PEER REVIEW CHARGE

CAFE COMPLIANCE AND EFFECTS MODELING SYSTEM

The National Highway Traffic Safety Administration (NHTSA), with technical support from the Volpe National Transportation System Center, has completed a draft version of the CAFE Compliance and Effects Modeling System with supporting documentation. The system was developed to conduct analysis for rulemakings addressing CAFE reform and for setting standards for model year (MY) 2008 light trucks.

The model supports a continuing effort by the Department of Transportation to establish a CAFE regulatory program that achieves higher fuel savings without adverse safety and economic consequences. The system is a tool used to predict the application of efficiency-increasing technologies to specific vehicle models in response to changes in CAFE standards, and to calculate resultant CAFE levels among vehicle manufacturers.

Task

The peer review charge is to highlight potential changes in methods, data, and assumptions that could enhance the model.

Specific Charge Questions

Individually and as a panel member, the reviewer is requested to focus on the technical questions listed below. The individual letter report does not have to contain answers to each question, but rather, should address the particular expertise of the reviewer. Answers to these questions may entail suggestions for revisions or changes. NHTSA will make every attempt to incorporate suggested changes, but will not initiate a second review.

<u>Compliance Simulation and Technology Application</u>

1. Please comment on the "engineering conditions" that we employed (Table 3 in documentation) to constrain the applicability of various technologies.

2. Please review and comment on the logic (Figure 3, Figure 4, and surrounding text in documentation) we have developed to simulate the application of technologies in response to CAFE standards.

3. Please review and comment on our input assumptions (Table C-5 and similar) regarding the applicability, cost, and effectiveness of different technologies.

4. Have we thoroughly represented specific technologies? Have we omitted technologies that we should include, or are there others currently included that we should omit? If additional technologies are suggested, what input assumptions should we make regarding applicability, cost, and effectiveness, and what "engineering constraints" should we apply?

<u>Cost Allocation</u>

5. Please review and comment on the cost allocation strategies employed. Have we omitted any cost allocation strategies that should be included?

Effects Calculations

6. Are the vehicle survival and use assumptions employed, developed by EPA for use in its MOBILE 6 vehicle emission factor model, the most appropriate to analyze various effects of stricter CAFE standards, or is more reliable information available?

7. We currently account for the difference between laboratory and on-road fuel economy using a single estimate of on-road mileage shortfall for all vehicle classes and fuel types. Should we attempt to identify estimates of this difference that vary among vehicle types or technologies?

8. Please comment on the appropriateness of our input assumptions regarding the following social costs of fuel production and driving: petroleum market externalities, congestion, noise, and accidents. Please identify any estimates of these costs that you feel would be more appropriate to use in assessing the economic benefits from reducing fuel production and use or the economic costs of additional driving.