

TABLE VII.A-2.—ALLOWANCE FOR LIMITED USE OF AN FEL CAP HIGHER THAN THE TIER 4 FEL CAPS

Power category	Model years	Engines al- lowed to have higher FELs	NO _x FEL cap (g/bhp-hr)	PM FEL cap (g/bhp-hr)
25 ≤ hp <75 (19 ≤ kW < 56)	2013–2016 2017+	10 5	Not applicable	0.22.
75 ≤ hp <175 (56 ≤ kW <130)	2012–2013 ^a	10	Not applicable	0.30 for hp <100.
	2014–2015	10	3.3 for hp <100	0.22 for hp ≥100.
	2016+	5	2.8 for hp ≥100	
175 ≤ hp ≤750 (130 ≤ kW ≤ 560)	2011–2013	10	Not applicable	0.15.
	2014	10	2.8	
	2015+	5		
hp >750 (kW > 560)	2014–2017	10	4.6	0.15.
	2018+	5		

^a This period would extend through the first nine months of 2014 under the alternative, reduced phase-in requirement (see Section III.B.1. for a description of the proposed alternative).

We request comment on the proposed provisions to allow higher FELs on a limited number of Tier 4 engines, including whether the proposed allowance limits of 10 percent and 5 percent have been set at the right levels and whether the allowance to use a higher FEL cap is appropriate for the Tier 4 program. We also request comment on allowing manufacturers to use the allowances in a slightly different manner over the first four years. Instead of allowing manufacturers to certify up to ten percent for each of the first four years, manufacturers could certify up to 40 percent of one year's production but spread it out over four years in an unequal manner (e.g., 15 percent in the first and second years, and 5 percent in the third and fourth years). Last of all, we request comment on whether the allowance should be available for NO_x during the years we are proposing a phase-in for the Tier 4 NO_x standards. As proposed, we would not cover NO_x during the phase-in years because manufacturers already can certify up to 50 percent of their engines to the Tier 3 NMHC+NO_x standards.

Under the proposed Tier 4 program, for engines above 75 horsepower there will be two different groups of engines during the phase-in period. In one group, engines would certify to the applicable Tier 3 NMHC+NO_x standard (or Tier 2 standard for engines above 750 horsepower), and would be subject to the ABT restrictions and allowances previously established for those tiers. In the other group, engines would certify to the 0.30 g/bhp-hr NO_x standard, and would be subject to the restrictions and allowances in this proposed program.

While engines in each group are certified to different standards, we are proposing to allow manufacturers to transfer credits across these two groups of engines with the following adjustment. As proposed, manufacturers could use credits generated during the phase-out of engines subject to the Tier 3 NMHC+NO_x standard (or Tier 2 NMHC+NO_x standard for engines above 750 horsepower) to average with engines subject to the 0.30 g/bhp-hr NO_x standard, but these credits will be subject to a 20 percent discount. In other words, each gram of NMHC+NO_x credits from the phase-out engines would be worth 0.8 grams of NO_x credits in the new ABT program. The ability to average credits between the two groups of engines will give manufacturers a greater opportunity to gain experience with the low-NO_x technologies before they are required to meet the final Tier 4 standards across their full production. (The 20 percent discount would also apply to NMHC+NO_x credits generated on less than 75 horsepower engines and used for averaging purposes with the NO_x standards for engines greater than 75 horsepower.)

We are proposing the 20 percent discount for two main reasons. First, the discounting addresses the fact that NMHC reductions can provide substantial NMHC+NO_x credits, which are then treated as though they were NO_x credits. For example, a 2010 model year engine (between 175 and 750 horsepower) emitting at 2.7 g/bhp-hr NO_x and 0.3 g/bhp-hr NMHC meets the 3.0 g/bhp-hr NMHC+NO_x standard in that year, but gains no credits. In 2011,

that engine, equipped with a PM trap to meet the new PM standard, will have very low NMHC emissions because of the trap, an emission reduction already accounted for in our assessment of the air quality benefit of this program. As a result, without substantially redesigning the engine to reduce NO_x or NMHC, the manufacturer could garner a windfall of nearly 0.3 g/bhp-hr of NMHC+NO_x credit for each of these engines produced. (Engines designed at lower NO_x levels than this in 2010 can gain even more credits.) Allowing these NMHC-derived credits to be used undiscounted to offset NO_x emissions on the phase-in engines in 2011 (for which each 0.1 g/bhp-hr of margin can make a huge difference in facilitating the design of engines to meet the 0.30 g/bhp-hr NO_x standard) would be inappropriate. Second, the discounting would work toward providing a net environmental benefit from the ABT program, such that the more that manufacturers use banked and averaged credits, the greater the potential emission reductions overall.

Some foreign engine manufacturers have commented that it is difficult for them to accurately predict the number of engines that eventually end up in the U.S., especially when they sell to a number of different equipment manufacturers who may import equipment. This would make it difficult for the engine manufacturer to ensure they are complying with the proposed NO_x phase-in requirements for engines above 75 horsepower and the proposed PM phase-in requirements for engines above 750 horsepower. Therefore, we are proposing to allow engine