application

The cost of the black-liquor loophole

A recent example of an (accidental) subsidy gone awry is the so-called black-liquor loophole in the law that gave companies tax credits for using alternative fuels. The tax credit is given to businesses that combine alternative fuels with traditional fossil fuels used in their operations, with the idea of encouraging companies to reduce their fossil fuel use in doing so.

It turns out that there is a chemical by-product of paper making called "black liquor" that paper companies have traditionally recycled to use as fuel in their plants. The government determined that this chemical qualified as an alternative fuel under the definition in the law. However, the paper companies couldn't qualify for the tax credit unless they **combined** the alternative fuel with a fossil fuel. So they started adding a bit of diesel fuel—a fossil fuel they weren't using at all before—to the black liquor before burning it. This led to two results. First, paper companies used more diesel than they did before, even though the point of the tax credit was to encourage movement away from use of fossil fuels. Second, paper companies got paid (in the form of tax credits) to burn the black liquor they were already using without payment. They got paid a lot too: This tax credit, originally projected to cost the government $61 million, ended up costing an estimated $6 to $8 **billion** in tax credits in 2009, almost all of it going to paper companies.

How does our analysis in this section explain what happened? The tax credit became, in practice, a diesel subsidy for the paper industry. By tying the credit to the use of blended fuels, it lowered the effective price of diesel that the paper companies faced. Before, when they had to pay the market price, their quantity demanded for diesel to fuel their plants was zero—they had a plentiful and cheap alternative in the black liquor. But now every gallon of diesel they bought came with a big tax credit attached—meaning they faced a downward-shifted supply curve for diesel. The quantity of diesel they demanded at these lower supply prices became positive.

As a result of this policy, the paper companies and the diesel sellers are better off because of the subsidy. (The former very much so in this case.) But the costs are large. First, there is deadweight loss: An industry that wasn't using diesel before because it had a superior alternative now demands it, even though the industry values it at less than the cost of supplying it. Second, the government has to pay the subsidy. And as noted above, that's a really big number. So big, in fact, that Congress closed the loophole in 2010 because they decided that we couldn't afford it. ■