

current CAFE system than under a Japanese-style, weight-based standard because the compliance incentive to “upsized” from cars to light trucks is quite large (27.5 mpg versus 20.7 mpg in model year 2004) now and would be lessened by the creation of multiple classes of light trucks.

Although the Japanese system uses vehicle weight as the key attribute, a measure of vehicle size, such as “shadow” (defined as exterior length multiplied by vehicle width), warrants further examination. A size-based standard would reduce or eliminate any incentive to downsize vehicles, thus contributing to safety. Vehicle width contributes to a vehicle’s stability (thereby reducing rollover risk) while vehicle length provides “crush space” for occupant protection. However, the empirical relationships between size and safety are less well known than the relationships between weight and safety. We seek further comments on the relative merits of a size versus weight-based approach.

A key question for attribute-based class systems is whether a manufacturer should be permitted to count superior fuel economy in one class to compensate for less-than-required fuel economy in another class. The EPCA does not directly address this issue, and the legislative history with regard to it is ambiguous. The EPCA conference committee report suggests (at p. 159) that Congress either intended that credit trading be disallowed between passenger automobiles and non-passenger automobiles or that it be disallowed between established classes of non-passenger automobiles:

“Any credit earned under this provision by exceeding an average fuel economy standard applicable to passenger automobiles may only be applied against a civil penalty assessed for failure to comply with an average fuel economy standard applicable to passenger automobiles. With respect to non-passenger automobiles, any credit earned under this provision may only be applied to automobiles of the same class for which the credit was earned.

The reference to “the same class” may imply a Congressional intent to limit credits to the particular class of non-passenger automobiles. The statute itself, however, appears to use the term more precisely to distinguish between passenger automobiles and non-passenger automobiles. Section 32903(e) states that:

Credits for a manufacturer of automobiles that are not passenger automobiles are earned and applied to a model year in which the average fuel economy of that class of automobiles is below the applicable average fuel economy standard under section

32902(a) of this title, to the same extent and in the same way as provided in this section for passenger automobiles.

The phrase “that class of automobiles” appears to refer to those that are not passenger automobiles, rather than to different classes of non-passenger automobiles.

When enacted in the 1970s, the EPCA anticipated averaging among classes, or 1-to-1 credit averaging. More recent credit trading constructs, however, may advance the goals of the EPCA in ways not directly anticipated during that time. For example, a credit system like the one employed by the Japanese could advance the energy conservation objectives of the statute (by encouraging over-compliance due to the 2-to-1 ratio in credits), while providing valuable compliance flexibility to vehicle manufacturers.

Proponents of discounting credits, such as the Japanese averaging system described above, argue that discounts are beneficial because they guarantee greater fuel savings than would occur without discounting. In the Japanese example, only half the fuel economy in excess of a standard may be used to offset vehicles that would not otherwise meet the standard. The remaining half would effectively be applied to greater fuel economy. As a consequence, to the extent that manufacturers make use of averaging, the overall level of fuel economy they achieve will be greater with discounts than without, other things equal.

Opponents of discounting point out that discounting effectively functions as a tax on averaging. As such, it will reduce the amount of averaging that would otherwise take place and diminish the cost savings that averaging could provide. The magnitude of the deterrent effect of a discount is directly related to its magnitude.

The general trend in Federal averaging programs in environmental regulation is away from discounting credits. For example, the Environmental Protection Agency typically mandates discounts on averaging and trading programs only in special cases, such as to account for uncertainties in how credits are calculated or enforced. Comments on the merits of different options for averaging across vehicle classes, as well as comments on whether NHTSA has the statutory authority to consider such options, are requested.

Below we discuss in more detail a range of different attribute-based standards. We seek comment on each system presented with regard to practical considerations, such as lead-time, potential approaches to a phase-in and the treatment of credits and

penalties during a transition period. We seek comment on potential ideas that would discourage or preclude the possibility of manufacturers’ increasing the weight and size of their vehicles under each system, which could actually lower fleet fuel economy and—if concentrated at the high end—have negative safety implications. We also seek comments on whether other measures of vehicle utility, such as payload capacity, interior volume, number of designated seating positions, towing capacity, etc., could be utilized as attributes, and how each of these systems would possibly operate.

#### *A. Two or More Classes of Light Trucks*

With the exception of different standards for 2-wheel vs. 4-wheel drive trucks, to date the agency has not attempted to create differing classes of light trucks. The creation of two or more light truck classes might have many benefits. The use of multiple classes might allow standards to better reflect the fuel economy potential of different vehicle types. Minivans, for example, tend to have greater fuel economy than SUVs, and many SUVs have greater fuel economy than pickup trucks. A system with multiple light truck classes could distinguish between these types of vehicles and more closely align them with their real-world use and performance.

One possible approach would be to divide light trucks into two weight or size classes, one above and one below the vehicle weight identified in NHTSA’s updated size and safety study as the point where weight reductions begin to produce fleet-wide or net safety benefits. The light trucks having an attribute that is above this weight “break point” (or a comparable size “break point” derived from the weight “break point”) would be subjected to a relatively more challenging (but still feasible and practicable) fuel economy standard than the other class of trucks. This would provide some incentive to downweight or downsize these larger vehicles to improve their fuel economy, and as a result, may improve the overall safety of the light vehicle fleet. This approach would appear to achieve some of the same objectives as the continuous function weight-based system suggested by the NAS committee.

In determining possible classes under a weight-based or a size-based system, an analysis was performed to attempt to identify analogous classes under both systems. This analysis attempted to identify a logical safety plateau for size that coincides with the weight safety plateau in a two-class system. The results show a good correlation between