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Technology as a solution to Climate Change

High School Of Iasmos, Greece.

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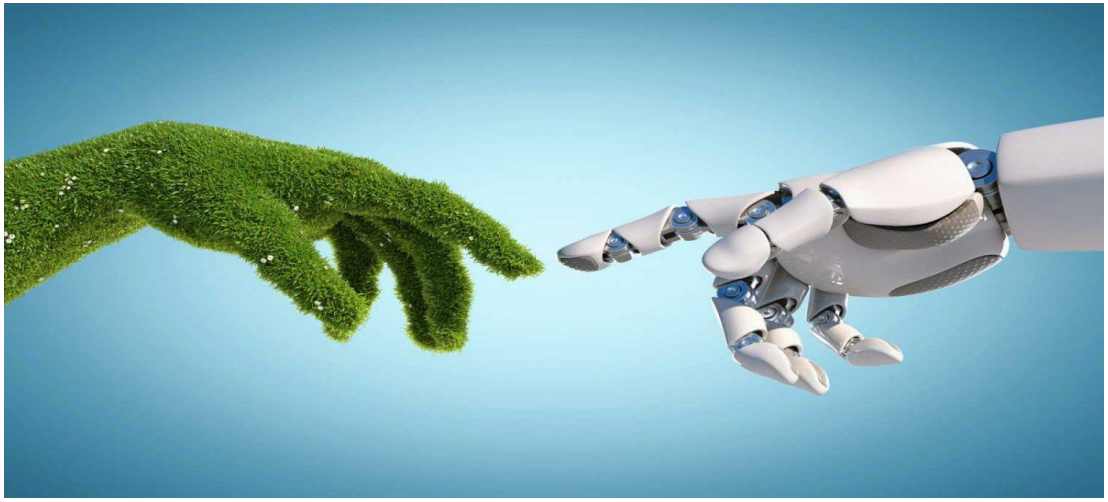
To Reduce Greenhouse Gas Emissions and Fight Global Warming

- *Technology has a pivotal role to play in climate change mitigation. We need ways to efficiently harness renewable energy while reducing the climate impacts we have already created. While our current technology is a good start, we will need to find ways to continually speed up decarbonisation.*



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1. Carbon Capture

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- Carbon capture has a lot of potential for mitigating climate change. The carbon capture technology is simple to reduce emissions, but the cons include high costs per tone of carbon dioxide removed, difficulties storing the captured carbon and possible CO2 leaks.

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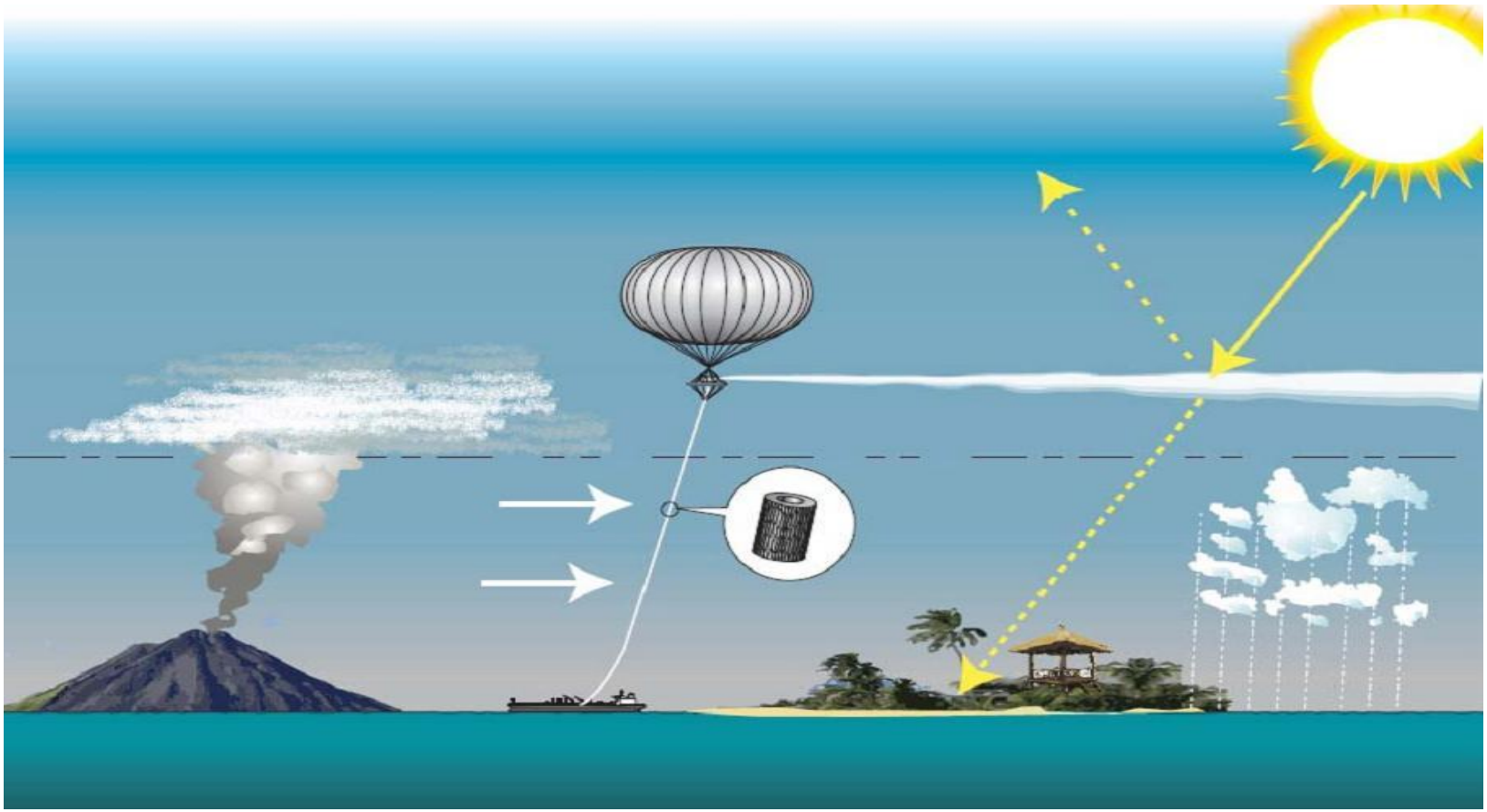
2. Reflective Sulfate Aerosols



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- Seeding the upper atmosphere with sulfate-based aerosols could increase the Earth's albedo and help reflect more of the sun's rays. Despite its immediate cooling effect, which buys time for further renewable energy integration, the idea meets a lot of opposition. Ozone layer depletion, acid rain and the accumulation of aerosols in waterways and soils are just some of the possible cons of the technology.

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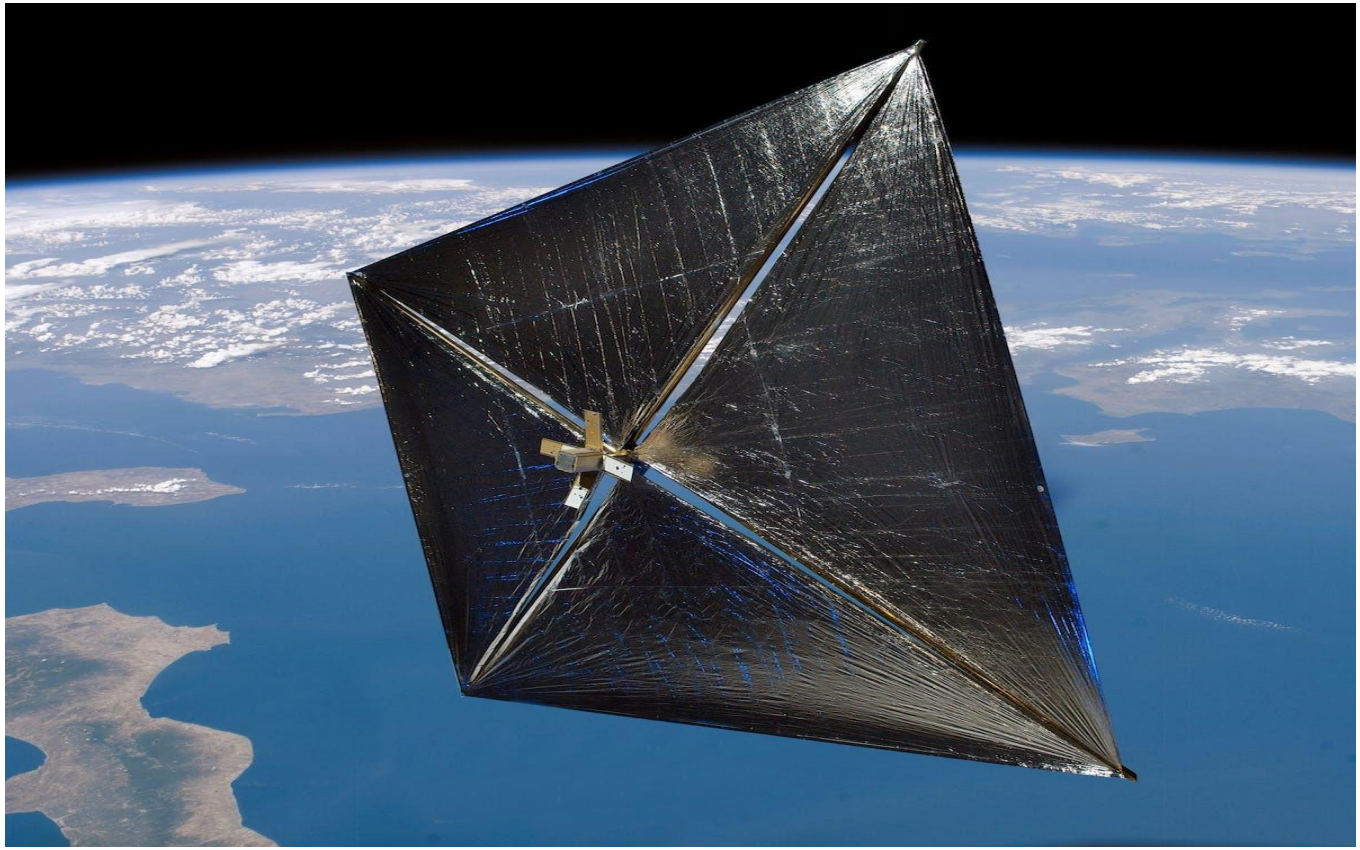
3. Solar Shields



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- Space solar shields would reflect the sun's rays before they could even reach the atmosphere. Incredibly expensive to implement and maintain, the technology would shield the sky and reduce the amount of sunlight reaching the lower levels of the troposphere. Easy maneuverability and on-demand deployment with foldable shields are the most prominent advantages of the technology.

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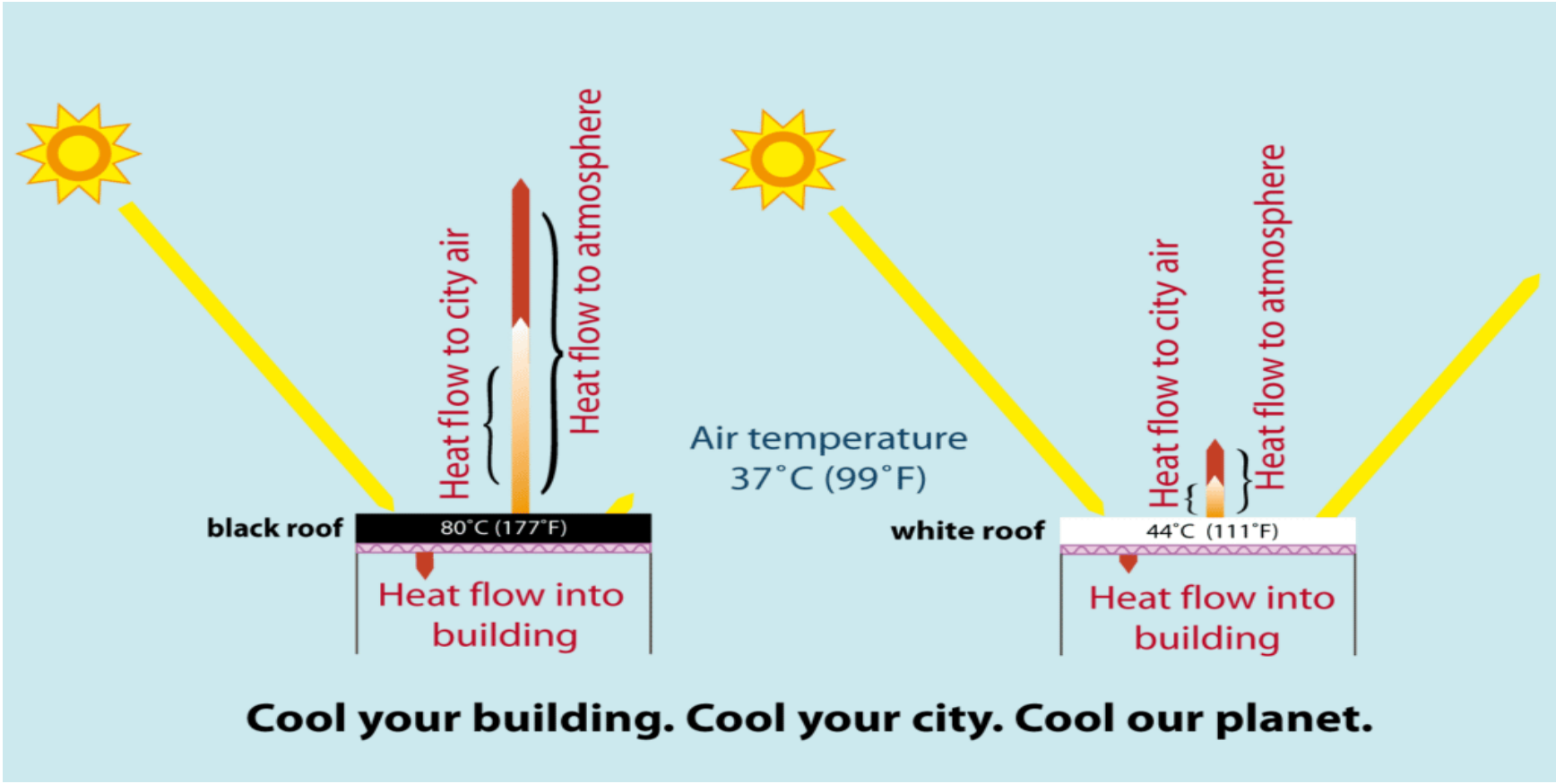
4. Painting Roofs White



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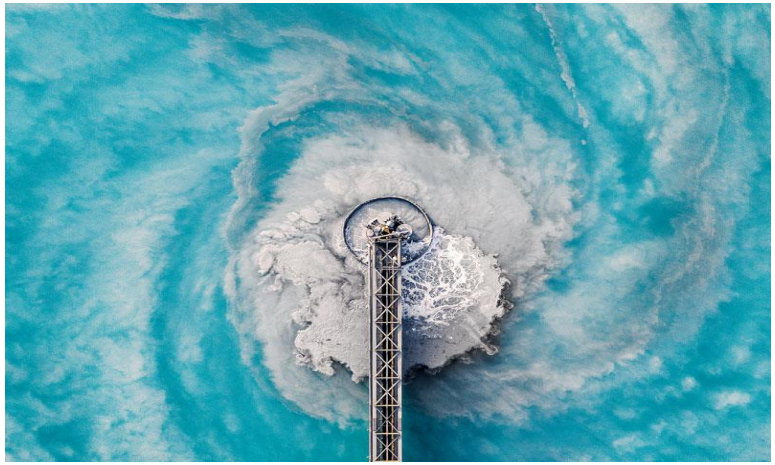
- The simplest and the easiest of all new technologies, painting roofs could potentially reduce the urban heat island effect and help reflect more light and heat back into space.

- The technology is cheap and easy to deploy. Additionally, it is possible to deploy the idea on a massive scale within a few years, and with the proper paint, it can be sustainable.

5. Seeking Solutions to Complement Existing Renewable Energy Technologies



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- However, the most realistic solutions to mitigate global climate change would be to improve on currently existing energy technologies and infrastructure to meet energy demands. This would avoid job losses due to industry shutdowns and benefit the world's economies. Furthermore, it would be a sustainable way to move forward.

Innovative climate change solutions of this kind include:

- smart devices and appliances
- smart electricity meters
- municipal waste energy recovery
- floating solar plant and farms (which also save water by reducing evaporation)
- vertical-axis wind turbines
- molten metal solar and wind energy storage
- reversible hydro dams
- and agrivoltaic solutions.

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Thank you for your interest!

There is no Planet B..