

D. Phase-In Provisions

In Section III we described the proposed NO_x and NMHC standards phase-in schedule. This phase-in requirement is based on percentages of a manufacturer's production for the U.S. market. We recognize, however, that manufacturers need to plan for compliance well in advance of the start of production, and that actual production volumes for any one model year may differ from their projections. On the other hand, we believe that it would be inappropriate and infeasible to base compliance solely on a manufacturer's projections. That could encourage manufacturers to overestimate their production of complying phase-in engines, and could result in significantly lower emission benefits during the phase-in. We voiced the same concern with respect to the highway HDDE phase-in schedule (see 66 FR 5109). As in the highway HDDE program we propose to initially only require nonroad diesel manufacturers to project compliance with the phase-in based on their projected production volumes, provided that they made up any deficits (in terms of percent of production) the following year.

Because we expect that a manufacturer making a good-faith projection of sales would not be very far off of the actual production volumes, we are proposing to limit the size of the deficit that would be allowed, as in the highway program. In all cases, the manufacturer would be required to produce at least 25% of its production in each phase-in power category as "phase-in" engines (meeting the proposed NO_x and NMHC standards or demonstrating compliance through use of ABT credits) in the phase-in years (after factoring in any adjustments for Early Introduction or Blue Sky Series engine credits; see Section VII.E). This minimum required production level would be 20% for the 75–175 hp category if a manufacturer exercises the option to comply with a reduced phase-in schedule in lieu of using banked Tier 2 ABT credits, as discussed in Section III.B1.b. Another important proposed restriction is that manufacturers would not be allowed to have a deficit in the year immediately preceding the completion of the phase-in to 100%. This would help ensure that manufacturers are able to make up the deficit. Since they could not produce more than 100% low-NO_x engines after the final phase-in year, it would not be possible to make up a deficit from this year. These provisions are identical to those adopted in the highway HDDE program.

E. What Might Be Done To Encourage Innovative Technologies?

1. Incentive Program for Early or Very Low Emission Engines

In our rulemakings for heavy-duty highway engines and light-duty Tier 2 vehicles, we expressed our view that providing incentives for manufacturers to introduce engines emitting at very low levels early, or at levels significantly below the final standards, is appropriate and beneficial. We believe that such inducements may help pave the way for greater and/or more cost effective emission reductions from future engines and vehicles. We believe this also holds for the early introduction of low-emitting nonroad diesel engines. We also believe that the opportunity for a practical early-engine program is even greater for the nonroad sector than for the highway sector, considering the long lead times before these proposed nonroad diesel standards would take effect, the large variety of applications (and therefore potential pull-ahead opportunities) in the nonroad sector, the large number of machines fueled at dedicated fuel stations on construction sites, farms, and industrial complexes, and the widespread availability of very low sulfur diesel fuel at highway outlets after 2006, even sooner in some areas. Thus we are proposing an early-engine incentive program very similar to that adopted for highway engines and vehicles.

Specifically, we are proposing that manufacturers be permitted to take credit for engines certified to this rule's proposed standards prior to the 2011 model year in exchange for making fewer engines certified to these standards in or after the 2011 model year. In other words, clean engines sold earlier than required reduces the requirement to sell similar engines later. The emission standards levels must actually be met by qualifying engines to earn the early introduction credit, without use of ABT credits. Therefore, the early introduction engine credit is an alternative to the ABT program in that any early engines or vehicles can earn either the engine credit or the ABT emission credit, but not both. The purpose of the incentive is to encourage introduction of clean technology engines earlier than required in exchange for added flexibility during the phase-in years.

Any early engine credits earned for a diesel-fueled engine would be predicated on the assurance by the manufacturer that the engine would indeed be fueled with low sulfur diesel fuel in the marketplace. We expect this would occur through selling such

engines into fleet applications, such as municipal maintenance fleets, large construction company fleets, or any such well-managed centrally-fueled fleet. Because obtaining a reliable supply of 15 ppm maximum sulfur diesel fuel prior to the 2011 model year will require some effort by nonroad diesel machine operators, we believe it is necessary and appropriate to provide a greater incentive for early introduction of clean diesel technology. Therefore, we propose to count one early diesel engine as 1.5 diesel engines later. This extra early credit for diesel engines means that fewer clean diesel engines than otherwise would be required may enter the market during the years 2011 and later. But, more importantly, it means that emission reductions would be realized earlier than under our base program. We believe that providing incentives for early emission reductions is a worthwhile goal for this program, because improving air quality is an urgent need in many parts of the country as explained in Section II, and because the early learning opportunity with new technologies can help to ensure a smooth transition to Tier 4 standards. Therefore, we are proposing these provisions for manufacturers willing to make the early investment in cleaner engines.

We are proposing to provide this early introduction credit to diesel engines at or above 25 hp that meet all of today's Tier 4 emissions standards (NO_x, PM, and NMHC) in the applicable power category. We are also providing this early introduction credit to diesel engines that pull-ahead compliance with only the PM standard. However, a PM-only early engine would offset only the "phase-out" engines during the phase-in years (those required to meet the Tier 4 standard for PM but not for NO_x or NMHC); it would not offset engines required to meet the Tier 4 NO_x, NMHC, and PM standards. Tier 4 engines certified to, or required to meet, the 2008 PM standard would not participate in this program, either as credit generators or as credit users.

An important aspect of the early incentive provision is that it must be done on an engine count basis. That is, a diesel engine meeting new standards early would count as 1.5 such diesel engines later. This contrasts with a provision done on an engine percentage basis which would count one percent of diesel engines early as 1.5 percent of diesel engines later. Basing the incentive on an engine count would alleviate any possible influence of fluctuations in engine sales in different model years.