



If you had followed the climate change news over the weekend, you might have been shocked to see headlines such as “[Scientists Prescribe a Healthy Dose of Sulphate Particles to Promote Global Cooling on the Cheap.](#)” CNN tweeted that “[Harvard and Yale scientists are proposing that we tackle climate change by dimming the sun.](#)” And the British tabloid *The Express* shouted “[GLOBAL WARMING SOLVED: Plans to DIM Sun by releasing CHEMICALS into atmosphere.](#)” Such exaggerations — both positive and negative — are unfortunately common in media coverage of [solar geoengineering](#).

[These journalists apparently did not contact the authors](#) of the study in question. In [the \(open access!\) scientific article on which they reported](#), Wake Smith and Gernot Wagner study the logistics of getting aerosols into the stratosphere, the leading proposed solar geoengineering method, and confirm that its direct financial implementation costs would be inexpensive in terms of climate change economics. But had the journalists done their homework, they would have found in *both* the article *and* [the press release](#) the authors’ clear statement: “We here make no judgment about the desirability of” stratospheric aerosol injection.

To be clear, there is more to solar geoengineering’s costs than the financial ones of deployment. [With Andy Parker and Peter Irvine, I wrote:](#)

The total costs of the SRM [i.e., solar geoengineering] system would ultimately be much higher than those for the simple delivery because there would be many other items added to the bill before the final reckoning. For example, a large-

scale observation and modeling effort would be needed if the deployer wanted to monitor the impacts of their climate intervention. Furthermore, high-level security would be necessary to protect the deployment infrastructure, and excess deployment capacity would be desirable “insurance” against the possibility of faulty or destroyed delivery equipment. In addition, even if SRM were to reduce net harms from climate change around the world, some areas might still experience negative environmental effects. Funds might be needed to compensate countries who claim—rightly or wrongly—that they have been harmed. Finally, it has been observed how the final costs of large public projects often balloon beyond original estimates. The final bill for SRM deployment, therefore, seems likely to be substantially higher than the few billions dollars projected for delivering aerosols to the atmosphere.

This does not claim that Smith and Wagner are somehow wrong. (In fact, [Wagner agreed on Twitter](#)). Instead, our point is that solar geoengineering's relevant costs include more than mere deployment.

There is, though, further relevant developments in solar geoengineering and its governance. Today, [a solid news feature in Nature](#) reports on progress toward what might become the first explicit outdoor experiment. And on the legal front, [some parties to the Montreal Protocol on Substances that Deplete the Ozone Layer recently drafted a decision](#) to call for research on possible impacts on ozone from stratospheric aerosol injection. However, there was insufficient time at the Meeting of Parties for informed discussion, and these countries plan on introducing the proposal next year.

If you encounter a report that solar geoengineering could either save or destroy the world, take it with a (large) grain of salt. The truth is lies between. It appears to be able to greatly reduce climate change, but imperfectly so and only as a supplement to aggressive reductions of greenhouse gas emissions. Keep an eye on [MIT Technology Review](#) (James Temple), [The Economist](#) (Oliver Morton), [Carbon Brief](#), and [The New York Times](#) for reliable coverage. I'll occasionally describe major developments here, and you can always see [my Twitter feed](#).