

# Buy coal? New analysis shows purchasing fossil fuel deposits best way to fight climate change

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Environmental policy has historically been driven by a demand-side mindset – attempting to limit consumption of precious fossil fuels through pollution permits, taxation, and multi-national climate change treaties. However, new research from the Kellogg School of Management at Northwestern University suggests that actually buying coal, oil and other dirty fossil fuel deposits still in the ground could be a far better way to fight climate change.

The new study, "Buy Coal! A Case for Supply-Side Environmental Policy," suggests that the single best policy for a multi-national climate coalition is to purchase the extraction rights of dirty fossil fuels in non-participating countries (also called "third countries"), and then conserve rather than exploit the deposits. According to the study's author, Bard Harstad, this would be a radical departure from the traditional view that focuses on reducing the demand for fuel.

"One of the biggest challenges for multi-national climate agreements is the role of non-participating countries. If a climate coalition reduces demand for fossil fuel, the world price of oil goes down and non-participating countries find it profitable to consume and pollute more. Similarly, if the coalition seeks to reduce the supply or extraction of [fossil fuels](#), the world price increases and these countries find it optimal to supply more," said Harstad, associate professor of managerial economics & decision sciences and Max McGraw Chair in Management

& Environment at the Kellogg School of Management. "Thus, both on the demand-side and the supply-side the result is carbon leakage, which is an increase in pollution abroad relative to the emission-reduction at home. To limit carbon leakage, the coalition may set up tariffs or other border measures, but this will distort trade."

"In my analysis, I show that by letting coalition countries buy extraction rights in third countries – and preserve rather than exploit the fuel deposits – climate coalitions can circumvent the traditional problems of a demand-side policy," he said.

Harstad explained further that the most intuitive benefit from this policy is that emission is reduced if one buys and conserves deposits. Furthermore, the coalition finds it cheapest to buy the marginal deposits (ie, deposits that are not very profitable to exploit, but still quite polluting when consumed). After selling its marginal deposits, a non-participating country's level of supply will be less sensitive to changes in the world fuel price. Consequently, there is no longer carbon leakage on the supply-side, and the coalition can limit its own supply without fearing that the non-participants will increase theirs.

"This does the trick," Harstad noted. After purchasing marginal extraction rights, the coalition implements its ideal policy simply by reducing its supply, not its demand. Fossil fuel prices are then equalized across countries. Also, the resulting fossil fuel price seems high enough to motivate even non-participating countries to invest effectively in new technologies, such as renewable energy sources. For these reasons, the policy is socially optimal in the analysis, even if some countries do not participate.

Most importantly, Harstad said, "The analysis shows that progress on international climate policy is best achieved by simply utilizing the existing market for extraction rights."

Multi-national companies are already trading extraction rights. "Climate coalitions should, as well," he concluded.

The study will appear in a forthcoming issue of the [Journal of Political Economy](#).

Provided by University of Chicago

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