The Risks of Climate Engineering

By Clive Hamilton

https://www.nytimes.com/..., Feb. 12, 2015

THE Republican Party has long resisted action on climate change, but now that much of the electorate wants something done, it needs to find a way out of the hole it has dug for itself. A committee appointed by the National Research Council may just have handed the party a ladder.

In a two-volume report, the council is recommending that the federal government fund a research program into geoengineering as a response to a warming globe. The study could be a watershed moment because reports from the council, an arm of the National Academies that provides advice on science and technology, are often an impetus for new scientific research programs.

Sometimes known as "Plan B," geoengineering covers a variety of technologies aimed at deliberate, large-scale intervention in the climate system to counter global warming.

Despairing at global foot-dragging, some climate scientists now believe that a turn to Plan B is inevitable. They see it as inscribed in the logic of the situation. The council's study begins with the assertion that the "likelihood of eventually considering last-ditch efforts" to address climate destabilization grows every year.

The report is balanced in its assessment of the science. Yet by bringing geoengineering from the fringes of the climate debate into the mainstream, it legitimizes a dangerous approach.

Beneath the identifiable risks is not only a gut reaction to the hubris of it all — the idea that humans could set out to regulate the Earth system, perhaps in perpetuity — but also to what it says about where we are today. As the committee's chairwoman, Marcia McNutt, told The Associated Press: The public should read this report "and say, 'This is downright scary.' And they should say, 'If this is our Hail Mary, what a scary, scary place we are in.' "

Even scarier is the fact that, while most geoengineering boosters see these technologies as a means of buying time for the world to get its act together, others promote them as a substitute for cutting emissions. In 2008, Newt Gingrich, the former House speaker, later Republican presidential candidate and an early backer of geoengineering, said: "Instead of penalizing ordinary Americans, we would have an option to address global warming by rewarding scientific invention," adding: "Bring on the American ingenuity."

The report, considerably more cautious, describes geoengineering as one element of a "portfolio of responses" to climate change and examines the prospects of two approaches — removing carbon dioxide from the atmosphere, and enveloping the planet in a layer of sulfate particles to reduce the amount of solar radiation reaching the Earth's surface.

At the same time, the council makes clear that there is "no substitute for dramatic reductions in the emissions" of greenhouse gases to slow global warming and acidifying oceans.

The lowest-risk strategies for removing carbon dioxide are "currently limited by cost and at present cannot achieve the desired result of removing climatically important amounts," the report said. On the second approach, the council said that at present it was "opposed to climate-altering deployment" of technologies to reflect radiation back into space.

Still, the council called for research programs to fill the gaps in our knowledge on both approaches, evoking a belief that we can understand enough about how the Earth system operates in order to take control of it.

Expressing interest in geoengineering has been taboo for politicians worried about climate change for fear they would be accused of shirking their responsibility to cut carbon emissions. Yet in some congressional offices, interest in geoengineering is strong. And Congress isn't the only place where there is interest. Russia in 2013 unsuccessfully sought to insert a pro-geoengineering statement into the latest report of the Intergovernmental Panel on Climate Change.

Early work on geoengineering has given rise to one of the strangest paradoxes in American politics: enthusiasm for geoengineering from some who have attacked the idea of human-caused global warming. The Heartland Institute, infamous for its billboard comparing those who support climate science to the Unabomber, Theodore J. Kaczynski, featured an article in one of its newsletters from 2007 describing geoengineering as a "practical, cost-effective global warming strategy."

Some scholars associated with conservative think tanks like the Hoover Institution and the Hudson Institute have written optimistically about geoengineering.

Oil companies, too, have dipped their toes into the geoengineering waters with Shell, for instance, having funded research into a scheme to put lime into seawater so it absorbs more carbon dioxide.

With half of Republican voters favoring government action to tackle global warming, any Republican administration would be tempted by the technofix to beat all technofixes.

For some, instead of global warming's being proof of human failure, engineering the climate would represent the triumph of human ingenuity. While climate change threatens to destabilize the system, geoengineering promises to protect it. If there is such a thing as a right-wing technology, geoengineering is it.

President Obama has been working assiduously to persuade the world that the United States is at last serious about Plan A — winding back its greenhouse gas emissions. The suspicions of much of the world would be reignited if the United States were the first major power to invest heavily in Plan B.

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