When you try to reduce use of fossil fuels in one place, you can actually increase emissions elsewhere, because some of the same fuels may just move to another country. In a sense, the carbon that used to be emitted in your country has "leaked" outside your borders. This is a well-known headache for climate policies. But it's an equal problem in reverse for Trump's policies — the solar panels or windmills that aren't sold in the U.S. can just pop up elsewhere.

The idea is pretty simple: If you work hard enough at it, maybe you can prop up the domestic buggy-whip industry through subsidies or by suppressing automobiles. But in doing so, you make the global price for cars cheaper, thus increasing global demand, and you increase the price of buggy whips, hurting your export market. The same is true for energy markets.

To be sure, the Trump Administration is doing its level best to put the squeeze on renewable energy and prop up the market for coal. It's not only willing to cut regulations to do this, at the expense of public health, but also to tamper with the supposedly sacred free market. Two recent examples are Energy Secretary Perry's order that FERC find some way to keep uneconomical coal plants in operation and the pending possibility of punitive tariffs against Chinese solar panels. These may have a domestic impact on energy use but have much less impact on the coal industry, as I'll explain.

Let's start with the possible tariff on solar panels. If it goes into effect, it will hurt a lot of people who work on the U.S. retail side. But if the Chinese can't dump solar panels here, they can still sell those same panels in other countries. They may or may not want to produce quite as many of them, because they might have to cut their prices in order to expand sales elsewhere. But at least a share of the panels will end up being sold in India, Europe, and elsewhere. This means the effect on CO2 emissions will be muted: they will go up in the U.S. but down elsewhere. It also means that any boost to the U.S. coal industry will also be muted. Greater use of solar abroad will reduce demand for coal elsewhere, and hence U.S. exports.

Much the same is true of Perry's demand that consumers pay higher electricity prices to subsidize coal plants. (If a Democratic Administration did this, wouldn't the GOP call it a hidden tax increase?) If it isn't thrown out by the courts and actually works, there will be less wind and solar power used in the U.S. But again there will be more use of these renewables abroad, and less use of coal than there would be otherwise (since the increased demand in the U.S. puts upward pressure on world coal prices). Perry's plan is a way to keep obsolete power plants in operation, but less effective as a way of keeping the coal industry healthy. To go back to the previous analogy, if you work hard enough at it, maybe

you can support the domestic buggy-whip industry by suppressing automobiles, but only by hurting your car exports and redirecting the cars you used to import to other countries. These effects would be less serious if other countries weren't moving toward renewables, but the global trend is actually for less coal and more renewables.

This is really the flip side of an argument industry often makes — for instance, that reducing oil production offshore won't affect global carbon, because the oil will still be produced somewhere else. The same thing applies to solar — if we try to eliminate solar panels, the panels will pop up in other countries. Indeed, if the industry were right that reducing production of oil in one place is perfectly balanced by expansions in other places, the same would be true for the reverse situation: increasing production in one place just reduces production somewhere else.

I said earlier that leakage was "at least" as much of a problem for fossil fuel promoting policies as for carbon reduction policies. I think it's actually *more* of a problem, for two reasons. First, wind and solar have more room for achieving economies of scale and technological improvements. So policies promoting them can actually move the cost curve, and as their costs come down, that also promotes adoption of the technologies elsewhere. That's not true for fossil-fuel power plants. Second, leakage can be reduced if other countries adopt similar policies. There's a world movement to reduce carbon; there's no world movement to boost the use of coal. For both reasons, Trump's efforts to promote fossil fuels in the U.S. are likely to experience stronger countervailing shifts in foreign markets, undercutting Trump's goals.

Politics complicates the picture in other ways. For instance, Trump's efforts to undermine renewables might actually lead some other countries to do more to promote renewables, just because they don't like Trump. Moreover, in terms of solar panels, the Chinese might retaliate by putting a tariff on U.S. products, hurting our economy but possibly reducing our energy use and carbon emissions at the same time.

I wish this meant that Trump's efforts will be entirely unsuccessful, but that's unlikely. Leakage is rarely 100% -though it might be for solar panels if the Chinese are determined enough to dump them in other countries. Trump's efforts will have some effect on encouraging the growth of renewables outside the country (and thereby reducing the market for U.S. coal), but probably not enough to completely offset the harmful effects in the U.S. Still, he won't achieve as much of an effect as he's hoping and the rest of us fear.