

Q&As for Phase II of the NO_x SIP Call

NO_x SIP Call Rule

1. What is the purpose of the Nitrogen Oxides (NO_x) State Implementation Plan (SIP) Call Rule?

The NO_x SIP Call Rule (63 FR 57356, October 27, 1998 and 69 FR 21604, April 21, 2004), addresses the interstate transport of ozone. It requires twenty-one States and the District of Columbia to eliminate those amounts of NO_x emissions that contribute significantly to downwind nonattainment of the 1-hour ozone standard.

2. How did the Environmental Protection Agency (EPA) determine the amount of significant contribution for each State in the original NO_x SIP Call?

EPA estimated the amount of NO_x emissions in a State by 2007 taking into consideration the effect of existing control measures and projected growth. This is known as the 2007 base year emissions inventory. EPA then applied highly cost-effective control measures to the 2007 base year emissions. This is known as the 2007 budget or controlled inventory. The amount of NO_x emissions that contribute significantly to nonattainment was determined to be the difference between the 2007 base year emissions inventory and the 2007 budget.

Both the 2007 base year inventory and budget are contained in the “Technical Amendment to the Finding of Significant Contribution and Rulemaking for Certain States for Purposes of Reducing Regional Transport of Ozone,” which was published on March 2, 2000 (65 FR 11222). In the NO_x SIP Call Phase II Rule (69 FR 21604), we recalculated the 2007 base year emissions inventory to reflect partial State emissions for Alabama, Georgia, Michigan, and Missouri and 82 percent control instead of 90 percent control for gas-fired lean burn engines in the stationary internal combustion (IC) engine source category.

3. What is the purpose of the State budgets in the NO_x SIP Call?

The budget is an accounting mechanism for ensuring that upwind States have adopted and are implementing control measures that will address the significant contribution to downwind nonattainment. Each State must achieve its 2007 ozone season NO_x emissions reductions to meet the requirements of the NO_x SIP Call.

Phase II NO_x SIP Call SIPs

4. What are States required to include in their Phase II budget demonstrations?

The States are required to submit a budget demonstration for only Phase II reductions (for Georgia and Missouri this refers to their full NO_x SIP Call budget). They are not required to submit a new budget demonstration encompassing the full NO_x SIP Call.

5. Are States required to submit Phase II SIPs if the budget in an already approved Phase I SIP is lower than or equal to the NO_x SIP Call budget reflected in the Phase II rule?

This depends on whether the SIP achieves the emission reductions necessary to eliminate the State's significant contribution; i.e., the emission reductions required by the NO_x SIP Call. Compliance with the State budget number does not determine compliance with the NO_x SIP Call rule. To demonstrate compliance, a State must adopt and implement control measures that are projected to achieve, by 2007, the aggregate emissions reductions determined by EPA.

Please note that EPA allowed States to make minor corrections to their 2007 base year emissions inventory in their Phase I SIPs. Where changes have been made to a State's inventory, the State budget was also changed to reflect this. The EPA may allow additional corrections in the future to certain State emission inventories on a case-by-case basis due, for example, to the change in the definition of electric generating unit (EGU). However, changes to a State's budget do not alter the State's obligation to achieve the emission reductions specified by the NO_x SIP Call rule.

The State and EPA must determine whether a State's budget has been lowered due to corrections to the State's inventory, or whether the State has actually achieved more emissions reductions than required by Phase I. In the latter instance, the tons reduced over the amount required are creditable with respect to the total amount of emission reductions the State must achieve when Phase II reductions are included.

6. Will EPA publish a correction notice regarding the Phase II increment?

In the same manner EPA processed minor corrections to State emission inventories and budgets in their Phase I SIPs, States may make corrections through the Phase II NO_x SIP Call rulemaking process. The changes would be subject to notice and comment rulemaking as part of the Phase II NO_x SIP Call rulemaking process.

7. If a State can demonstrate its Phase II increment through creditable IC engine retirements and/or replacements, does the State need to promulgate an IC engine rule as part of its Phase II SIP revision submission?

Where the State demonstrates that the SIP already meets the NO_x SIP Call requirements, a Phase II SIP revision is not necessary.

New IC Engines

8. Are States required to revise SIPs to reflect the 82 percent control for IC engines when new engines are located within the fine grid?

No, the NO_x SIP Call 2007 budgets include growth.

9. Are States required to include additional reductions from existing engines to offset sources that plan to increase capacity in the future or add new IC engines?

Again, no because growth was built into the NO_x SIP Call. Also, large new engines will be covered by new source review requirements, which may result in more stringent controls than the NO_x SIP Call.

State Flexibility and Compliance Plans

10. Is company-wide averaging for IC engines located in a State allowed?

Yes, as stated in EPA's August 22, 2002 guidance memorandum from Lydia Wegman to the Air Division Directors, EPA encourages States to establish a NO_x tons/season emissions decrease target for individual companies with multiple engines and then provide the companies with the flexibility to develop a compliance plan that would achieve the needed emissions reductions. The companies may select from a variety of control measures to apply at their various emission units in the State or portion of the State affected under the NO_x SIP call.

11. For IC engines, does a compliance plan with control measures need to be specifically written into the rule for each company?

As provided in the attached example rule, using compliance plans, a State may take a flexible approach by adopting a rule as part of the SIP that allows a company with multiple affected engines to comply with a specific emission rate limit for each engine established in a compliance plan. Each emission rate limit must be reflected in a federally enforceable permit which is the enforcement mechanism for the compliance plan. For informational purposes, the company must record annual ozone season operating hours, which the State may review from time-to-time, along with other NO_x SIP Call measures, to assess consistency with the Statewide NO_x budget.

The rule must yield enforceable and demonstrable reductions equal to the NO_x tons/season reductions required by the State. Alternatively, a State may adopt a less flexible approach which sets, for example, a single emission rate requirement for affected engines. What is important from EPA's perspective is that the State, through a SIP revision, demonstrates that all the control measures contained in the SIP are collectively adequate to provide for compliance with the State's NO_x budget during the 2007 ozone season.

Early Reduction Credit

12. Can sources obtain emission reduction credit prior to 1995 for large IC engines and if yes, how?

Yes, because the emission reductions we calculated for large IC engines were based on uncontrolled levels. In addition, early reduction credit for smaller IC engines may be given where the controls are not part of the 2007 baseline in the NO_x SIP Call emissions inventory. For more information, see the August 22, 2002 guidance memorandum.

13. Can States credit reductions for sources that have replaced the capacity of large natural gas-fired engines with electric engines since the 1995 ozone season?

Yes, but the State would have to demonstrate that the historic ozone season capacity of the large reciprocating IC engine would be replaced by the electric engines during each ozone season.

Other Creditable Reductions

14. Can States allow credit for reductions from sources that have retired engines? If so, must the retired engine be from the 1 ton/day sector?

No, the SIP Call is based, in part, on application of controls that eliminate the significant contribution from one State to another State. The State must demonstrate that the control measures contained in the SIP are adequate to produce emission reductions matching the highly cost effective emission reductions described by EPA in the NO_x SIP Call rule. If retirement credit were allowed, a source might just shift capacity to other engines on site with a similar emission rate; in which case the emission reductions required under the NO_x SIP Call would not occur.

15. Can States allow creditable reductions for sources that have replaced IC engines with new engines or turbines? If so, how should the reductions be quantified? Must the replaced engine be from the 1 ton/day sector?

Yes, but the State would have to demonstrate that the historic ozone season capacity of the IC engine no longer in operation would be replaced by the new engine or turbine during each ozone season. The emission decreases could be quantified based on the past emission rate/operating hours and the projected emission rate/operating hours of the engines/turbines. There is no size restriction with respect to emission reduction credit.

16. Can States allow creditable NO_x reductions for sources that demonstrate reductions from emission units other than engines at a source?

Yes, for purposes of complying with the NO_x SIP call, a State is free to choose whatever mix of controls will meet its budget and is free not to regulate IC engines at all. Although the attached example rule focuses only on IC engines, a compliance plan may include credit from emission reductions at other types of sources.

Compliance Monitoring

17. What are the requirements for compliance monitoring for IC engines? If there are specific requirements, does EPA require the Phase II State rules to address them or can they be addressed in the State compliance assurance monitoring rules?

Acceptable monitoring is not limited to those monitoring methods such as continuous or predictive emissions measurement systems that rely on automated data collection from instruments. Non-automated monitoring, including parametric monitoring, may provide a reasonable assurance of compliance for IC engines provided such periodic monitoring is sufficient to yield reliable data for the relevant time periods determined by the emission standard. This requirement is addressed in both the August 22, 2002 guidance memo and the attached example rule.

NO_x Budget Trading Program

18. Are large IC engines required to be included in the NO_x Budget Trading Program?

No, however, a State may include this source category in its trading program or an owner may participate through the opt-in provisions of the NO_x Budget Trading Program rule.

19. What changes to the Trading Program must be included in State rulemakings?

With regard to EGUs and non-EGU boilers and turbines, State rules must address any changes in the number of affected units. The EPA is unaware of any units that would change status as a result of the revision in the cogeneration definition, because States have already included all the affected sources in their Phase I SIPs. In the Phase II rule, EPA requested States that identify any cogeneration unit whose status has changed as a result of the revision to the cogeneration definition, to submit a letter describing the unit, to the EPA Clean Air Markets Division. Subsequently, EPA will advise of any appropriate change in the State budget for inclusion in its rulemaking.

If a cogeneration unit is moved from the EGU source category to the non-EGU source category and this results in the cogeneration unit receiving more allowances, the State must revise its rule to reflect the new definition prior to EPA issuing any additional allocations.