

Stationary Source Voluntary Measures Draft Policy

(Note: As used in this document, the terms “we”, “us” and “our” refer to EPA. The terms “you” and “your” refer to a State or States.)

Why are we developing a stationary source voluntary measures policy?

Many areas of the country that are designated as nonattainment are finding it increasingly difficult to find ways to achieve additional emission reductions needed to attain the National Ambient Air Quality Standards (NAAQS). Many areas have already applied reasonably available control technologies (RACT) to stationary sources. In some cases, areas have chosen to control sources well beyond RACT levels, but still cannot attain the standards. These areas need to find additional innovative emission reduction approaches. One way to accomplish this is through voluntary measures. Voluntary measures are an alternative to the traditional command and control approach that has potential to encourage new, untried and cost-effective approaches to reduce emissions.

What is a voluntary measure?

As discussed in this policy, a voluntary measure would be an action by a “source” that will reduce emissions of a criteria pollutant or precursor to a criteria pollutant that the state could claim as an emission reduction in its State Implementation Plan (SIP), for purposes of demonstrating attainment or maintenance of the NAAQS, reasonable further progress (RFP), or rate of progress (ROP), but that is not directly enforceable against the “source”. Voluntary measures could not be used by the source to meet any other emission reduction requirement, (for example, offsets for New Source Review or credits for trading under an economic incentive program). Voluntary measures also could not be used to meet any other emission reduction requirement such as RACT, BACT, LAER and NSPS. In effect, the “source” accrues neither liability nor direct benefit from the action. All voluntary emission reductions would be credited to the State¹ for demonstrations of attainment, maintenance or RFP/ROP.

What is a “source” as discussed in this policy?

For ease of reference, the term “source” refers to any non-mobile source of a criteria pollutant or precursor to a criteria pollutant. This includes major and area sources, including farms, natural sources of pollutants such as blowing dust, retail stores and individual consumers.

What sources does this policy cover?

¹ “State means a state, local agency, tribe or other entity that has the authority to submit an implementation plan to EPA for approval under section 110 of the Act.

Under this policy a state could develop voluntary measures for the following types of sources:

- Subject to the limitations described later in this policy, stationary sources or emission points within a stationary source including any building, structure, facility or installation which emits or may emit an applicable criteria air pollutant or precursor.
- Area sources that are too small and/or too numerous to be individually included in a stationary source emissions inventory. This category could include facilities that directly emit applicable criteria pollutants or their precursors such as very small printers or bakeries. It could also include products sold by wholesale or retail operations that may emit criteria pollutants or their precursors and individual consumers that may use products which emit criteria pollutants or their precursors.

Could all sources use the stationary source voluntary measures policy?

EPA would not consider it appropriate for all sources to participate in the voluntary measures policy. Some nonattainment problems (whether area-wide or part of the larger nonattainment area) are strongly affected by one source or a small group of sources. This is usually the case in nonattainment areas for Lead and SO₂, and for certain PM and CO nonattainment areas as well. It should not be the case for Ozone, where a mix of major sources, area sources, mobile sources and long range transport all contribute to the problem. We do not believe that sources, which strongly affect a nonattainment problem, should be allowed to participate in a voluntary measures program. Emission reductions in these cases should be directly enforceable against the sources causing the problem.

Could existing requirements be made “voluntary”?

No, existing permit or SIP requirements on sources cannot be converted to voluntary measures. This “antibacksliding” provision is meant to ensure that currently required and enforceable activities cannot be made “voluntary.”

What is the relationship of this policy to the mobile source voluntary measures policy?

This policy would not cover any of the emission sources included in the mobile source voluntary measures program, including on-road and non-road vehicles. Those sources are covered by the mobile source voluntary measures guidance signed October 27, 1997. However, this program does represent an extension of the basic policies developed in the mobile source voluntary measures guidance to the stationary source arena.

What is the relationship of this policy to the Economic Incentive Program (EIP)?

Economic incentive programs differ from voluntary measures in that under a State's EIP, emission reductions (or actions leading to emission reductions) must either be identifiable and enforceable against a specific source, or the state must use one of the following three methods to meet the enforceability requirement:

- the EIP submittal includes fully adopted contingency measures and contains a State commitment to automatically implement contingency measures, if necessary.
- the State will only count emission reductions on a retrospective basis.
- the State has used the control strategy in a similar situation, has achieved positive results, and gets preliminary approval from the relevant EPA Regional Office to use the provision.

Some strategies might be originally approved under the voluntary measures policy and later, after program evaluations have been completed, be able to be approved as a regular EIP. If an emission reduction strategy can meet the EIP requirements, a State should strive for the strategy to be approved as an EIP rather than as a voluntary measure.

What are the different types of stationary source voluntary measures programs?

Voluntary measures could be continuous, seasonal (in effect only during the season in which an area experiences high pollutant concentrations) or, for certain actions, episodic (implemented during specific periods of high pollutant concentrations, varying by meteorological conditions).

What are examples of types of stationary source voluntary measures?

Some examples of voluntary measures could include:

- Retail operations agreeing not to sell high emitting VOC products during the ozone season.
- Consumer oriented programs to reduce the use of high emitting paints or other consumer products during the ozone season or no paint days during periods of high predicted ozone concentrations (Ozone Action Days)
- Deferring or reducing both consumer and industry maintenance involving high emitting chemicals.
- Where it is not already required, improved operating practices or use of pollution prevention approaches to reduce emissions, such as covering containers, reducing waste from operations, or use of water based systems for cleaning operations at stationary sources.
- Reducing emissions from emissions points not currently required to be controlled (e.g., by applying new or innovative emission reduction approaches such as pollution prevention or process changes).
- Process changes to reduce emissions during the ozone season.

- No burn days for PM programs, e.g. wood stoves or agricultural.
- Reductions due to land use planning related to stationary sources, e.g. locating clean utilities in brownfields areas.
- Programs to reduce electricity usage.
- Heat island programs to encourage activities that will reduce center-city temperatures during the summer, e.g. replacing roofs with Energy Star-labeled roof products or planting shade trees.

What basic requirements would a stationary source voluntary measures program need to meet?

In order to be approvable as a SIP revision, a stationary source voluntary measures program could not interfere with other requirements of the Clean Air Act, would need to be consistent with SIP attainment, maintenance or RFP/ROP requirements, and provide emission reductions that are:

1. **Quantifiable** - The voluntary measure emission reductions should be quantifiable and include procedures to evaluate and verify over time the level of emission reductions actually achieved.

2. **Surplus** - The emission reductions could not be required or assumed by an existing SIP or permit and could not otherwise be relied on or required to meet any of the following:

- A technology based requirement of the Act, including, but not necessarily limited to, RACT, BACT, LAER, BART, NSPS limits, or NESHAPS limits.
- Conformity-based requirements - for example, reductions needed to demonstrate conformity.
- Emission reductions used or needed for offset or netting purposes.
- Other adopted State air quality programs not in the applicable SIP.
- Federal rules that reduce criteria pollutants (or their precursors) such as rules for reducing VOCs promulgated under section 183 of the CAA.

In other words, you could not claim emission reductions that result from any other emission reduction or limitation of a criteria pollutant or precursor that you are already required to have to attain or maintain a NAAQS or satisfy other CAA requirements for criteria pollutants. In the event that emission reductions relied on in a voluntary measure are subsequently required by a new air quality-related program, like one of those listed above, those emission reductions would no longer be surplus.

3. **Enforceable** - While we have already stated that voluntary measures are not enforceable against the source, the State would be responsible for assuring that the emission reductions credited in the SIP occur. The state would make an enforceable commitment to monitor, assess and report on the emission reductions resulting from the voluntary measures and to remedy any shortfalls from forecasted emission reductions in a timely manner as discussed below.

4. **Permanent** - The voluntary program should be permanent unless it is replaced by another measure (through a SIP revision) or the State demonstrates in a SIP revision that the emission reductions from the voluntary program are no longer needed.

What is the authority for approving voluntary measures programs under the Clean Air Act?

EPA would approve voluntary measures under the following sections of the Clean Air Act:

- 110 and 172 regarding emission reductions needed to achieve attainment of the NAAQS.
- 182 regarding economic incentive provisions.
- 175A regarding maintenance plans.

In light of the increasing incremental cost associated with stationary source emission reductions and the difficulty of identifying additional stationary sources of emission reduction, EPA believes that it needs to stimulate innovative approaches to emission reductions. Consequently, EPA believes that it may be appropriate and consistent with the Act to allow a limited percentage of the total emission reductions needed to satisfy ROP, RFP and attainment and maintenance requirements to come from voluntary measures.

While this policy would not require that actions be enforceable against individual sources, the policy would place clear responsibility on a State to ensure that the emission reductions take place. This includes a commitment, under timeframes as discussed below, to evaluate the effectiveness of each measure and, in the event the voluntary measure does not achieve the projected emission reductions, to remedy any SIP shortfall by providing enforceable emission reductions from other sources or by showing that the emission reductions are not needed to achieve attainment, maintenance or RFP/ROP requirements. The enforceable emission reductions from other sources or “showing” would be accomplished through a SIP revision.

What limitations apply to voluntary measures programs?

Because of the innovation involved in stationary source voluntary measures, our inexperience in quantifying them, and the inability to enforce these measures against individual sources, EPA believes that it is appropriate to limit the amount of emission reductions allowed in a stationary source voluntary measures program. At this time, we believe an appropriate limit for stationary source voluntary measures would be 3% of needed reductions for ROP, RFP, attainment or maintenance demonstration purposes. This is not 3% of an area’s total emission inventory. For example, if a State projects emissions in the attainment year to be 100 tons a day over the emissions needed to show attainment, the State could take credit for emission reductions from stationary source voluntary measures of up to 3 tons per day.

Section 123 of the Act limits the credit states can take for using dispersion techniques, which include episodic and supplemental controls on emissions from stationary sources that vary

based on atmospheric or meteorological conditions. EPA's regulations implement section 123 at 40 CFR sections 51.100, 51.118, and 51.119. One of the purposes of section 123 is to make sure stationary sources² do not rely upon intermittent controls in order to avoid the application of feasible constant emission controls. In implementing the voluntary measures policy, states would need to take care to avoid seeking SIP credit for episodic controls on stationary source emission activities that are feasibly regulated through continuously or seasonally applicable emission controls. Under the policy, EPA would not grant credit to any stationary source episodic control measure that falls within the Agency's definitions of "dispersion technique" at 40 CFR 51.100(hh)(1)(ii) or "intermittent control system (ICS)" at 40 CFR 51.100(nn), except as allowed by EPA's rules.

EPA believes that section 123 should not, however, restrict credit for non-stationary source episodic or supplemental emission reduction measures that apply to consumer actions or the use of consumer products such as paints or hairspray, for which these controls may represent the only feasible type of control. For example, EPA has formally determined that the use of smoke management in agriculture and silviculture practices, and episodic curtailment of residential wood combustion, are not dispersion techniques limited by section 123. Moreover, EPA has explained that the use of dust suppressants at stationary sources are not dispersion techniques, since these measures are triggered by the rate of dust emissions rather than by varying atmospheric or meteorological conditions. Finally, EPA has stated that seasonal controls that are implemented at pre-determined periods of the year and that do not vary with atmospheric or meteorological conditions are not limited by section 123, even if they apply to stationary sources.

How does a voluntary measure get SIP approval?

A state would submit a SIP to EPA which:

- identifies and describes the voluntary measure program
- contains projections of emission reductions attributable to the program, along with relevant technical support documentation
- commits to State implementation of those parts of the measure for which the State or local government is responsible
- commits to monitor, evaluate, and report the resulting emissions effect of the voluntary measure

² In this document, the term "stationary source" is generally used broadly to include any source that is not a mobile source, including consumer actions. However, in this discussion of section 123, the term "stationary source" is used in its more traditional, regulatory sense, which is narrower in scope and does not include individual or retail actions. For examples of regulatory definitions of "stationary source," see 40 CFR 51.165(a)(1)(i), 40 CFR 51.166(b)(5), and 40 CFR 60.2.

- commits to remedy any SIP credit shortfall in a timely manner as described below if the voluntary program does not achieve projected emission reductions
- meets all other requirements for SIP revisions under sections 110 and 172 of the Act.

See attachment 1 for a detailed description of the SIP approval process.

How should a SIP authority calculate the credit to be obtained from a voluntary measure?

The stationary source voluntary measures policy applies to a wide variety of types of stationary sources. While a State would need to carefully develop a emissions quantification protocol that best fits each type of emissions source, the following generic protocol presents the basic components that should be accounted for in any emission reduction quantification approach.

- Identify the type of source or facility that will be involved in the emission reduction activity.
- Determine whether the emissions from these sources are already included in the emissions inventory in the SIP. If they are not already in the SIP inventory, no credit could be given for these sources unless the baseline is reassessed. If they are in the SIP inventory, determine the baseline emissions from these sources.
- Fully explain the emission reduction technique, provide a detailed estimate of the amount and type of emissions (e.g. VOCs, NOX, PM, etc.) that will be reduced. Provide a clearly articulated methodology for how the emissions reduction estimates were derived .
- Identify the number of sources that will participate in the voluntary measure and provide documentation as to how that number was derived and why the SIP authority believes it to be accurate.
- If there is uncertainty in either the amount of emission reduction that will be generated by the emission reduction technique or the number of sources that will participate, the SIP authority should apply an adjustment factor to reduce the estimate commensurate with the level of uncertainty. The greater the uncertainty, the greater the adjustment factor. This could be in the form of a percentage reduction to the estimate.
- If the sources are generally of the same size and emission rate, multiply the number of sources participating by the amount of emission reduction estimated per source to determine the total emission reduction to be applied to the SIP.

-or-

If the emission reduction can differ substantially from source to source, add the emission reduction from each participating source to derive a total emission reduction and apply it to the SIP.

How should a state evaluate the emission reduction effectiveness of its voluntary measures programs?

Program evaluation is the process of retrospectively assessing the performance of your voluntary measures program. The primary purpose of program evaluation is to evaluate the amount of reductions actually realized through the program and to serve as a basis for adjustments to the program if the original estimates of emission reduction are not being achieved. In your SIP submittal, you would develop and include specific program evaluation procedures for your voluntary measures program.

You should carefully consider what approach can provide the most effective means to accurately evaluate your voluntary measures program. Your approach will depend greatly on what type of voluntary program you evaluate. For example, if you evaluate a low VOC retail paint sales program, you may want to use inventory records to evaluate the program. For an ozone action day approach to discourage use of VOC based consumer products (paints, hair spray, etc.), you may want to use a consumer survey.

How often should a State evaluate its voluntary measures program?

The state would enforceably commit to complete an initial evaluation of the effectiveness of each measure not later than 18 months after putting the measure in place (one year to run the measure and 6 months to analyze the data to determine the measure's effectiveness). This evaluation should be done more quickly, where possible. For instance, for a seasonal voluntary measure program that may only run for 6 months, the timeframe may be 6 months to run the program and 6 months to determine its effectiveness.

Once a state has determined the initial effectiveness of its voluntary measure, it may reevaluate its voluntary measure programs at the same time as other SIP measures, generally every 3 years, except that if no requirement to reevaluate SIP measures applies to the particular plan, the state would need to reevaluate its voluntary measure programs at least every three years. If, before the required initial evaluation or the scheduled reevaluations, the State becomes aware that the voluntary measure program is not achieving or will not achieve the predicted emission reductions, the State should notify EPA and correct the SIP as discussed in the next section.

What should a State do if the evaluation reveals a shortfall between predicted and actual emissions reduction?

Your voluntary measures SIP submittal would include an enforceable commitment that if you learn through program evaluations (or by other means) of a *shortfall* (i.e., projected emission reductions were not or will not be achieved), you will correct the problem by providing enforceable emission reductions from other sources or showing that the emission reductions are not needed for attainment, maintenance or RFP/ROP. The enforceable emission reductions from other sources or "showing" would be accomplished through a SIP revision.

Any shortfall would need to be corrected as soon as possible but could not exceed a year from the completed program evaluation (or learning of the shortfall) if State rulemaking is not required. If State rulemaking is required, you should proceed as expeditiously as possible under the required state process, but you would need to correct the shortfall within 2 years. If the emission reductions from the voluntary measure are necessary to be able to make a showing of attainment or ROP, your timeframe to correct a shortfall could not exceed the statutory attainment or ROP milestone date for your nonattainment area (for example, in the one hour ozone program, 2005 or 2007 for severe areas and 2010 for the extreme area). Failure to address this shortfall could lead to a finding of nonimplementation under section 179(a)(4) of the Act. In such a case, sanctions may be imposed under section 179(b) of the Act.

How long does this policy last?

Because this policy is new and innovative, the EPA plans to evaluate the effect of this policy after 5 years to determine if it is meeting its goals.

The policies set forth in this document are intended solely as guidance, do not represent final agency action, and cannot be relied upon to create any rights enforceable by any party.

Attachments

Attachment 1 - SIP APPROVAL PROCESS

General Submittal Requirements

A State would submit a SIP to EPA which

- identifies and describes the voluntary program;
- contains projections of emission reductions attributable to the program, along with relevant technical support documentation;
- commits to monitor, evaluate, and report the resulting emissions effect of the voluntary measure;
- commits to remedy in a timely manner any SIP credit shortfall if the voluntary program does not achieve projected emission reductions,
- meets other requirements for SIPs such as
 - a showing that the State has legal authority. For example, the evidence may be a letter from the State's Attorney General's office providing an analysis of the legal authority to adopt and implement the State program under State law. -- the date of adoption, as well as the effective date of the program, if this information is not already included in the program.
 - evidence that the program, is consistent with the provisions of section 110(a)(2)(E) of the Act..
 - include a copy of the voluntary measure, including indications of the changes made to the existing approved SIP where applicable. The State program and other relevant rules would have to be signed, stamped, and dated by the appropriate State official indicating that it is fully implementable by the State. The effective date of the program should, whenever possible, be indicated in the document.
- contains evidence that:
 - the State adopted the voluntary measure program into the appropriate State mechanism (e.g., your applicable State rules) and the date adopted.
 - the State followed all the procedural requirements in the State's laws and constitution in conducting and completing the voluntary measure program.
 - the State gave public notice of the proposed changes consistent with procedures approved by EPA, including the date of publication of this notice.
 - the State held public hearings consistent with the information in the public notice and the State's laws and constitution.
 - the State established explicit procedures for including the public in the program implementation and evaluation phases, to address any environmental justice issues.
 - the State has sufficient resources to collect data and perform a program evaluation to determine the actual emission reductions realized by a voluntary measure.

General Process Timeline

The general process timeline for getting your voluntary program approved consists of the following steps:

- Develop the SIP revision in consultation with appropriate stakeholders - community (including communities of concern), industry, academia, environmentalists and regulators.
- Prepare documentation to support the SIP revision.
- Submit the SIP revision and supporting documentation to the applicable EPA Regional Office.
- The EPA Regional Office reviews the SIP submittal for completeness and decides whether the SIP submittal is complete.
- If the EPA Regional Office considers the SIP submittal to be incomplete, the EPA Regional Office will return the SIP submittal. At this point, the State may revise the SIP submittal and resubmit the package.
- The EPA proposes action on the SIP revision in the Federal Register and takes comments on the SIP from the public. Based on the public's comments, the EPA may ask that the State make changes in the SIP revision.
- The EPA publishes the final approval of the (original or modified) SIP revision in the Federal Register.

Attachment 2 - Mobile Source Voluntary Measures Policy

10/24/97

MEMORANDUM

SUBJECT: Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs).

FROM: Richard D. Wilson,
Acting Assistant Administrator
for Air and Radiation

TO: EPA Regional Administrators, 1 - 10

Introduction

This memorandum provides guidance and sets forth the Environmental Protection Agency's (EPA) policy and interpretation regarding the granting of explicit State Implementation Plan (SIP) credit for Voluntary Mobile Source Emission Reduction Programs (VMEPs) under section 110 of the Clean Air Act. Voluntary mobile source measures have the potential to contribute, in a cost-effective manner, emission reductions needed for progress toward attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). EPA believes that SIP credit is appropriate for voluntary mobile source measures where we have confidence that the measures can achieve emission reductions. This memorandum announces EPA's intent to grant emission reduction credits for VMEPs, the terms and conditions for establishing and implementing VMEPs, and the requirements for approvable VMEP SIP submittals.

The establishment of this policy pertains solely to voluntary mobile source programs and is not intended to establish precedent for other air emissions source categories. Guidance on emission reduction credits for voluntary activities for other source categories may be established through future guidance documents. This policy also does not change existing EPA policy on credits for mobile source measures in the context of emissions trading programs or Economic Incentives Programs.

Policy Summary

The Clean Air Act Amendments of 1990 increased the responsibility of States¹ to demonstrate progress toward attainment of the NAAQS. At the same time, air pollution control programs in the U.S. have had difficulty regulating the emission reduction potential of smaller or unconventional sources. EPA supports innovative methods in achieving air quality goals and wishes to promote the creation of viable voluntary mobile source air quality programs. The desire to recognize the emission reductions from these sources has led the Agency to develop policies to support an increasing variety of innovative approaches. EPA recognizes that emission reduction credit toward SIP air quality demonstrations can be a positive factor for gaining political and institutional support for program development and implementation. The demonstration of air quality benefits is also desirable for program assistance through EPA's section 105 grants and is a requirement for project eligibility under the Department of Transportation's Congestion Mitigation and Air Quality Improvement (CMAQ) program.

This memorandum is intended to clarify the basic framework for ensuring that VMEPs become eligible for SIP credit. Generally, a State would submit a SIP which 1) identifies and describes a VMEP; 2) contains projections of emission reductions attributable to the program, along with relevant technical support documentation; 3) commits to monitor, evaluate, and report the resulting emissions effect of the voluntary measure; and 4) commits to remedy in a timely manner any SIP credit shortfall if the VMEP program does not achieve projected emission reductions.

EPA anticipates that this policy will generate additional interest and resources toward VMEP development and data collection. EPA wishes to ensure that the potential benefits of VMEPs are properly quantified and that these benefits are sustained as successful components of the SIP. As experience and information regarding the effectiveness of VMEPs becomes available, EPA intends to provide further technical guidance and assistance to the States. As States and EPA gain more experience with VMEPs in quantifying emissions benefits, more precise information will be available in determining the effectiveness of a range of programs. The type of information that EPA expects to gain from evaluating VMEPs includes emissions benefits, public response and education, cost of implementation, secondary indicators\benefits, quantification methodologies, and data collection.

¹Throughout this document, the term "State" refers to any state or local government body or agency with the authority to submit SIPs to EPA for approval.

EPA hopes that the effect of this policy will be to generate sufficient information and programmatic experience to warrant a wider application of VMEPs for progress toward attainment under the new NAAQS policy framework. EPA believes that States should benefit from this policy by having a wider range of programmatic options to consider. This policy will ultimately support the creation of new, cost-effective air quality programs and market-based incentives.

Background

Historically, mobile source control strategies have focused primarily on reducing emissions per mile through vehicle and fuel technology improvements. Tremendous strides have been made resulting in new light-duty vehicle emission rates which are 70 to 90 percent less than for the 1970 model year. However, transportation emissions continue to be a significant cause of air pollution due to a doubling of vehicle miles traveled (VMT) from 1970 to 1990, and tripling since 1960. In some quickly developing urban areas, the more recent VMT growth rate is even more dramatic. In San Diego, California, VMT tripled between 1970 and 1990. VMT in Las Vegas, Nevada, increased 160 percent from 1981 to 1991, and nearly doubled in Phoenix, Arizona, during the same time period.

The increasing cost of technological improvements to produce incrementally smaller reductions in grams per mile or grams per kilowatt hour emissions in the entire fleet of vehicles and engines, along with the time it takes for technological improvements to penetrate the existing fleets, suggests that supplemental or alternative approaches for reducing mobile source air pollution are necessary. Mobile source strategies which attempt to complement existing regulatory programs through voluntary, nonregulatory changes in local transportation sector activity levels or changes in in-use vehicle and engine fleet composition are being explored and developed.

A number of such voluntary mobile source and transportation programs have already been initiated at the State and local level in response to increasing interest by the public and business sectors in creating alternatives to traditional emission reduction strategies. Some examples include economic and market-based incentive programs, transportation control measures, trip reduction programs, growth management strategies, ozone action programs, and targeted public outreach. These programs attempt to gain additional emissions reductions beyond mandatory Clean Air Act programs by engaging the public to make changes in activities that will result in reducing mobile source emissions.

Definitions

The following definitions apply to VMEPs as described in this memorandum.

Voluntary Measures: Emission reduction programs that rely on voluntary actions of individuals or other parties for achieving emission reductions.

Seasonal Measures: Emission reduction programs that are in effect only during the season in which the area experiences high pollutant concentrations.

Episodic Measures: Activity-based mobile source programs that are implemented during identified periods of high pollutant concentrations, varying by meteorological conditions. These measures may or may not be continuous in nature depending on program design. The statutory authority for approval of episodic measures in SIPs applies only to activity-based mobile source emission reduction measures as explained below.

Clean Air Act Authority

EPA plans to use its authority under the Clean Air Act to allow SIP credit for new approaches to reducing mobile source emissions. This policy represents a flexible approach regarding the SIP requirements set forth in section 110², and economic incentive provisions in section 182 and 108 of the Act. This policy responds to State and local government interest in gaining SIP credits and funding for VMEP programs which will count toward their State's plan to make progress toward attainment and maintenance of the NAAQS and builds on EPA's history of approving measures that rely to some degree on voluntary compliance, such as provision of mass transit. Recognizing that only a limited amount of implementation experience currently exists, and that information on VMEP effectiveness will be evaluated and reported as a result of this policy, EPA plans to re-evaluate this policy in the future.

Authority to approve of voluntary measures in SIP

EPA believes that it has authority under CAA section 110 to approve voluntary measures in a SIP for emission reduction credit. However, EPA believes that as part of its SIP submittal a State must commit to monitor, evaluate, and report the resulting emissions effect of the voluntary measure, whether the measure is implemented directly by the State or another party, and to remedy in a timely manner any credit shortfall.

In light of the increasing incremental cost associated with additional mobile source emission reductions, the lead time required for new technologies to penetrate fleets, and the increasing need to target mobile source use to realize reductions, where voluntary measures meet

²The requirements regarding emission reductions needed to achieve attainment of the NAAQS.

the requirements of this policy, EPA believes that it is appropriate and consistent with the Act to allow a limited percentage of the total emission reductions needed to satisfy any statutory requirement, as described below, to come from voluntary measures. In the event the voluntary measure does not achieve the projected emission reductions, the State, having previously committed in its SIP to remedying such shortfalls, will pursue appropriate follow-up actions in a timely fashion including, but not limited to: adjusting the voluntary measure, adopting a new measure, or revising the VMEP emission credits to reflect actual emission reductions, provided overall SIP commitments are met. EPA believes that voluntary mobile source measures, in conjunction with the enforceable commitment to monitor emission reductions achieved and rectify any shortfall, meet the SIP control measure requirements of the Act.

Establishment of a cap on SIP credits allowed for VMEPs

Under this policy, in light of the innovative nature of voluntary measures and EPA's inexperience with quantifying their emission reductions, EPA is setting a limit on the amount of emission reductions allowed for VMEPs in a SIP. The limit is set at three percent (3%) of the total projected future year emissions reductions required to attain the appropriate NAAQS. However, the total amount of emissions reductions from voluntary measures shall also not exceed 3% of the statutory requirements of the CAA with respect to any SIP submittal to demonstrate progress toward, attainment of, or, maintenance of the NAAQS³. EPA has analyzed a number of voluntary mobile source programs which could be incorporated into a SIP. The emission reduction potential of these programs is generally a fraction of one ton per day. A three percent limit on emission reductions from VMEPs will allow areas to implement and claim SIP credit for a significant number of voluntary mobile source programs. This cap still provides a sufficient incentive for developing and implementing VMEPs, while setting a limit on the extent to which a SIP can rely on innovative programs with which we have had limited experience.

³For example, an ozone area classified as severe needing reductions of 200 tpd of volatile organic compounds (VOC) and 100 tpd of oxides of nitrogen (NO_x) from the projected year 2005 baseline inventory could rely on VMEPs for up to 3% of the required reductions from each pollutant, or 6 tpd of VOC and 3 tpd of NO_x. The area could also use all or a portion of these same reductions for purposes of meeting interim rate-of-progress (ROP) milestones, but again the 3% limit would apply. Thus, if the area needed 25 tpd of creditable VOC reductions to meet the 1999 ROP target, no more than 0.75 tpd of the VOC reduction in the 1999 ROP plan could come from VMEPs.

Relationship to Economic Incentive Programs

The 1990 Amendments statutorily required the Agency to develop Economic Incentive Program (EIP) rules⁴. The EIP provides general SIP guidance for the adoption of incentive and other innovative programs. Some programs that depend on voluntary actions also require either State or local government authorization to implement the program. In these cases, which include certain transportation control measures such as congestion pricing programs, it may be more appropriate to use the EIP authority to incorporate the measure into the SIP. Further, where emissions reductions are expected to exceed the 3% limit, EPA would anticipate the State could use the EIP to incorporate measures. If a State wishes to have a VMEP approved under the EIP program rules, EPA is willing to work with the State to develop such a program.

Approval of Voluntary Measures into the SIP - Key Criteria

This section sets forth minimum criteria for approval of VMEPs into SIPs. These criteria require that the VMEP not interfere with other requirements of the Clean Air Act, be consistent with SIP attainment and Rate of Progress requirements, and that emission reductions be:

1. Quantifiable - VMEP emission reductions must be quantifiable. The level of uncertainty in achieving emission reductions must be quantified, and this uncertainty must be reflected in the projected emission reductions claimed by the VMEP. VMEPs must also contain procedures designed to both evaluate program implementation and to report program results as described in the section “Technical Support for VMEPs” of this guidance.

2. Surplus - The VMEP emission reductions may not be substituted for mandatory, required emission reductions. States may submit to EPA for approval any program that will result in emission reductions in addition to those already credited in a relevant attainment or maintenance plan, or used for purposes of SIP demonstrations such as conformity, rate of progress, or emission credit trading programs.

3. Enforceable - A State’s obligations with respect to VMEPs must be enforceable at the State and Federal levels. Under this policy, the State is not responsible, necessarily, for implementing a program dependent on voluntary actions. However, the State is obligated to monitor, assess and report on the implementation of voluntary actions and the emission reductions achieved from the

⁴In accordance with the Act language (section 182 (g)(4)(A)), the EIP applies to “incentives and requirements to reduce vehicle emissions and vehicle miles traveled,” including TCM’s contained in section 108 of the Act. In addition, the EIP defines mobile sources to mean on-road (highway) vehicles (e.g., automobiles, trucks and motorcycles) and non-road vehicles (e.g., trains, airplanes, agricultural equipment, industrial equipment, construction vehicles, off-road motorcycles, and marine vessels). In certain cases, States are required to adopt EIP provisions into their State Implementation Plan (SIP). The EIP also serves as guidance for all other States that choose to adopt EIP provisions into their SIP as non-mandatory EIPs. In 1994, the Agency issued EIP rules and guidance (40 CFR part 51 subpart U), which outlined requirements for establishing these programs.

voluntary actions and to remedy in a timely manner emission reduction shortfalls should the voluntary measure not achieve projected emission reductions. As stated earlier, EPA anticipates that the State will take the steps it determines to be necessary to assure that the voluntary program is implemented and that emission reductions are achieved so that corrective SIP actions are not required. For example, the State may want to sign a Memorandum Of Understanding (MOU) with the VMEP sponsors.

Any uncertainty in the emission reductions projected to be achieved by the VMEP must be estimated and reflected in the emission reduction credits claimed in the SIP. As part of this submission, the State must commit to conducting program evaluations within an appropriate time-frame. The State must also report the resulting information to EPA within an appropriate time-frame in order to document whether the program is being carried out, and emission reductions are being achieved as described in the SIP submittal. Through the program evaluation provisions contained in this policy EPA anticipates that States will discover any potential emission reduction shortfall in a timely manner and appropriately account for such shortfall either by changing the program to address the shortfall, adopting a new measure, or revising the VMEP's emission credits to reflect actual emission reductions achieved, provided overall SIP commitments are met.

4. Permanent - Emission reductions produced by the VMEP must continue at least for as long as the time period in which they are used by applicable SIP demonstrations. The VMEP need not continue forever to generate permanent emissions reductions, but must specify an appropriate period of implementation in the SIP. Voluntary actions in such a program, and the resulting emission reductions, can be discrete (temporary) or continuous, depending on the nature of the program. For example, an ozone action day program which takes effect over an ozone season, but calls for specific actions on days when exceedences of the ozone standard are likely (i.e., episodic measures) is considered a continuous program producing discrete (temporary) reductions, and therefore the reductions are SIP creditable.

5. Adequately Supported - As with all SIP creditable programs, VMEPs must demonstrate adequate personnel and program resources to implement the program.

Approval of Episodic Measures

EPA has concluded that episodic transportation control measures and other mobile source related market response measures may be approved for SIP credit under the Act. Prior to the 1990 amendments to the Act, EPA believed that section 123 of the Act, which bars the use of dispersion techniques in calculating emission limitations, might apply to all control measures, including transportation and mobile source market controls. However, new language was added to the Act in the 1990 amendments that EPA believes indicates a clear congressional intent to allow and even require the incorporation of episodic transportation and mobile source market response programs in SIPs.

Several new requirements added to the Act in 1990 specifically require adoption of transportation control measures as listed in section 108(f)(1) of the Act under certain circumstances. See, for example, section 182(c)(5) - Transportation Controls and section 182(d)(1) - Vehicle Miles Traveled. Section 108(e) and (f) authorizes EPA to issue guidance on various types of transportation control measures available for selection in the control programs required under section 182. Section 108(f)(1)(B) identifies methods that contribute to reductions in mobile source related pollutants during periods in which a primary NAAQS will be exceeded. Episodic transportation and market response measures designed to operate during periods when ambient pollution levels are anticipated to exceed the NAAQS clearly fall within the scope of these types of programs that Congress has authorized areas to include in their section 182 transportation and vehicle miles traveled programs.

EPA therefore concludes that any implication that section 123 may have applied to transportation and mobile source market response programs under the Act as amended in 1977 has been clarified by the Act as more recently amended in 1990 by the addition of the specific authorization for adoption of any program identified in section 108(f) under the transportation control programs required under section 182.

Technical Support for VMEPs

A State may take credit in its SIP for VMEPs only if they are quantifiable. VMEPs which are thought to be directionally sound, but for which quantification is not possible cannot be granted credit. EPA believes that carefully designed and implemented VMEPs are quantifiable to the extent necessary to grant SIP credit.

All VMEP submittals must include documentation which clearly states how the sources from which the reductions are occurring, are currently, or will be addressed in the emissions inventory, ROP plan, and attainment or maintenance plan, as applicable. This documentation should include a description of the assumptions used in estimating and tracking emissions and emissions reductions from affected sources.

The following sections are intended to provide general guidance on the elements of emission reduction calculation and evaluation procedures that must be addressed in a VMEP SIP submittal.

Emission Reduction Calculation

To receive SIP credit for a VMEP, the SIP submittal must contain a good faith estimate of emission reductions, including technical support documentation for the conclusion that the measure will produce the anticipated emission reductions. VMEP emission reduction calculations must account for and be adjusted to reflect uncertainties in the program. The calculations must be adjusted to account for two types of uncertainty:

compliance uncertainty - the extent to which the responsible party (a public or private entity) will fully implement the VMEP program, and

programmatic uncertainty - the extent to which voluntary responses actually occur and/or the inherent uncertainties of program design.

The State must adjust the VMEP calculation for compliance and programmatic uncertainty, based on program design elements, and on the predictive quality of the information, data, and analytic methodology used by the State to develop the projected emission reductions. The State must justify the appropriateness of the adjustments in its VMEP SIP submittal, usually as part of the technical support document.

The adjusted emission reduction estimate should be developed and justified by the State by taking into account various elements of the VMEP program design. These elements could include, but not be limited to: the voluntary mechanism upon which the program is based, such as public outreach or reduced fares; the variability in emission rates from affected mobile sources; the extent of uncertainty in the emissions quantification procedure; and the frequency and type of program evaluation, monitoring, record keeping and reporting.

Evaluation Reporting Procedures

States which use VMEPs in their SIP must describe how they plan to evaluate program implementation and report on program results in terms of actual emissions reductions. Program evaluation provisions for VMEPs must be accompanied by procedures designed to compare projected emission reductions with actual emissions reductions achieved. The timing of the evaluations must be specified in the VMEP SIP submittal. The States and program sponsors will benefit from accurate and complete evaluation reports. EPA expects that program evaluations and experience gained over time will result in VMEP modifications to increase effectiveness.

The State must provide timely post-evaluation reports to the EPA relevant to the SIP time-frame in which the emission reductions are being used. These reports may be used by EPA for the purpose of reviewing subsequent SIP submissions required by the CAA, including but not limited to: periodic inventories, rate of progress (milestone compliance demonstrations), attainment demonstrations, and maintenance demonstrations.

EPA is working with State and local government representatives to develop methodologies which would provide sufficient technical support for VMEP SIP submissions. As results become available, EPA will provide technical guidance to assist in the development of VMEP emission reduction estimates and program evaluation procedures. However, EPA's policy is to recognize the experience of State and local voluntary programs in quantifying emission reductions and evaluating program results. Acceptable methodologies and procedures will not be limited to those developed by EPA, and programs are encouraged to discuss technically sound alternative methods with EPA Regional Office staff.

VMEP Emission Reduction Use

As explained above, under Title I of the Clean Air Act, EPA is permitting a limited amount of voluntary mobile source measures to be included in SIPs and FIPs and to be adopted for any criteria pollutant in both nonattainment and attainment areas. VMEP emission reductions shall be limited in use as determined by existing applicable SIP policy including offsets, Rate of Progress, attainment demonstrations, baseline determinations, redesignation and maintenance demonstrations.

Future Guidance and Regional Coordination

It is incumbent upon EPA Regional Offices and Headquarters to coordinate the implementation of this policy through consultation and exchange of information. It will be necessary to determine the appropriateness of individual VMEPs, applicability of emission reductions, development of methodologies to estimate emission reductions (including the appropriateness of uncertainty adjustments), peer review, and standardization of policy. To the extent that issues cannot be resolved through ongoing coordination efforts between Regional and Headquarter offices, issues may be ultimately raised through the SIP consistency process. EPA encourages early consultation between project sponsors, planners, and EPA's Regional offices during the development of VMEPs.

For further information on EPA's policy on VMEPs or the guidance set forth in this memorandum, contact Michael Ball of the Office of Mobile Sources, at 313-741-7897.

Attachments

Examples of Voluntary Mobile Source Emission Reduction Programs

The following are some examples which are representative of voluntary mobile source emission reduction programs (VMEPs) that could be implemented and credited with emission reductions for SIP related purposes. These programs can and have been designed to be implemented on an episodic, seasonal, or a continual basis. More program examples and ideas may be found on the following websites:

EPA Office of Mobile Source Smart Travel Resources Center web site
(www.epa.gov/omswww/strc.htm)

Market Incentive Resource Center (www.epa.gov/omswww/market.htm)

Episodic Measures Database (www.epa.gov/omswww/reports/episodic/study/htm)

Employer Based Transportation Management Programs

Various programs implemented by employers to manage the commute and travel behavior of employees, such as: van pooling, car pooling, subscription buses, walking, shuttle services, guaranteed rides home, alternative work schedules, financial incentives (transit passes and subsidies) and on-site TDM support.

Work Schedule Changes

Changes in work schedules to provide flexibility to employees to commute outside of peak travel periods, such as: telecommuting, flextime, compressed work weeks, staggered work hours.

Area-wide Rideshare Incentives

Promotional assistance aimed at encouraging commuters to use alternatives to single occupant vehicles, such as: marketing of ridesharing services, transit station shuttles, computerized carpool matching, vanpool matching, program implementation assistance.

Parking Management

Management of parking supply and demand, such as: preferential parking locations for carpools and vanpools, preferential parking prices for carpools and vanpools, fee structures that discourage commuter parking, reduced parking for new developments.

Special Event Travel Demand Management

Special plans to manage travel demand in effect during special events, defined as

destinations for a large number of vehicle trips which occur on a one-time, infrequent, or scheduled basis (such as athletic events, festivals, and major entertainment performances). These measures could include parking management, remote parking connecting with transit or shuttle services, efficient traffic routing efforts, public information and communications systems.

Vehicle Use Limitations/Restrictions

Techniques to limit vehicle activity in a given geographic area or specified time period, such as: auto restricted zones, pedestrian malls, traffic calming, no-drive days, commercial truck restrictions on parking and idling.

Reduced Vehicle Idling

Measures to reduce the amount of time which vehicles spend in idle modes as part of their overall operation, such as: reduced operations of drive-thru facilities such as banks and fast-food restaurants, reduced construction of drive-thru facilities, programs that facilitate reducing idling at truck stops, transfer facilities and loading docks at commercial developments.

Small Engine and Recreational Vehicle Programs

Measures targeted at reducing the frequency and duration of small engine and recreational vehicle use. Other programs aim to shift the time period in which emissions producing activities, such as lawn and landscape maintenance, take place so that the negative impact on air quality is reduced. These measures are usually associated with episodic or seasonal control programs with a significant component of public education and outreach to encourage the voluntary change in activities.

Example of a Voluntary Program

Program scenario: A State air quality agency is approached by a public utility to begin a lawn mower buy back program. The State would like to take credit for the emissions reductions from this private sector activity in it's 15% plan.

Up-front credit: The State would like to take credit predicting the effect of the program in reducing emissions associated with replacing uncontrolled lawnmower emissions with electric -- non polluting lawnmowers.

SIP Submittal

General Process

- State notifies EPA of it's intent to take credit for voluntary lawnmower program. Includes program information and technical support documentation and commitment to remedy any emission reduction shortfall in a timely manner.
- Regional Office reviews and approves up-front credit after comments.
- Activity is conducted by the public utility.
- State verifies that the program achieved the predicted benefits and generates information for EPA review.
- Regional Office reviews the State SIP submission and determines that the credits have been achieved as predicted. Also approved under milestone compliance.

Program Identification: State submits to EPA its intent to conduct or take credit for the voluntary lawn mower buy back program in the SIP. The State will describe how the program or activity will work in practice. In the submission, the State will describe the following program elements.

Program participants

How the program works

Activity effects

Emission effects

State commitment for evaluation, reporting, remedying emission credit shortfall

Technical support documentation

Program Participants The State will identify the sponsors of the program. In this case the public utility.

How the Program Works As part of the submittal the State will include a description of the basic program, predicted effect of the program on a given NAAQS criteria pollutant and a

commitment to evaluate the program over the desired period of implementation and remedy any emission reduction shortfall in a timely manner.

In the submittal, the State describes the basic program including how the utility intends to facilitate the activity-- buy back of lawn mowers. On three consecutive Saturdays, the utility customers and employees are able to bring in their gasoline powered lawnmowers and receive a voucher toward the purchase of any new electric lawnmower.

Activity Effects The State will submit predicted and observed activity effects. Data will be generated and analyzed which examines the predicted and actual effect of the program.

In this case, using information provided by the utility, the State estimates that 2000 lawnmowers would be replaced by non-polluting electric mowers.

Emission Effects Activity effects ultimately are translated into emissions benefit calculations (usually in tons per day\per year).

The State would be given up-front credit for emission reductions in terms of HC, CO and other NAAQS criteria pollutants for 2000 mowers being replaced by electric mowers.

State Commitment for Evaluation, Reporting, and Addressing Credit Shortfall The State will be responsible for ensuring that data will be collected regarding participation and the effectiveness of the program. In addition, the State must commit to remedy any SIP credit shortfall in a timely manner if the voluntary measure does not achieve projected emission reductions.

The State, as part of the evaluation and reporting commitment, submits to EPA a comparison of the predicted effect of the program with the actual observed levels. In this example the utility finds that 2000 mowers were replaced. Thus, the predicted reductions were achieved.

Technical Support Documentation The State will submit Technical Support Documents describing the program and the methodology for predicting emissions benefits. Where possible the State should identify data collection methodologies and information necessary for describing implementation, compliance, effectiveness and other relevant information. This information should account for the following:

Programmatic Uncertainty- Because the program will be voluntary in nature, the State will be responsible for submitting to EPA the predicted and, eventually, the actual participation levels.

Analytic Methodology- The State will describe how they estimated participation levels and the effect of the activity on emissions.