

Composites Offer Relief at the Pump

By John Busel

*Automotive Composites Alliance
benchmark study targets hybrids*



As Americans grimace at the gas pump, policy makers and engineers pursue solutions that would lower gasoline prices by reducing demand. One time-honored solution as old as the 1973 oil crisis is to make lighter weight cars and trucks. Automotive engineers refer to the weight loss tactic as “mass reduction.” Composite raw material suppliers and automotive component and systems manufacturers call it “opportunity.”

In response to fuel shortages, the U.S. government issued its first mandated “CAFE” standards for motor vehicles in 1975. CAFE stands for Corporate Average Fuel Economy and requires that the average fuel efficiency of all products sold by a motor vehicle manufacturer not exceed a specified miles-per-gallon ceiling.

The latest incarnation of CAFE standards is woven into the Energy Independence and Security

Act of 2007, which was signed into law last December. In addition to making transportation more economical, the law is designed to reduce U.S. dependency on foreign oil and reduce the emissions of greenhouse gases.

A key provision of the act requires manufacturers of cars and light trucks to achieve an average fleetwide efficiency of 35 miles per gallon by 2020. In the complex 21st century, stricter CAFE standards are part of a much bigger energy picture that includes renewable fuels and nontraditional automotive power plants, such as hybrid propulsion. To put a much sharper focus on composites within this bigger picture, the Automotive Composites Alliance commissioned a detailed benchmark study on composites for hybrid vehicles. (The Alliance operates as part of American Composites Manufacturers Association.) ➤