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Open Forum

Subsidies are the wrong road to biofuels

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Ethanol and other biofuels allow us to use solar energy (collected by plants or even salvaged from trash) instead of fossil fuels just by mixing them with the gasoline and diesel we already use. There is a lot to be said for them, and the government is right to encourage their use. Unfortunately, the package of policies for these promising technologies is enough to drive a reasonable person to the ethanol (liquor) cabinet.

The main pieces of this policy are a flat subsidy of 51 cents per gallon of ethanol used in fuel (about a third of what it costs to make), a mandate to use 7.5 billion gallons of biofuels a year nationally by 2012, and a 50 cents or \$1-a-gallon subsidy for biodiesel. A whole forest of more specific and obscure programs provide (for only one example) accelerated depreciation for biomass electric-generating equipment, which means tax savings, and another set of rules forces automakers to sell vehicles that use less fuel altogether. These are piled on top of farm and import policies that prevent the Brazilians from selling us sugar-cane ethanol (that they are very good at making very cheap), and distort the behavior of U.S. farmers of every large crop. It's a lunatic salad of ill-designed, inefficient and uncoordinated giveaways.

What's wrong with this approach? Almost everything, except that it does vaguely push us toward more responsible energy use. The first problem is that an ethanol subsidy (for example) makes this chemical cheap, no matter how it's made. Among the most important things my colleagues and I have found in studying ethanol is that its benefits for the planet (reduced global warming) and the nation (reduced dependence on imported petroleum) depend a lot on how it is made, and what it is made of. (If you want to know more, go to rael.berkeley.edu/ebamm.)

For several years, U.S. ethanol will be made almost entirely from corn kernels. Going about it the wrong way -- for example, growing corn with lots of chemicals and fertilizer and bad tillage practice that damages the soil, trucking it to a faraway ethanol plant and processing it with coal -- is about as bad as just burning gasoline in your car. Use good agricultural practices and an efficient production plant -- for example, located next to a feedlot, where the cattle can eat the byproducts without having to dry the material and their waste generates methane to run the plant -- and it's quite a green fuel. It's profoundly wasteful to pay the same subsidy for both of these, and when ethanol made from household trash and whole-plant material (so-called cellulosic, which will probably be exceptionally environmentally friendly) becomes economical, it will be even more absurd to subsidize ethanol made from corn.

Another problem with subsidies, even if they discriminate good ethanol from better ethanol, is that they simply misinform us about the cost of our behavior.

Driving your car with a gallon of ethanol doesn't do 50 cents worth of good for society, it just

does less damage than driving it with gasoline. The subsidy certainly does a lot of good for the folks who sell ethanol, especially agribusiness giants, such as Archer Daniels Midland, who are nicely situated to lobby Congress for more subsidies. Most people think it is wrong for the government to lie to its citizens, but there's no other way to portray ethanol subsidies: Your government, by distorting the price you pay so it doesn't reflect real costs, is lying to you.

What really hurts everyone else is for you to burn a pound of carbon from fossil fuels, period. If only because there isn't corn-growing land enough in the country to replace more than a quarter of the gasoline we use, we will still be putting greenhouse gas into the air when the ethanol fad tops out.

What we should be doing, instead of the current incredibly complex and ill-targeted package of subsidy programs, is to charge for using the Earth's limited ability to accept carbon dioxide in the air. A carbon charge (which analysts say should increase gas prices anywhere from a nickel to as much as \$1.50 a gallon) would make gasoline, oil, coal and natural gas reflect their true cost. It would make ethanol or biodiesel much more expensive if manufactured with coal, and somewhat more if manufactured with natural gas, than those fuels made with minimal fossil fuels -- which is how it should be. And it would set in motion a cascade of adjustments through the economy that wouldn't have to be coercive (like the current federal fuel economy standards for cars) and wouldn't have the very expensive errors inevitable with subsidies and regulations.

Until we do this, we will weave an ever-more-complicated and tangled patchwork of intrusive government. To see how complicated, look at the Governor's Climate Action Team Report from March: www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF

I specifically haven't called this a carbon tax because it shouldn't be thought of that way. It's not a revenue-raising device, and we shouldn't get accustomed to spending the revenues it raises as it rolls in. Instead, it should be distributed very mechanically back to citizens in a way that isn't affected by their use of fuels; perhaps by a refund check mailed to everyone every year, or a deposit made directly to the Social Security Trust Fund, displacing payroll taxes. We'll have, as a society, just as much money to spend, but the price of everything will quietly but honestly go up or down to signal what you're doing to the planet by using different fuels (and things made with different fuels). People who find ways to burn less carbon will be better off, people who don't, will not. That's rational policy, fair policy and a policy people can understand and vote on.

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