

# Ozone Advance

## Introduction

Ozone Advance is a collaborative effort by EPA, states, tribes, and local governments to encourage emission reductions in ozone attainment areas nationwide to maintain the National Ambient Air Quality Standards (NAAQS) for ozone. The goals of the program are to (1) help attainment areas take action in order to keep ozone levels below the level of the ozone NAAQS to ensure continued health protection for their citizens, (2) better position areas to remain in attainment, and (3) efficiently direct available resources toward actions to address ozone problems quickly.

The Ozone Advance program offers participating states, tribes, and local governments the opportunity to work in partnership with EPA and each other within a framework that can help focus participants' efforts to keep their air clean. While participation in the program is not a guarantee that an area will avoid a future nonattainment designation or other Clean Air Act requirements, it can better position the area to comply with the requirements associated with such a designation. For example, emission reduction actions undertaken as part of the program could potentially receive "credit" in future State/Tribal Implementation Plans (SIPs/TIPs) in the event an area is eventually designated nonattainment with a Moderate or higher classification, either in terms of reflecting a lower baseline from which additional reductions are needed to meet reasonable further progress goals or, if they occur after the baseline year, as a measure that shows progress toward attainment.<sup>1</sup>

Other collaborative ozone attainment programs preceded the current Ozone Advance program, including the Flexible Attainment Region (FAR) approach in the 1990s, the 2001 1-hour Ozone Flex Program,<sup>2</sup> and the 2006 8-hour Ozone Flex Program,<sup>3</sup> each of which was focused on taking proactive steps to reduce emissions of ozone precursors in attainment areas in order to ensure continued maintenance of the relevant ozone NAAQS. The Early Action

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<sup>1</sup> In order to receive emission reduction credit as a measure in a SIP, the measure would need to be quantifiable, surplus (in terms of not being double counted both as part of the baseline and as a control measure in the SIP), federally enforceable, and permanent. It would also need to meet any other relevant requirement in CAA section 110 and/or 172, and if the measure is voluntary, the state would need to make an enforceable commitment to ensure that the estimated emissions reductions are achieved.

<sup>2</sup> Six areas participated in the 2001 1-hour Ozone Flex program: Austin and Corpus Christi, TX; Little Rock, AR; Shreveport-Bossier City, LA; Tulsa, OK; and Quad Cities Metropolitan Area, IA/IL.

<sup>3</sup> Five areas participated in the 2006 8-hour Ozone Flex program: Corpus Christi, TX; Oklahoma City, OK; Tulsa, OK; Austin-Round Rock, TX; and Quad Cities Metropolitan Area, IA/IL.

Compact (EAC) program<sup>4</sup> was distinct from these attainment area programs in that it focused on areas that were violating or close to violating the 1997 NAAQS at the time of designation, but was similar in that it encouraged early action, the use of innovative measures, and the development of stakeholder groups.

This document provides guidance on Ozone Advance, including general applicability, regulatory issues, program participation, and timelines. This program guidance was developed with the input of stakeholders that include state and local government officials and organizations, tribes and tribal organizations, and environmental and health groups.

Please visit the program website ([www.epa.gov/advance](http://www.epa.gov/advance)) or contact Laura Bunte, EPA Office of Air Quality Planning and Standards, at (919) 541-0889 or [advance@epa.gov](mailto:advance@epa.gov) if you would like additional information about Ozone Advance.

## **General Applicability**

### 1. What is Ozone Advance?

Ozone Advance is intended to preserve or improve the air quality in ozone attainment areas, particularly in areas that have ambient ozone levels close to the level of the NAAQS and thus are at the greatest risk of violating the standard. The program provides a structure for local actions that reduce emissions, helps areas maintain air quality that meets the current ozone NAAQS or any future revised ozone NAAQS, and offers a means for states, tribes, and local governments to take the initiative in maintaining and improving their air quality.

Local areas can take steps to reduce ozone on their own, and EPA encourages these proactive efforts. However, some states, tribes, or local governments may prefer to pursue local emission reductions within the program framework with closer involvement and support from EPA. Representatives from participating areas will work with EPA to quickly evaluate, select, and implement control measures and programs. EPA can point to available tools and resources that may be used to resolve their issues, provide technical advice and other support, and, where appropriate, may recognize areas that have been especially proactive and successful in pursuing reductions.

The program may assist an area with efforts aimed at (1) reducing air pollution, (2) ensuring continued healthy air quality levels, (3) avoiding violations of the NAAQS that could potentially lead to a nonattainment designation and associated requirements, and (4) increasing public awareness about ground-level ozone as an air pollutant.

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<sup>4</sup> Information about the former EAC program can be found on the Advance program website: [www.epa.gov/advance](http://www.epa.gov/advance).

Additional information about the program and current participants, and a variety of helpful resources are available on the program website: [www.epa.gov/advance](http://www.epa.gov/advance).

2. Why should an area want to take action to reduce emissions that contribute to ozone formation now, if it is not currently required to do so?

Robust, proactive work to address ozone precursors can reduce emissions sooner and avoid violations of the ozone NAAQS that might compromise public health. In addition, if the ozone NAAQS is lowered in the future, reductions now could position an area to achieve air quality concentrations that enable it to avoid a nonattainment designation or, if eventually designated nonattainment, could result in a lower classification. A lower classification means fewer mandated control requirements for the area. By acting in the near-term, a local government or state will have greater flexibility to choose control measures that make the most sense and are cost-effective for an area. Once a nonattainment designation is made, specific federal requirements apply, some of which, for Moderate and higher classifications, relate to specific categories of sources. Early actions to reduce ozone that keep an area in attainment, whether through Ozone Advance or otherwise, are expected to be less resource intensive than waiting until a nonattainment designation occurs before taking action.

Many measures that a local government, tribe or state may choose to implement could result in multi-pollutant benefits. For example, reductions of nitrogen oxides (NO<sub>x</sub>) can lead to lower ambient fine particulate matter (PM) levels as well as lower ambient ozone levels. An area interested in taking proactive steps to address ozone has the opportunity to maximize ozone control co-benefits per the area's unique situation.

3. Is EPA also working with PM attainment areas to achieve emission reductions that will ensure continued maintenance of the PM NAAQS?

After launching Ozone Advance in April 2012, EPA developed a related program to assist attainment areas that are interested in reducing fine particulate matter (PM<sub>2.5</sub>). Information about PM Advance can be found on the Advance Program website, [www.epa.gov/advance](http://www.epa.gov/advance).

The National Research Council of the National Academy of Sciences recommended that an integrated, multi-pollutant approach to managing air quality would be most effective. EPA encourages Ozone Advance participants to maximize multi-pollutant reductions when selecting measures and programs to further reduce ozone. Strategies to achieve multi-pollutant (NO<sub>x</sub> and PM in particular) reductions related to diesel emissions will be central to this work, as well as efforts to reduce residential wood smoke and other PM sources. Ozone Advance participants in areas where the air quality is also violating a PM standard should combine their Advance efforts

into one multi-pollutant program that addresses both ozone and PM. In addition, EPA will work with participants to provide information on the multi-pollutant co-benefits associated with transportation, land use, energy efficiency, and climate change programs.

4. Who can participate in Ozone Advance?

States, tribes, and/or local governments that want to participate in Ozone Advance must meet the basic program eligibility criteria in A, B, C, and D below.

- A. States, tribes, and/or local governments can join the program with respect to areas that are not currently designated nonattainment for any ozone NAAQS that has not been revoked. They may not join the program with respect to areas that are currently designated nonattainment (with any classification) for any ozone NAAQS that has not been revoked.

Areas projected to be designated nonattainment for a new ozone NAAQS may participate in Ozone Advance until designations are effective. For example, EPA expects that designations for the 2015 ozone NAAQS will be finalized in October 2017 and will be effective a few months later. Once designations are effective, areas designated nonattainment with a Moderate or higher classification would drop out of Ozone Advance in order to focus on compliance with the planning and other requirements that apply to them. Areas participating in Ozone Advance that are later designated nonattainment with a Marginal classification may continue participating in Ozone Advance until such time as they may be reclassified to a Moderate or higher classification.

Refer to the table below to confirm whether your area’s designation status for each ozone NAAQS at the time of sign-up allows for the area to join Advance:

Designation Status at Time of Sign-Up	1979 1-hr NAAQS (revoked)	1997 8-hr NAAQS (revoked)	2008 8-hr NAAQS	2015 8-hr NAAQS
Attainment (incl. maintenance areas)	Yes	Yes	Yes	Yes
Unclassifiable	Yes	Yes	Yes	Yes
Attainment/Unclassifiable	Yes	Yes	Yes	Yes
Nonattainment, Marginal	Yes	Yes	No (however, areas that joined Advance prior to the effective date of their nonattainment, Marginal	No (however, areas that join Advance prior to the effective date of their nonattainment, Marginal designation

			designation may continue participating until such time as they may be reclassified to a higher classification)	may continue participating until such time as they may be reclassified to a higher classification)
Nonattainment, Moderate or higher classification	Yes	Yes	No (however, after the 2008 standard is revoked, the area could join and participate)	No (however, these areas can join and participate until the designation is effective (expected late 2017/early 2018))

- B. States, tribes, and/or local governments must generally identify the area(s) within their jurisdiction with respect to which they would like to participate.
  
- C. Where possible, states, tribes, and/or local governments should identify and be able to report on the air monitor(s) that reflect or best represent the air quality in the area(s); this may require consultation with the state to determine what monitor(s) the state has reported to EPA as being indicative of air quality in the area(s). EPA recognizes that some areas, particularly in parts of the western U.S., may need to utilize data from outside the given area to track progress. These areas should discuss their situation with EPA prior to signing up for Ozone Advance.
  
- D. EPA will evaluate a state’s compliance with existing emissions inventory requirements before accepting an area into Ozone Advance. States reporting obligations for the National Emissions Inventory must be met prior to an area applying for participation in Ozone Advance. Some local agencies’ emissions reporting supersedes the state-submitted emissions; where this is the case, the prospective participant(s) should consult EPA prior to signing up for the program. Emissions inventory reporting requirements must continue to be met by the relevant state or local agency for a given Advance area in order for the area to remain in the program.

Other applicants, such as a regional, multi-state, or local council of governments (COG), will be considered by EPA. These organizations should discuss the possibility of their participation with EPA prior to signing up. Whether or not a COG becomes a direct participant in the program, it will be important for state, tribal, and local government participants to coordinate with area COGs to give them an opportunity to provide input during the development

of an Ozone Advance “Path Forward,” and to ensure they are kept informed about efforts undertaken within the program.

EPA does not necessarily intend for townships or other similarly small local governments to participate, on their own, in Ozone Advance. However, small local governments will be considered by EPA and should discuss the possibility of their participation with EPA prior to signing up.

States, tribes, and/or local governments that are already signed up and that are participating in Ozone Advance may continue to participate in the program if the area of concern is eventually designated nonattainment and classified Marginal. Such areas would not be exempt from any requirements that apply to them, such as New Source Review, transportation conformity, and the requirements to submit an emission statement rule and a base year actual (i.e., not projected) emissions inventory. Marginal areas do not have specific Clean Air Act-mandated planning requirements. Rather than wait until planning may eventually be required, it makes sense for these areas to actively step up their efforts to reduce ozone. This may better position an area to attain within three years after designation, and thereby avoid reclassification to a higher classification. Regardless of a Marginal area’s participation in the Ozone Advance program, if the area does not meet its Marginal area attainment date and is not eligible for the Clean Air Act’s one-year extensions, it will be reclassified to a higher classification. Although the state, tribe, and/or local government would not be able to continue participating in Ozone Advance with respect to the area, the efforts they pursued under Ozone Advance should not end, but would transition into SIP planning efforts. Areas classified as Moderate or a higher classification have specific attainment planning requirements that are not required for Marginal areas. If a Marginal area participating in Ozone Advance is reclassified as Moderate or a higher classification, the Ozone Advance activities could be helpful in meeting certain SIP requirements. EPA would provide SIP assistance and support as it does for all nonattainment areas.

Areas that have been redesignated to attainment for an ozone NAAQS and that have an approved maintenance plan may participate in Ozone Advance. However, these areas must implement their maintenance plans as approved. Participation in Ozone Advance would not relieve any area from any requirements to which they are otherwise subject under the Act or EPA’s regulations, including the transport regulations issued pursuant to Clean Air Act section 110(a)(2)(D), or from any requirement in an approved SIP. Measures and programs undertaken as part of Ozone Advance would be in addition to those included in the approved SIP, and could provide the area with a buffer against future violations.

Areas that are still designated nonattainment for any revoked ozone NAAQS may join Ozone Advance if they are not designated nonattainment for any subsequent ozone NAAQS that

have not been revoked. Otherwise, any area that is designated nonattainment for an ozone NAAQS that has not been revoked may not sign up for Ozone Advance until the area has been redesignated attainment with an approved maintenance plan. However, early progress can still be made. If a state has submitted a maintenance plan to EPA, then pending EPA approval of the plan EPA could consult with the area and provide some level of assistance. Full participation in Ozone Advance would not occur until the area has been redesignated attainment with an approved maintenance plan, and has met the other program eligibility criteria (i.e., ensure that emissions inventory reporting requirements are met and, where possible, identify the monitor(s) that reflect the area's air quality).

Ozone Advance is the program EPA is offering to provide assistance to areas interested in taking steps to stay in attainment of the ozone NAAQS. Former Early Action Compact (EAC) areas and former 8-hour Ozone Flex (also called 8-O3 Flex) areas that meet the Ozone Advance program eligibility criteria are encouraged to participate in Ozone Advance.<sup>5</sup>

A state, tribe, or local government that intends to sign up for Ozone Advance should discuss the prospect with the other potentially affected governmental entities, and, ideally, all of the parties interested in participating should submit one joint sign-up letter together. If a state, tribal, or local government signs up, but other potentially affected governmental entities choose not to participate, the applicant should copy the other potentially affected governmental entities on any sign-up letter submitted to EPA. Once EPA acknowledges the area's acceptance into the program in writing (i.e., an e-mail or letter), the participant(s) should coordinate with the other potentially affected governmental entities to give them an opportunity to provide input during the development of the area's Path Forward, and to ensure they are kept informed about efforts undertaken within the program. Prospective program applicants should also coordinate with EPA and appropriate stakeholders prior to signing up for the program.

#### 5. Who cannot join Ozone Advance?

States, tribes, and local governments cannot join the program if the area of concern is designated nonattainment for any current ozone NAAQS that has not been revoked. An area that is designated nonattainment for any current ozone NAAQS that has not been revoked, but that is currently attaining that NAAQS may not sign up for Ozone Advance until the area has been redesignated attainment with an approved maintenance plan. If a state has submitted a maintenance plan to EPA, then pending EPA approval of the plan EPA could begin consulting with the area and provide some level of assistance. Full participation in Ozone Advance would not occur until the area has been redesignated attainment with an approved maintenance plan.

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<sup>5</sup> Ozone Advance participants may be interested in reviewing the types of activities that were pursued by Ozone Flex and EAC areas; information about these efforts is available on the Advance website, [www.epa.gov/advance](http://www.epa.gov/advance).

Applicants must also be able to generally identify the area(s) with respect to which they are signing up. In addition, emissions inventory reporting requirements must have been complied with prior to sign up and, where possible, applicants should indicate the air monitor(s) that reflect the air quality in the area(s).

6. What is the timing for participation in Ozone Advance?

We encourage states, tribes and local governments to participate in Ozone Advance as early as possible, but there is no requirement that an area commit to the program by a specific date as long as they sign up prior to being designated nonattainment (i.e., prior to the effective date for final designations for the ozone NAAQS). There is currently no expiration date for enrollment. We recommend that an area commit to Ozone Advance for a five-year term, with the option to renew at the end of the first term and each successive term. An area can choose to end its participation in the program at any time, with notice to EPA.

7. How can an area apply for participation in Ozone Advance?

We encourage interested states, tribes, and local governments to carefully consider participation, reviewing pertinent issues including, but not limited to, projected industrial and population growth, trends and concerns regarding air quality, and support of such a program by the state, tribes, and local governments.

To sign up for the program, submit a brief “sign-up letter” to Laura Bunte of the EPA Office of Air Quality Planning and Standards (OAQPS) preferably by e-mail to [advance@epa.gov](mailto:advance@epa.gov). If desired, the letter may also be mailed to the following address:

Ozone Advance  
c/o Laura Bunte, Mail Code C304-01  
109 TW Alexander Drive  
RTP, NC 27711

The sign-up letter should be signed by the appropriate state, tribal, and/or local government official(s) with the authority to implement the program and to assist in leveraging staff and other resources as needed. A copy should also be sent to the relevant EPA Regional Office(s). EPA will review to determine that the area has met the basic program eligibility requirements, and will then indicate by e-mail and letter whether the applicant(s) has/have been accepted into the program.

8. Must a Memorandum of Agreement/Memorandum of Understanding (MOA/MOU) be developed and signed in order to participate in Ozone Advance?



No. However, to the extent a participating state, tribe, or local government would benefit from having a more formal agreement in place, EPA would be willing to work with them to develop an MOA/MOU.

9. What other submissions to EPA are needed?

As a first step toward minimizing the potential for ozone concentrations in excess of the ozone NAAQS, a participating area should evaluate a variety of voluntary and mandatory control options and other programs. EPA can provide advice during this evaluation. No later than one year after signing up for the program, the area should submit a “Path Forward” to the EPA program contact via mail per #7 above, or via e-mail to [advance@epa.gov](mailto:advance@epa.gov), with a copy to the relevant EPA Regional Office. At a minimum, the Path Forward should fully describe the measures and/or programs the area will implement and provide a schedule for the implementation of each one. Participants should consider providing additional information beyond this minimum, particularly if the Path Forward is a helpful way to communicate with area stakeholders and the public regarding ozone and what is being done locally to address it. See Attachment A for more information. Paths Forward are made available on the program website.

Unlike a formal SIP submission, EPA will not approve or disapprove the commitments made by the state, tribe, and/or local government, and the input provided by EPA during the course of Ozone Advance will not serve as an approval for purposes of any eventual SIP. However, EPA may provide feedback to the area regarding whether commitments are likely to result in emission reductions and public health benefits.

The Path Forward developed for the area can be submitted by a state and/or a tribe and/or a local government, although preferably it would be submitted jointly by all of the program participants. The letter specifies actions the signatories have agreed to implement to reduce ozone precursor emissions and thereby improve local air quality. The Path Forward is not a federally enforceable document and does not institute any legal or financial obligations on any entity.

10. What happens after a Path Forward is submitted?

The area should begin or continue implementing the selected measures and programs expeditiously. In order to most quickly impact ambient ozone levels, implementation should occur to the extent possible for the ozone season immediately following the Path Forward, recognizing that some measures/programs may take longer to implement or may have longer lead times until emission reductions are realized.

11. Should participants periodically share information with EPA?

Yes, participants should stay in communication with EPA periodically throughout the program. In addition, at least once a year from the time the Path Forward is sent to EPA, a participating area should briefly and informally summarize the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison of current status for each measure/program as compared with the schedule laid out in the Path Forward), current air quality, stakeholder meetings/events, and any other information the area would like to highlight. The information should be sent to the EPA program contact via mail per #7 above, or via e-mail to [advance@epa.gov](mailto:advance@epa.gov). Information from these annual check-ins may be made available on the program website, [www.epa.gov/advance](http://www.epa.gov/advance).

## **Regulatory Issues**

12. Does Ozone Advance establish new or avoid existing regulatory requirements?

No, this program does not create or avoid any regulatory requirements. For example, it does not defer nonattainment designations under a new NAAQS. Participation in Ozone Advance does not substitute for or allow the participant(s) or regulated entities in those communities to avoid applicable requirements under the Clean Air Act, EPA regulations, or an approved SIP. While the program itself does not establish any regulatory requirements for state, tribal, or local government participants, if, as part of the program, state, tribal, or local authorities adopt regulations, such regulations likely would establish enforceable requirements on the regulated entities (i.e. enforceable by the state or local government; state and local regulations may even become Federally enforceable if they are incorporated into the SIP).

13. What happens if violations of the ozone NAAQS occur despite an area's participation in the program?

The area should quickly evaluate, select, and implement additional measures and programs to mitigate its ozone problem. It is important to note that Ozone Advance does not shield an area from being redesignated nonattainment if the area eventually violates the ozone NAAQS. Should a violation occur, EPA would consider the factors in section 107(d)(3)(A) of the Act. These include "air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate." Where control measures are actively being implemented by program participants, EPA may allow time to determine whether such measures bring the area back into attainment. This is not meant to suggest that participation in Ozone Advance will result in special treatment by EPA should an area begin to measure violations. It is meant to acknowledge that EPA may include an area's active pursuit of

control measures and programs as one factor among the set of factors it considers when exercising its discretion to revise the area's designation to nonattainment, and this would equally be the case whether the area is a participant in Ozone Advance or not.

It is important to note the distinction in the Clean Air Act between initial designations under a **new or revised** NAAQS (CAA section 107(d)(1)(A)) and redesignations under an **existing** NAAQS (CAA section 107(d)(3)(A)). Participation in the Advance program does not defer nonattainment designations under a **new or revised** NAAQS. The measures being implemented by an area to reduce ozone may be a factor (among others) that EPA considers when making a decision as to whether an attainment area that is violating an **existing** ozone NAAQS should be redesignated as nonattainment.

14. Might the way an area is defined for purposes of participation in Ozone Advance affect future nonattainment boundaries, for example might it result in the eventual designation of partial counties/cities or non-contiguous nonattainment areas?

No. Regulatory decisions regarding nonattainment boundaries will not be impacted by Ozone Advance participants' definition of areas included in the Ozone Advance program.

15. Will states receive SIP "credit" for emission reduction measures undertaken as part of Ozone Advance?

EPA will not, as part of Ozone Advance, review commitments made under Ozone Advance for purposes of approval or disapproval into a SIP. However, if an area participating in Ozone Advance is subsequently designated nonattainment for any current or future ozone NAAQS, emission reductions achieved from measures implemented as part of the program could be accounted for in future SIP planning. We describe two ways in which they could potentially be accounted for below in #16.

EPA encourages participating states, tribes, and/or local governments to adopt proven, effective control measures to reduce ozone expeditiously. We also recognize that some of the measures states, tribes, and localities may choose to adopt under the program may be innovative measures. EPA supports flexible approaches that account for the complex nature of ozone formation and in various previous SIP approvals has provided SIP credit for innovative measures

that meet SIP approval criteria.<sup>6</sup> EPA is interested in working with areas to help them identify innovative measures that suit the area's unique needs.<sup>7</sup>

16. How can early reductions achieved as part of Ozone Advance be recognized in any future SIP that the area may need if designated nonattainment with a Moderate or higher classification for any ozone NAAQS?<sup>8</sup>

If emission reductions occur through Ozone Advance **prior to** the baseline year for purposes of attainment demonstration modeling or a reasonable further progress demonstration, then the reductions would lower the emissions baseline. A lower baseline means that the area would need fewer future emission reductions in order to demonstrate attainment and/or proportionally fewer emission reductions would be needed to show reasonable further progress.

If emission reductions occur through Ozone Advance **after** the baseline year, the area may take credit for those reductions subject to Clean Air Act requirements, such as demonstrating that the reductions are surplus, quantifiable, enforceable, and permanent. Credit earned in this way means that fewer additional emission reductions will be needed to meet reasonable further progress goals and to demonstrate attainment, thereby bringing the finish line of attainment with the ozone NAAQS closer.

For example, if the area must achieve a 15% reasonable further progress reduction in VOC emissions over six years, reductions that occurred before the baseline year for calculating the 15% would be reflected in a reduced baseline; reductions that occur after the baseline year but during the six-year period could be counted toward the 15% reduction requirement.

The issue of SIP baselines is typically addressed in the ozone implementation rule for a new or revised ozone NAAQS. With respect to the 2015 ozone NAAQS, EPA plans to address SIP baselines in the implementation rule that is expected to be proposed in fall 2016, and finalized by fall 2017. Although the approach that will be taken in the upcoming rule cannot be specified at this point, it is worth noting that in the past EPA has allowed some flexibility in determining the appropriate baseline year.

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<sup>6</sup> EPA encourages states to seek SIP credit for voluntary emission reductions. A variety of guidance materials are available to guide states considering voluntary measures for adoption into a SIP. See Attachment C for some examples; this list is not exhaustive of all guidance on SIP credit.

<sup>7</sup> In order to receive emission reduction credit as a measure in a SIP, the measure would need to be quantifiable, surplus (in terms of not being double counted both as part of the baseline and as a control measure in the SIP), federally enforceable, and permanent. It would also need to meet any other relevant requirement in CAA section 110 and/or 172, and if the measure is voluntary, the state would need to make an enforceable commitment to ensure that the estimated emissions reductions are achieved.

<sup>8</sup> See also Question #4 above regarding eligibility to participate in Ozone Advance.

17. Can EPA guarantee that participating in Ozone Advance will cause an area to remain in attainment?

EPA can provide no guarantees. A participating state, tribe, and/or local government's success in the program depends largely on its/their level of commitment and the effectiveness of the actions taken under Ozone Advance. Evaluating, choosing, and expeditiously implementing measures and programs that result in actual emission reductions will be critical, and in many cases essential, to success. One of the benefits of participating in the program is that governmental entities and citizens become more aware of emission sources and what may cause ozone levels to increase, and may be more likely to react to potential issues before ozone levels rise. Proactive work to address these issues should lead to a greater chance of success in keeping ambient levels of ozone below the level of the NAAQS or, if the area is eventually designated nonattainment, could help prevent a higher classification than the area would otherwise have had (e.g., Marginal instead of Moderate).

18. If Federal measures are likely to provide the reductions needed in order to bring many eventual Marginal areas back into attainment, why should these areas pursue local reductions?

EPA will continue to promulgate Federal measures that reduce NO<sub>x</sub> and VOC emissions and that should lead to improved air quality levels in many areas; however, local action is still needed in some areas in order to attain. Marginal areas in particular may attain the ozone NAAQS within three years of designation due to reductions of ozone precursors resulting from a number of Federal and state emission reduction actions that have already been adopted. Such programs include more stringent emission standards for on-road and non-road vehicles and equipment (with associated fleet turnover), regional reductions in power plant emissions to address interstate transport, and other rules such as the boiler maximum achievable control technology (MACT) standards. Often, these reductions in conjunction with other ongoing state and federal controls should be sufficient to bring about attainment for some Marginal areas. In other areas, additional control measures may be needed for timely attainment. While Federal measures are likely to bring some Marginal areas back into attainment, these areas should consider taking steps to better ensure that once they return to attainment, they will remain in attainment. Among other things, Ozone Advance can facilitate actions that reduce emissions to provide an improved buffer against future air quality violations that may lead to nonattainment.

19. How should transported air pollution be accounted for within Ozone Advance?

Ozone Advance is not intended to address transport obligations pursuant to Clean Air Act section 110(a)(2)(D). Ozone Advance participants should be aware of their area's potential to adversely affect downwind air quality, as well as the potential impact of upwind air quality on

the area. For more information on EPA's programs related to interstate air pollution transport, see [www.epa.gov/airmarkets/interstate-air-pollution-transport](http://www.epa.gov/airmarkets/interstate-air-pollution-transport).

20. Can a state seek to incorporate measures into its SIP even if it is not currently subject to nonattainment area planning requirements?

Yes. A state can consider submitting adopted measures as a SIP revision at any time, even if there are no Clean Air Act requirements to do so. Assuming EPA approves the SIP revision, it will strengthen the SIP, ensure that control measures are Federally enforceable, and provide the mechanism to allow credit for the emission reductions associated with the measures for any future reasonable further progress (RFP) or attainment plan requirements, assuming they are not counted in the baseline.

## **Program Participation**

21. What are the steps in participating in Ozone Advance?

Step 1 – Send a Sign-Up Letter to EPA

Participation in Ozone Advance is begun by the state, tribe, and/or local government submitting a sign-up letter to EPA, and EPA accepting them into the program following a review to ensure the eligibility criteria described in #4 above are met. There is no particular format that must be followed in this letter; refer to the program website ([www.epa.gov/advance](http://www.epa.gov/advance)) for examples of letters submitted by current participants. The letter should express the willingness of all of the signatories to coordinate with each other and with EPA and to quickly implement measures and other programs to reduce ozone. Specific measures do not need to be identified in the sign-up letter, although if the applicant would like to highlight any existing measures and programs, they are welcome to do so. The letter should be signed by the appropriate local, state, and/or tribal official(s) with the authority to implement the program and to assist in leveraging staff and program funds as needed.

Step 2 – Identify Available Information Regarding the Area's Ozone Issue

This information could relate to the sources of ozone precursors, the degree of the local contribution to ozone based on available modeling by EPA or others, the appropriate area from which emissions reductions should occur, and existing or upcoming control measures and programs affecting sources in the area.<sup>9</sup> It would be helpful if this information were shared

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<sup>9</sup> One source of information on the emissions sources in the area is the National Emissions Inventory (NEI). NEI data can be found at [www.epa.gov/chief/](http://www.epa.gov/chief/).

informally with EPA, so that we may direct you to available information and resources that may assist you with needs you have identified.

### Step 3 – Secure Stakeholder Participation

It is important to identify, contact, and secure the participation of key stakeholders. This is commonly accomplished by the formation of a local air quality committee consisting of representatives from local government, industry, environmental and citizens groups (such as environmental justice organizations), and other interested parties. Stakeholders may need to be added as emissions sources and control measures are identified.

### Step 4 – Coordinate Control Strategy Selections and Develop Path Forward

Ozone Advance emphasizes expeditious, local action to reduce ozone; to keep the focus on taking steps to reduce ozone, as opposed to prolonged planning, participants should coordinate their control strategy options with area stakeholders, make their selections, and document their selections in a Path Forward within no more than a year after joining the program. It is important not to remain in planning mode for too long before starting to implement the plan.

Ozone Advance participants should consider a variety of emission reduction measures and programs, which may include traditional control measures as well as other measures, policies, and programs related to, for example, energy efficiency and mobile sources. EPA is available to assist areas that are interested in exploring their options for potential measures and programs that could be included in their Ozone Advance Path Forward.

The participating state, tribe, and/or local government will lead coordination efforts with stakeholders and with EPA. EPA will work with the participant(s) early in the process as needed to identify and help them resolve technical and other issues and provide information about emission reduction and public awareness/education options. EPA's technical assistance will generally be in the form of directional advice; EPA does not anticipate, for example, conducting new modeling on behalf of a particular Ozone Advance area. The participant(s) will be the lead on any technical efforts they decide are appropriate, with EPA's guidance. The state should be included in these discussions to ensure technical consistency.

The control measures an area chooses to implement may require businesses, industries, and citizens to comply with ordinances, codes, or other binding state or local regulations, or may encourage voluntary actions that reduce ozone precursors. The geographic area covered by such measures should be based on the location and nature of sources, or other factors important to the area and to achieving reduction of ozone precursor emissions. Other programs that relate to

public education and awareness may be considered as well. The process should offer opportunities for discussion and debate among stakeholders; these opportunities should be provided and led by the participating state, tribe, and/or local governments.

States, tribes and EPA can provide valuable information for local governments. It may be helpful to meet with the state/tribal and EPA representatives to discuss issues and options before the Path Forward is submitted. EPA will review and provide comments on the area's preliminary decisions and will work with local technical or policy committees and the state/tribe(s). Local plans should complement current or potential future state/tribal or Federal efforts for the area. Local governments participating in Ozone Advance should identify the state-level controls and programs that may impact local ozone, and, similarly, participating states should identify any local controls and programs that may have an effect in the local area.

EPA suggests that participating areas consider enhancing the area's Path Forward by including background related to the area's ozone issue and additional detail about the area's plans for addressing it. Helpful information to include would be, for example, an executive summary, list of measures to be implemented and a detailed implementation schedule, discussion of roles and responsibilities, air quality trends, demographic information, a map of the area, information about important NO<sub>x</sub> or VOC-reducing measures that have been completed or that are already underway, and provisions for public/stakeholder involvement. Providing additional information of this sort is not a requirement for participation in Ozone Advance. However the inclusion of this information in a Path Forward could allow it to serve as a useful blueprint for the area to work from in working with stakeholders and as a focal point for public recognition of the area's efforts to improve air quality. Virtually all of the Ozone Advance participants to date have elected to develop Paths Forward that include such additional information. See Attachment A for further information.

Some participating areas may also consider technical work (e.g., emissions inventory development/refinement, air quality modeling, looking at intrastate transport and the effect of planned new sources outside the Ozone Advance area) to support their work to address ozone. Although the development of technical analyses is not a requirement of the program, to the extent a program participant elects to pursue appropriate technical work, EPA encourages these efforts and will be available to provide advice to the program participant(s) who wish to develop these analyses. The development of technical support should be of particular interest to areas that are very close to, or already violating the ozone NAAQS, in order to best align their efforts under Ozone Advance with any eventual SIP requirements.

Once the area has sought stakeholder involvement and input and has selected control measures and programs, the selections should be documented as the area's Path Forward. There is no particular format that must be followed; refer to the program website



([www.epa.gov/advance](http://www.epa.gov/advance)) for examples of Paths Forward submitted by current participants. The Path Forward should be sent to EPA via mail or e-mail to the EPA contact noted in #7 above..

#### Step 5 – Implement Control Strategy Per Schedule and Provide Annual Status Updates

Program participants should begin implementing the measures and programs specified in the Path Forward immediately. Participants should stay in communication with EPA periodically throughout the program. In addition, each year from the time the Path Forward is sent to EPA, a participating area should briefly summarize the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison between current status for each measure/program with the schedule laid out in the Path Forward), current air quality, stakeholder meetings/events, and any other information the area would like to highlight. These status updates should be provided via letter or e-mail to the EPA contact noted in #7 above.

#### Step 6 – Apply for Federal Grants, if Desired

The Federal grants website [www.grants.gov](http://www.grants.gov) may be of interest to program participants. The website enables agencies and organizations to electronically find and apply for competitive grant opportunities from all Federal grant-making agencies. Over 1,000 grant programs offered by the 26 Federal grant-making agencies can be accessed from the website, and some of these may be useful in the context of this program.

One such grant program is EPA's Diesel Emissions Reduction Act (DERA) program, which provides grant funding to eligible entities to reduce diesel emissions by retrofitting, repowering, and replacing older diesel engines. Funding for eligible entities to complete diesel emission reduction projects is periodically offered through a competitive process (such as the national grants competition) or through lottery (such as the rebate program). Additional information on the DERA program, including availability of funding and requirements for applicants can be found at [www.epa.gov/cleandiesel/](http://www.epa.gov/cleandiesel/).

There is currently no funding associated specifically with the Ozone Advance program, however EPA may provide preferred status to Ozone Advance participants when applying for grants programs.

22. Must a participating area undertake emissions inventory refinement or modeling as part of participation in Ozone Advance?

No. Compliance with existing emissions inventory requirements is necessary in order to join and continue participating in Ozone Advance, specifically, the Air Emissions Reporting

Requirements rule (AERR, 40 CFR Part 51). However, further emissions inventory refinement and modeling are not otherwise necessary prerequisites to participation in the program. EPA encourages participating areas to (1) consider existing emissions inventories and modeling information and/or develop new analyses as necessary in order to characterize the nature of the ozone issue in the area (i.e., is the area NO<sub>x</sub> or VOC limited, is the area upwind of nonattainment areas, might the area be considered to affect ozone levels downwind in any future revised ozone NAAQS), (2) provide a technical foundation for control selections and schedules, and (3) ensure that available resources are used efficiently and effectively. Attachment B provides a general discussion of emissions inventories, modeling, and controls.

23. What happens if the ozone concentrations in an area violate the ozone NAAQS?

The success of Ozone Advance for a given area will lie in the area's willingness to undertake new measures that result in real emission reductions. EPA recognizes that some areas are affected by the transport of upwind pollution; however, it is still important for local reductions to be achieved, where possible. Similarly, an area's emissions may affect an ozone nonattainment area downwind. As soon as an area determines that the air quality is deteriorating, the area should act quickly to supplement the measures and programs as listed in its Path Forward with additional measures/programs. If the air quality in the area deteriorates and air quality violations occur, EPA may revise the area's designation to nonattainment; pending any decision, EPA will continue working with the area to see what additional measures can be taken to help improve the air quality.

24. Must a participating area commit to contingency measures?

No. Ozone Advance does not require that areas commit to adopt and implement specific contingency measures in the event the area violates the ozone NAAQS. EPA has attempted to streamline the program to the extent possible in order to encourage areas to keep their focus on actually taking proactive steps to improve their air quality. The goal is to encourage areas to take action to reduce ozone concentrations even though they are not currently required to do so. In lieu of contingency measures, Ozone Advance participants should consider quickly implementing additional measures should the quality of the air in their area begin to deteriorate; while participants are not required to develop contingency measures, they should begin to consider their options regarding additional measures well before they are needed. Measures undertaken should not be discontinued even if the area continues to remain in attainment, in order to protect against increases in local as well as downwind transported ozone concentrations.

25. What implementation schedule will participating areas follow?

EPA recommends that an area commit to Ozone Advance for a five-year term, with an option to renew at the end of the term and each successive term. An area's ambient air quality over the next several years would potentially affect designations following any possible revisions to the NAAQS in the future; therefore, it is important that the area work to improve air quality for a sustained period in order to best ensure it remains in attainment. The Path Forward should provide a schedule for implementation of the indicated measures. Significant actions that are necessary or may affect control measure implementation, such as required reviews/approvals, acquisition of equipment, etc., should be included in the schedule.

The Ozone Flex program specified the submission of a semi-annual program report, which could become an annual report if the area's design value was maintained or decreased. EPA contemplated eliminating these reports in order to further streamline the administration of Ozone Advance and the level of state/tribal/local resources directed to the program. However, EPA believes that some level of information sharing is beneficial to ensure that all parties are kept informed about program progress. The intention is that the status updates submitted to EPA each year will be informal (e.g., in the form of a check-in e-mail or letter) and will provide a brief, general summary of the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison of current status for each measure/program with the schedule laid out in the Path Forward), current air quality, stakeholder meetings/events, and any other information the area would like to highlight.

26. What provisions should be made for public and stakeholder involvement?

Support for the proposed measures in the area's list of Ozone Advance commitments from organizations and institutions in the area is vital. Local officials can determine the best means to seek and respond to input from groups or individuals interested in or affected by the measures. We recommend that the commitments be developed by a local air quality committee that includes environmental, health, and citizens groups, as well as representatives from local industry and government. Input on appropriate measures from environmental and health groups, citizens groups, industry representatives, the general public, states/tribes, and EPA should be given thoughtful consideration by the committee.

27. How long should an area plan on participating in Ozone Advance?

Participation should last for a period of five years or longer as needed/desired. Participants may terminate their involvement in Ozone Advance at any time, with notice to EPA. Similarly, EPA may end a state's, tribe's or local government's participation in the program at any time, such as where a participant does not demonstrate any effort to make air quality improvements during the course of the program.

28. How does the Ozone Advance timeline compare with the schedule for implementation of the ozone NAAQS?

Ozone Advance participants should keep the NAAQS implementation dates in mind when deciding upon the extent and timing of the measures and programs to be put in place. In particular, areas likely to be designated nonattainment with a Marginal classification should be aware of their window of opportunity to effect change before reclassification to a higher classification may occur.

Sample Timeline; Some Dates Are Tentative

July 2015	2008 ozone NAAQS Marginal area attainment date; attainment demonstration/rate of progress (ROP)/reasonable further progress (RFP) SIPs due for areas classified as Moderate or higher for the 2008 ozone NAAQS
Oct. 2015	Final 2015 ozone NAAQS
Oct. 2016	State/tribal recommendations for 2015 ozone NAAQS designations (expected to be based on 2013-2015 and preliminary 2014-2016 air quality data, including any exceptional event considerations)
Oct. 2017	Final designations for 2015 ozone NAAQS (expected to be based on 2014-2016 air quality data; early certified 2017 air quality data may also be relevant)
Late 2017/ Early 2018	Effective date for final 2015 ozone NAAQS designations.
July 2018	2008 ozone NAAQS Moderate area attainment date (based on 2015-2017 air quality data)
Late 2020/ Early 2021	2015 ozone NAAQS Marginal area attainment date (based on the three most recent, complete years of data); attainment demonstration/ROP/RFP SIPs due for areas classified as Moderate or higher for the 2015 ozone NAAQS
Late 2023/ Early 2024	2015 ozone NAAQS Moderate area attainment date (based on the three most recent, complete years of data)
2018-2019	2008 ozone NAAQS revoked

29. Who did EPA coordinate with prior to beginning the Ozone Advance program?

OAQPS asked the EPA Regional Offices to talk with their states about our plans to offer Ozone Advance. We briefed the National Association of Clean Air Agencies (NACAA) criteria pollutants committee and the National Tribal Air Association, and described our plans to the Environmental Council of the States (ECOS) and multijurisdictional organizations. We also

discussed the program with the American Lung Association and EPA's Clean Air Act Advisory Committee.

The draft guidance was distributed to states, tribes, local governments; state, tribal, and local organizations; environmental, health, and transportation organizations; and industry representatives for review and comment. During the review period we provided a webinar to summarize the draft guidance and respond to questions; this presentation was attended by over 200 individuals from 44 states and the District of Columbia (including state environmental and transportation agencies, regional organizations and Councils of Government, and local governments); 12 tribes; several state, local and tribal organizations, environmental, health, and transportation organizations, and industry representatives. We also spoke directly with several individual states and local areas who had questions about the program, as well as some of the states and areas participating in the Ozone Flex program.

The draft guidance was modified to reflect the input from these discussions, and this final guidance will be clarified via supplemental questions and answers which we will provide via the program website: [www.epa.gov/advance](http://www.epa.gov/advance).

### 30. EPA Contacts

Questions about Ozone Advance may be referred to Laura Bunte, Office of Air Quality Planning and Standards (OAQPS), (919) 541-0889 or [advance@epa.gov](mailto:advance@epa.gov), or to the appropriate EPA Regional Office. Questions about mobile sources may be directed to Rudy Kapichak, Office of Transportation and Air Quality (OTAQ), (734) 214-4574 or [kapichak.rudolph@epa.gov](mailto:kapichak.rudolph@epa.gov).

EPA Regional Office contacts for Ozone Advance include:

Region 1	Anne Arnold	(617) 918-1047
Region 2	Matt Laurita	(212) 637-3895
Region 3	Ellen Schmitt	(215) 814-5787
Region 4	Kelly Sheckler	(404) 562-9222
	Jane Spann	(404) 562-9029
Region 5	Steve Rosenthal	(312) 886-6052
Region 6	Carrie Paige	(214) 665-6521
	Kenneth Boyce	(214) 665-7259
Region 7	Lachala Kemp	(913) 551-7214
	Amy Bhesania	(913) 551-7147
Region 8	Jody Ostendorf	(303) 312-7814
Region 9	John Kelly	(415) 947-4151
	Karina O'Connor	(775) 434-8176

Updated April 2016

Region 10    Claudia Vaupel    (206) 553-6121

The EPA Regional Office contacts generally serve as the main EPA point of contact for participating areas within the Region and will work with participating states, tribes, and local governments directly, in coordination with OAQPS. In some Regions, OAQPS may serve as the primary EPA point of contact for participating areas and will engage with participants directly, in coordination with the EPA Regional Office.

Thank you for your interest in the Ozone Advance program!

**Attachment A**  
Ozone Advance  
Path Forward

The focus of Ozone Advance is on participating areas' implementation of measures and programs that will achieve emission reductions of ozone precursors to help these areas remain in attainment of the ozone NAAQS and to increase the chances that they will be in attainment for any future revised NAAQS that may be promulgated. The program does not require extensive upfront analysis and planning, such as is required as part of the SIP process. However, participating areas may have an interest in developing a Path Forward that goes beyond the minimum, which is a list of measures and programs the area plans to implement and a schedule for the implementation of each measure and program. Paths Forward are not just meant to inform EPA, but also to inform area stakeholders and the public about ozone and what is being done locally to address it.

In order to more fully communicate with these audiences, Advance participants often include additional information such as a brief description of what ozone is and its health and environmental effects, what the Advance program is and why they are participating, the current status of the area's air quality issues including recent monitoring information and design value trends, any technical analyses undertaken by the area, such as modeling to understand the area's emission sources and appropriate controls, the key sources of NO<sub>x</sub> and VOC in the area per National Emissions Inventory information or other more refined local information, a summary of past and ongoing measures and programs in the area that have helped to reduce ozone, provisions for public and stakeholder involvement, etc. The Path Forward can serve as the area's blueprint for actions into the future, and can help focus stakeholder and public understanding of the amount of pollution reduction needed in order to ensure the plan will be effective, as well as the steps the area is taking to ensure continued protection of citizens' health.

There is no specific format that must be followed for a Path Forward, so participating areas can select a format that makes sense to them. Many examples of Paths Forward developed by Advance participants can be found on the program website, [www.epa.gov/advance](http://www.epa.gov/advance), and EPA can provide you with tips as you work to develop a Path Forward for your area.

EPA suggests that the following sections be included in a Path Forward, at a minimum:

- Introduction
- Description of the measures and programs to be implemented, responsible parties, how the measure will be implemented
- Implementation schedule for each measure and program
- Provisions for public and stakeholder involvement

## A. Introduction

In the introductory section, information should be provided about ozone and its health and environmental effects, what the Advance program is and why the participant(s) have opted to join. The introduction should generally describe the area to be covered by the plan, including the rationale for choosing the geographic boundaries. At a minimum, the geographic area should include the urbanized area, where applicable.<sup>10</sup> A map showing the geographic boundaries would be helpful. It is important to include brief information about the participating groups/agencies, and the general objectives of the plan.

The number and location of ozone monitors, and the number and extent of ozone concentrations above the ozone NAAQS should be provided, along with observed trends in emissions and ozone concentrations. If any modeling has been conducted, it should be mentioned as well.

Information on the sources (i.e., point, area, non-road, and on-road) and the total amounts of NO<sub>x</sub> and VOC emissions should be summarized. To the extent known, indicate the local sources of these pollutants and the extent to which each type or specific source contributes to the total emissions in the area. Large sources in adjacent areas should be identified. EPA can supply you with local emissions information from the National Emissions Inventory.

## B. Description of Measures to be Implemented and Responsible Parties

The specific control measures or programs the local government, state, tribe, and/or community organizations commit to undertake as a result of Ozone Advance should be described in detail. The description for each measure should indicate how, where, when, and by whom the measure will be implemented. At a minimum, the list of measures should be designed to keep ozone levels below the current ozone NAAQS. More stringent air quality targets can be agreed to by the interested parties. Reductions should be achieved as expeditiously as practicable to provide maximum benefits.

The measures and programs may be mandatory or voluntary, and may additionally include educational or awareness-building efforts. The plan should include details about the means of ensuring the implementation of any measures and programs selected by the area, such as regulations, agreed orders, and verification mechanisms. It should also discuss how the effectiveness of voluntary measures might be assessed. The effectiveness of these measures may vary depending on the extent of participation or other circumstances.

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<sup>10</sup> An urban area generally consists of a large central place and adjacent densely settled census blocks that together have a total population of at least 2,500 for urban clusters, or at least 50,000 for urbanized areas. An urban area can be in a metropolitan or non-metropolitan area.



EPA encourages participants to include a diverse set of measures and programs that relate to the various sources of NO<sub>x</sub> and VOC in the area. These typically include measures and programs addressing mobile source emissions (e.g., reducing miles traveled, minimizing congestion, fleet management strategies, diesel reduction projects, alternative fuels), point and area source emissions (e.g., programs that trigger on high ozone days or throughout the ozone season), and energy-related programs (e.g., energy efficiency, green infrastructure). Most Advance participants additionally opt to include awareness-building or educational programs.

Any existing background explaining how the list of measures was selected, such as any technical analysis conducted, would be helpful. Areas should consider developing or refining emissions inventories, assessing whether VOC or NO<sub>x</sub> emission controls are most needed, and conducting photochemical modeling. While this work is not required in order to participate in the program, it would be helpful; EPA and Regional Planning Organizations can provide assistance in the direction and scope of these efforts, such that available resources can be used most effectively. If existing modeling is unavailable for reference and new analyses are not conducted by the area, the action plan should explain what means were used to select the measures in the plan. These technical efforts provide a foundation for an area's plan, and can be used to identify and analyze the sources of emissions in the area. Such information will suggest which control strategies may be most effective in reducing emissions that lead to ozone formation, and could help the area most efficiently use its limited resources. Attachment B contains more detailed information about the emissions inventory, modeling, control measures and selection.

EPA encourages use of the latest planning assumptions and emissions models available to evaluate and accurately estimate the benefits that control measures provide. Examples of assumptions include estimates of current and future population, employment, activity, projections and growth factors, and vehicle age and fleet mix. For on-road and non-road mobile source emission estimations, the current emissions model is MOVES (Motor Vehicle Emissions Simulator) ([www.epa.gov/otaq/models/moves/index.htm](http://www.epa.gov/otaq/models/moves/index.htm)). The most current version should be used. Areas in California would use the latest Emission Factors (EMFAC) model.

The measures and programs in the plan should, as a group, achieve emission reductions beyond those already being achieved in the area, given that the program is aimed at taking action to keep ozone levels below the level of the NAAQS. However, participants are encouraged to highlight past and ongoing measures along with new, planned measures in order to fully represent the proactive work to maintain/improve air quality in the area. To the extent possible, the amount of NO<sub>x</sub> and/or VOC emission reduction anticipated from each measure or combination of measures should be estimated. The plan should not include measures that are

required under state/tribal or Federal law, such as the measures included in approved maintenance plans.

The state, tribe, and/or local government should commit to adjusting the list of measures and programs as appropriate in order to speed up progress in achieving reductions, and to ensure continued attainment in light of any future revised ozone NAAQS.

### C. Implementation Schedule

EPA recommends that an area commit to Ozone Advance for a five-year term, with an option to renew at the end of the term and each successive term. See sample timeline in #29 above. The Path Forward should provide a schedule for implementation of the indicated measures. Significant actions that are necessary or that may affect control measure implementation, such as required reviews/approvals, acquisition of equipment, etc., should be included in the schedule.

### D. Provisions for Public/Stakeholder Involvement

Support for the proposed measures in Ozone Advance commitments is vital. Local officials can determine the best means to seek and respond to input from groups or individuals interested in or affected by the measures. We recommend that the commitments be developed by a local air quality committee that includes environmental and citizens groups, as well as representatives from local industry and government. Input on appropriate measures from environmental groups, citizens groups, industry representatives, the general public, states/tribes, and EPA should be given thoughtful consideration by the committee.

**Attachment B**  
Ozone Advance  
Emissions Inventory, Modeling, and Controls

Emissions inventory (EI) work and source apportionment, dispersion, or other modeling are not required as part of Ozone Advance. However, the use of an emissions inventory and technical support for the selection of control measures is encouraged, and EPA will provide technical advice to participating areas who seek it. The state should be included in these discussions to ensure technical consistency. Areas with well-developed emissions inventories and technical support are better positioned to target and select control measures that maximize emission reductions that will result in air quality improvements given local conditions and characteristics.

**Emissions Inventory**

One of the first steps in determining how to improve air quality in an area is to gather information on the sources and amounts of emissions. In many cases, existing state, multijurisdictional or regional planning organization (MPO/RPO), and Federal EIs may provide a guide in targeting sources of interest in a particular local area to enable appropriate control selections. Ozone Advance participants are not required to develop a baseline emissions inventory for NO<sub>x</sub> and VOCs; however, they are encouraged to do so in order to identify the level of emissions that would represent continued attainment for the area and to monitor growth.

The extent of the geographic area inventoried will vary by community. The EPA recommends evaluating the Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (MSA/CMSA) (or the county or parish if there is no MSA) and enlarging the area if necessary. Local EIs can help an area identify, target, and obtain emission reductions that are feasible and that are most likely to lead to reduced ozone formation in the area. EPA's protocol for developing an EI and additional information on EIs are available at [www.epa.gov/air-emissions-inventories](http://www.epa.gov/air-emissions-inventories). In particular, information regarding EPA's Emission Inventory Improvement Program (EIIP) can be found at [www.epa.gov/air-emissions-inventories/emission-inventory-improvement-program-eiip](http://www.epa.gov/air-emissions-inventories/emission-inventory-improvement-program-eiip). While some aspects of the EIIP website, such as mobile source information, are out of date, much of the information provided may be useful to participating states, tribes, and local governments that want basic information about how to further develop and refine their EIs. In addition, EPA's latest NAAQS inventory guidance is available at [www.epa.gov/air-emissions-inventories/emissions-inventory-guidance-documents](http://www.epa.gov/air-emissions-inventories/emissions-inventory-guidance-documents).

Emissions are generated by stationary sources (industrial or commercial facilities), mobile sources (on and off-road vehicles, aircraft, ships and locomotives), and area sources (gas

stations, dry cleaners, auto body paint shops, etc). Emissions of NO<sub>x</sub> and VOC contribute to ozone formation and should be the focus of EI efforts.

Information should be gathered on the number and types of emission sources in the area and the types and amounts of pollutants emitted. It is important to summarize the extent and availability of information on NO<sub>x</sub> and VOC emissions which contribute to ozone formation in the area. To the degree it is known, the extent to which each type of source or specific source contributes to the release of the total emissions in the area should be specified.

Expected emission reductions from planned efforts or controls should be identified and should be quantifiable, to the extent possible. Emission reductions from some measures may be difficult to quantify (e.g., voluntary measures due to unknown levels of participation), but it may be possible to specify a percentage, range, or time-adjusted sequence of anticipated emission reductions from each or a combination of these “hard to estimate” measures.

The following steps outline the process for emissions inventory development:

**Step 1: Determine if inventory information currently exists**

The state/tribe may have information on the sources and emissions in the area. EPA and MPOs/RPOs may have additional information. EPA compiles the NEI every three years. The most recent NEI includes 2011 emissions, and the 2014 NEI is expected to be released in the summer of 2016 with a final revision by the summer of 2017. States are required by the Air Emissions Reporting Requirements (AERR) rule to submit emissions inventory information every three years. Ozone Advance participants should identify information sources and compile the information relevant to their area.

**Step 2: Determine the extent of available information**

The extent of available EI information varies from area to area. The state/tribe or EPA can provide guidance on the types of EI information that has been collected for your area and which may be useful for your local efforts.

**Step 3: Gather additional information as necessary**

In addition to specific EI data from the state/tribe or EPA, the following information may be of use to local EI development:

Information about VOCs of particular concern in an area:

- National-Scale Air Toxics Assessment (NATA), [www.epa.gov/national-air-toxics-assessment](http://www.epa.gov/national-air-toxics-assessment).

Stationary source data:

- VOC/NO<sub>x</sub> sources/emissions not included in the state/tribal emissions inventory
- Development of the most current EI possible for a year with high ozone observed in the area

Mobile source data:

- Useful mobile source information that could improve estimates available from other sources such as the NEI
- Non-road vehicle, engine and equipment types, numbers, emissions, hours/frequency of operation
- On-road vehicle types, numbers, emissions, vehicle miles traveled (possible data sources include local Metropolitan Planning Organizations and the local Department of Transportation)
- For additional information on the use of MOVES for estimating on-road and non-road emissions please see: [www.epa.gov/otaq/models/moves/index.htm](http://www.epa.gov/otaq/models/moves/index.htm).

Additional useful information regarding EIs is available electronically through [www.epa.gov/chief/](http://www.epa.gov/chief/).

## **Modeling and Data Analysis**

Photochemical air quality modeling that can predict the effectiveness of a proposed control strategy or a proposed control measure in reducing the local ozone concentration, and other modeling or data analyses are not required for participation in Ozone Advance. However, these types of analyses could be used as a tool in the program to help areas identify which emissions may be the most beneficial to reduce. Before beginning any modeling effort, an area should contact the state/tribe or EPA Regional Office for suggestions regarding whether sufficient relevant modeling information for the area already exists, and, if not, what types of analyses are appropriate. A review of any existing modeling could add credence to the selection of control measures and could conserve both time and money. If the area intends to perform modeling, it should follow EPA or state-approved modeling protocols; see the EPA modeling information at [www.epa.gov/scram/](http://www.epa.gov/scram/).

Other considerations include:

### **A. Photochemical Grid Modeling**

If used, photochemical grid modeling should be SIP-quality and developed according to current EPA ozone modeling guidance. This modeling can help answer questions such as:

- Is it more effective for Ozone Advance efforts to concentrate on reductions of VOCs, NO<sub>x</sub>, or both?
- If a combination of both VOC and NO<sub>x</sub> reductions appears to be called for, what percentage of each would be appropriate to maintain attainment?
- What amounts of reductions are necessary to make a difference in ozone concentrations?
- Which control measures will result in emission reductions that would be most effective at reducing ozone concentrations in the area?

Photochemical grid modeling may also be used to assess the effectiveness of a control strategy in helping to reduce ambient ozone levels. In such a demonstration, there may be a need for assessing some future year(s), and for developing future emissions inventories.

## B. Air Quality Data Analysis

In some cases, it may be possible to address the questions posed in the previous section without the use of time and resource-intensive photochemical grid modeling via careful statistical analysis of monitored ambient ozone, ozone precursor, and meteorological data. This analysis is used to produce a meteorologically-adjusted ozone trend that reflects summertime average ozone levels under typical meteorological conditions. Data analysis efforts designed to answer the questions listed below can also be used to support and confirm any modeling results.

- Which meteorological conditions are most often associated with elevated ozone concentrations in the area?
- Does the meteorologically-adjusted trend confirm that summertime average ozone concentrations in the area are decreasing?
- Has there been a relationship in the recent past between local ozone precursor emissions reductions and the meteorologically-adjusted trends?

## C. Data and Time Periods of the Assessment

If a participating state, tribal, or local government decides, in consultation with EPA, that analyses are needed in order to understand the area's air quality issues, decisions will need to be made regarding which data will be used, and the period(s) to be modeled. The following questions are among those that would need to be answered:

- How many and which sources should be modeled?
- What types of pollutants and amounts of emissions from each source should be evaluated?
- Are the emissions inventory and other necessary data (i.e., meteorological data) available?

- Should modeling be done for an extended period such as five years or for shorter periods, such as each year?

#### D. Use of an Appropriate Model

Different models are available to predict air quality impacts. Participating local governments should consult with the state/tribe and EPA regarding which models would be appropriate for the purpose intended as well as the area, pollutants and sources to be evaluated. As stated earlier, a review of existing modeling analyses, if they exist, could simplify the selection of control measures and conserve resources.

### **Pollution Reduction Measures and Programs**

Once the sources and types and amount of emissions are generally known, a list of potential air quality improvement and/or emission pollution reduction options can be developed. These options should be different from actions required by state/tribal or Federal law prior to or during the agreement term. These options may include, for example, public awareness, notification, and participation in local programs; requiring the installation of control devices or implementation of procedures by stationary sources; or mobile source control options. Other options may include voluntarily adopting state/tribal or certain Federal measures like those designed and mandated for ozone nonattainment areas.<sup>11</sup> To the extent that it is possible, these measures could be implemented on a voluntary basis and adapted as necessary. Consideration of multi-pollutant benefits (such as maximizing reductions in both NO<sub>x</sub> and PM) should be incorporated into any selection of measures and programs.

Emission reduction measures are specific emission reduction commitments from specific facilities or industrial sources, broader measures applicable to an entire area, measures which target a specific group of emission sources or category of emissions (e.g., sources with VOC emissions greater than 25 tons per year), or voluntary programs such as those that encourage behavior change in order to achieve reductions (e.g., transportation programs that reduce vehicle miles traveled). Public notification and education programs include activities to inform and educate the public of the impact of their daily activities and to encourage them to participate in efforts to improve local air quality and to take actions to protect their health when exposed to poor air quality.

New state/tribal or Federal requirements may impact the emissions in an area. In order to best ensure continued attainment of the ozone NAAQS, Ozone Advance participants may need to

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<sup>11</sup> Some federal measures are not available for state or local adoption because they are preempted legally. Vehicle emission standards and fuel standards are examples of this. Please consult your EPA Regional Office early in your process for considering measures.

consider going beyond Federal and state/tribal requirements that are already in place or that are anticipated in the near term. Consequently, in order to effectively evaluate potential control measures to adopt, local governments should become informed of requirements that already apply or are scheduled to apply within the area. Even where Federal, state, and tribal controls are generally expected to be sufficient to keep an area in attainment, local measures may provide an extra buffer against future violations, and will help to ensure continued public health benefits.

A variety of sources provide information about air quality improvement options that areas may want to explore. These include, for example, the Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate (RACT/BACT/LAER) Clearinghouse ([cfpub.epa.gov/RBLC/](http://cfpub.epa.gov/RBLC/)), the National Clean Diesel Campaign and Diesel Emissions Reduction program (DERA) grants ([www.epa.gov/cleandiesel](http://www.epa.gov/cleandiesel)), and the State and Local Transportation Resources website, [www.epa.gov/otaq/stateresources/index.htm](http://www.epa.gov/otaq/stateresources/index.htm). EPA will be available to provide assistance in identifying options that may best suit an area's unique needs and priorities.

Also consider contacting other states, tribes, and/or local governments, particularly those with similar sources and air quality issues, for information on measures they have considered or implemented. A list of some general categories of control measures follows, but Ozone Advance participants are not limited to these categories for sources of controls. Additional information on emission control options for specific sources can be obtained from EPA. Also, see Attachment C for a list of guidance documents that apply to a wide variety of control measures for stationary, area, and mobile sources.

### **Control Measure Selection**

Emissions, modeling, source, and control information can be analyzed to select appropriate control measures that will help achieve emission reductions and prevent ozone levels that may exceed the level of the NAAQS. Specific Ozone Advance Paths Forward can tailor the use, combination, and timing of specific measures to meet local needs. Aside from control measures/programs identified in the plans, the plans may contain public education and awareness programs. Factors which may be considered in selecting control measures include, but are not limited to:

#### **A. Determination of amount/type of emission reductions**

The type and amounts of emission reductions impacts the selection of controls. An area with air quality affected predominantly by mobile sources and needing NO<sub>x</sub> emission reductions would need different control measures than an area with air quality affected predominantly by



large stationary sources of VOCs. Emissions inventory and modeling data may be beneficial in making these determinations. Considerations include:

- Is ozone formation in the area driven by NO<sub>x</sub> or VOC emissions or a combination of the two?
- What are the primary types of NO<sub>x</sub> and VOC emissions sources in the area? For example, are mobile or stationary sources emitting most of the NO<sub>x</sub> or VOC in the area?
- Are there a few very large emitters of NO<sub>x</sub> or VOC, many smaller ones, or a combination?
- Are there additional air quality improvements, such as toxic emissions reductions, that result from implementation of the controls under consideration for this program?
- Are there possible benefits to environmental justice communities?

#### B. Analysis of available control measures

Even if the types and amounts of emission reductions that would provide the greatest benefits are known, the availability and ease of implementation of emission control options may impact selection of a particular measure. Considerations include:

- What available control technologies/measures would be feasible to implement?
- What is the effectiveness of these control technologies/measures in achieving emission reductions?
- What are the timeframes necessary to implement the measure and see results?
- What is the cost (dollars/resources) necessary to implement the measure?
- What are the challenges to “selling” the measure to specific companies, decision makers or citizens?

It is worth noting that, although local ordinances imposing mandatory control measures may or may not satisfy the requirements associated with eventual SIP “credit,” these measures are certainly acceptable in terms of actions that may be taken as part of a participant’s proactive work under Ozone Advance.

#### C. Selecting the proposed control measures

The state/tribe and EPA can assist in evaluating data and in reviewing the modeling for control options. Cooperative discussions with stakeholders can help determine the most appropriate control measures. Other states/tribes or local governments with similar sources and air quality issues could be contacted for additional ideas or measures to consider.