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Pay countries to keep their fossil fuels in the ground

By Bard Harstad

It makes sense to regulate the quantity extracted rather than subsequent use, writes Bard Harstad

China's economic growth has led to the country becoming the biggest emitter of greenhouse gases

What is wrong with traditional climate policies? Negotiations past and present focus on regulating consumers or emitters, whether through quotas, carbon taxes or cap-and-trade systems – such as the EU scheme the European parliament voted yesterday to prop up. The problem is that whenever some countries opt out of a global climate coalition such as the Kyoto protocol, the result is "carbon leakage". That is, if co-operating countries decide to cut back fossil fuel consumption, the world price declines and other nations can afford to buy more. Estimates of the magnitude of such leakage vary from 20 per cent to 25 per cent.

Not only does such carbon leakage weaken any coalition's impact on the climate; the percentages are also used by advocates of the status quo .

Is there an alternative? You bet. Economists postulate that demand equals supply. So rather than regulating consumption, we can regulate supply – the quantity of fuels extracted from the ground.

My research article, Buy Coal! A Case for Supply-Side Environmental Policy, explores the consequences of letting a climate coalition participant trade in the market for fossil fuel deposits. Fuel deposits differ in how costly they are to extract. Deposits with high extraction costs are barely profitable, and the owner is thus willing to sell the extraction rights for a low price. If a climate coalition purchases such a deposit, without exploiting it, then global emission is reduced at a relatively small cost.

As a side effect, carbon leakage is reduced. If the world fuel price changes, non-coalition nations will not alter extraction levels much once the least profitable deposits have been sold to the coalition. So if the coalition then cuts back its own extraction, it need no longer fear other countries will raise their own by comparable quantities.

Consequently, the coalition's most effective climate policy is to focus on reducing extraction. There will be no need to regulate consumers or emitters, so users will face the same price within the coalition or outside. This removes the temptation for companies to move to countries with weaker regulation, which in turn reduces their clout when lobbying against participation in a treaty.

What about new technology? Note that the world fuel price will be relatively high when the focus is on reducing extraction. This will motivate all companies and countries to economise on energy and to develop green technologies or renewable sources. Traditional climate policies, by contrast, allow countries that do not co-operate to buy fuel at a low price and, therefore, they face few incentives to adopt or develop green technologies.

So can the policy work? Reassuringly, the market for extraction rights exists already. Multinationals trade in it, as do China and India. And, to get around the risk of a seller renationalising the deposits after receiving a one-off payment, a natural solution is leasing the extraction rights. Furthermore, it need not be as expensive as it might seem. After all, it is cheapest and most effective to focus only on the deposits with the highest extraction costs, which can be obtained at relatively low prices.

In fact, we have seen a similar market evolve in recent years. Efforts to boycott timber from tropical forests did not cut deforestation. Instead, the timber price fell and those not participating in the boycott were able to buy more. Non-government organisations, as well as nations, have realised that it is more effective to acquire the land or pay certain countries directly for reducing deforestation.

Agreeing a deal on extraction may raise its own problems, but these must be compared with the disappointing impact of the traditional approach. To limit global warming to the UN goal of at most 2C, a large fraction of known resources must remain unexploited. It is time to think carefully about which should be conserved. The leading candidates are those with high emission factors or high extraction costs. Canadian tar sand might be an example of the former; drilling in places such as the Arctic, an example of the latter.

Either way, the owners will certainly request compensation for conserving their resources on the world's behalf. Anything else would be unrealistic.

The writer is a professor of economics at the University of Oslo, the Max McGraw chair, Kellogg School of Management and winner of the 2013 Erik Kempe award

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