

The agency agrees that the Volpe analysis prepared for the NPRM contained clerical errors and, in some instances, applied and removed technologies without consideration of capital costs. We have remedied the clerical errors in our earlier Volpe analysis, changed our application of technologies to reflect the impact of repaying capital investments and modified the analysis so that the Volpe cost estimates are more nearly based on the technologies, or their equivalents, used by NHTSA in its updated Stage analysis. We have also performed a more traditional analysis of General Motors' projected costs by calculating the total cost of all the projected "Stage" technologies. As we are also using the Volpe methodology to calculate costs for the industry, as well as for General Motors, the Volpe methodology was also changed to reflect that capital costs might require employment of technologies for several years, rather than a single year. As is the case with the Stage analysis, the Volpe analysis was also changed to apply technologies in a manner more consistent with General Motors' projections of its product plans and capabilities. In so doing, we also examined the abilities and plans of the industry as a whole in determining which technologies could reasonably be used. As indicated in our discussion regarding costs, we believe that the Volpe analysis provides an accurate accounting of the potential aggregate costs of this final rule.

After careful review of General Motors' comments, the agency modified its application of both the Stage analysis and the Volpe analysis. One Stage I technology was not applied as widely as it was in the NPRM. A Stage II technology that NHTSA had calculated could be widely introduced in MY 2005 is now being applied in phases in MYs 2006 and 2007. Technologies that were not used in our analysis for the NPRM are now being applied as Stage II technologies. Finally, in regard to Stage III, our analysis no longer relies on General Motors' removing the existing 6.0L engine from some trucks and replacing it with a smaller V-8. As stated above, the possibility that forcing through regulation substantial deviation from product offerings based on projected consumer demand may impose unreasonable constraints on the market leads us to conclude that it is not appropriate to include such engine shifts in the Stage analysis. Nonetheless, market forces may yet independently favor further reassessment of product plans for which there remains adequate lead time.

In addition to these changes in the technologies used and the way they were applied, we also changed our estimates of the improvements we expect to gain from certain technologies. In the case of low rolling resistance tires and low viscosity/low friction lubricants, the agency had previously estimated that these technologies would each yield a .5 percent improvement in fuel economy. In response to criticisms that our values were either too low or too high, we decided to use the NAS mid-range estimates (where available) since they were developed based on extensive study and review. Thus, we adopted a 1.3 percent improvement for low rolling resistance tires, which is the midpoint value projected by the NAS report.

In the case of low friction/low viscosity lubricants, we indicated in the PEA accompanying the CAFE NPRM that these lubricants could yield anywhere from a 0.3 percent to 1.0 percent improvement in fuel economy. However, our calculations for the NPRM relied on a 0.5 percent improvement from low friction/low viscosity lubricants. After consideration of the potential benefits of these lubricants, we now anticipate, as did the NAS, that use of these oils will yield a 1 percent improvement. In addition to changing the estimated returns for the preceding technologies, our analysis also reduced the percentage improvement related to improved cooling fans from 2.4 percent to 2.0 percent.

After correcting errors in our earlier analysis and making other changes as described above, our Stage analysis projects, based on General Motors' most recently submitted product plans, light truck CAFE estimates for that company of 20.96 mpg for MY 2005, 21.56 mpg for MY 2006 and 21.99 mpg for MY 2007. Unlike many previous CAFE rulemakings, we are establishing light truck standards for three consecutive model years. This provides, especially as regards the third model year, MY 2007, additional lead time for companies to develop compliance options not typically available when a standard is set just 18 months prior to a model year. We believe that, although General Motors' current product plans do not project that it will achieve a 22.2 mpg light truck CAFE without further adjustments, that the opportunity and technologies exist to make such adjustments technologically feasible and economically practicable for MY 2007. We note that, while Ford finds the standards "challenging," that company stated that it would make just such adjustments to meet the standards.

Further, the Volpe analysis (while principally a tool to assess costs and benefits) suggests a projection of 22.2 mpg for MY 2007 for General Motors. Rather than address General Motors' product plans on a model-by-model basis, the Volpe analysis estimates the company's projected CAFE capabilities through application of technologies available to the industry as a whole. The Volpe analysis suggests that the Stage analysis may present a conservative projection for MY 2007, given the additional lead time provided for that model year.

Moreover, the CAFE statute does not contemplate that each standard automatically be set at the lowest projected level of the "least capable manufacturer with a significant share of the market." Instead, it contemplates CAFE levels at the maximum level attainable within the industry as a whole without necessitating consequential adverse economic consequences. As noted above, this is the first time since 1980 that the agency has simultaneously established light truck standards for more than two model years. As a result, we believe it to be within the intent of the statute to set more challenging—but still reasonable—CAFE levels during the year(s) furthest in the future.

Indeed, the concept of the "least capable manufacturer with a significant share of the market" was intended to be a surrogate for analyzing whether employment reductions or other adverse economic consequences (including vehicle weight reductions) were necessary to meet the standards. While we have not pointed to particular measures based on current plans and projections that will bring General Motors' MY 2007 CAFE level to 22.2 mpg, that level may be achieved through additional technological improvements and the expansion of hybrid electric, diesel engine or cross-over utility vehicles in the marketplace. External market factors may also impact actual CAFE performance. As a result, we have determined that—for MY 2007, as well as MYs 2005 and 2006—the CAFE standards are technologically feasible, and economically practicable, for the industry as a whole despite being set at a level above the current projections for a company with a substantial share of the light truck market.

2. Ford

Our December 2002 NPRM estimated, based on examination of Ford's product plans and use of the Stage analysis, that Ford could improve its light truck CAFE to 21.0 mpg for MY 2005, 21.6 mpg for MY 2006 and 22.2 mpg for MY 2007.