

performance during the later model years covered by the regulation.

#### 4. Implementation Risks in Forecasted Technological Improvements

General Motors, Ford, DaimlerChrysler and the Alliance suggested that NHTSA must fully account for implementation risks in its forecast of technological improvements and that the proposed standards be lowered to account for the numerous technological and implementation risks that they may encounter. The Alliance stated that the following risks should be included: availability of technology options, cost of technology, level of technology applied, success of each new technology in meeting its targets, range of product offerings, overall economic climate, customer requirements for utility, size, performance, usage patterns, options, powertrains, and the level of new regulations in vehicle safety and emissions. The Alliance also stated that risks cannot be reduced by assuming that an increase in the popularity of crossover vehicles may limit the future sales of full size utility vehicles or that consumers will consider traction control and limited slip differentials as replacements for 4WD in vehicles. DaimlerChrysler stated that NHTSA's projections are based on the highest and riskiest levels of technology and may not be attainable.

General Motors provided specific estimates of suggested CAFE reductions to account for various risks, Ford suggested that NHTSA consider scenarios involving both high and low fuel economy estimates from each manufacturer, and DaimlerChrysler recommended reducing the standards to 20.9 mpg for MY 2005, 21.1 mpg for MY 2006 and 21.5 mpg for MY 2007. DaimlerChrysler stated that its current projected costs to improve fuel economy, taking into account the risks described in its submission to the RFC, are approximately four times higher than those projected by the agency in the NPRM. DaimlerChrysler provided no other analysis or data to support lowering the proposed CAFE standards.

The companies also asserted that their projected CAFE performance tends to be overly optimistic and must often be reduced in light of actual market demand. Public advocates were skeptical of those claims and countered that the industry's tendency to market less fuel efficient vehicles, in lieu of marketing more fuel efficient vehicles, contributes to any discrepancy between projected and actual CAFE performance.

As noted above, we have made adjustments in our technological analysis, where appropriate, to account

for certain technology risks and included into our analysis additional lead time.

The agency has at times included in its assessment of maximum feasible a "risk factor" to account for unforeseen external factors that may render reasonable efforts to comply inadequate to meet the standards. This was done, for example, when establishing light truck CAFE standards for MY 1995 and reducing passenger car standards for MYs 1987–88. When faced with the necessity of lowering the statutorily established CAFE standard for passenger cars, the agency concluded that the risk that manufacturers would be forced to restrict product offerings to meet more challenging standards outweighed the risk that manufacturers could develop means to outperform the established CAFE level. The agency acted to adjust the passenger car standard just prior to the start of the 1987 model year and about a year before the advent of the 1988 model year, noting that as of that time the record showed that manufacturers had made good faith, but unsuccessful, compliance efforts.

We do not believe the same type of "risk factor" is appropriate to apply to this rulemaking. While we recognize that the standard set for MY 2007 is an aggressive one in light of General Motor's current product plans, we also believe that technological advancements, market acceptance of hybrids and modern diesels, and other external factors could alter General Motor's relative position. Unlike the situation in the late 1980s, which included a risk factor when no lead time was possible, there remains sufficient lead time for a manufacturer whose current product plan may not yet project compliance to develop product offerings to enhance their currently projected CAFE performance. In addition, unlike any time in the past, the market is beginning to include vehicles with advanced technologies including hybrid electric and advanced diesel engines that are more fuel-efficient and that do not adversely affect safety or American jobs.

Accordingly, unlike the situation presented to the agency in the late 1980s, current conditions and contingencies lead us to conclude that the potential harm of setting the light truck CAFE standard too low for MYs 2005–2007 outweighs the risk of setting it too high. As noted above, the agency intends to examine the manufacturers' pre and mid-model year fuel economy reports filed with NHTSA through December 2004 and current market information, and consider the

reasonableness of the efforts made by the manufacturers after this final rule to meet the MY 2007 standard. If appropriate, the agency could adjust the standard upward or downward.

#### 5. Use of Weight Reduction To Meet Proposed Standards

The Alliance, General Motors, Competitive Enterprise Institute, Insurance Institute for Highway Safety, and Lutter and Kravitz commented that manufacturers may reduce vehicle weight in response to the standards and that doing so would have negative safety implications. Competitive Enterprise Institute argued that the historical fact is that vehicle manufacturers tend to respond to CAFE standards by reducing the size of their fleets. Competitive Enterprise Institute also argued that higher CAFE standards would likely encourage sales of the smaller, less crashworthy SUVs at the expense of the larger, safest SUVs. In addition, that organization argued that higher CAFE standards would diminish the ongoing market trend toward larger, safer SUVs; that is, such standards would reduce or eliminate future upsizing. That organization stated that the agency's proposal fails to acknowledge or analyze these effects.

American Honda Motor Co., Inc. (Honda), Environmental Defense, Union of Concerned Scientists, American Council for an Energy-Efficient Economy, and Center for Auto Safety argued that weight reduction is an important fuel economy strategy that may not have negative net safety implications, if it were limited to the largest and heaviest light trucks. The Sierra Club disagreed with the assumption that weight and safety are always inversely related and with the NAS report's conclusions about the safety impact of the current standards. It also commented that safety is a function of design, not size. Similarly, Environmental Defense argued that the NAS report and agency studies treat weight as the only vehicle attribute affecting safety and do not account for size, crashworthiness, compatibility and the general quality of the vehicle structure and its safety features. That organization and Public Citizen further argued that agency studies are unable to distinguish between the effects of vehicle weight and vehicle size. Public Citizen argued that any safety problem associated with changes in the fleet of light vehicles was largely due to increases in the overall divergence in vehicle weight within the light vehicle fleet caused by the growth in the number of light trucks and to the rollover proneness of light trucks.