

I've posted previously about the rebound effect. Improving energy efficiency frees up money, which can be used to purchase more of the same product or different products that use energy. This "rebound" cuts away at the energy savings and correspondingly at the carbon reduction achieved through energy efficiency. Everyone seems to agree that the rebound effect is real; the big dispute is over its size and significance. Blake Hudson pointed me toward a [new study](#) of the issue on CO2 Scoreboard that concludes that critics of energy efficiency have exaggerated the extent of rebound.

Economists are fond of paradoxical arguments, like the rebound effect or the [claim](#) that safer cars cause more deaths. (I'm not making up the auto safety claim.) Sometimes economists seem to be living in a kind of Bizarro World, where the best way to accomplish any goal is always to do the opposite. Making these claims takes a certain ingenuity, because there's nearly always some feedback effect that tends to push back against the direct effects of a policy. There are also feedback effects that strengthen the impact of a policy, but those are less fun to point out. For instance, energy efficiency makes people better off economically, and the [environmental Kuznets Curve](#) holds that more affluence produces greater demand for pollution regulation, which will result in less use of dirty fuels such as coal and thereby cut carbon emissions.

The big issue is the size of the feedback effect, and that's very difficult to establish empirically. The problem is that determining the effect of an event such as a policy or technological change requires holding everything else constant. Since other things rarely are constant, an empirical study has to estimate what would have happened in a world in which everything except the policy change was the same. Not easy to do!

I'd like to suggest the relevance of two economic axioms to this debate. One is familiar: *there's no free lunch*. Even something as seemingly desirable as improved energy efficiency does not come without some price. The other is less familiar (because I just made it up): *you can't lose weight by eating more*. Call that the "no miracle diet" rule. This means that the direct effects of an action are rarely completely negated or reversed by feedback effects. Rarely does not mean never, but there's a strong burden of proof on anyone who wants to argue for such exceptionally strong feedback. In the case of energy efficiency, that means that the presumption should be in favor of the common sense conclusion: greater energy efficiency means less energy use.