



Department of Energy

Washington, DC 20585

MAR 17 2803

Dr. John D. Graham, Ph.D.
Administrator
Office of Information and Regulatory Affairs
Executive Office of the President
Office of Management and Budget
Washington, D.C. 20503

Dear Dr. Graham:

Thank you for your letter of February 24, 2003, and your interest in the National Energy Modeling System (NEMS). The Energy Information Administration (EIA) takes its responsibility as an unbiased, independent source of energy data and analysis seriously. We are always interested in customer feedback and suggestions for improving our models and forecasts. We review **and** monitor changes in energy markets continually, updating our models each year to reflect changes in technological improvement and consumer behavior for all energy markets.

No energy or economic model can perfectly reflect human behavior and decision making. This is certainly true for transportation modeling, where an aggregation of vehicle types and attributes are necessary. We believe, however, that the transportation model in NEMS is at the forefront of energy transportation models in its ability to capture the market potential for new vehicle technologies, including full and mild hybrid-electric and diesel-powered vehicles. And, we believe the model is well-based to represent market forces and the known or proposed policy developments that might occur over the next 20 years.

Your letter expresses concern that EIA forecasts indicate that hybrid electric and diesel vehicles will have limited penetration in the passenger vehicle market over the next 20 years. In fact, the *Annual Energy Outlook 2003* projects that almost 12 percent of new vehicle sales in 2025 will be either mild or full hybrid-electric vehicles and that 4 percent will be diesel-powered vehicles.

The NEMS transportation model represents all transportation technologies currently planned or envisioned. Technological characterizations are reviewed with experts annually. NEMS represents four manufacturing groups (domestic and import cars and light trucks), six size classes each for cars and light trucks, and 16 vehicle types, including diesel-powered **and** full hybrid-electric vehicles. These 16 vehicle types are established from 63 vehicle subsystem technologies that include **4** hybrid technologies,



including regenerative braking and integrated starter generator (ISG), which allows for “idle off” operation of the primary vehicle engine. Conventional or diesel vehicles can incorporate regenerative braking and ISG without being classified as hybrids. The model, of course, will not include these subsystem features on a vehicle that already has them, such as a full hybrid.

Along with incorporating the mild hybrid technologies into NEMS for the *Annual Energy Outlook* 2003, EIA also updated all cost and performance data for these 63 subsystem technologies, and incorporated the latest data **and** market trends for the commercial fleet market. We represent technological improvement in the model through cost reductions and efficiency and horsepower improvements due to engineering and manufacturing improvements. These improvements are responsive to fuel price increases.

The NEMS model also recognizes that the U.S market is vastly different from the European and Japanese markets due to large gasoline taxes in Europe and Japan and significant diesel subsidies in some European countries, as well as varying environmental standards. **As** a result of these differences, higher efficiency levels are achieved without the need for CAFÉ standards in Europe and Japan. These price inducements to change consumer behavior are not part of the U.S. vehicle market.

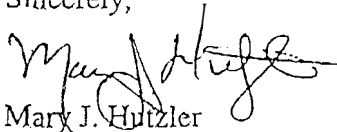
Because virtually all technologies and their associated markets, including those for hybrid and diesel technologies, are evolving, we are co-funding a study with other offices in the Department of Energy to examine technical issues and potential market impacts of these vehicles and we are requesting an extensive industry review of our subsystem technology data by auto manufacturers and their supporting subsystem suppliers. This is in addition to our briefings and discussions with auto manufacturers that we conduct annually to ensure that our transportation model is relevant, credible, and of high quality. These projects will be used to update both our manufacturer technology choice and our consumer vehicle choice models.

Regarding regulatory developments, all commercial technologies are available to manufacturers to satisfy a CAFÉ standard on an economic basis in NEMS. Your concern that NEMS assumes that vehicle manufacturers will use only “conventional technologies” to comply with Corporate Average Fuel Economy (CAFÉ) standards is therefore unfounded. The NEMS model is already configured to represent consumer tax credits and we welcome any requests from you to analyze CAFÉ standards or tax credits within the transportation sector.

The NEMS model is fully compliant with OMB and DOE information quality guidelines. EIA has employed quality standards throughout its existence and our model assumptions and methodology are fully documented **and** updated annually as required by those standards. The transparency of our modeling systems through their detailed documentation of assumptions and methodology and our outreach and quality control activities including our annual conference, our Government working groups, our independent expert reviews, and our focus groups all help to ensure that we are providing policymakers and the public with the highest quality forecasts and analyses.

Thank you again in your interest in our modeling and analysis work. Hopefully, the information provided above has fully addressed the concerns raised in your February 24, 2003, letter. Please do not hesitate to contact me should you have further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Mary J. Hutzler". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mary J. Hutzler

Director, Office of Integrated Analysis
and Forecasting
Energy Information Administration



Department of Energy
Energy Information Administration
Office of Integrated Analysis and Forecasting

TELEFAX TRANSMISSION

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NUMBER OF PAGES TRANSMITTED INCLUDING COVER SHEET: 4

PLEASE CALL 202-586-2222 IF YOU HAVE TROUBLE RECEIVING TRANSMISSION

FROM: Mary Hutzler

MESSAGE