

Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs)

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Section 1. Introduction

1.1 What is the purpose of this guidance?

This guidance provides the Environmental Protection Agency's (EPA's) policy and interpretation regarding the granting of state implementation plan (SIP) credit for Voluntary Mobile Source Emission Reduction Programs (VMEPs) under section 110 of the Clean Air Act (CAA or the Act). Voluntary mobile source measures have the potential to contribute emission reductions needed for reasonable further progress (RFP), 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 guidance reaffirms EPA's intent to grant emission reduction credits for VMEPs, the rationale for establishing and implementing VMEPs, and the requirements for approvable VMEP SIP submittals. EPA is also reaffirming a limit on the amount of emission reductions allowed for VMEPs in a SIP. Consistent with EPA's policy to date, except for certain cases described below, the limit is set at three percent (3%) of the total amount of emissions reductions necessary for CAA requirements with respect to any SIP submittal to demonstrate progress toward, attainment of, or maintenance of the relevant NAAQS.

On October 24, 1997, EPA published "Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs)" (also referred to in this guidance as the "1997 VMEP Guidance"). Today's guidance updates and supersedes the 1997 VMEP Guidance. EPA is releasing this update so that state and local governments consider voluntary measures with the latest information on our experience to date. We are also providing this guidance to help in the development of future attainment and RFP SIP submissions in ozone and PM_{2.5} nonattainment areas that have not yet attained the applicable NAAQS. For example, we have included a more detailed description of what a VMEP SIP submission should include for EPA's SIP approval. Other clarifications include an example calculation of the 3% cap on emission reductions for VMEPs and more information on what a state could submit when seeking SIP reductions above the 3% limit. The additional detail will help states develop approvable SIPs for their innovative programs, although it is important to note this update does not otherwise change the previous guidance. See Section 4 of this guidance for more information on the calculating and documenting reductions for VMEPs. Today's guidance also highlights other guidance from EPA that would assist states in the development of voluntary measures for SIP credit.

This guidance pertains solely to VMEPs and is not intended to establish precedent for other air emissions source categories. This guidance also does not change existing EPA policy on credits for mobile source measures in the context of emissions trading programs or Economic Incentives Programs. EPA has developed separate guidance on emission reduction credits for Economic Incentives Programs. EPA discusses the relationship between Economic Incentive Programs and this VMEP guidance in Section 2.3.

1.2 What is a voluntary mobile source measure?

This VMEP guidance applies to SIP emission reduction measures that rely on voluntary actions of government, private businesses, and/or individual citizens. A VMEP may rely on a party other than the state to implement the emission reduction program, such as a truck or agricultural equipment replacement program, where a trucking company would be responsible for replacing older, dirtier trucks with new, cleaner trucks or where a farm would be responsible for replacing older dirtier agricultural equipment with new, cleaner equipment. A VMEP may be a seasonal measure if the emission reduction program is in effect during the season in which an area experiences high pollutant concentrations in relation to seasonal meteorological conditions or seasonal source activity or usage. For example, a Small Engine and Recreational Vehicle Program, which reduces the frequency and duration of small engine and recreational vehicle use, during times of the year when meteorological conditions cause higher pollutant concentrations. An activity-based VMEP may also be implemented during identified periods of high pollutant concentrations, varying by meteorological conditions, and may or may not be continuous in nature depending on the program design. One example is Special Event Travel Demand Management, which are specific plans to manage travel demand in effect during special events, defined as destinations for many vehicle trips that occur on a one-time, infrequent, or scheduled basis (such as athletic events, festivals, and major entertainment performances).

The VMEP guidance may not be applicable to state or federally funded projects that have well-defined requirements to ensure the full implementation of a SIP program. For example, projects such as a vehicle and/or engine replacement program would not be subject to the VMEP guidance if a state or local regulation or ordinance that required projects were included in the SIP. See Section 5 for more examples of VMEPs.

1.3 What are the requirements for using emission reductions from voluntary mobile source measures in SIPs?

This guidance describes how SIP credit for new approaches to reducing mobile source emissions can be implemented under the CAA. This policy provides a framework for crediting mobile source emission reduction programs that rely upon the voluntary actions of government, private businesses, and/or citizens. This policy represents a flexible approach regarding the SIP requirements set forth in CAA section 110 and economic incentive provisions in sections 182 and 108.

Under CAA section 110, emission reduction programs credited in SIPs shall be quantifiable, surplus, enforceable, permanent, and adequately supported. Later in Section 2 of this guidance, these criteria and the Clean Air Act authority are described in the context of EPA's approval of VMEPs in SIPs. Due to the uncertainty of future emission reduction results from VMEPs that rely upon voluntary actions, 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 to come from voluntary measures. If a voluntary measure does not achieve the projected emission reductions, the state, having committed in its SIP to remedy such shortfalls, will pursue appropriate follow-up actions in a timely manner, including but not limited

to: adjusting the design and scope of the voluntary measure to increase emission reduction effectiveness, adopting a new measure, or revising the VMEP emission credits to reflect actual emission reductions achieved, provided all SIP commitments are met.

1.4 Does this guidance create any new requirements?

This guidance does not create any new requirements and the discussion in this document is intended solely as guidance. The statutory provisions and EPA regulations described in this document contain legally binding requirements. This document is not a regulation itself, nor does it change or substitute for those provisions and regulations. It does not impose legally binding requirements on EPA, states, or the regulated community. The statutory provisions and EPA regulations described in this document do, however, have legally binding requirements. EPA retains discretion to approve approaches on a case-by-case basis that may differ from this guidance, but still comply with the statute and regulations. Any decisions regarding a particular SIP will be made based on the statute and regulations. This guidance may be revised periodically without an opportunity for public comment.

1.5 Who do I contact for additional information?

For specific VMEP questions concerning a particular nonattainment area, states should contact their EPA Regional Office. You can find a list of EPA Regional Office contacts at <https://www.epa.gov/transportation-air-pollution-and-climate-change/office-transportation-and-air-quality-contacts> in Section 16.2, last page.

Additional information regarding state and local transportation air quality planning resources can be found on EPA's website at: <https://www.epa.gov/state-and-local-transportation>. For example, information on other SIP crediting policies such as the Bundled Measures policy and the Economic Incentive Programs guidance are available at <https://www.epa.gov/state-and-local-transportation/general-guidance-innovative-and-voluntary-air-pollution-control>. EPA guidance on crediting emission reductions in SIPs from specific types of voluntary measures, such as diesel replacement programs, may be found at: <https://www.epa.gov/state-and-local-transportation/guidance-control-strategies-state-and-local-agencies>.

For general questions about this guidance, please see the Office of Transportation and Air Quality "Contacts by Topic" document available at <https://www.epa.gov/transportation-air-pollution-and-climate-change/office-transportation-and-air-quality-contacts>. A contact person is listed under the topic, "SIP credits for voluntary programs."

Section 2. Overview of Clean Air Act Requirements

2.1 What is the Clean Air Act authority for EPA's approval of VMEPs?

This guidance is consistent with the 1997 VMEP Guidance in that both describe EPA's authority under the CAA to allow SIP credit for voluntary approaches to reducing mobile source emissions. This guidance provides a flexible approach regarding the SIP requirements set forth in section 110 and economic incentive provisions in sections 182 and 108 of the Act. This guidance provides information to state and local governments for including VMEPs in their state's plan to make progress toward attainment and maintenance of the NAAQS and builds on EPA's experience of approving measures that rely to some degree on voluntary compliance.

EPA can use its authority under CAA section 110 to approve voluntary measures in a SIP for emission reduction credit. However, 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 emission reduction shortfall. Where voluntary measures meet 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 a statutory requirement, as described below in Section 4, 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 remedy 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 reduction estimates 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.

2.2 What is the Clean Air Act authority for EPA's approval of episodic measures?

This guidance is consistent with the 1997 VMEP Guidance in that both describe how episodic transportation control measures (TCMs) and other mobile source related market response measures that EPA may approve 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, language was added to the Act in the 1990 Amendments that 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 for ozone nonattainment areas. 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 amended in 1990 with 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.

2.3 Economic Incentive Programs Guidance

The 1990 Amendments statutorily required the Agency to develop Economic Incentive Program (EIP) rules. In accordance with the Act (section 182(g)(4)(A)), the EIP rules apply to “incentives and requirements to reduce vehicle emissions and vehicle miles traveled,” including TCMs contained in CAA section 108. In addition, the EIP rules define 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 SIP. The EIP also served as guidance for all other states that chose 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. In 2001, EPA issued guidance for states that choose to adopt and implement discretionary (i.e., non-mandatory) EIPs.¹ 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 TCMs 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 (see discussion of the 3% limit in Section 4), EPA anticipates the state could use the EIP to incorporate measures.

¹ [“Improving Air Quality With Economic Incentive Programs,” January 2001, EPA-452-R-01-001.](#)

Section 3. Using Voluntary Mobile Emission Reductions in SIPs

3.1 What are the basic requirements for using emission reductions in SIPs?

In order to be approved as a VMEP which provides additional emission reductions in a SIP, a measure would need to be consistent with SIP RFP, attainment, or maintenance requirements and other CAA requirements, as appropriate. The VMEP measure must achieve emission reductions that meet the basic SIP requirements described below and a state's SIP submittal should address and document how the VMEP measure meets these criteria.

3.1.1 Quantifiable

A state may use emission reductions from a voluntary measure in its SIP only if the emission reductions are quantifiable. VMEP measures, which are thought to be directionally sound, but for which quantification is not possible cannot be granted credit under this policy. The emission reductions from a VMEP measure are quantifiable if they are measured in a reliable manner and can be replicated (i.e., the assumptions, methods and results used to quantify emission reductions can be understood).² Emission reductions must be calculated for the time period during which the reductions will occur and will be used for SIP purposes. If reductions can't be quantified, the state could implement the measure and include a discussion of the measure in a weight-of-evidence discussion in its SIP.

All VMEP submittals should include documentation that clearly states how the sources from which the reductions are occurring, are currently, or will be addressed in the emissions inventory, RFP 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 level of uncertainty in achieving emission reductions should be quantified, and this uncertainty should be reflected in the projected emission reductions claimed by the VMEP. VMEP submissions should also contain procedures designed to both evaluate program implementation and to report program results.

3.1.2 Surplus

Emission reductions are considered "surplus" if they are not otherwise relied on to meet other applicable air quality attainment or maintenance requirements for that specific NAAQS pollutant (i.e., there can be no double-counting of emission reductions). When a VMEP measure is used to meet such air quality program requirements, the VMEP measure is no longer considered surplus and may not be used again in a SIP as additional emission reductions. Emissions from mobile sources affected by a VMEP measure must be included in the applicable

² The MOVES model should be used to the extent possible to estimate emission reductions from measures for SIPs in states other than California. The most recent version of MOVES should be used. Users should check EPA's MOVES website for the most current approved version of the model ([MOVES web page](#)). The most current emissions models in California, including the latest version of EMFAC, should be used when developing VMEPs in that state.

mobile source emissions inventory before the emission reductions from a VMEP measure can be credited in a RFP, attainment or maintenance plan.

The VMEP emission reductions may not be substituted for mandatory, required emission reductions. States may submit to EPA for approval any measure(s) that will result in emission reductions in addition to those already credited in a relevant attainment, RFP or maintenance plan.

3.1.3 Federally Enforceable

A VMEP measure credited in a SIP must be enforceable. A state's obligations with respect to VMEP measures must be enforceable at both the state and Federal levels. Under this guidance, the state is not responsible, necessarily, for implementing a measure dependent on voluntary actions. However, the state is obligated to monitor, assess and report implementation of voluntary actions and the emission reductions achieved from the voluntary actions and to remedy in a timely manner emission reduction shortfalls should the voluntary measure not achieve projected emission reductions. Because the state is legally responsible for assuring that the emission reductions credited in a SIP occur, the state would need to make an enforceable commitment to monitor, assess and report on the actual emission reductions achieved and to remedy any emission reduction shortfalls from forecasted emission reductions in a timely manner. 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 with the VMEP sponsors outlining the responsibilities of the parties involved.

Any uncertainty in the emission reductions projected to be achieved by the VMEP measure must be estimated and reflected in the emission reductions claimed in the SIP. See discussion on emission reduction uncertainty in Section 4. As part of the SIP submission, the state must commit to conducting program evaluations within an appropriate timeframe. The state must also report the resulting information to EPA within an appropriate timeframe 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 guidance, 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 reductions to reflect actual emission reductions achieved, provided overall SIP commitments are met.

3.1.4 Permanent

Emission reductions produced by the VMEP measure must continue at least for as long as the time period in which they are used by applicable SIP demonstrations. The VMEP measure need not continue indefinitely 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 exceedances 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.

3.1.5 Adequately Supported

As with all SIP creditable programs, VMEP submissions must demonstrate adequate personnel and program resources to implement the program on the schedule identified by the state. For example, a state should ensure it has allocated appropriate funds from a reliable funding source.

3.2 What would a state submit to EPA to meet the requirements for incorporating a voluntary mobile source emission reduction program measure in a SIP?

A state would submit to EPA a SIP that addresses the following:

- All VMEP submittals must include documentation that clearly states how the sources from which the reductions are occurring, are currently, or will be, addressed in the emissions inventory, and in the RFP 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 as a result of the VMEP.
- Identifies and describes the measure and its implementation schedule to reduce emissions within a specific time period.
- Contains estimates of emission reductions attributable to the VMEP measure, including methodology and other technical support documentation. MOVES should be used to the extent possible to assess the emission reductions from VMEP measures for SIP purposes.
- An enforceable commitment to monitor, assess, and report the emission reduction results.
- An enforceable commitment to remedy any SIP emission reduction shortfall in a timely manner in the event that the measure does not achieve the estimated emission reductions claimed in a SIP.
- Meets all other requirements for SIPs under CAA sections 110 and 172.

3.3 What monitoring and record keeping should be completed to document emission reductions from voluntary mobile source emission reduction program measures?

CAA section 110(a)(2)(C) requires that SIPs "include a program to provide for the enforcement of the measures" that the state adopts to reduce emissions. A state's decision about how a measure needs to be enforced will depend on the state's knowledge of the emission reductions achieved by the measure. Therefore, this CAA requirement for a program that provides for enforcement makes it necessary for states to monitor measures that they include in their SIPs, such as VMEPs.

States that include VMEP measures 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 VMEP measures 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 and assure achievement of the VMEP emission reductions in the SIP. The state must provide timely post-evaluation reports to the EPA relevant to the SIP timeframe 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, RFP (milestone compliance demonstrations), quantitative milestone demonstrations, attainment demonstrations, and maintenance demonstrations.

EPA recommends that for each VMEP the state air agency or another responsible party should periodically monitor and record the following information, where applicable:

- Scope of the VMEP program, for example, number and type of vehicles and/or equipment covered during the reporting period.
- A description of activities taken to implement the program and relate those actions to the implementation schedule in the SIP.
- A summary of the emission reduction results and relate those results to the implementation schedule in the SIP.
- Identify any potential shortfall and describe how the shortfall will be addressed, including any actions already taken.
- If a shortfall exists, describe the reason(s) for the shortfall.

Monitoring and recording these data are ways to ensure that the statute is met. A state can propose other methods of monitoring and recording data in its SIP submission, and EPA would consider whether it would be sufficient to meet CAA requirements.

Section 4. Quantifying Emission Reductions

4.1 How should projected and actual emission reductions from voluntary mobile source emission reduction program measures be quantified?

To include emission reductions in a SIP as credit for a VMEP measure, 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. Reductions must be quantified using the latest version of MOVES to the extent possible. 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 emission reduction 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.

For example, a state estimated that its voluntary diesel replacement program would result in a 1 ton per day (tpd) NO_x emissions reduction after considering compliance and programmatic uncertainty. The state's subsequent monitoring of program implementation showed that 90% of the anticipated vehicles were actually replaced. The state determined that this resulted in actual reduction of 0.9 tpd of NO_x emission reductions ($1 \text{ tpd} * 0.90 = 0.9 \text{ tpd}$). This results in a 0.1 tpd of NO_x shortfall. In this example, the state needs to take steps to address the shortfall in emission reductions, such as making adjustments to the voluntary program or revising its SIP to provide additional emission reductions to address the shortfall.

4.2 How should the 3% cap be calculated?

Consistent with the 1997 VMEP Guidance, EPA is retaining a limit on the amount of emission reductions allowed for VMEPs measures in a SIP due to EPA's experience to date and

considering the nature of voluntary measures and the compliance and programmatic uncertainty inherent in programs that rely upon voluntary actions to achieve emission reductions. The limit continues to be set at 3% of the total amount of emissions reductions necessary for CAA requirements with respect to any SIP submittal to demonstrate attainment, progress toward attainment, or maintenance of the relevant NAAQS. A 3% limit on emission reductions from VMEP measures will allow areas to implement and include emission reductions in SIPs 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.

For example, an ozone nonattainment area classified as Severe needing reductions of 200 tpd of volatile organic compounds (VOC) and 100 tpd of oxides of nitrogen (NO_x) to attain the applicable standard could rely on VMEPs for up to 3% of the required reductions from each precursor, or 6 tpd of VOC and 3 tpd of NO_x, unless a reasoned justification for exceeding this 3% cap is provided in the state's SIP submission. As you can see in this example, the cap should be calculated for each pollutant/precursor and the cap should be calculated for each applicable year for the SIP, such as each relevant RFP year and the attainment year. The ozone nonattainment area could also use all or a portion of these same reductions for purposes of meeting interim RFP milestones, but again the 3% limit would apply. Thus, if the area needed 25 tpd of creditable VOC reductions to meet an RFP target, no more than 0.75 tpd of the VOC reduction in the RFP plan should come from VMEPs, unless a reasoned justification for exceeding this 3% cap is provided in the state's SIP submission, as described further below.

4.3 How to provide justification that emissions reduction over the 3% cap will be achieved

EPA will re-evaluate the 3% cap on emission reductions on a case-by-case basis and allow the cap to be exceeded if the cap hinders the implementation of effective voluntary control measures, subject to notice and comment during SIP approval. In such a case, the SIP submission would need to provide a reasoned justification for exceeding the cap. That justification would need to address how the emission reductions in excess of the 3% cap would be achieved and the state's rationale for concluding with high certainty that these emission reductions would be achieved. For example, a SIP submittal with a VMEP that exceeds the 3% cap could address the elements of program design and implementation that contribute to compliance and programmatic uncertainty and describe how the state will ensure full VMEP program implementation. It is reasonable to expect that implementation of a VMEP and the VMEP's emission reduction results could vary widely year-to-year during the VMEP's implementation period. To address this type of program uncertainty, a state could commit to conduct frequent audits and evaluations throughout the VMEP's implementation, for example quarterly reports, and to share those reports with EPA. A second example could apply to a state that has experience with successfully implementing similar programs. The state could describe how that experience informs its plan for implementing and assessing the emission reduction performance of the VMEP. Alternatively, if a state submits an EIP as a VMEP, it could provide details on incentive funding and the expected level or amount of participation expected from the incentives that would be offered. Early identification of potential shortfalls in emission reduction SIP commitments and a quick response to adjust program implementation is critical for achieving those emission reductions.

Section 5. Examples of VMEPs

The following examples are representative of voluntary mobile source emission reduction programs 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.

Vehicle/Engine Replacement/Retrofit Programs

Projects that include any technology, device, fuel, or system that, when applied to an existing diesel engine or vehicle, achieves emission reductions beyond that required by EPA regulations at the time of the engine's certification, including early replacement of existing vehicles or equipment with vehicles or equipment that achieve emission reductions beyond that required by EPA regulations at the time of the original engine's certification.

Employer Based Transportation Management Programs

Various programs implemented by employers to manage the commute and travel behavior of employees, such as: van pooling, carpooling, subscription buses, walking, shuttle services, guaranteed rides home, alternative work schedules, financial incentives (transit passes and subsidies) and on-site travel demand management 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 many vehicle trips that 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 pedestrian malls, traffic calming, and commercial truck restrictions on parking and idling.

Reduced Vehicle Idling

Measures to reduce the amount of time 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. For example, these programs may aim to reduce the negative impact on air quality by shifting the time of day in which emissions-producing activities, such as lawn and landscape maintenance, take place. 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.