What Did the National Academy of Sciences Really Say on Fuel Economy and Safety?

The 2002 study by the National Research Council of the National Academy of Sciences (NAS) found that increasing light truck fuel economy would *improve* — not harm — safety.

> **Finding 13:** "Any adverse safety impact [of fuel economy standards] could be minimized, or even reversed, if weight and size reductions were limited to heavier vehicles (≤ 4000 lbs.). Larger vehicles would be less damaging (aggressive) in crashes with all other vehicles and thus pose less risk to other drivers on the road."

What we know: All peer reviewers agreed with this conclusion that the *future* design of CAFE standards, if directed at light trucks, would yield safety benefits.

The reason? *Disparities* among vehicles cause devastating crashes between cars and SUVs. *Any convergence in vehicle weight from better fuel economy standards actually improves safety.*

What was in dispute: Members of the panel disagreed about a study purporting to describe the *historical* effects of CAFE upon safety. Two members of the panel wrote a detailed, strongly worded dissent on that issue alone, to spell out their objections.

The Dissent Was Right: NAS Majority's Conclusions Relied on Unsound Science

The NAS majority relied on a deeply flawed and unscientific study by researcher Charles Kahane, in which Kahane applied a *totally hypothetical formula to measure the effect of reducing all vehicles on the road by 100 lbs., shrinking the vehicle's frame to match his weight reductions.*

The hitch? **This never happened.**

- **Eighty-five percent of gains in fuel economy came from technologies with no impact on vehicle weight or size.** As to the other 15 percent, while the heaviest vehicles in the fleet lost roughly 1000 lbs., manufacturers did not reduce the weight or safety of lighter cars: the Honda Civic gained 800 pounds and went from failing NHTSA's crash tests to the best possible rating – 5 stars. The Ford Pinto and Chevrolet Chevette, notably unsafe vehicles, were replaced by the safer Ford Escort and Chevy Nova. **Because automakers got more fuel savings from reducing the weights in the heaviest cars, it was cost-effective to target those first, and the number of the very lightest cars that were produced actually decreased.**
- Kahane's study also confuses the effects of vehicle *size* and the effects of vehicle *weight*, producing distorted results. A 2002 study by Dynamic Research, Inc., for Honda, applied these methods to more recent data, finding that **fuel economy standards did not harm safety.**
- **The key to safety is not weight, but good design.** In fact, across many measures of safety, gas-guzzling SUVs are the worst safety performers, proving that consumers don't have to choose between a safe vehicle and a fuel-efficient one. **Detroit can, and should, do better.**