



## 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 ( $\leq 4000$  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.**