

Republicans vehemently attacked the Obama Administration's estimate of the social cost of carbon. Trump withdrew that estimate and directed individual federal agencies to do their own estimates. The agencies will now be faced with a number of problems, and it's not clear that they are well positioned to deal with them. They might prefer to simply forget about the social cost of carbon, but that may not be an option given judicial rulings. Instead, they're going to have to come up with their own estimates.

To understand the difficulties, it's worth considering what Obama's Interagency Working Group (IWG) did. They began by selecting the most widely cited models used by economists. Those models combine a climate change model with an economic model, measuring the amount of damage from carbon emissions under various scenarios regarding economic growth and carbon prices. These models had to be tweaked to make them comparable. The IWG decided to focus on the global impacts of carbon, partly for policy reasons, but also because the vast majority of economics literature do so. The IWG then used various discount rates, a crucial factor in calculating the social cost of carbon, to provide a range of estimates. (You can learn a lot more about the IWG and about the models [here](#).)

Let's say the Department of Transportation and EPA decide to modify CAFÉ standards. They could try to design their own climate model, but that would be a big undertaking - the existing models have been refined over a period of many years.

Alternatively, they could follow the IWG's approach, pick one or more existing model and then do some tweaks.. This actually took a lot of work by the IWG, and it may not be easy to establish a group with similar expertise in this Administration, given budget cuts and so forth. Assuming they did use an existing model, they would essentially be stuck with that model's damage function (which connects temperature increases to economic impacts), including whatever assumption the model includes about potential catastrophic outcomes. The model would also incorporate standard climate models, which probably wouldn't suit the trump Administration. And the models may not be designed to isolate U.S. damages. Either way, a good deal of time and expertise will be required.

If the social cost of carbon is only used for internal purposes within the Administration, shortcuts may be possible. For instance, an agency might be able to use the old IWG estimates, use a percentage adjustment based on a guess about what percent of world damages would be in the U.S., and then apply a high discount rate. But it will be harder to get away with those shortcuts if the agency's action has to pass outside scrutiny.

If a rulemaking decision such as a change in the CAFÉ standard makes use of the social cost of carbon, it will be open to comments by outsiders. The Trump Administration's approach is

is sure to be met by a barrage of criticisms from environmental groups and academic economists, many of whom think the IWG estimate was too low rather than too high.

To the extent that the Trump estimate of the social cost of carbon is used in decision-making, as it would be with the CAFÉ standards, the estimate is subject to judicial review. For example, an effort to use a high discount rate will run into heavy criticism based on recent economic literature that leans strongly in the other direction. To survive judicial review, the agencies will have to have cogent responses to the critiques. If different agencies come up with different estimates, that will undoubtedly complicated their issues in court.

What all this means is that replacing the old estimates of the social cost of carbon is not going to be an easy task. It may or may not be possible to do so convincingly enough to survive judicial review.

When he rescinded the Obama Administration's estimate of the social cost of carbon, Trump may have thought he was settling something. Instead, he was only opening the doors to a whole new set of problems.