

A group of people are walking through a field of solar panels. In the foreground, four people are walking towards the camera. From left to right: a man in a grey and blue striped long-sleeved shirt and dark pants, holding a water bottle; a man in a white t-shirt with a 'Game of Thrones' logo and blue jeans; a woman in a blue and white striped button-down shirt and dark pants, wearing sunglasses; and a man in a blue t-shirt and khaki pants. In the background, several other people are walking away from the camera. The solar panels are mounted on metal poles and are arranged in rows across the field. The sky is overcast.

september, 2018

andlinger center for energy + the environment

Lynn Loo

director • theodora d. '78 & william h. walton III '74 professor of engineering •
professor of chemical + biological engineering



our mission

directed from global challenges

+ develop solutions for
our energy **+**
environmental future

+ in the nation's service **+**
in the service of
humanity

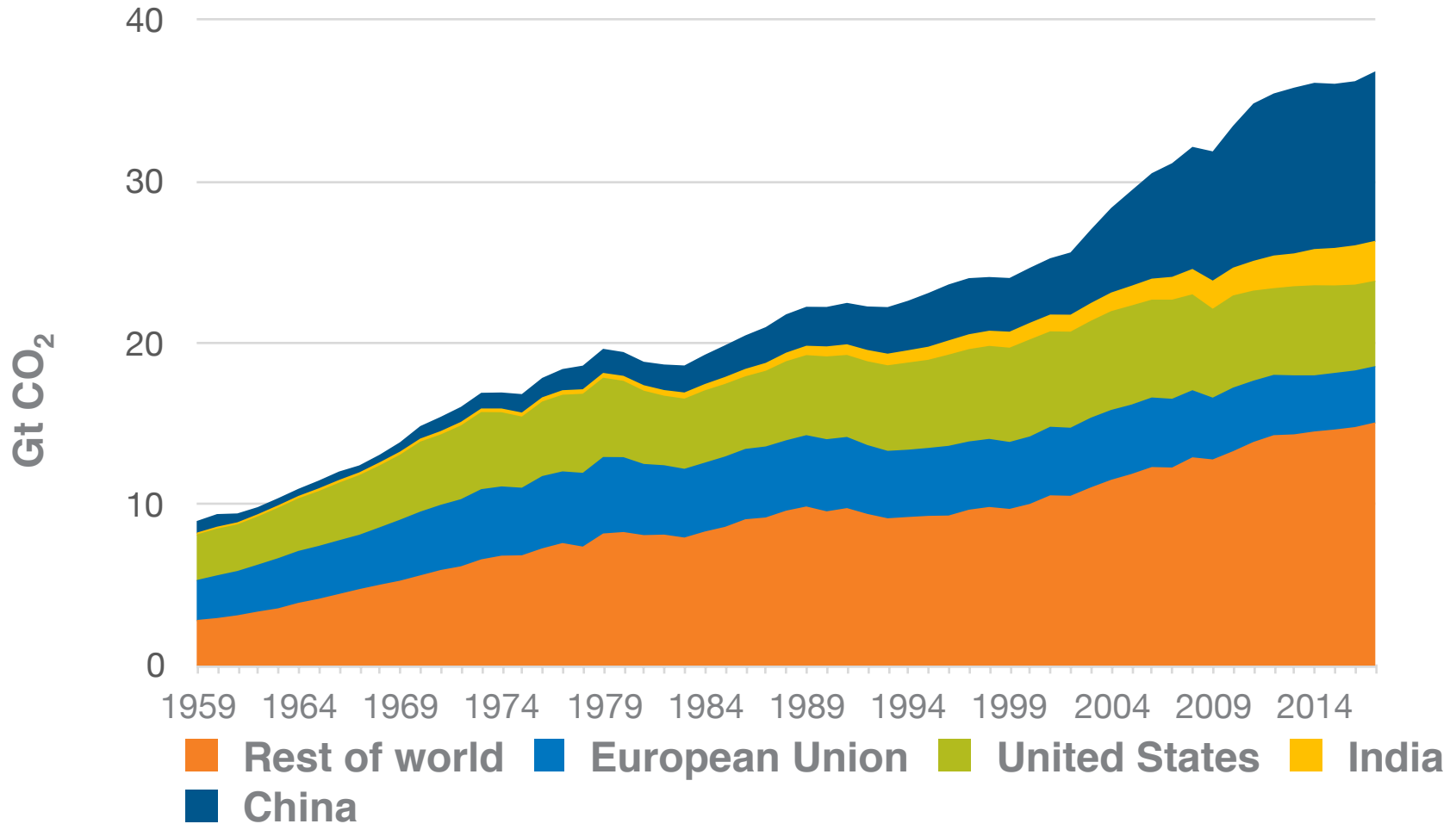




the climate challenge

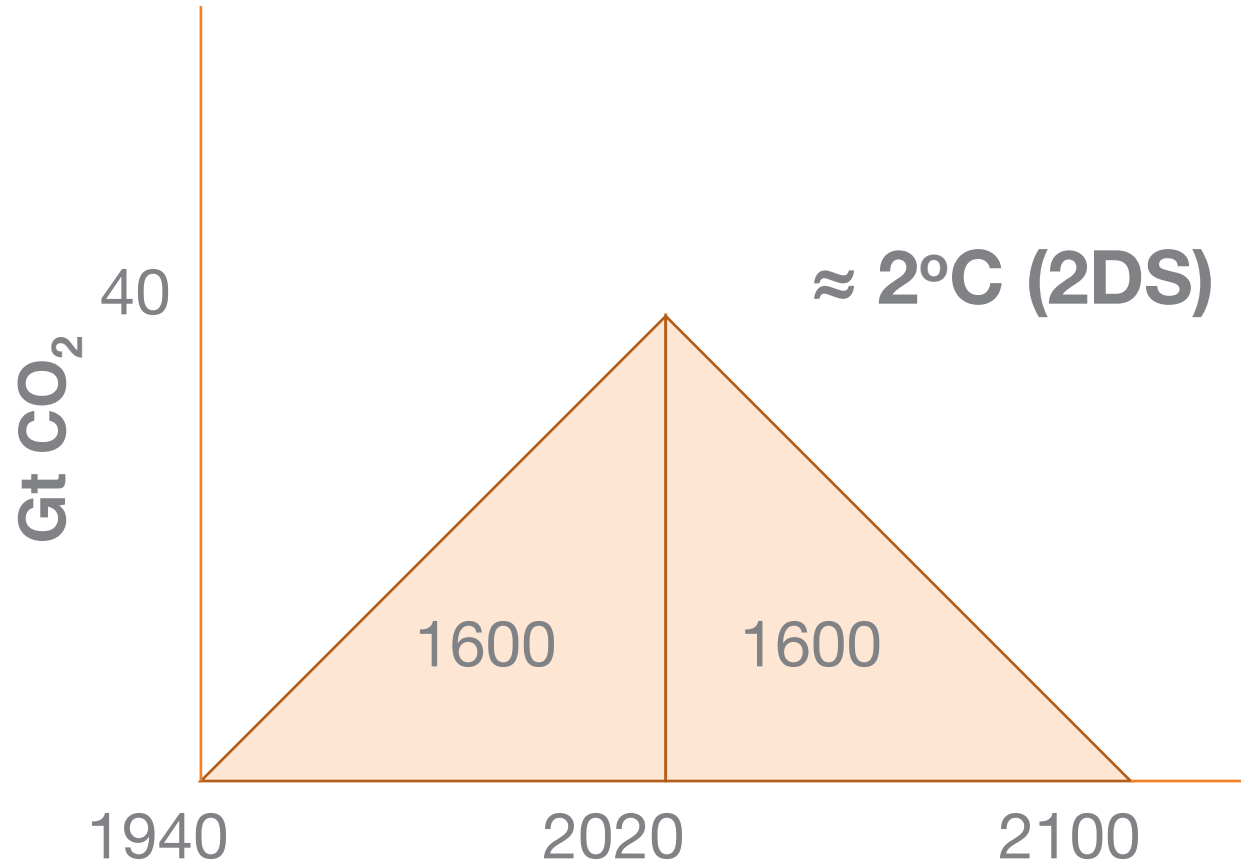
the emissions problem

annual CO₂ emissions from fossil fuels by region



Global Carbon Project

the emissions problem

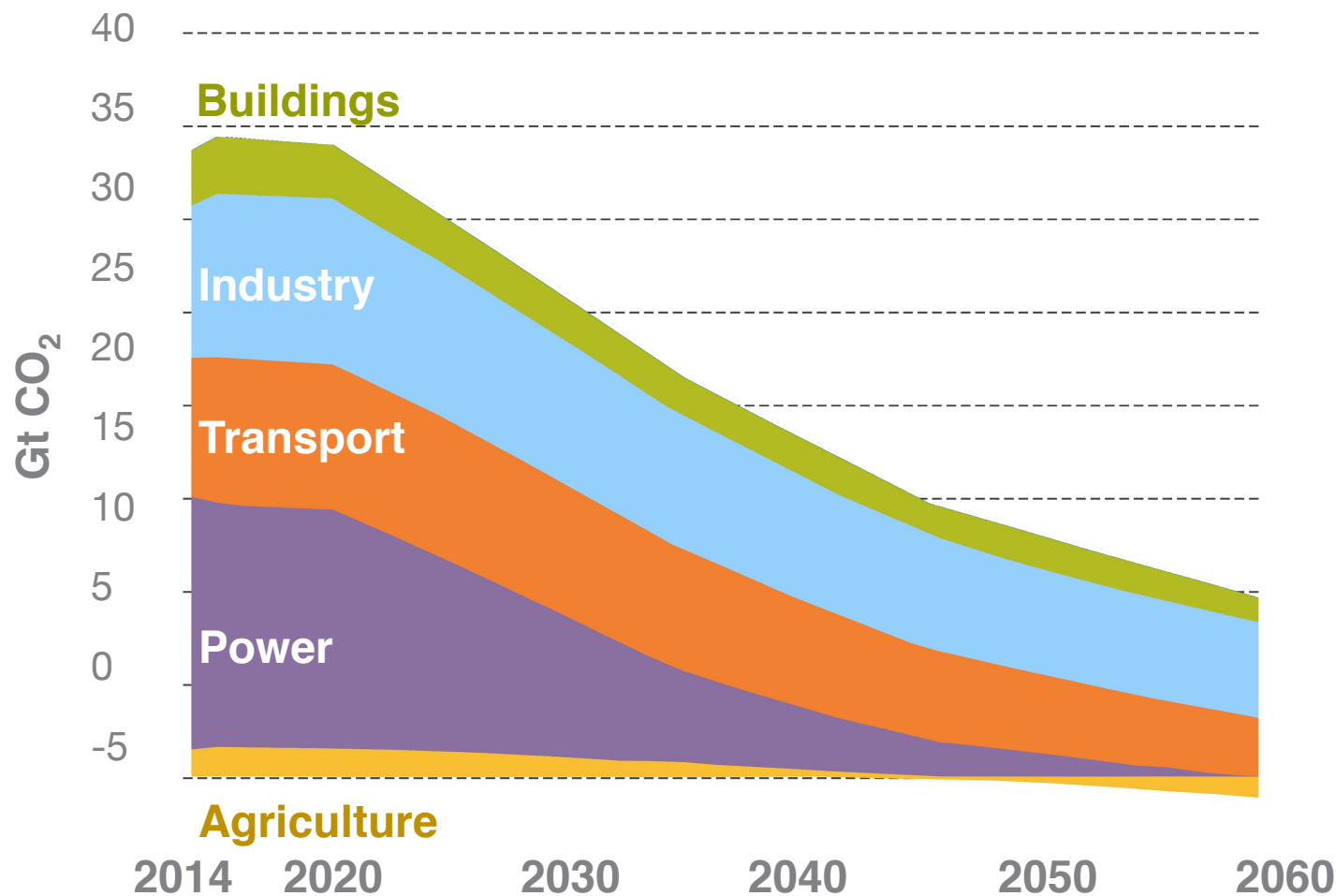


Robert Socolow

carbon emissions by sector

must deeply decarbonize power sector

2 Degree Scenario (2DS)

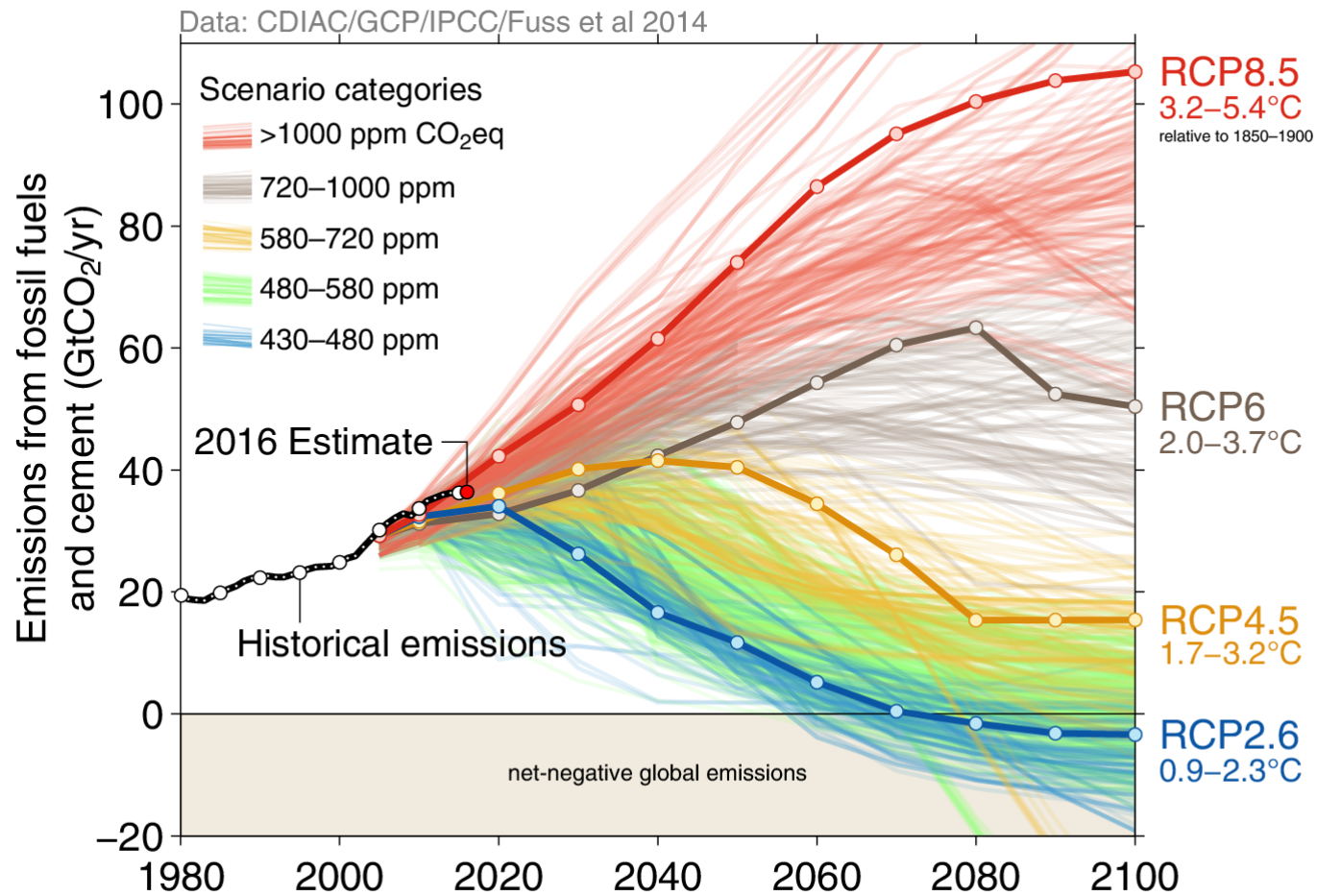


IEA Energy Technology Perspectives 2017



transition to low-carbon technologies

rapid decarbonization





understanding bottlenecks

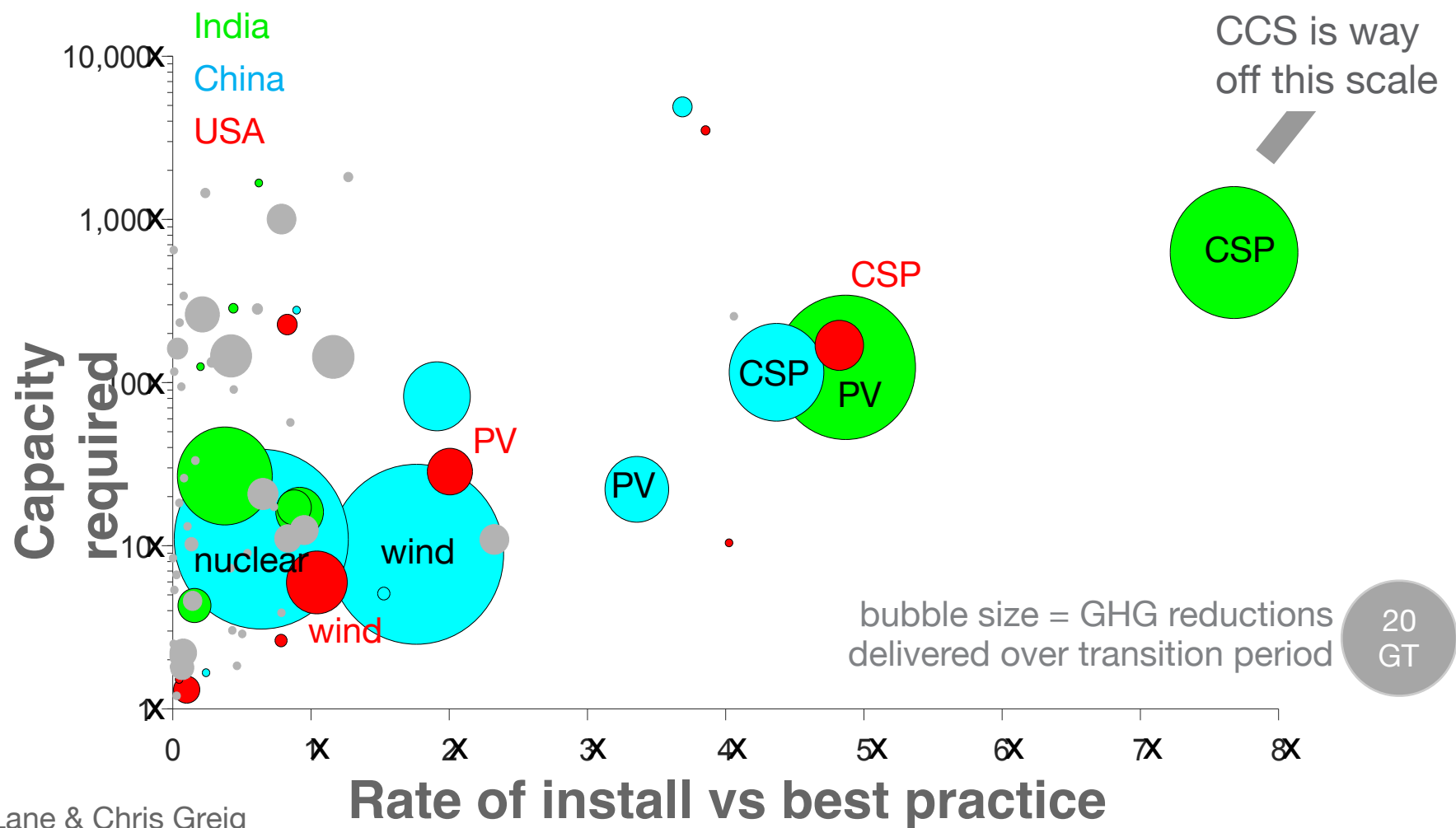
rapid switch

an unprecedented technological, infrastructural, social and economic transformation is ahead

- + socio-behavioral resistance to expansion of low-carbon infrastructure; e.g., nuclear, high voltage transmission, offshore wind
- + techno-economic barriers to deep penetration of variable renewable energy and widespread deployment of efficient mass transit infrastructure

understanding scale and pace of change
rapid switch

2060 projections relative to current day



Joe Lane & Chris Greig

why are we here?

“...emerge from this conference with new ideas about how each and every one of us can make a difference and be part of accelerating climate action.”

**Judi
Greenwald**

*inaugural gerhard andlinger
visiting fellow*

