scientific, technological, or informational uncertainty. Therefore, quantifying reductions from emerging measures may require the development of a protocol based on assumptions and/or modeling so that emission impacts can be estimated.

In addition, the emission reductions attributable to an emerging measure may have a significant level of uncertainty due to concerns relating to best available science and engineering information or uncertain implementation assumptions. In such cases, a "discount factor" should be applied to the emission reductions. EPA recommends that the SIP authority apply a discount factor of 20% to the estimated emission reductions to reflect the uncertainty in the estimate. This discount factor may be increased or decreased as appropriate, depending on the level of uncertainty in the emission reduction estimate.

An emerging measure would not be precluded from being used for SIP credit simply because the level of emission reduction is less certain than would be the case with traditional measures. Provided the discount factor takes into account the uncertainty in the level of emission reduction to be

achieved, the emerging measure might be approvable.

Voluntary Measures

A voluntary measure is an action by a source that will reduce emissions of a criteria pollutant or precursor that the state could claim as an emission reduction in its SIP, but that is not directly enforceable against an individual source. An individual source would not directly receive credit for participating in the voluntary measure, but there may be other advantages for their participation. For example, sources could receive recognition from the state or others for their contribution to improving air quality in the area. Using voluntary measures to achieve emission reductions may be a more cost-effective or less resource-intensive method to reduce criteria pollutant emissions in some areas.

Examples of voluntary measures include:

- Voluntary no-burn days to reduce particulate matter emissions, or voluntary wood stove change-out programs;
- Programs to reduce electricity usage;
- Retailers agreeing not to sell certain products that emit volatile organic compounds during the ozone season; and
- Process changes to reduce emissions during the ozone season.

While voluntary measures are not enforceable emission reductions, the state would be responsible for assuring that the emission reductions credited in the SIP actually occur. Should the emission reductions from the voluntary measure fall short of the expected reduction, the state must enact alternative measures in a timely manner. To be approved by EPA, the state would be required to make an enforceable commitment to implement the alternative measures.

The effectiveness of voluntary measures should be initially assessed by the state within 18 months after

putting the measure into place. The voluntary measure should be re-assessed every three years when the effectiveness of other SIP measures are being assessed.

Limitations on Emerging and Voluntary Measures

EPA believes that there should be a presumptive limit on the amount of emission reductions attributed to emerging and voluntary measures. EPA has set the presumptive limit of 6% of the total amount of emission reductions required for the ROP, RFP, attainment, or maintenance demonstration. This limit applies to the total amount of emission reductions attributed to emerging and/or voluntary measures, not each measure individually. EPA has established this limit because of the uncertain nature of the emission reductions that result from these types of strategies. Since this is a presumptive limit, EPA will address requests for a higher limit on a case-by-case basis.

In its September 2004 policy, EPA also established a limit on using episodic measures for emission reductions. The agency wants to ensure that, if there is an appropriate traditional measure to achieve emission reductions on a continual or seasonal basis,

that the traditional measure is not avoided by implementing emerging and voluntary measures.

However, EPA indicates that non-stationary source emission reduction measures that apply to consumer actions, or to the use of consumer products or services, are not limited by the new policy. In some cases, consumer actions may be the only feasible type of emission control to address episodic events. For example, episodic curtailment of residential wood combustion would be an emission reduction measure that would not be limited under the new policy.

Obtaining SIP Approval

The September 2004 policy establishes several requirements for a state to receive approval of an emerging or voluntary measure in a SIP. These requirements are listed in Table 1.

A state must identify and fully describe each proposed emerging and voluntary measure. The projected emission reductions resulting from each measure should be well documented. In addition, the state should include all relevant technical and supporting documentation regarding the emission reduction measures, and

discuss the best available science for the projected emission reductions.

States must commit to monitoring, evaluating, and reporting on each measure at least every three years. The monitoring, evaluations, and reports are to be made available to the public and submitted to EPA.

Each state is to enforceably commit to the parts of each measure for which state or local governments are responsible. SIP submittals need to include an enforceable commitment such that, if the state learns through program evaluations of an emission reduction shortfall, the state will quickly correct the problem by providing enforceable emission reductions from other sources, or by showing that the emission reductions are not needed for attainment, maintenance, RFP, or ROP. If state rulemaking is not required, any shortfall should be corrected as soon as possible, and no later than one year after the program evaluation is completed. If state rulemaking is required, the state should proceed as expeditiously as possible under the required state process, but the state should correct the shortfall within two years of when the shortfall is discovered.

TABLE 1

Requirements for SIP Approval of Emerging or Voluntary Measures

- The request for approval must identify and describe the measure.
- Projections of emission reductions from the measure and relevant technical support documentation discussing best available science supporting emerging measures must be provided.
- The state must enforceably commit to implementation of those parts of the measure for which the state or local government is responsible.
- The proposed measure must enforceably commit the state to monitor, evaluate, and report the effectiveness of the emission or pollutant reduction measure at least every three years to the public and EPA.
- The state must enforceably commit to remedy any SIP emission reduction shortfall in a timely manner.
- The measure must meet all other SIP revision requirements.
- The proposed measure must undergo public notice and comment as would any other SIP revision.

SIP = state implementation plan.
 Source: U.S. EPA, September 2004.

Requests for approval of emerging and voluntary measures must meet all other SIP revision requirements. The requests are to go through standard public notice and comment mechanisms similar to any other SIP revision.

Relationship to the Economic Incentive Program

EPA has issued other guidance documents regarding nontraditional programs, including one titled "Improving Air Quality with Economic Incentive Programs." This guidance is referred to as the Economic Incentive Program (EIP), and provides additional

information on developing and implementing nontraditional control strategies. EIPs differ from emerging measures in that emission reductions must be clearly quantifiable in an EIP.

EPA encourages states to have any voluntary measure that can be shown to meet the EIP criteria approved as an EIP, rather than as a voluntary measure. EIP measures are not subject to the percentage limit that applies to emerging and voluntary measures.

References: U.S. EPA, "Incorporating Emerging and Voluntary Measures in a State Implementation Plan (SIP)," September 2004. Available via the Internet at

<http://www.epa.gov/ttn/oarpg/t1pgm.html>.

U.S. EPA, "Stationary Source Voluntary Measures Final Policy," January 19, 2001. Available at <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

U.S. EPA, "Improving Air Quality with Economic Incentive Programs," EPA-452-R-01-001, January 19, 2001. Available at <http://www.epa.gov/ttn/oarpg/t1pgm.html>. 

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