



Should We **PRICE CARBON** *from* **FEDERAL COAL?**

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Conversations in the United States about policies to reduce emissions from fossil fuels have generally focused on a number of “downstream” approaches that target the end or intermediate users of fossil fuels. Notably, the US Environmental Protection Agency’s proposed Clean Power Plan (CPP) addresses emissions from existing electric power plants, and fuel economy standards are reaching for a 50 percent reduction of carbon dioxide (CO₂) emissions from the transportation sector.

As an alternative to developing a large number of these downstream policies, an “upstream” approach—targeting fossil fuels as they come out of the ground—might be more efficient. Forty percent of US coal is produced on federal land managed by the Bureau of Land Management (BLM). Because coal is the most carbon-intensive of fossil fuels, and because our research shows a significant discrepancy between

the price of coal from federal lands and the estimated global damages of coal, federal coal seems like a logical target for launching an upstream carbon pricing policy.

In new research, we examine whether BLM could—and perhaps should—impose an upstream carbon charge on this production. Such a policy would signal the Obama administration’s intent to reduce CO₂ emissions (especially beyond what may or may not be achieved via the CPP). And it would set the precedent for a future, more substantive upstream charge on emissions, broadly applied to all coal and fossil fuels.

Our legal analysis reveals that the case for BLM having the statutory and regulatory ability to increase royalty payments on new coal leases is stronger than the case against. We refer specifically to new leases because BLM probably could not impose a charge on all production at once but rather only on new leases or as current 20-year leases

expire and are renewed. Our confidence in BLM's legal position does come with a non-trivial disclaimer: BLM is charged by law with balancing multiple uses of federal lands, including mining (and the associated generation of federal revenue). Although the courts will generally defer to BLM's balancing of uses, climate-driven policy that would stop new federal coal mining (or nearly so) would invite tough judicial scrutiny in response to the inevitable lawsuits.

However, whereas the legal case for an upstream carbon pricing program under BLM seems fairly strong, the economic case appears noticeably weaker. Because most government coal leases have only one bidder, bid prices for the land might be reduced to account for the greater royalty rate. At the same time, depending on the competitiveness of the coal market, operators on federal land might have to absorb the carbon charge in lower profits. Both cases would result in no change in the coal price (and therefore no internalization of the related climate externalities). The effectiveness of a significant charge upstream also would be weakened because 60 percent of US coal is not produced on federal lands. That said, market demand for non-federal coal would likely rise if a significant carbon charge were implemented on federal coal, partly mitigating any price increases.

Interactions with downstream policies also must be carefully considered. Notably, double-counting must be avoided. Two prominent policies are the CPP and the Mercury and Air Toxics Standards (MATS) program. The CPP would internalize at least part of the climate change externalities from coal, so care must be taken that the combined policies don't put too high a premium on coal prices. At the same time, a rise in the coal price from a carbon charge might make the goal of the CPP easier to attain. As for MATS, reducing mercury

emissions could become more expensive because the cheapest approach to reducing mercury relies on low-sulfur coal, much of which is on federal land.

We did not focus on the appropriate size of the ultimate carbon charge in our research, but suppose one used as a starting point the social cost of carbon estimates developed by an interagency working group for the federal government to use in calculating the climate benefits of rulemakings. In this case, using the midrange of these estimates for 2020 of about \$46 per ton of CO₂, the carbon charge would be more than \$90 per ton of coal, far above the current price of federal Powder River Basin coal (\$12 per ton). Without a long transition period, this approach could be highly disruptive to the coal market, the electricity market, and the economy as a whole.

As an alternative, BLM could incorporate a carbon charge even earlier than the leasing stage, applying it to its planning processes. This promising option is less likely to endanger BLM's multiple use mandate. The Council on Environmental Quality's newly revised draft guidance under the National Environmental Policy Act (NEPA) says that federal agencies should include climate change considerations in their planning efforts. In theory, BLM could examine a parcel of land that could be used for coal development—or for grazing or as a wildlife reserve—and consider a carbon charge in determining whether the land should be put up for coal leasing. ●

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FURTHER READING

Krupnick, Alan J., Joel Darmstadter, Nathan Richardson, and Katrina McLaughlin. 2015. Putting a Carbon Charge on Federal Coal: Legal and Economic Issues. Discussion paper 15-13. Washington, DC: RFF.