

Mother Jones

Cooling the Planet for Free

— By [Kevin Drum](#) | Wed August 12, 2009 10:17 AM PST

"Why do we tune up our cars but not our far more complex buildings?" asks Evan Mills, a scientist at the Lawrence Berkeley National Laboratory. He's talking about "commissioning," a basket of techniques for increasing the energy efficiency of buildings:



Energy-wasting deficiencies are almost always invisible to the casual observer, and unfortunately also to building designers, operators, and owners.

Commissioning is not a widgeit or "retrofit"; it is an integrated quality-assurance practice.

...Back in 2004, the U.S. Department of Energy asked my team at Lawrence Berkeley National Lab to build a national database of commissioning experience....The results are compelling. The median normalized cost to deliver commissioning was \$0.30/ft² for existing buildings and \$1.16/ft² for new construction....Correcting these problems resulted in 16% median *whole-building* energy savings in existing buildings and 13% in new construction, with payback times of 1.1 years and 4.2 years, respectively.

...Applying our median whole-building energy-savings value (certainly far short of best practices) to the U.S. non-residential building stock corresponds to an annual energy-savings potential of \$30 billion by the year 2030, which in turn yields greenhouse gas emissions reductions of about 340 megatons of CO₂ each year.

In other words, this is a way of reducing greenhouse emissions significantly — and it's not just free, it *saves* money. It's a no-brainer, and it's the kind of thing that will become more widespread if the Waxman-Markey climate bill passes.

It's also why the cost of Waxman-Markey, despite the pronouncements of the doomsayers, is likely to be close to zero. The CO₂ goals in W-M are actually fairly modest (a 17% decrease from 2005 levels by 2020), and commissioning could provide upwards of a thirds of that at no cost. Other technologies have similar paybacks, and the net result is that we can almost certainly achieve a 17% reduction at a net cost that's very, very small. Things gets tougher after 2020, but that's also the point at which W-M has provided several years of incentives to develop green technologies that will make further cutbacks considerably less painful than they would be today. Warts and all, that's why Waxman-Markey needs to pass.