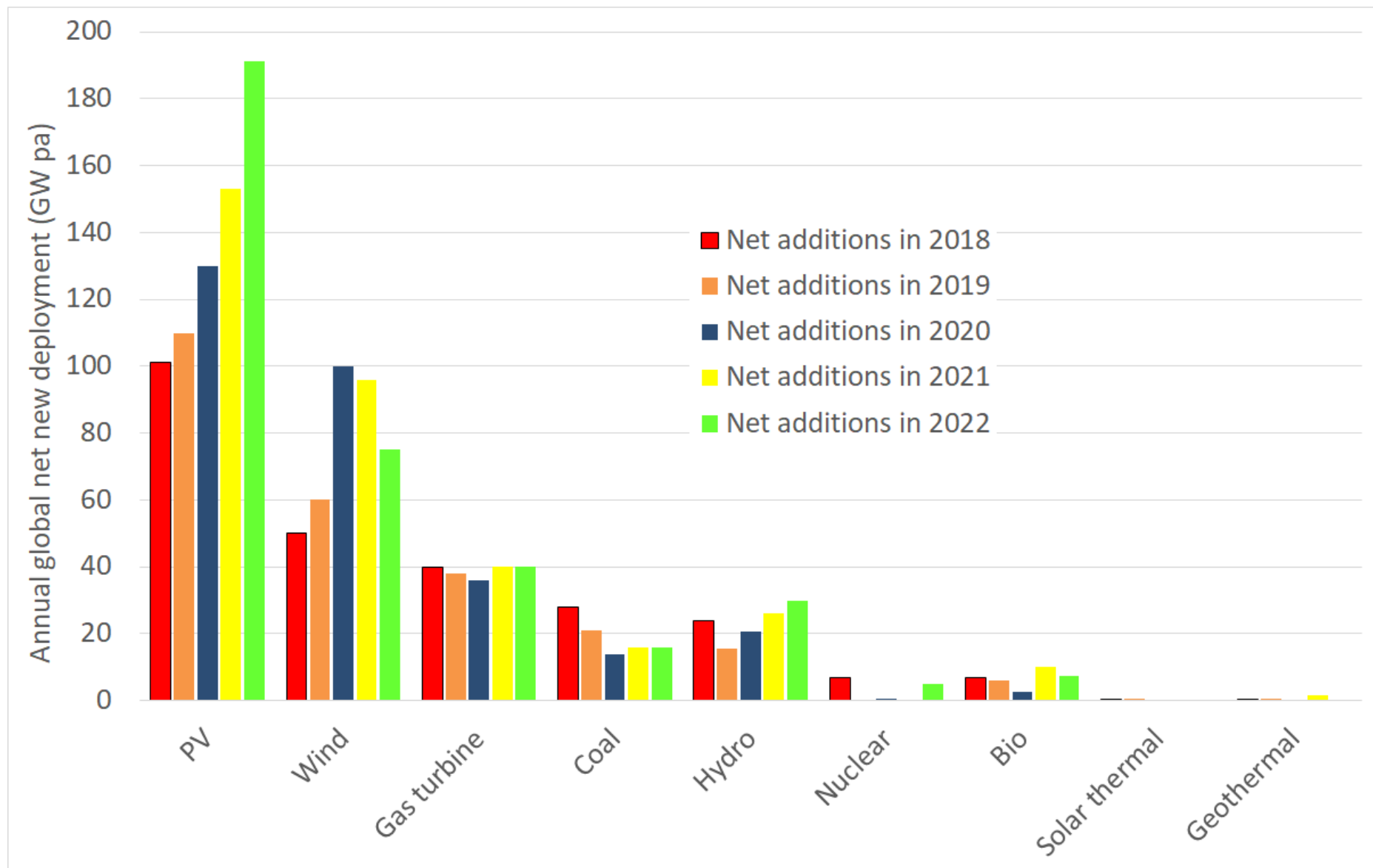


A wide-angle photograph of a large-scale solar farm. The foreground and middle ground are filled with rows of dark blue photovoltaic solar panels, which recede into the distance towards a flat horizon. The sky is a deep, clear blue, and a bright sun is positioned in the upper left quadrant, creating a strong lens flare that radiates across the sky. The overall scene conveys a sense of clean, renewable energy production on a large scale.

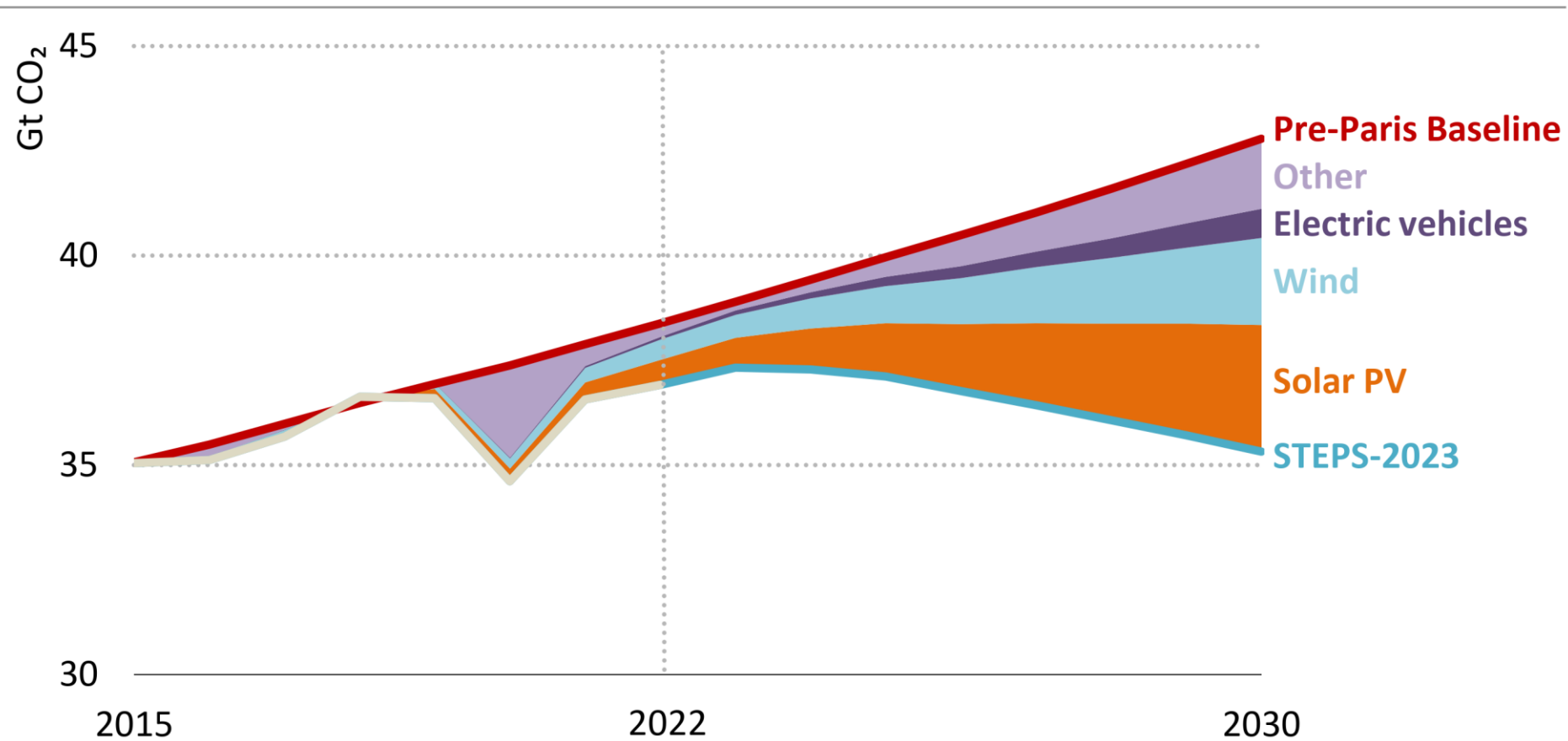
Accelerating renewables

Prof. Kylie Catchpole



Globally, >75% of new energy capacity is renewable

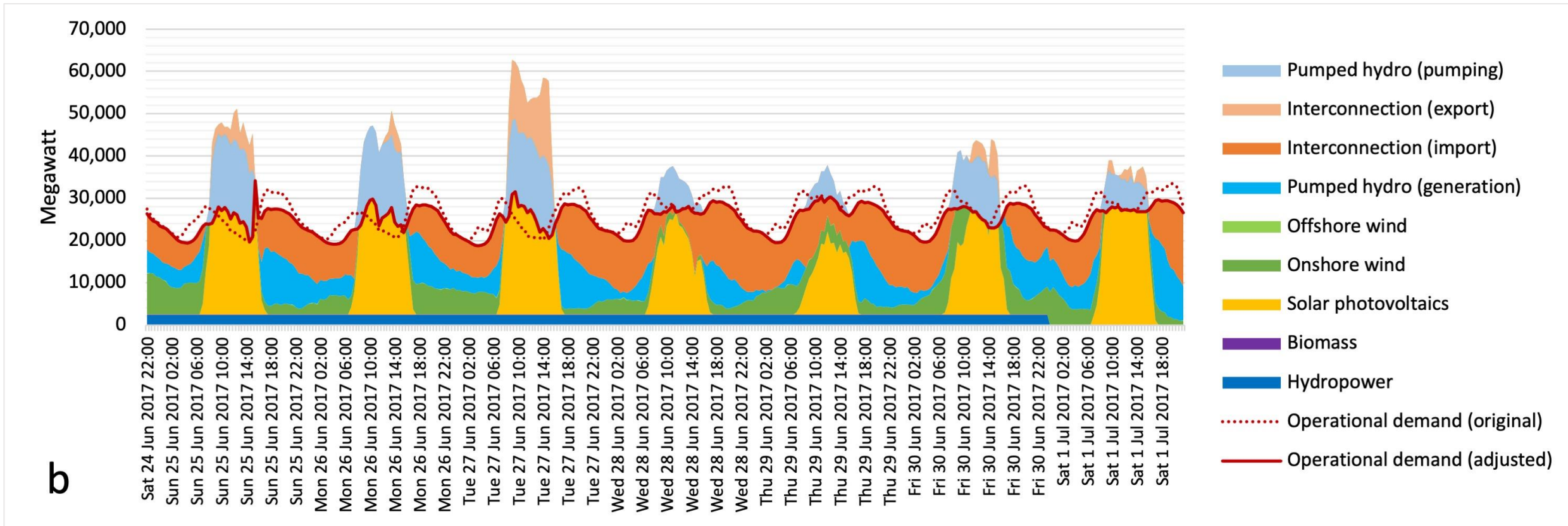
Figure 1.3 ▶ Global energy sector CO₂ emissions in the Pre-Paris Baseline Scenario and STEPS, 2015-2030



IEA Net-zero roadmap 2023
IEA. CC BY 4.0.

- Solar projected to reduce emissions by 3Gt CO₂ by 2030, approximately equal to emissions from all the cars on the road today
- Wind will reduce emissions by 2Gt, EVs by around 1Gt.

Accelerating renewables requires lots of action in parallel



E.g. seasonal variability can be managed with pumped hydro, more renewables and transmission – but we need to get moving

Conclusion



Impact

- The transition to renewables is unstoppable.
- Accelerating renewables is the most important thing we can do to reduce emissions globally

Progress

- Transmission expansion
- Capacity investment scheme so that renewables and storage are installed while transmission expands

Going forward

- Long-duration storage
- Making the use of consumer solar and batteries a win-win
- Modelling to better understand the risks and opportunities