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hearing on “The Future of the Federal Coal Program”

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Thank you Chairman Lowenthal and Ranking Member Gosar for providing me with the opportunity to speak to the Committee on the future of the Federal coal program. I have also provided a written statement, which gives details that I do not have time to cover now.

My name is Jim Stock. I am a professor in the Economics Department at Harvard University. In 2013 and 2014, I was a member of the Council of Economic Advisers under President Obama. My research and teaching includes econometrics and energy and environmental policy.

In 2018, 41% of US coal was mined under a Federal lease. According to the US Geological Survey, burning that coal accounted for 13% of energy-related CO2 emissions.

There are two narratives surrounding the future of coal. One is that we stand on the verge of a coal Renaissance, as part of the Administration’s goal of energy dominance. The other is that coal is rapidly on its way out and that climate policy should move beyond thinking about coal.

In my view, both these narratives are wrong.

In recent research, I and coauthors estimate that 92% of the decline in coal from 2008 through 2016 is due to the decline in natural gas prices. The consolidation of the Black Thunder and North Antelope-Rochelle mines announced last month, and the closure last week of the Eagle Butte and Belle Ayr mines, demonstrate that market forces are driving the decline of coal, despite the many pro-coal actions taken by this Administration.

That said, under current policy, coal is not disappearing anytime soon. The remaining coal plants are the most efficient and the ones for which coal has the greatest cost advantage. In addition, coal from the Powder River Basin, which is mainly Federal coal, will remain the lowest-cost coal available. The Energy Information Administration projects that coal use for electricity will decline by less than 25% through 2050. If so, our children and grandchildren might have autonomous electric vehicles, but under current policy, they will be powered in part by coal.

A threshold question is whether Federal coal removed from the market would simply be replaced one-for-one by non-Federal coal. The answer is no. In other research, we estimate that this substitution ratio is likely to be quite small. Removing Federal coal drives up the price of all coal, which stimulates demand for gas and renewables.

Removing Federal coal from the market would have a climate effect big enough to matter. We estimate that the emissions implications of some Federal coal program reforms are of the same order of magnitude as the Clean Power Plan.

There are several policy options for scaling back the Federal coal program, should Congress choose to do so:

- One is simply ending coal leasing on Federal lands, perhaps with some phase-out considerations.
- A second is increasing significantly the royalty rate on Federal coal, for example by incorporating a carbon charge.
- A third is imposing a carbon budget for Federal coal mined under new leases, thereby capping cumulative emissions from the Federal coal program.

The economics of these policies are quite similar.

Under each, most of the phased-out Federal coal would be replaced by natural gas or renewables.

We estimate that retail electricity prices would increase by less than 2%, arguably much less if wind and solar prices continue to decline.

And because existing federal leases would be grandfathered, all three policies would provide electricity markets and mining communities with a 20-year glide path.

One difference among these policies is whether the additional revenues from higher prices go to the states or to the coal companies. Another difference is that the carbon budget policy is in effect a backstop that only kicks in if market forces do not, on their own, sharply reduce coal generation.

Mining in the PRB took off in the 1970s because of Federal policy, specifically the environmental need for low-sulfur coal. Now, PRB jobs and some state budgets, especially Wyoming's, are highly vulnerable to advances in renewables technology and to future national and/or power sector climate policy. These communities will face transition challenges in any event, and addressing them proactively is an important part of this discussion.