

California's Flirtation with Geoengineering Raises Questions

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A mysterious bill regarding the development of a protocol for measuring “radiative forcing” as a climate action indicator stalled out in the California Senate last year. While legislative staff for the author of the bill have insisted that the purpose of the bill is strictly for promoting study and research of the climate, a close look at materials and stakeholders supporting the bill reveal a strong connection with climate geoengineering.

The bill, authored by [Santa Monica State Senator Ben Allen](#), was introduced in February of 2019, and would explicitly require the California Air Resources Board “to adopt a climate accounting protocol to evaluate the potential of proposed climate mitigation and restoration actions to reduce radiative forcing and excess heat in the atmosphere to reduce the global and regional mean temperatures.”

The direct use of the bill language regarding climate “restoration” actions to “reduce radiative forcing” is unequivocally a reference to climate geoengineering. This would include [geoengineering hypotheticals](#) like Solar Radiation Management (SRM) – essentially unproven technologies such as injecting substances into the upper-atmosphere to reflect the heat of the sun away from the Earth.

The bill was sponsored by a handful of established atmospheric scientists, and with the lobby acumen of the prominent Sacramento firm [Conservation Strategy Group](#) the bill was able to advance through the Senate Environmental Quality Committee and the Senate Committee on Natural Resources and Water before it stalled out in the Senate Appropriations Committee, where it currently resides, and is likely to expire. Legislative staff familiar with the bill indicated that the bill is unlikely to advance or be reintroduced in the 2020 legislative session.

Interestingly, the bill was originally introduced with direct reference to an ongoing and controversial effort at the International Organization for Standardization (ISO) to develop a “draft guidance standard on radiative forcing management.”

The concept of radiative forcing is widely used by the IPCC and the climate science community to understand the interlinkages between disturbances of the climate system and changes to temperatures at regional or global scales.

The ISO defines radiative forcing as a change in the difference between incoming radiation from the sun and outgoing radiation after reflection due to a change from an external driver of climate change such as carbon dioxide or other greenhouse gases, which warm the atmosphere as “climate forcers.”

External drivers can also include “climate coolants” like sulphur dioxide and other aerosols that temporarily reduce radiative forcing. Elements such as sulphur dioxide can be emitted by natural geological activity like the eruptions

of volcanoes, yet such elements could be artificially introduced to the atmosphere by mechanical means, in essence being one of the basic climate intervention concepts known as geoengineering.

A field study of this approach to geoengineering is in preparation; the Stratospheric Controlled Perturbation Experiment, known as SCoPEX, a project of Harvard University.

The State of California has taken a prominent role in providing legitimacy to SCoPEX, in that Lousie Bedsworth, the executive director of the Strategic Growth Council, is the chair of the SCoPEX advisory committee that has been convened to ostensibly address contentious issues of governance of geoengineering technologies and policy.

Members of the Hands Off Mother Earth coalition have written an open letter to the SCoPEX Advisory Committee warning of the risks and dangers inherent to the normalization of geoengineering.

The role of a California state institution in the SCoPEX project is significant when considering that the state legislature has quietly flirted with geoengineering in coordination with international stakeholders involved with developing these technologies.

Every indication is that the California state legislature and state agencies are going to continue to surreptitiously advance a geoengineering agenda for responding to climate change. It will behoove social justice and ecosystem protection activists to calibrate their advocacy to the realities of this brave new world.

A crucial critique of prioritizing the measuring of radiative forcing in climate policy is that the addition of layers of uncertainty and complexity to environmental decision making further obscures the fundamental climate action requirement of reducing the extraction and combustion of fossil fuels, as well as addressing the global economic system's abuse of natural ecosystems.

The promotion of geoengineering is recognized to be a dangerous distraction long used by the fossil fuel industry to delay regulatory action on their destructive industry.

The development of the ISO draft guideline for the use of radiative forcing as a critical metric of climate intervention and the basis by which climate targets are developed and assessed is controversial. An expert report on the ISO draft guidelines for radiative forcing was published in September 2019 articulating concerns regarding the potential conflict of a new protocol with already existing systems of climate accountability, and the apparent disregard for critical issues of human rights and the protection of biodiversity.

In the California State Senate Committee on Natural Resources and Water analysis of the radiative forcing bill, Tod Delaney, the Chair of the Climate Change Coordinating Committee of the International Organization for Standardization, the ISO committee developing the draft guideline, is explicitly listed as a supporter of the bill.

The analysis also includes arguments in support that "California must not only reduce emissions but also consider climate stabilization" and "California must consider all options available for climate stabilization."

No definitions for "climate stabilization" or "climate restoration" are provided anywhere in the materials related to the bill.

The direct reference to the ISO was amended out of the original language of the Allen radiative forcing climate accounting protocol bill and is no longer included in the proposed law.

However, the language making reference to "climate mitigation and restoration actions to reduce radiative forcing" remained in the bill.

Committee staff experienced with the bill provided assurances that the intent of the bill was to advance a neutral scientific process for establishing a protocol for improved study of the climate.

Staff were clear in articulating that "Sen. Allen had and still has no intention of encouraging or enabling SRM or other geoengineering technologies, but hopes that ARB can use the most accurate accounting and not underrepresent the impacts of short-lived climate pollutants."

Tellingly, staff also referenced the highly sensitive nature of the proposed legislation, because of the direct association with SRM as a geoengineering technology. Staff indicated that all those who had been involved with supporting the bill last spring were not interested in trying to advance the bill in the context of any expressed concerns or public opposition, insinuating that defending the bill in the face of public scrutiny was the last thing supporters of the bill desired.

Yet no opposition to the bill was ever formally registered as the bill quietly advanced during the committee process last spring.

As the bill arrived to Appropriations and the financial impact of the bill was assessed, the Air Resources Board (ARB) expressed willingness to embark upon the development of the radiative forcing protocol if fiscal conditions would be met by the legislature. Foremost of those conditions listed by the ARB was that the budget provide for hiring sufficient staff to develop the protocol and oversee the public review process for approval of the protocol under the California Environmental Quality Act (CEQA).

The ARB also communicated a preparedness to analyze proposed climate “restoration” efforts with other agencies, as well as clearly identify the obligation of the agency to hold “public workshops to engage with stakeholders.”

The bill remained in Appropriations last spring, and never made it to the floor of the Senate. The chances the bill will advance in the next weeks before the deadline for 2019 bills to pass out of their chamber of origin are nearly zero. Thus, the fate of the bill lies in being reintroduced in February 2020 for consideration during the current session, which the author of the bill thus far seems disinterested in pursuing.

Even as this specific bill regarding “radiative forcing” steadily fades into obscurity, the mysterious flirtation of the California legislature with the ISO in the development of a climate accounting protocol of tremendous utility to a nascent geoengineering industry and their proposed climate “restoration” actions raises many questions, and merits more scrutiny.

The appearance of this bill in the California state legislature was a crucial marker in the rapidly changing political landscape of climate change.

As the reality of climate change and global environmental degradation becomes increasingly manifest, calls for “urgent emergency measures” are providing impetus to the embrace of risky and unproven measures such as geoengineering.

Ultimately, these approaches not only distract from the fundamental necessity of reducing emissions, but also have the potential to backfire, making things worse, not better.

Every indication is that the California state legislature and state agencies are going to continue to surreptitiously advance a geoengineering agenda for responding to climate change. It will behoove social justice and ecosystem protection activists to calibrate their advocacy to the realities of this brave new world.