ENERGY COMMUNITIES REPOSITORY

Workshop

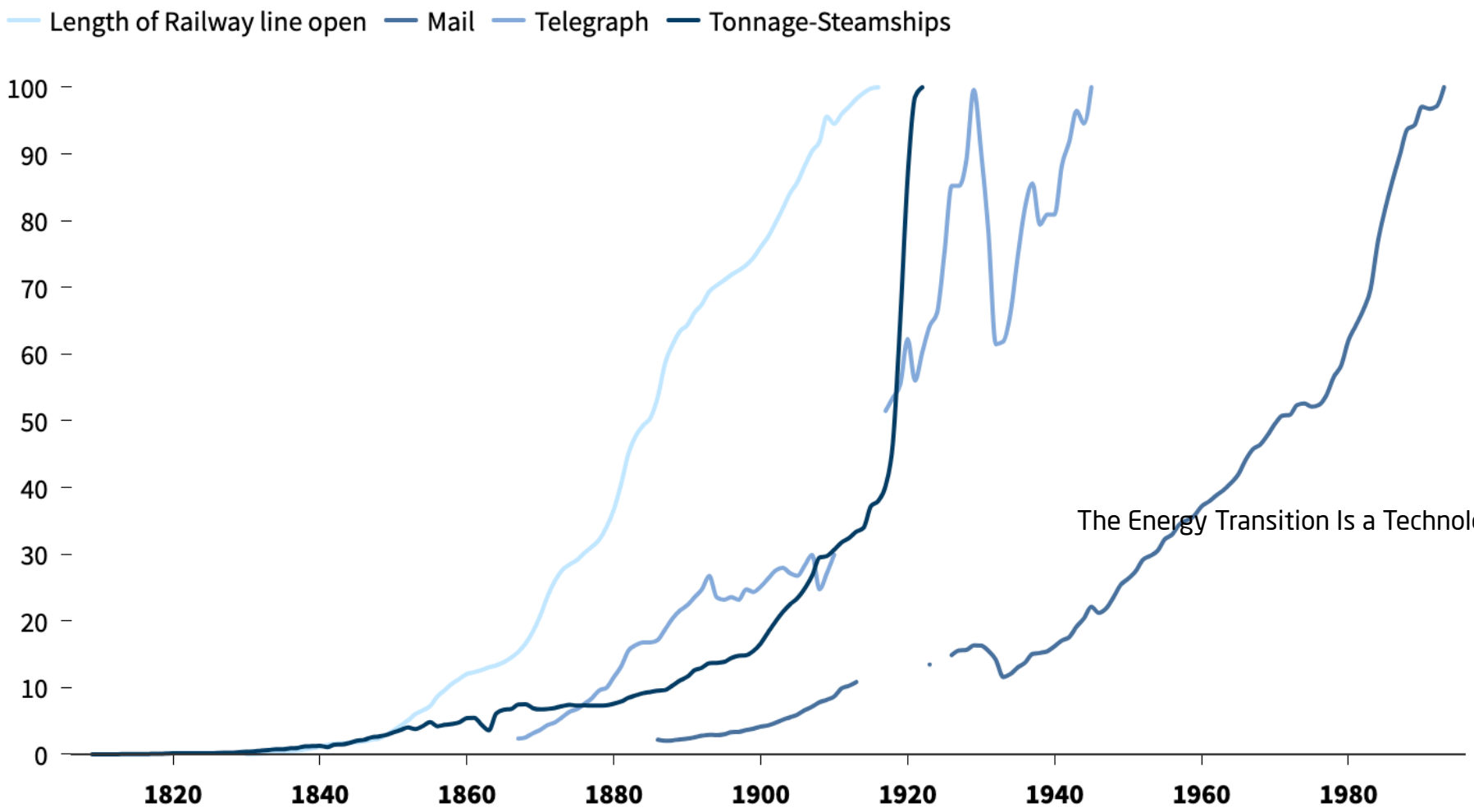
ABILITARE ENERGIE DI COMUNITÀ

DEMOCRAZIA ENERGETICA E COMUNITÀ ENERGETICHE RINNOVABILI: DAGLI SCENARI INTERNAZIONALI ALLE PRATICHE LOCALI

Gianluca Ruggieri
Università dell'Insubria
ènostra

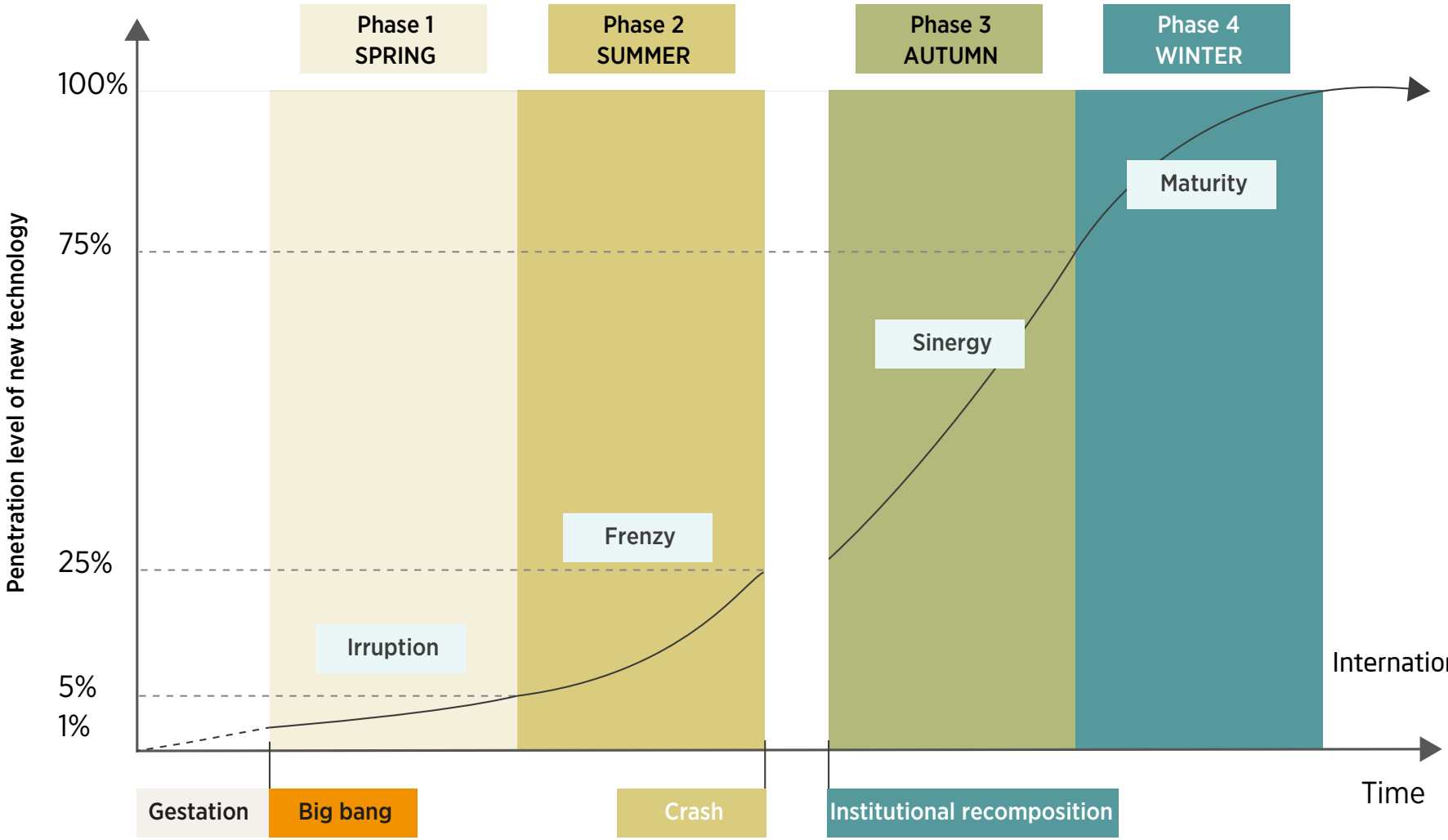
Adoption of key technologies during the Industrial Revolution, United States

% of maximum recorded ("peak") value in timeseries



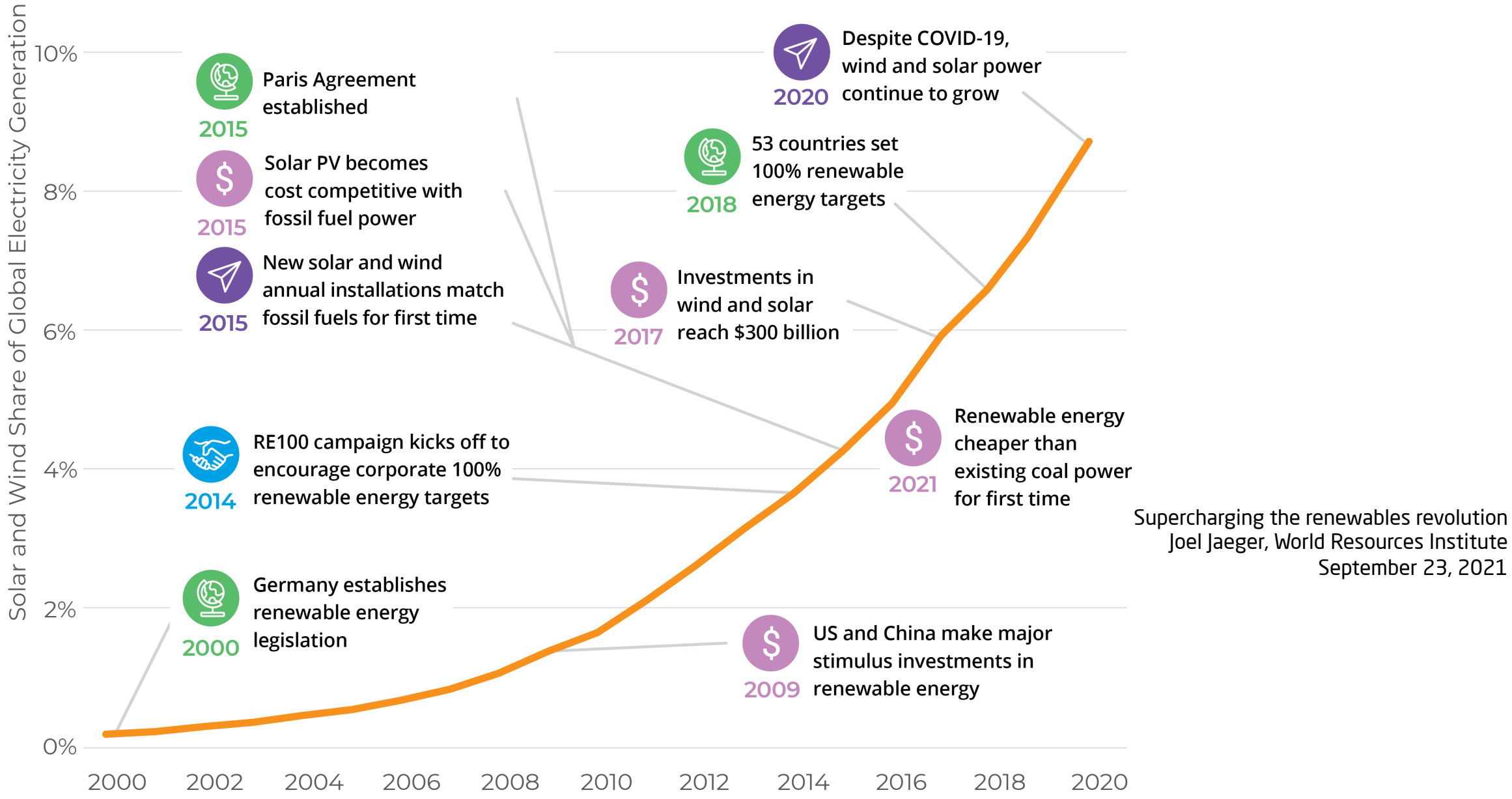
Source: Comin & Hobijn, Historical Cross-Country Technology Adoption Dataset (2004)

The Energy Transition Is a Technological Revolution – with a Deadline
rmi.org - August 10, 2023



Source: Adapted from Perez (2002).

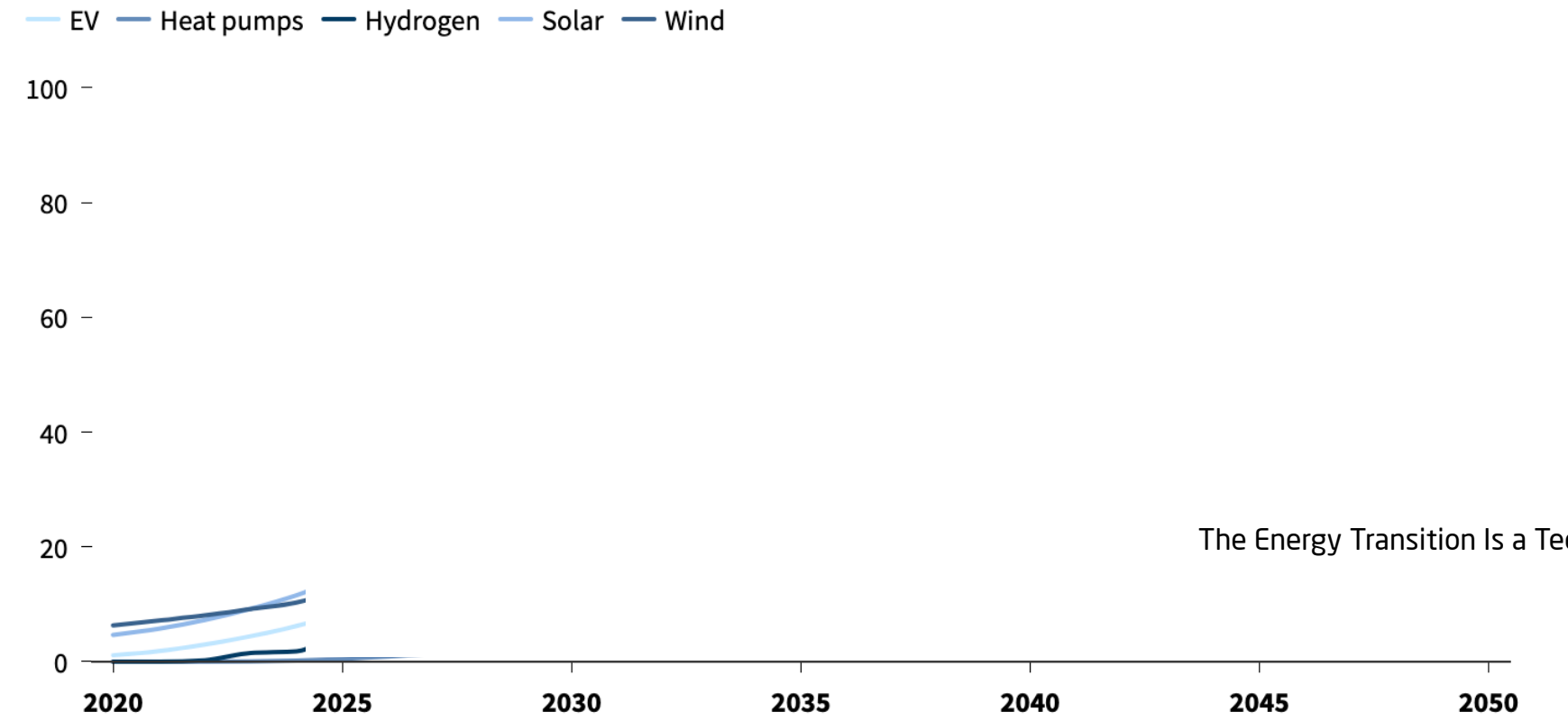
Bond (2021),
The renewable spring:
The interplay between finance
and policy in the energy transition,
International Renewable Energy Agency, Abu Dhabi.



Supercharging the renewables revolution
Joel Jaeger, World Resources Institute
September 23, 2021

Adoption of key technologies during the energy transition, global

% of cumulative capacity in 2050

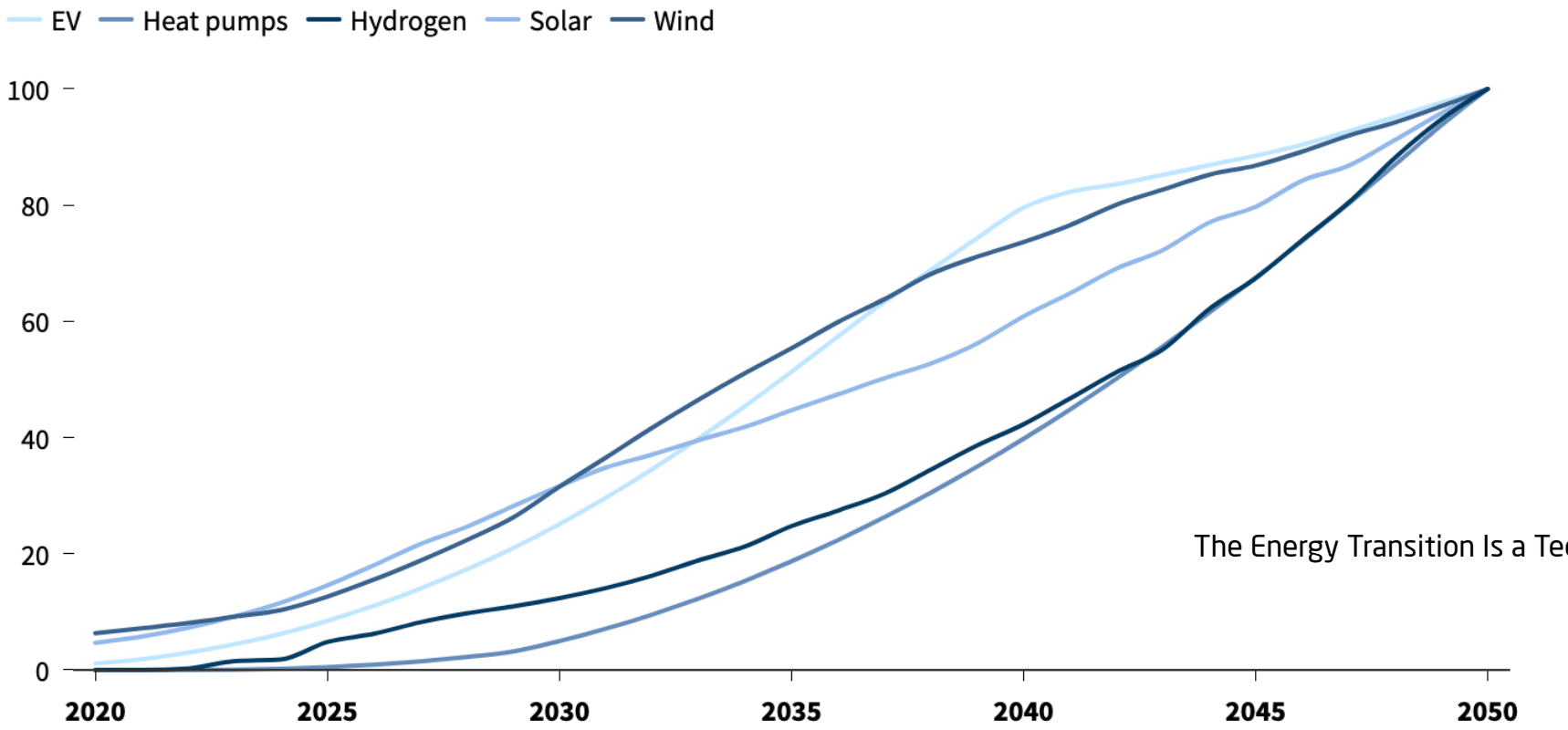


Source: BloombergNEF New Energy Outlook 2022

The Energy Transition Is a Technological Revolution – with a Deadline
rmi.org - August 10, 2023

Adoption of key technologies during the energy transition, global

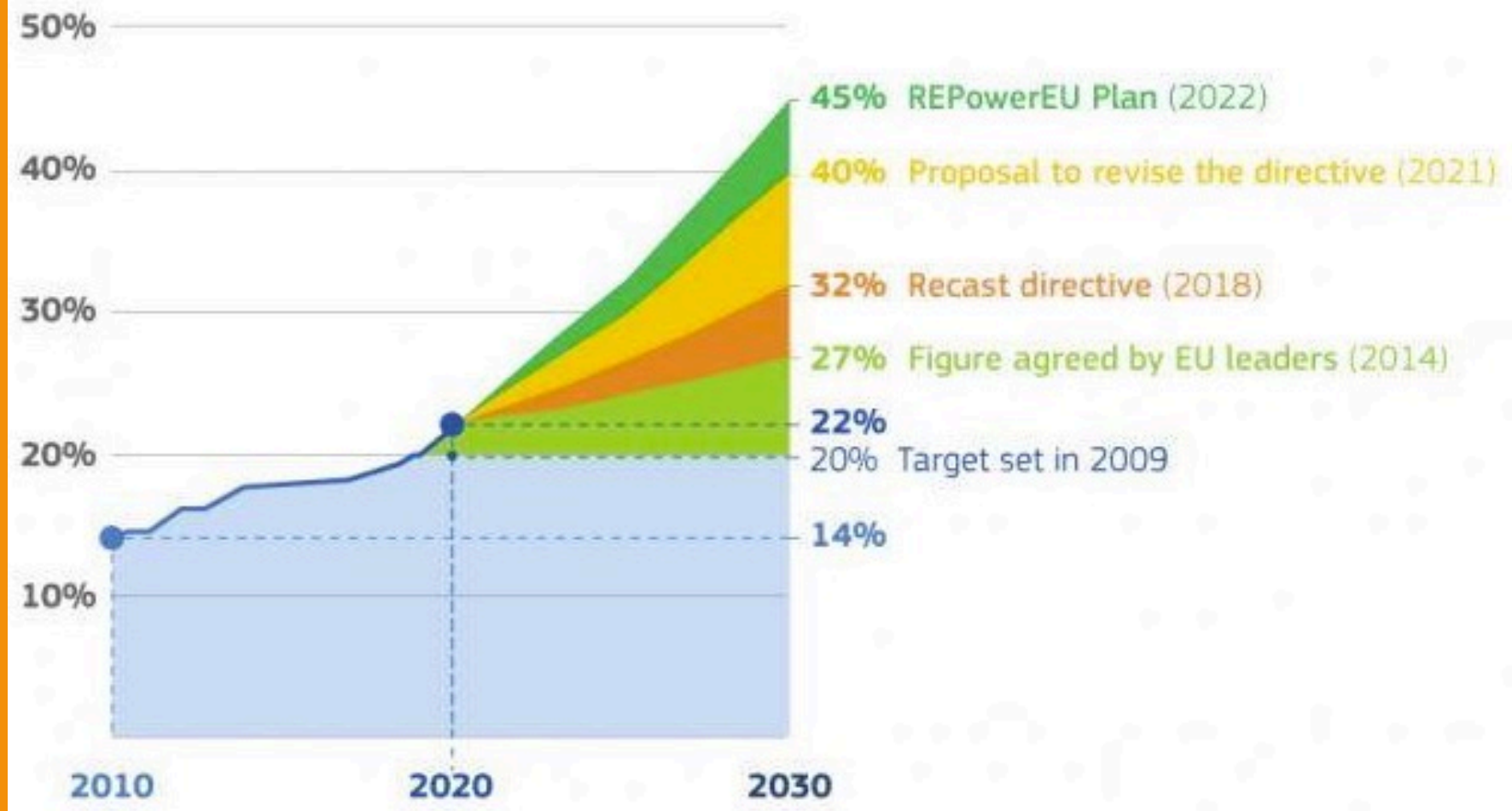
% of cumulative capacity in 2050



Source: BloombergNEF New Energy Outlook 2022

The Energy Transition Is a Technological Revolution – with a Deadline
rmi.org - August 10, 2023

Evolution of renewable energy targets



"The transition to clean energy is happening worldwide and it's unstoppable. It's not a question of 'if', it's just a matter of 'how soon' – and the sooner the better for all of us"

Fatih Birol
Executive Director, IEA

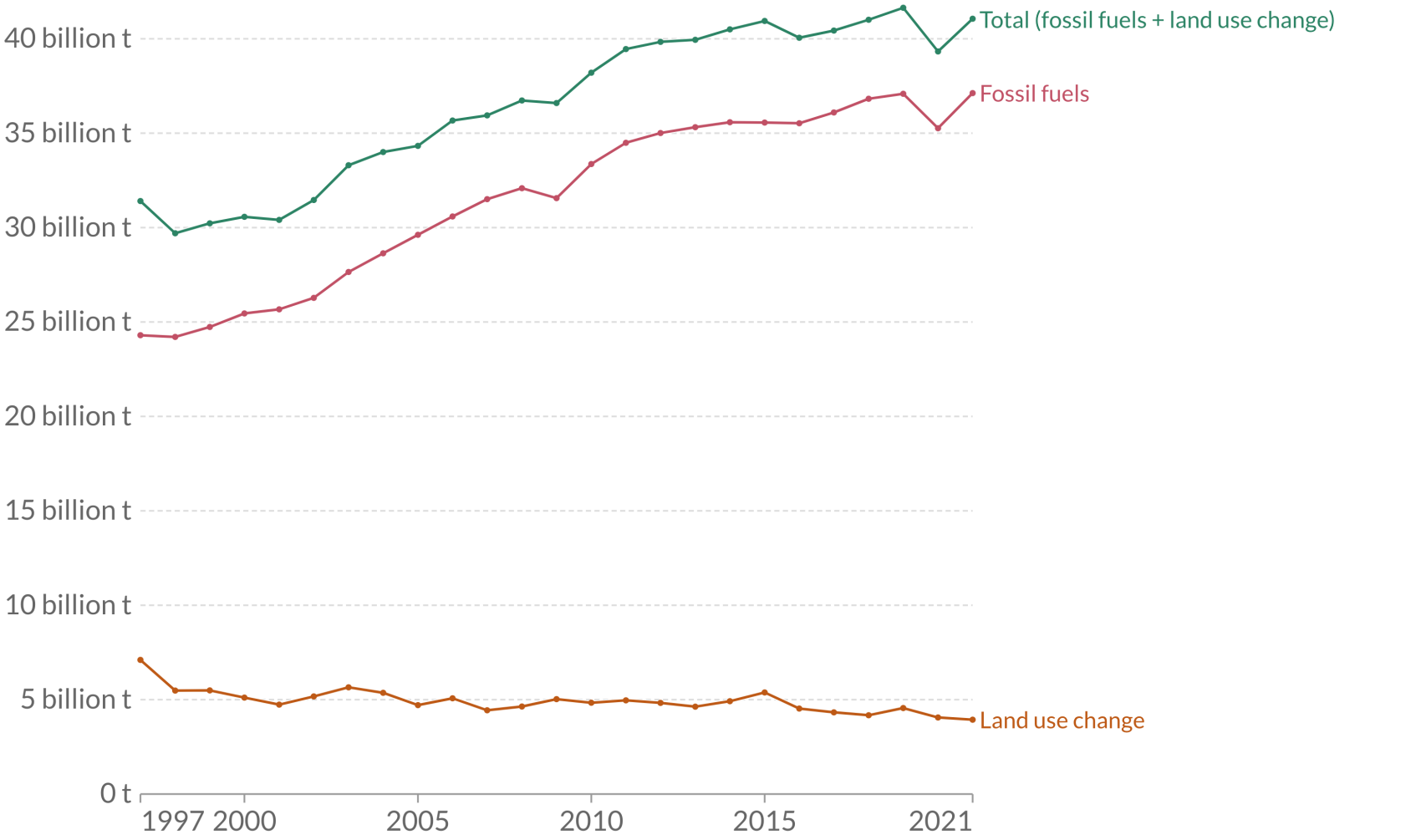
International Energy Agency

"When we look back 10 years from now, we will see that 2022 was a major milestone in the history of energy, where we saw a turbocharging of the clean energy transition."

Fatih Birol
Executive Director, IEA

International Energy Agency

Global CO_2 emissions from fossil fuels and land use change, World



Source: Global Carbon Budget (2022)

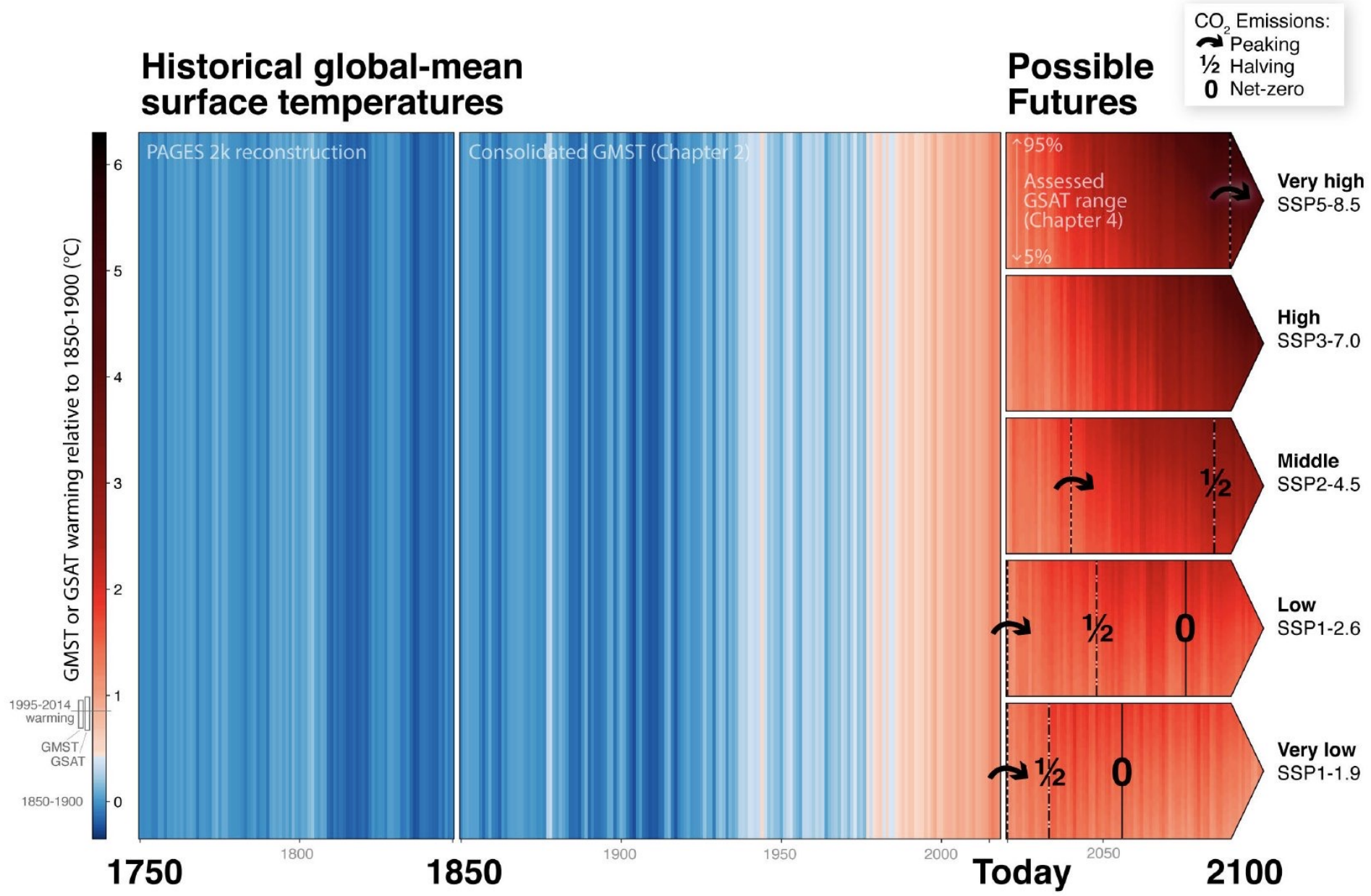
OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

Anche se ancora non si vede, le rinnovabili hanno vinto

e allora perché sbattersi ancora?

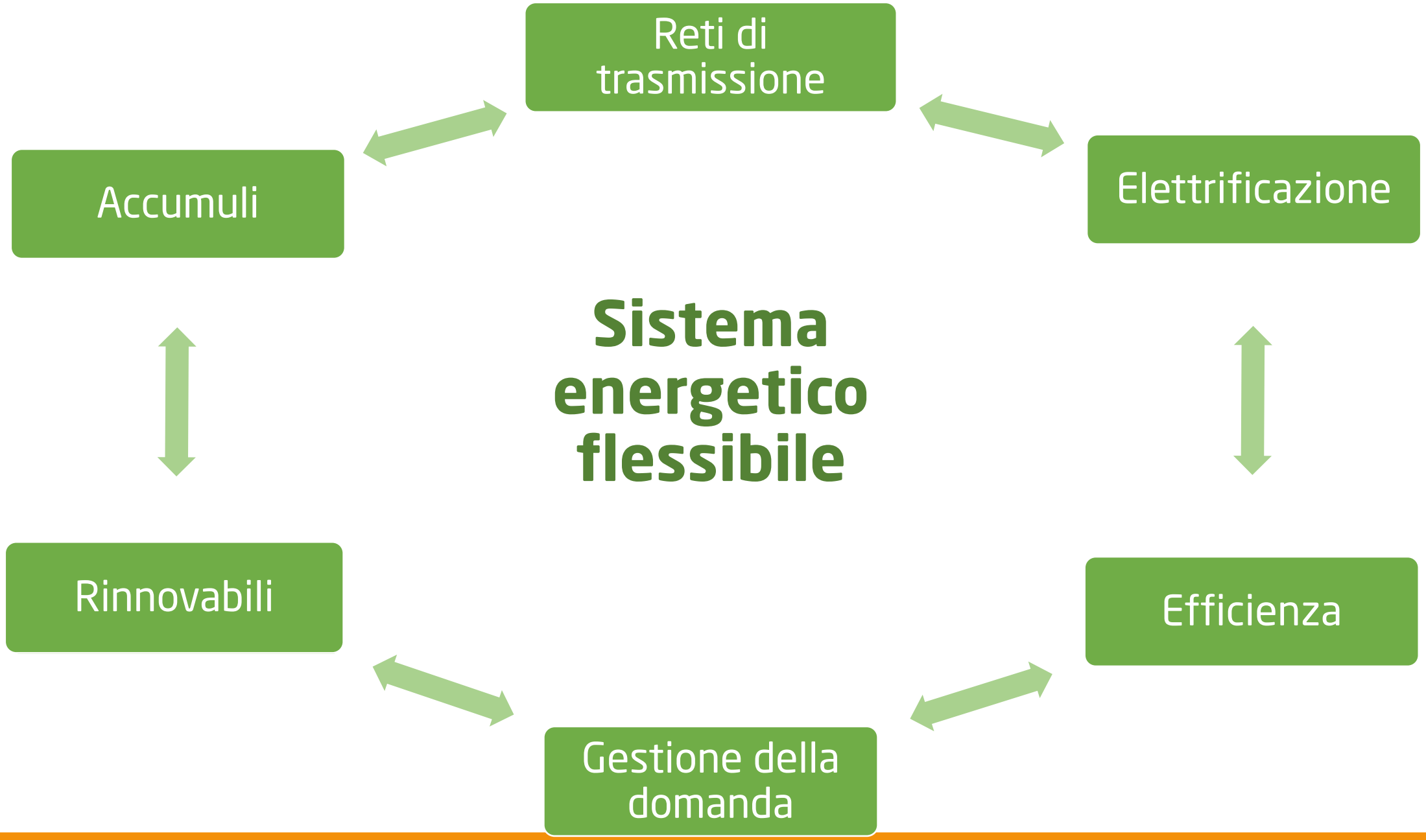
Primo

perché «quando» non è indifferente


Historical global-mean surface temperatures
Possible Futures
CO2 Emissions:
Peaking
½ Halving
0 Net-zero
PAGES 2k reconstruction
Consolidated GMST (Chapter 2)
95%
Assessed GSAT range (Chapter 4)
5%
Very high
SSP5-8.5
High
SSP3-7.0
Middle
SSP2-4.5
½
Low
SSP1-2.6
½
0
Very low
SSP1-1.9
½
0
GMST or GSAT warming relative to 1850-1900 (°C)
6
5
4
3
2
1
0
1995-2014 warming
GMST
GSAT
1850-1900
1750
1800
1850
1900
1950
2000
Today
2050
2100

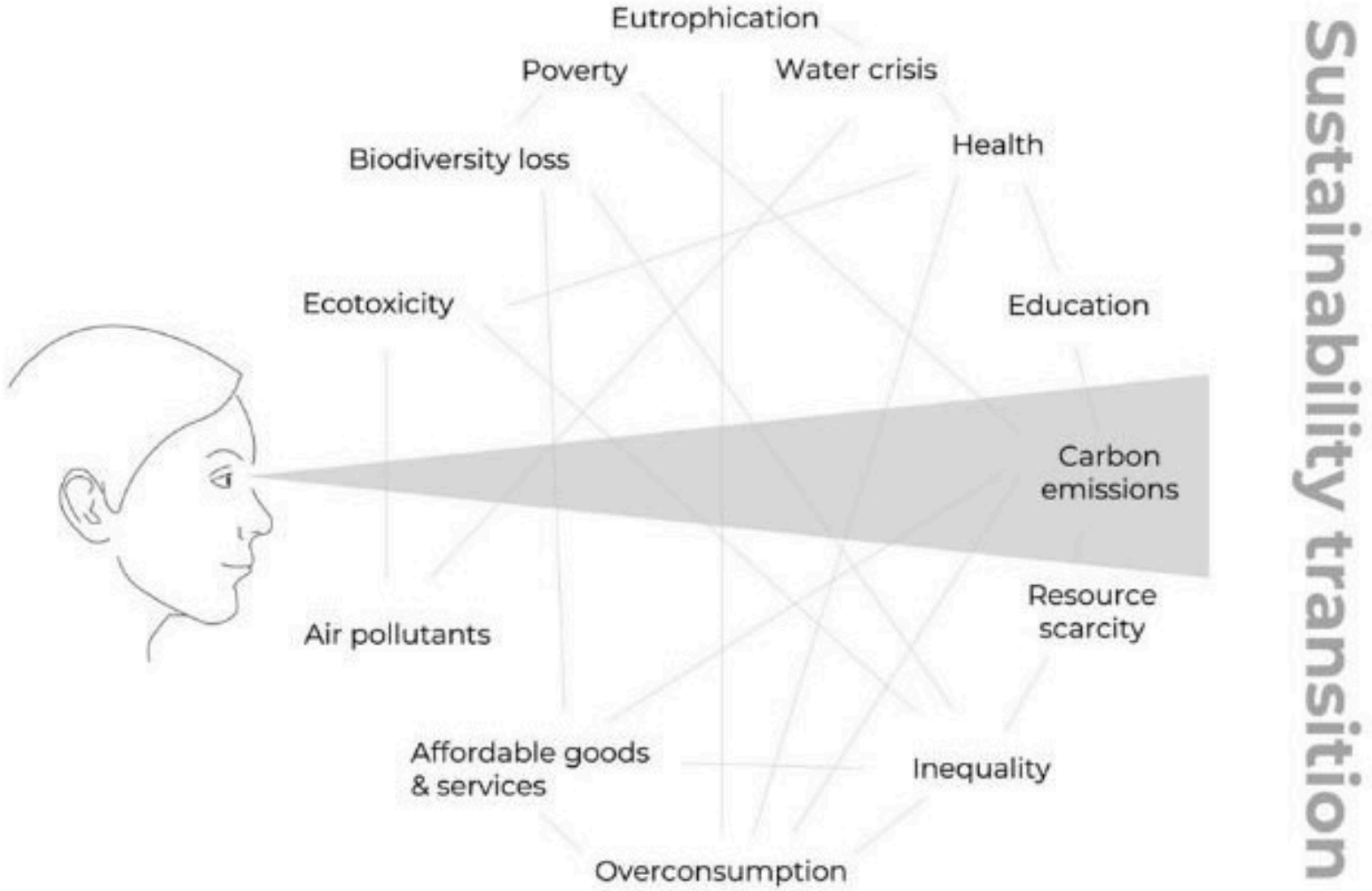
Secondo

perché le rinnovabili
sono solo un pezzo della soluzione


Reti di trasmissione
Elettrificazione
Efficienza
Gestione della domanda
Rinnovabili
Accumuli
Sistema energetico flessibile

Terzo

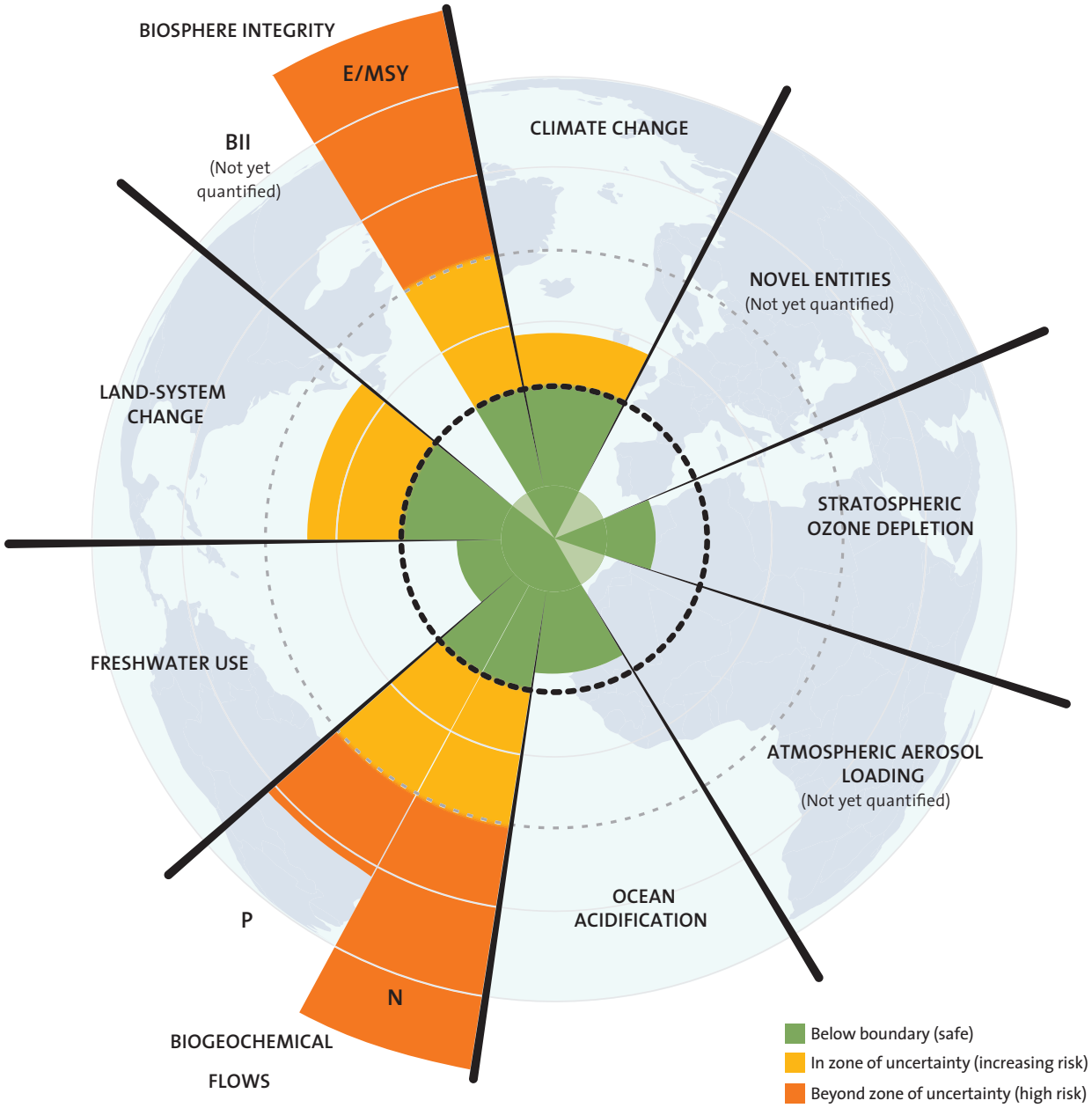
perché il clima
è solo un pezzo del problema



Graphic by Jan Konietzko

Carbon tunnel vision

Stockholm Resilience Centre | Stockholm University



2021

17 obiettivi
169 traguardi misurabili

Quarto

perché le sfide da vincere sono tante


MACARON
LE PEUPLE
SOUVERAIN
S'AVANCE

- Riconversione professionale
- Riconversione settori industriali
- Disponibilità risorse
- Filiere di produzione
- Loss and damage – paesi più danneggiati
- Regioni estrattive
- Investimenti dei singoli – chi paga?

Quinto

perché serve innescare processi di cambiamento generativi


Formazione
Tecnologia
Economia
Decarbonizzazione
Politica
Media
Persone

Sesto, e ultimo

perché più rinnovabili non vuol dire *per forza* più democrazia o più pace

npj | climate action

www.nature.com/npjclimataction

ARTICLE OPEN

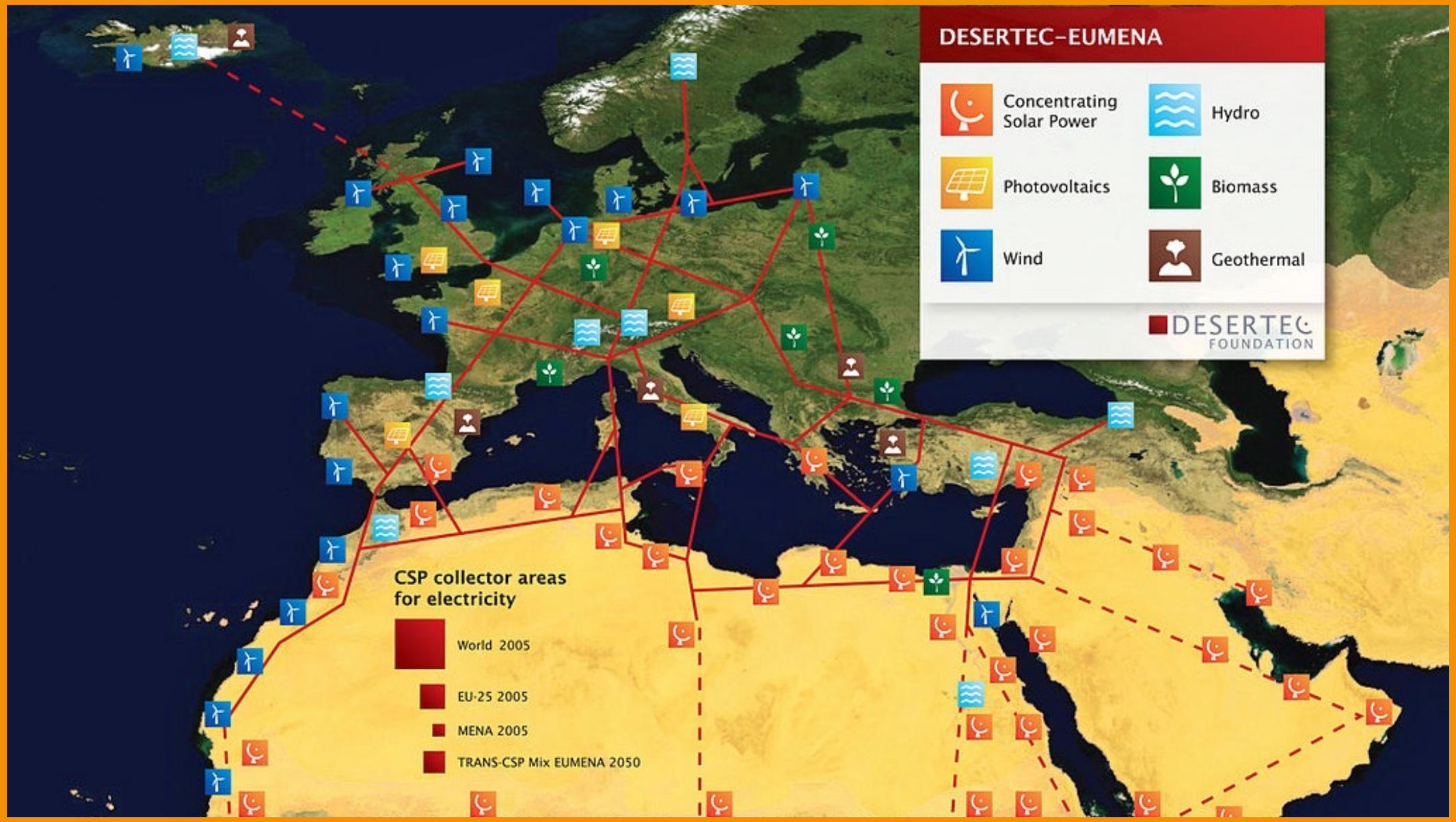
Check for updates

Does climate action bring peace? Assessing the geopolitics of renewables using global investment data

Juergen Braunstein[1], Andreas C. Goldthau[2,3]✉ and Konstantin Veit[4]

The transition toward renewables is central to climate action. The paper empirically tests whether renewables also enhance international peace, a hypothesis discussed in the International Political Economy (IPE) of renewables literature. It develops and tests hypotheses about the pacifying effects of renewables, with a view to establishing the foundations for analyzing more detailed causal mechanisms. These mechanisms rest on the 'energy democracy' debate, suggesting that a low carbon world sees less interstate tension thanks to more states being democratic; the 'capitalist peace' theorem, establishing that the deployment of renewables brings about economic development, reducing conflict; and the human security literature, positing that renewables reduce local-level reduce vulnerabilities, thus enhancing social stability and reducing violence. Using a longitudinal dataset on global renewable energy investment, econometric tests suggest that distributed renewable energy systems do not seem to foster democratic rule, nor do they have a significant influence on human development. Countering the energy democracy literature, it is a higher concentration of renewable investment that tends to increase stability/ absence of violence and human development, instead of decentralized investment patterns. We find no evidence for the 'peace through prosperity' argument. Overall, there is no support for the assumption that renewables bring about peace and reduce conflict. The paper critically discusses the limitations of these findings and suggests further avenues for empirical research.

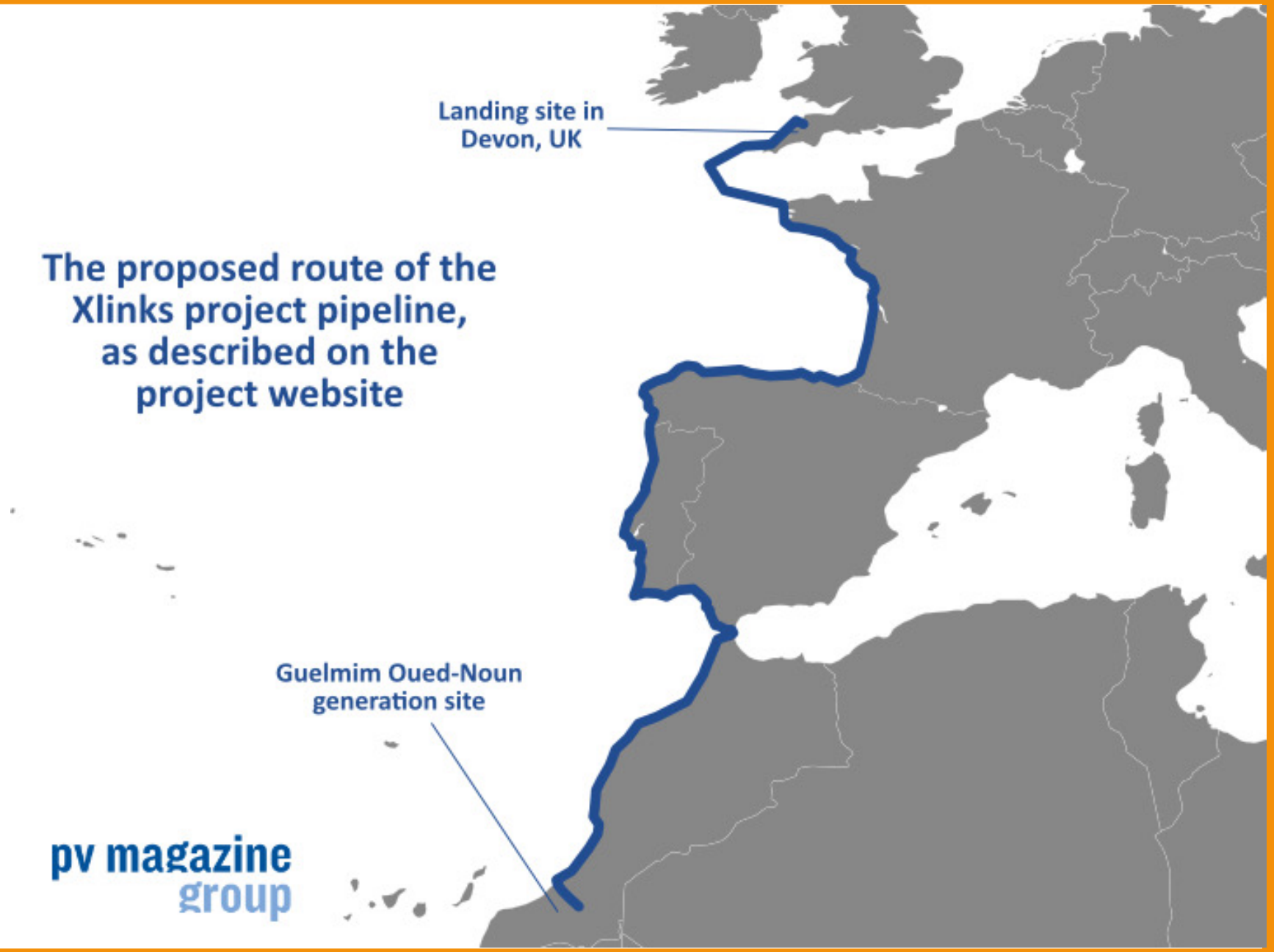
npj Climate Action (2023)2:14 ; https://doi.org/10.1038/s44168-023-00045-6


DESERTEC-EUMENA
Concentrating Solar Power
Hydro
Photovoltaics
Biomass
Wind
Geothermal
DESERTEC FOUNDATION
CSP collector areas for electricity
World 2005
EU-25 2005
MENA 2005
TRANS-CSP Mix EUMENA 2050

The Xlinks Morocco-UK Power Project is a proposal to create 10.5 GW of renewable generation, 20 GWh of battery storage and a 3.6 GW high-voltage direct current interconnector to carry solar and wind-generated electricity from the Kingdom of Morocco to the United Kingdom

If built, the 3,800 km cable will be the longest undersea power cable by far, and would supply up to 7.5% of the UK's electricity consumption

The first phase of the project is expected to be operational in 2029, with the second phase due in 2031.

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