

Stanford-industry study says deeper emission cuts will take more than efficiency

Saqib Rahim, Environment & Energy Publishing, 4-4-11

Environmentalists have said it before: "It's not the miles per gallon, it's the gallons."

Now that argument has support from a study Stanford University released last week -- a study co-written by major energy corporations and partly funded by the oil majors.

The troupe of researchers expects that carbon intensity -- the amount of carbon dioxide emissions occurring with each dollar of gross domestic product -- will stay relatively flat for the next 20 years, even without new energy or climate policies.

Reaching larger carbon cuts, up to 50 percent below 2005 levels by 2030, will take more aggressive action: a policy that doesn't just cut energy use, but also cuts carbon emissions in absolute terms.

The point may seem quaint, especially because Congress is not considering a price on carbon, and current greenhouse gas rules under U.S. EPA mainly call for energy-efficient technologies.

Yet the Stanford team included researchers from the Department of Energy, General Electric Co., the American Petroleum Institute, Southern Co. and the Environmental Defense Fund. All will be players in whatever energy policy forms on Capitol Hill.

The study's sponsors included BP America, Chevron Corp. and Exxon Mobil Corp., as well as DOE and EPA.

The paper looked at a few different policies to try to get significant carbon cuts. One was a \$30 price per ton of CO₂, starting in 2010 and rising to \$80 by 2030.

In that scenario, the research found, the economy would keep growing, but energy efficiency would only be a bit player in the carbon cuts. Energy intensity, the amount of energy needed to produce a dollar of GDP, would drop no more than 10 percent.

Hill Huntington, who directs the Energy Modeling Forum at Stanford and co-authored the study, said energy efficiency can't deliver the whole climate solution partly because coal plants can only be cleaned up so much.

Human behavior is another limitation: If people don't face a carbon constraint, they may just spend their energy savings on other carbon-intensive activities -- the so-called "rebound" effect. And humans have also shown that there's a gap between what an energy-efficient gadget can do and how people use it.

Skip Laitner, director of economic and social analysis at the American Council for an Energy-Efficient Economy, said one approach is to change the sales pitch. Instead of trying to get people to buy energy-efficient technology and hoping they'll use it efficiently, he's turning his research toward the way people think -- and how they can be persuaded.

He's also working on a paper suggesting that with the right efficiency investments and incentives, the U.S. economy could double or triple in 2050 -- even as energy use stays put.