

La corsa delle rinnovabili

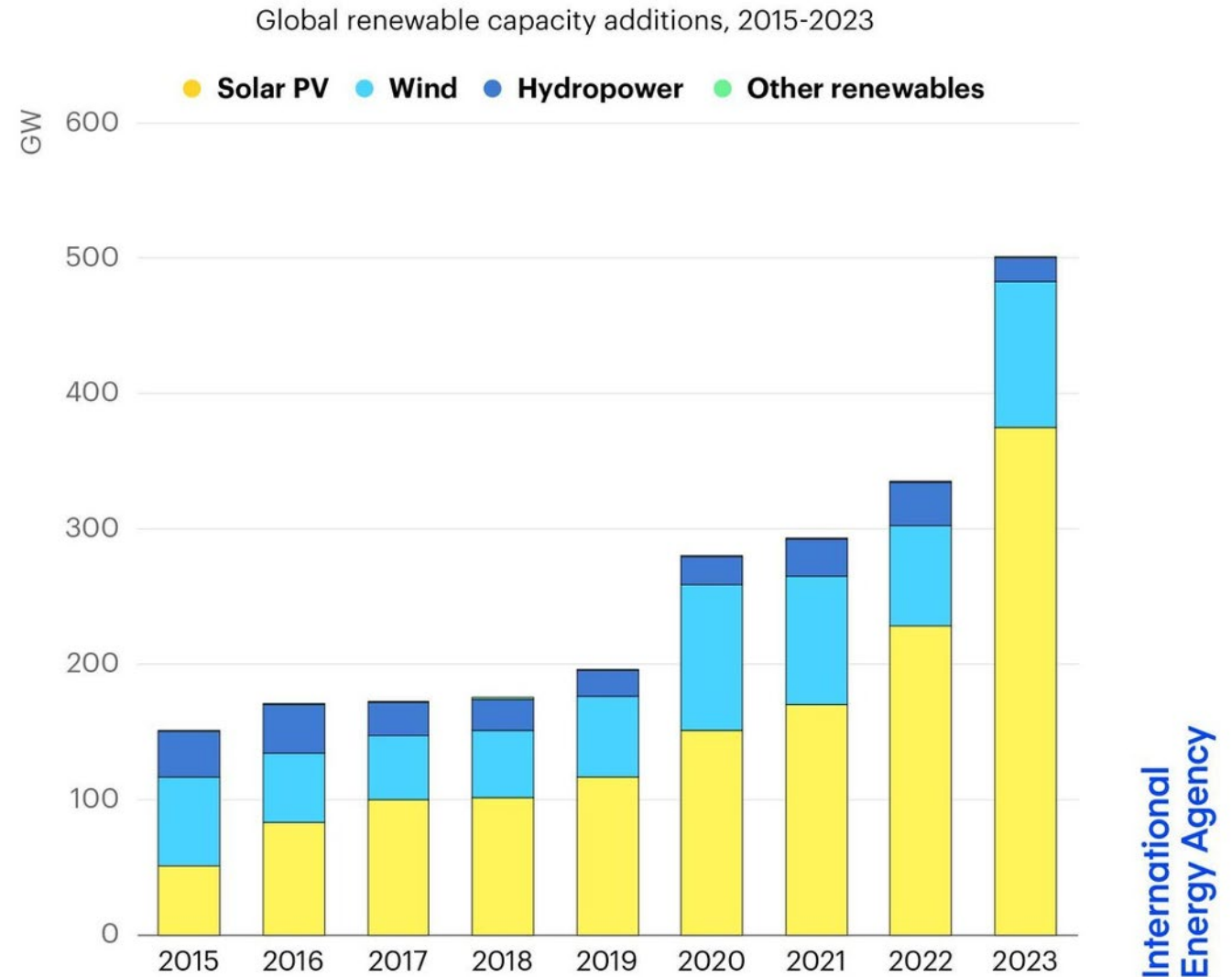
Gianni Silvestrini

Direttore scientifico Kyoto Club

La potenza verde nel mondo
è cresciuta del 51% nel 2023,
raggiungendo 510 GW

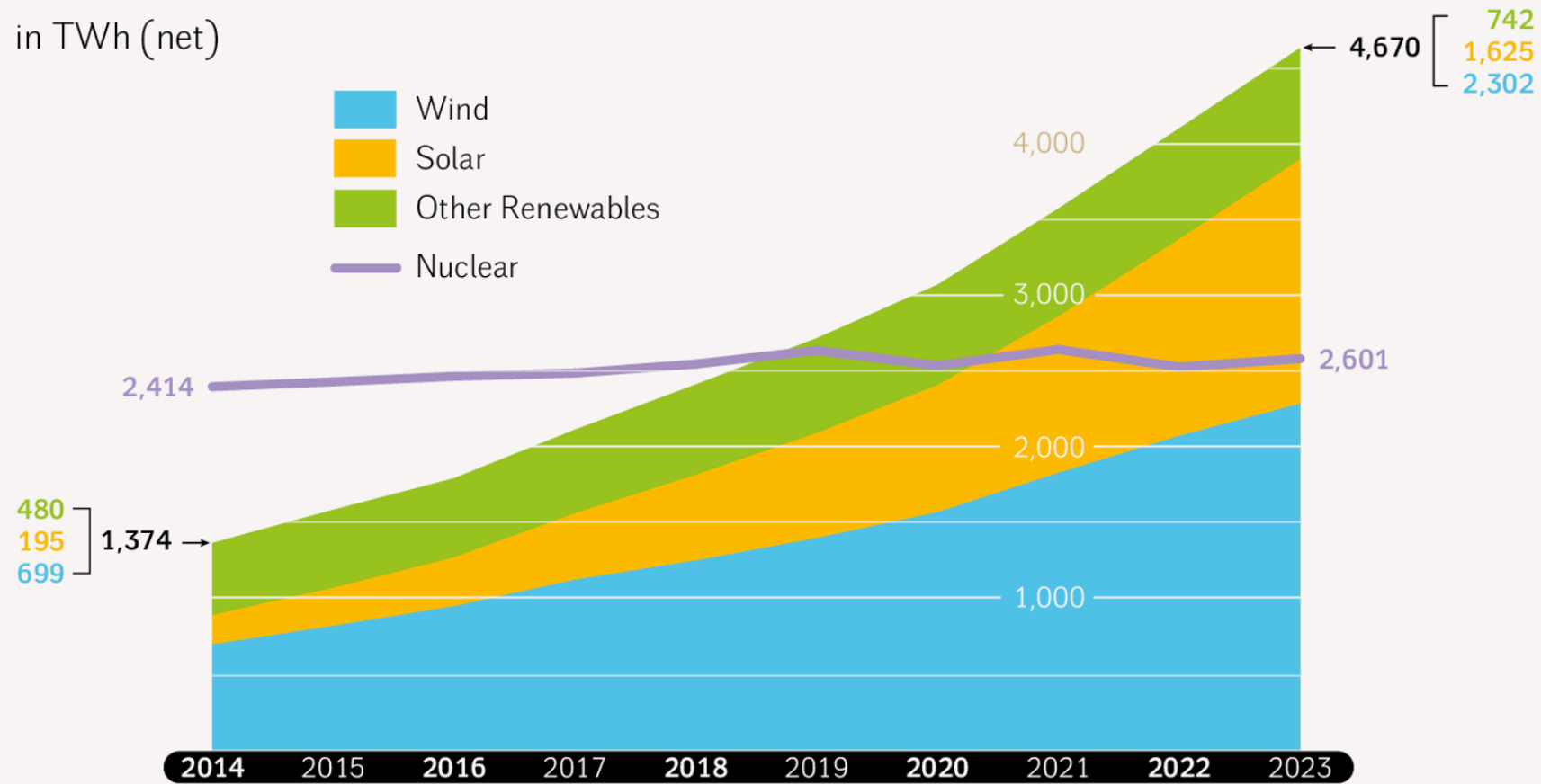
Boom del fotovoltaico

The world added a historic 510 GW of renewable capacity in 2023, equivalent to the entire power capacity of Germany, France & Spain combined



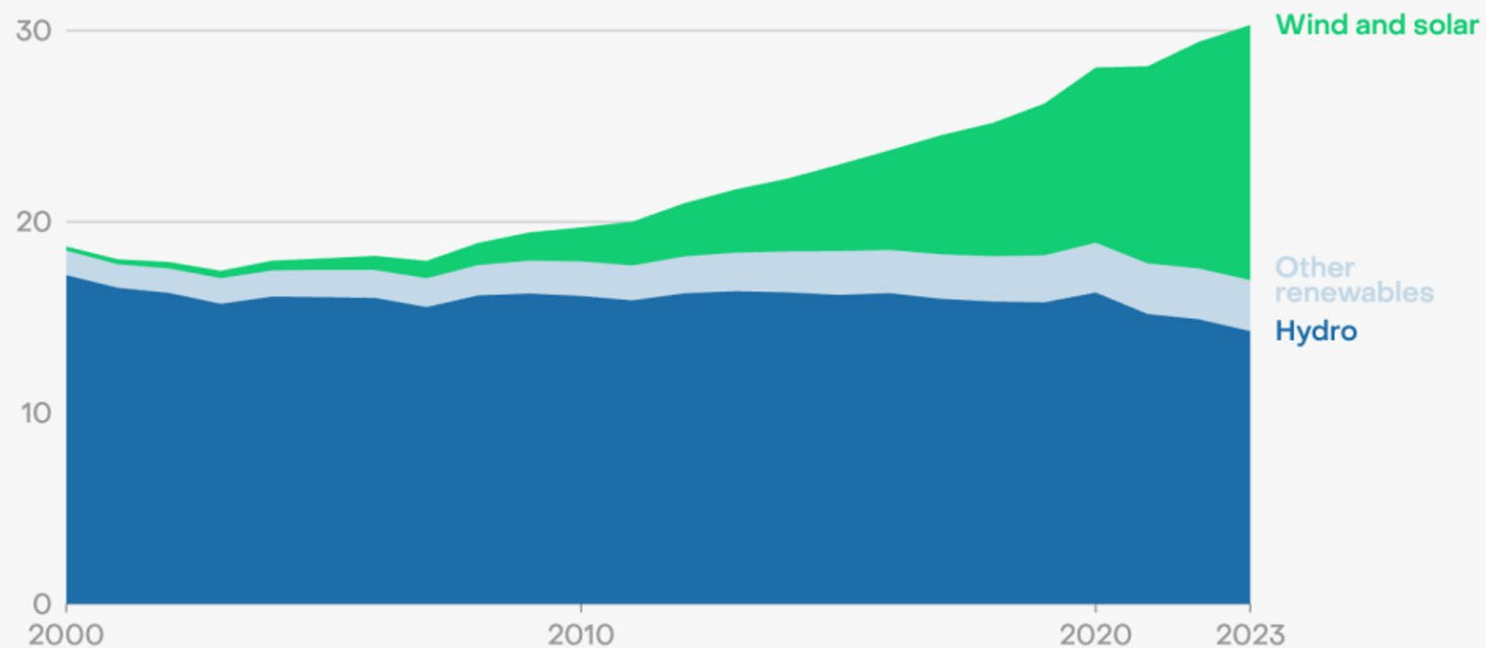
Nuclear vs. Non-Hydro Renewable Electricity Production in the World 2014–2023

in TWh (net)



Global growth in wind and solar pushed renewables to make up more than 30% of the global electricity mix in 2023

Share of global electricity generation from renewable sources (%)

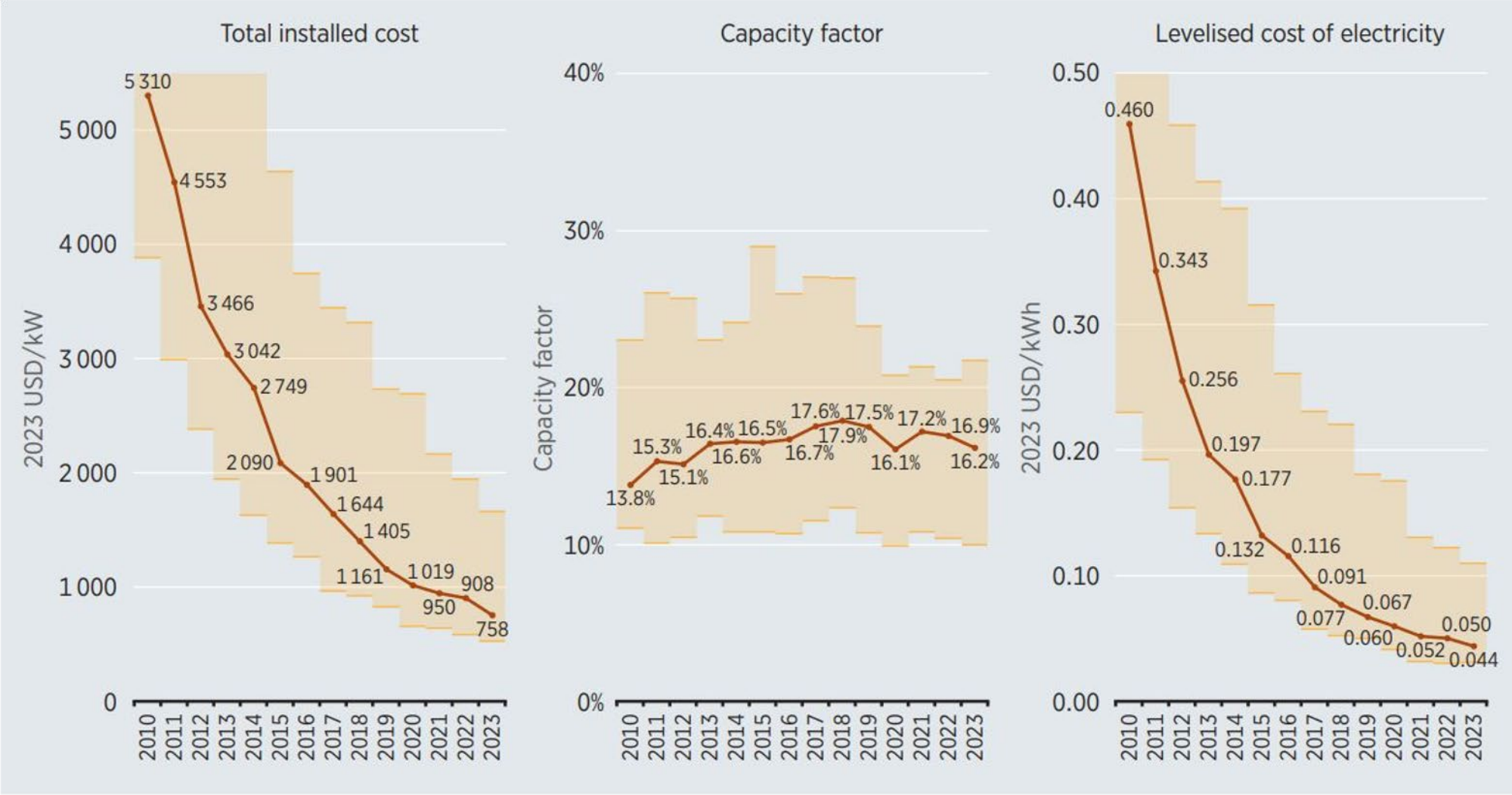


Source: Annual electricity data, Ember

EMBER

Secondo la IEA nel 2030 le rinnovabili contribuiranno alla metà della produzione elettrica mondiale (pv ed eolico 30%)

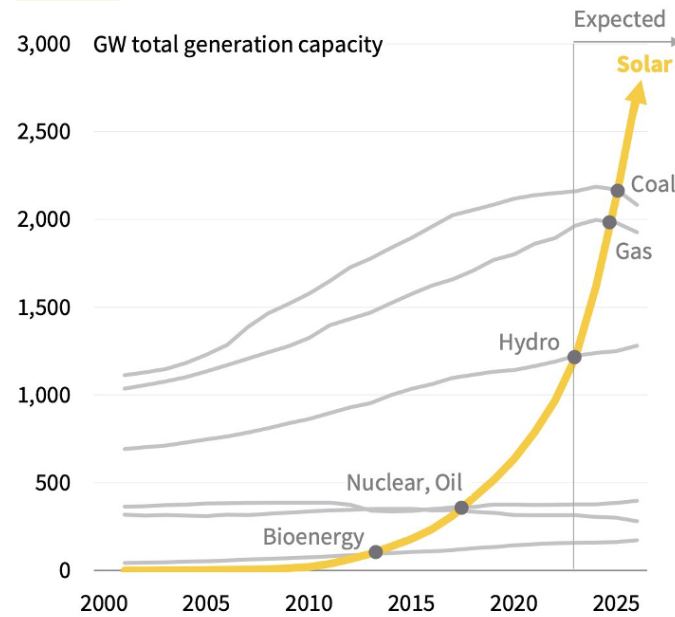
Riduzione dei costi del fotovoltaico 2010-2023



Solar and batteries are taking over

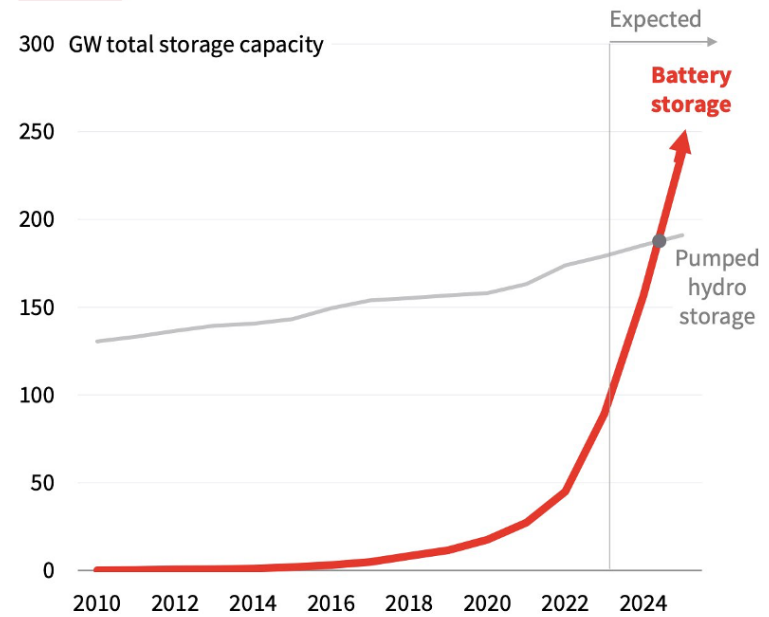
Solar will shortly overtake every other type of capacity, and battery storage will leapfrog pumped hydro

Solar

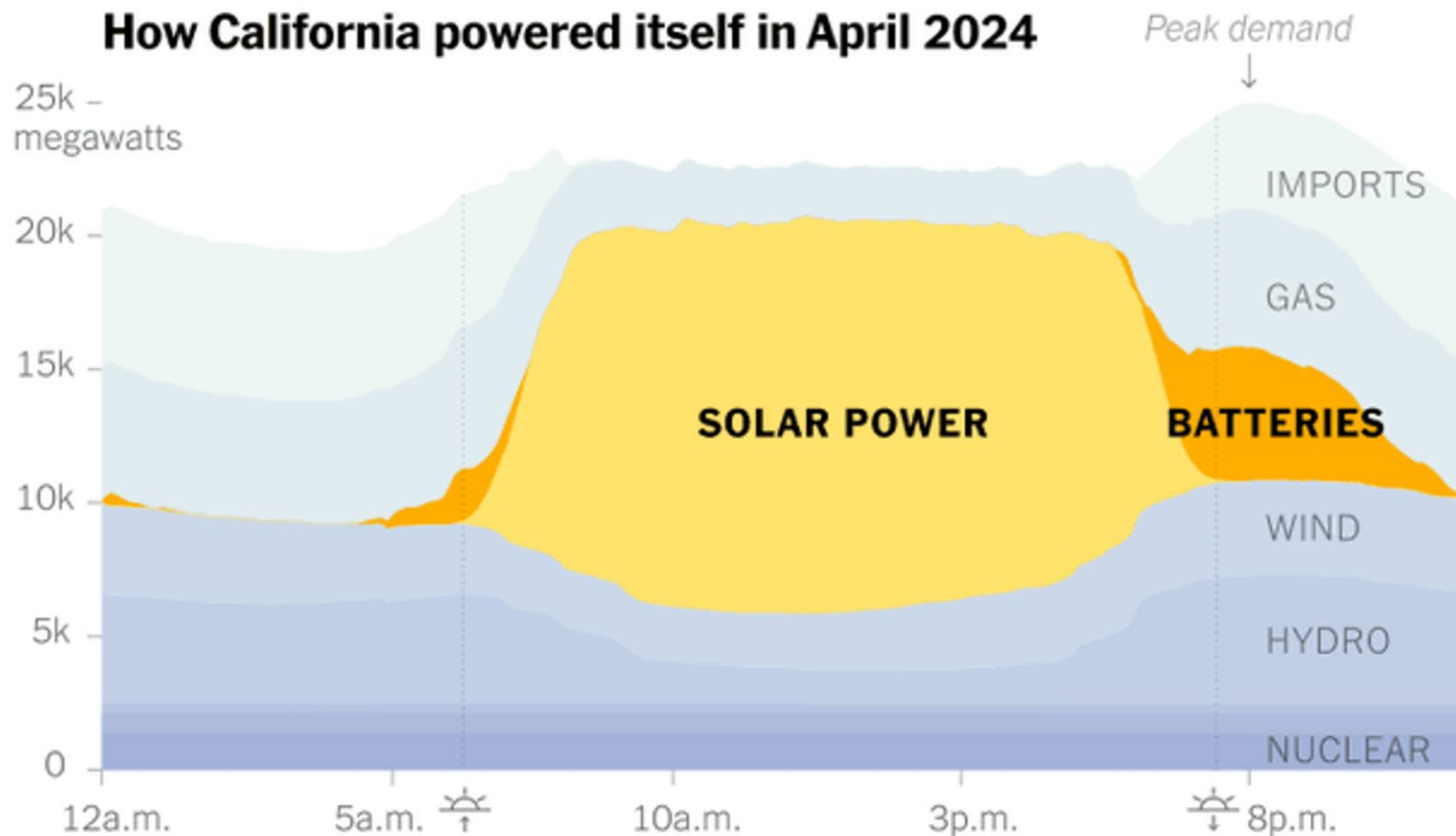


Source: BNEF, IEA.

Batteries



How California powered itself in April 2024



13 GW di batterie

Progetto ACES, Utah

Elettrolizzatori da 220 MW alimentati da rinnovabili produrranno idrogeno da comprimere in due grandi caverne (grandi come l'Empire State Building) realizzate in un deposito salino che possono contenere 140 GWh.

L'idrogeno inizialmente miscelato a metano verrà poi utilizzato in un ciclo combinato da 840 MW

