



CLIMATE CHANGE AND ENERGY

## The US government has approved funds for geoengineering research

NOAA will get at least \$4 million for a research program, which will include efforts to assess “climate interventions.”

By James Temple

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A plane flies near clouds.

CRISTIAN BARON ON UNSPLASH

planet.

The \$1.4 trillion spending bills that Congress passed this week included a little-noticed provision setting aside at least \$4 million for the National Oceanic and Atmospheric Administration to conduct stratospheric monitoring and research efforts. The program includes assessments of “solar climate interventions,” including “proposals to inject material [into the stratosphere] to affect climate.”

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President Donald Trump is expected to sign the sweeping appropriations bills today.

In a related move, Congressman Jerry McNerney of California introduced a bill yesterday that would enable NOAA to set up a formal program to carry out this climate intervention research.

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The full text of the bill isn't yet available, and McNerney's office didn't immediately respond to inquiries from MIT Technology Review. But the primary aims would include improving our basic understanding of stratospheric chemistry, and assessing the potential effects and risks of geoengineering.

The legislation would also grant NOAA oversight authority to review and report on experiments proposed by other research groups, says Kelly Wanser, an advisor on geoengineering research efforts and executive director at SilverLining, who consulted with McNerney's office on details in the bill.

A growing number of academic research groups are exploring various ways to cool the planet as the threat of climate change grows, including injecting reflective particles into the stratosphere or spraying salt water into the sky to brighten coastal clouds.

In a statement, McNerney asserted that the federal government should take the lead in this controversial field, noting that other research efforts are already moving forward.

A team of Harvard researchers has been preparing to conduct one of the first outdoor experiments related to geoengineering, by launching a balloon that would spray a small quantity of particles into the stratosphere. At least in part because there isn't a US-government-funded research program in place, Harvard took the unusual step of creating its own external advisory committee to ensure that the researchers work to limit environmental risks, seek outside input, and operate in a transparent way.

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McNerney previously introduced legislation directing the National Academy of Sciences to propose a geoengineering research agenda and oversight guidelines. It, in turn, established a committee that's set to release its recommendations next year.

Since emissions cuts alone likely can't prevent dangerous levels of climate change, public funding for geoengineering research is "overdue," Jesse Reynolds, an environmental law and policy fellow at the University of California, Los Angeles, said in an email.

"We need to know more about solar geoengineering's capabilities, limitations, and risks so that future decisions will be informed ones," he added. **T**

**by James Temple**