

# CLOCKWORK CLIMATE

Engineering the Weather

1 x 52 HD



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(working title)

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According to a survey from August 2012, 77% of the world's population is worried about the future of the Earth's climate. For good reason: international conferences to slow the greenhouse effect have gone from failure to failure over the past 20 years and an alarming projection from the Intergovernmental Panel on Climate Change predicts that cascading catastrophes could wreak havoc on life on Earth.

Can technology turn things around? Experiments in deliberate climate engineering, also known as geo-engineering, are multiplying the world over. The United States, Canada, the European Union, China and Russia are all funding evaluations of these techniques' efficacy against global warming.

In the past decade, climate engineering has attracted considerable support. Entrepreneurs like Bill Gates and Richard Branson have invested in research promising both to save the world and to generate immense wealth. Powerful conservative think tanks, like the American Enterprise Institute, promote them actively. And in 2009, President Obama's science advisor declared: "It's got to be looked at, we don't have the luxury of taking any approach off the table." A growing fear about the climate emergency makes "last-ditch" solutions more palatable, despite the huge risks involved; according to Stanford climatologist Ken Caldeira, "A faulty geo-engineering system could cause global warming to speed up considerably." The same scientist admits, however, that we can't rule out this option anymore: "Like it or not, a climate emergency is a possibility, and geo-engineering could be the only affordable and fast-acting option to avoid a global catastrophe."

For science historians, these "quick fix" climate manipulation solutions—seeding the ocean, gigantic artificial trees, cloud whitening, stratospheric aerosols, space parasols and more—create a sense of déjà vu. Many current ideas are throwbacks to research first performed during the Cold War. Back then, U.S. president Lyndon Johnson wanted to turn climate engineering into "a new dimension in the art of warfare." The most respected climatologist at prestigious M.I.T. declared that he "shuddered at the thought of the consequences if the Russians were to invent a feasible method of controlling the weather," and the physicist Edward Teller—the model for Kubrick's "Doctor Strangelove"—urged the Pentagon to develop methods for "climate warfare." Now, geo-engineering is finding a promising new market, but its theories are as dangerous and blind to "collateral damage" as ever, as well as being extraordinarily costly to put into effect.

*Clockwork Climate* is an investigation into the worldwide boom in geo-engineering. How did a pseudo-science with a controversial past become a global research subject? How did crackpot academics turn into respected, and even courted, figures? As the climate crisis picks up speed, how can we keep "rogue states" from risking dangerous experiments on our atmosphere and oceans? And will we really have any choice? *Clockwork Climate* introduces the scientists, businesspeople and political decision-makers who are spearheading this research, reveals its historical background using spectacular research archives that look like science fiction, and looks at the results of recent experiments, from lab simulations to field tests. The film also speaks with the scientists who have almost lost faith in a global awakening to the need to resolve the climate crisis, yet who are still fighting the "geo-engineers" tooth and nail.

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## CREDITS

Producer: Olivier Mille  
Director: Pierre-Oscar Lévy

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