



UCSC Climate Salon #5

Climate Action Now (UCSC CAN), Baskin Engineering, and the UCSC Earth Futures Institute

Energy and material constraints on society in a fossil-fuel free world

Thursday February 26 3:30-5:00 pm

Center for Adaptive Optics Atrium

In person or via [ZOOM](#)

Dr. Patrick Chuang, UCSC Earth and Planetary Sciences

Energy and materials are foundational for any modern society. It is therefore likely that human society will change profoundly when fossil fuels are phased out. Given the resulting energy transition AND the planet's material limits, how should this new society be structured? Can both planned obsolescence and material shortages be avoided?

This talk will use an energy/materials perspective to explore which versions of this future society are/are not plausible within the limits posed by our planet's resources.

The problem in a nutshell:

Scenario: We manage to construct a solar + wind power infrastructure that meets societal needs. **Congratulations!**



Now do it again... over the next 20 years. And then again 20 years after that.
And so on ad infinitum...

“Wind turbines and solar panels are REBUILDABLE, not RENEWABLE.”

--- Alice Friedemann, *Life after Fossil Fuels*

This is a follow-up talk to Dr. Chuang's Climate Salon #2 from November 19, 2024, which you can find on our YouTube Channel:

<https://www.youtube.com/@EFI-EarthFutures>

Watching this video would be a useful but not necessary preparation for this seminar.

