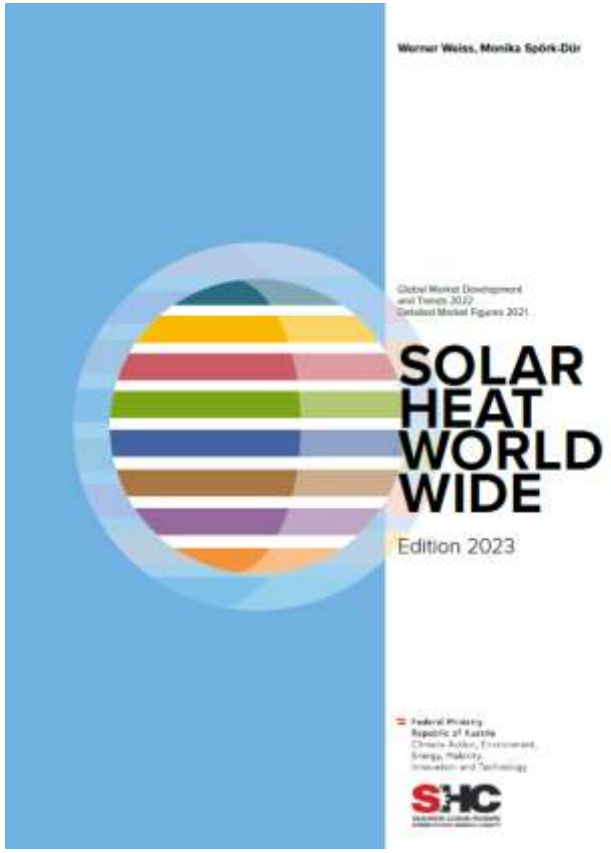
Discussion on the future of Solar thermal energy in France and worldwide: perspectives and challenges



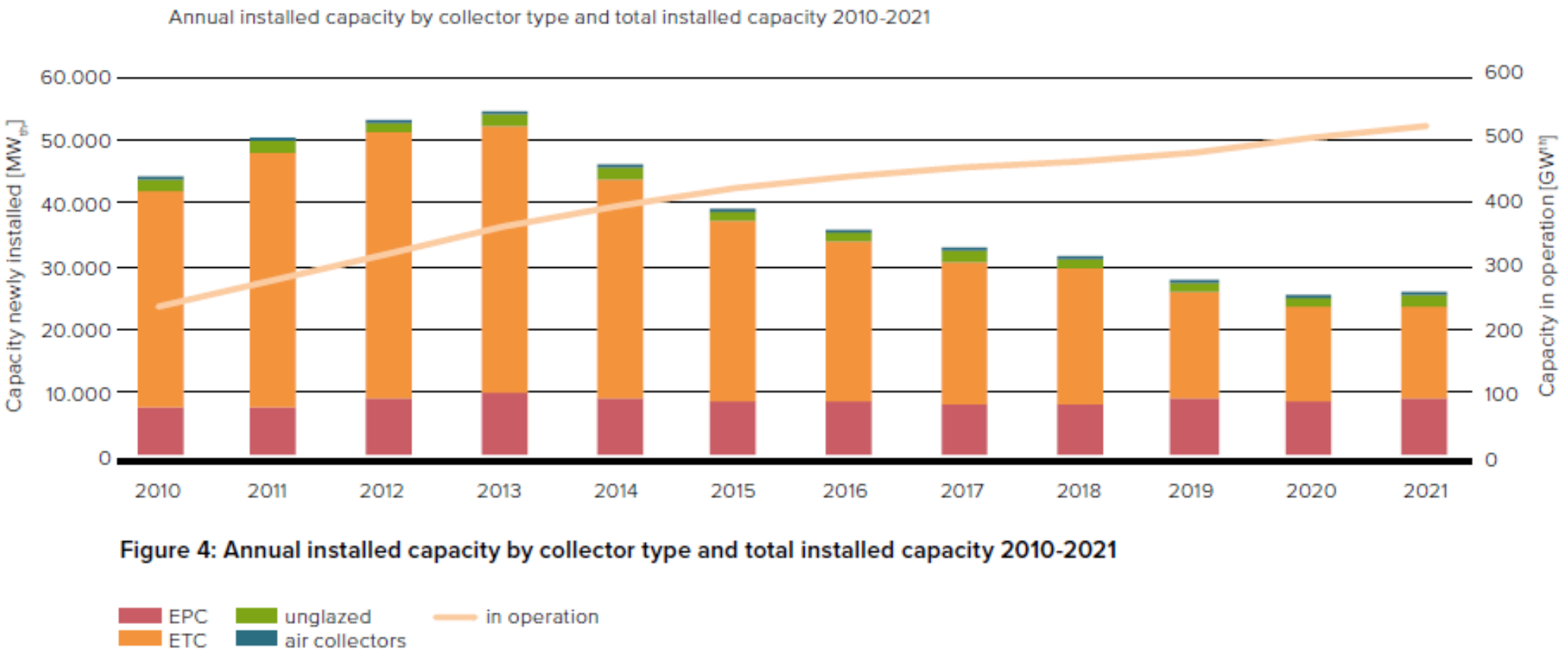


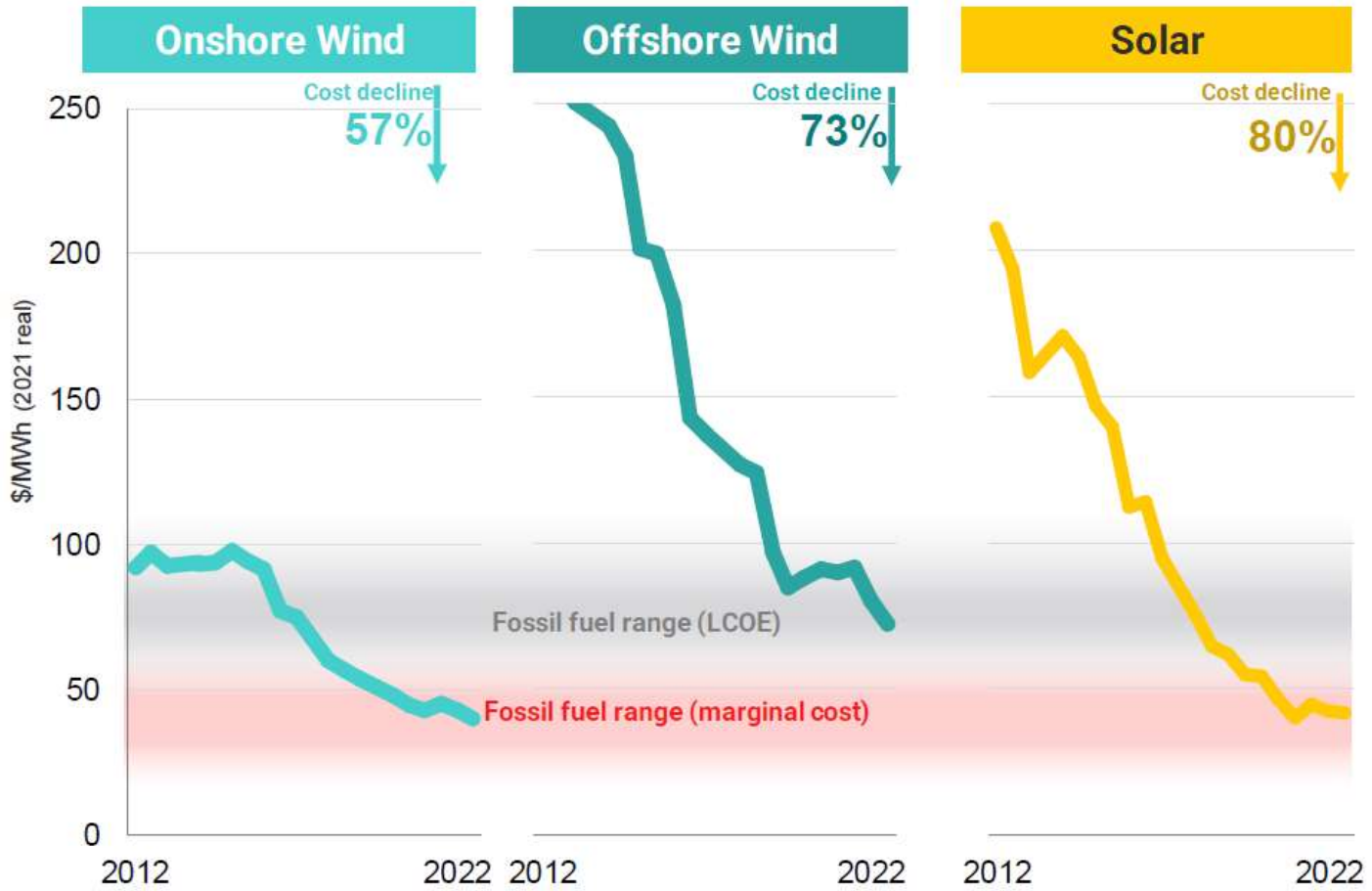
Figure 4: Annual installed capacity by collector type and total installed capacity 2010-2021

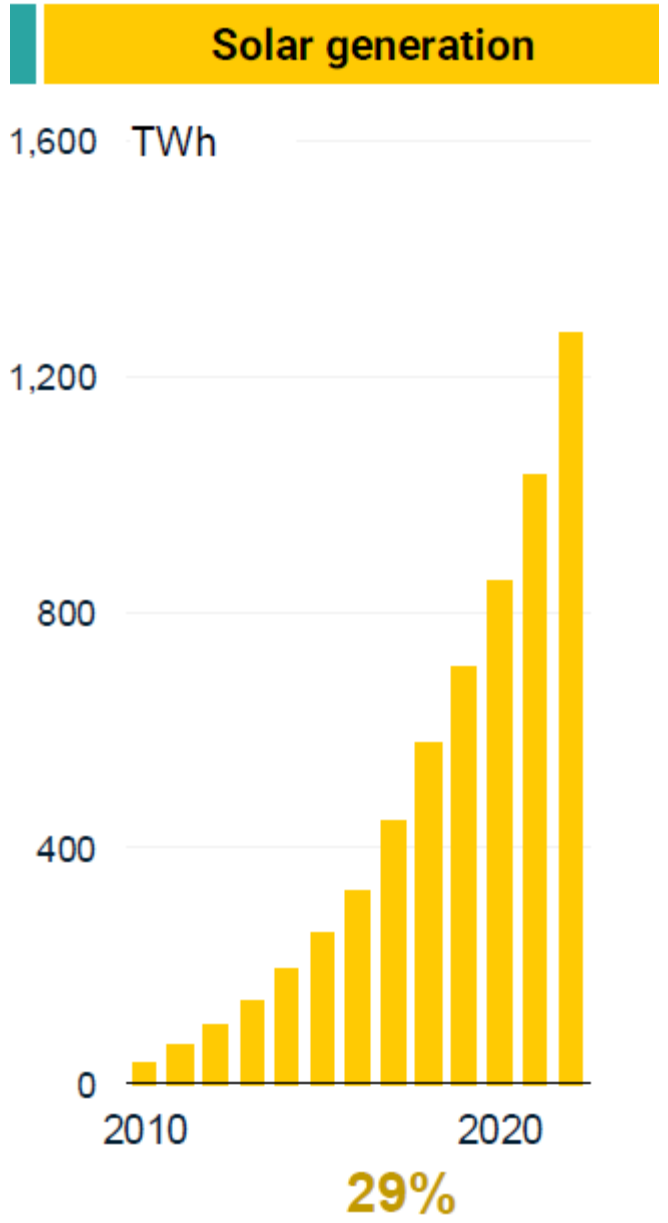
Solar Thermal : growing market…

but growing fastly enough ?

Current situation for Wind and PV

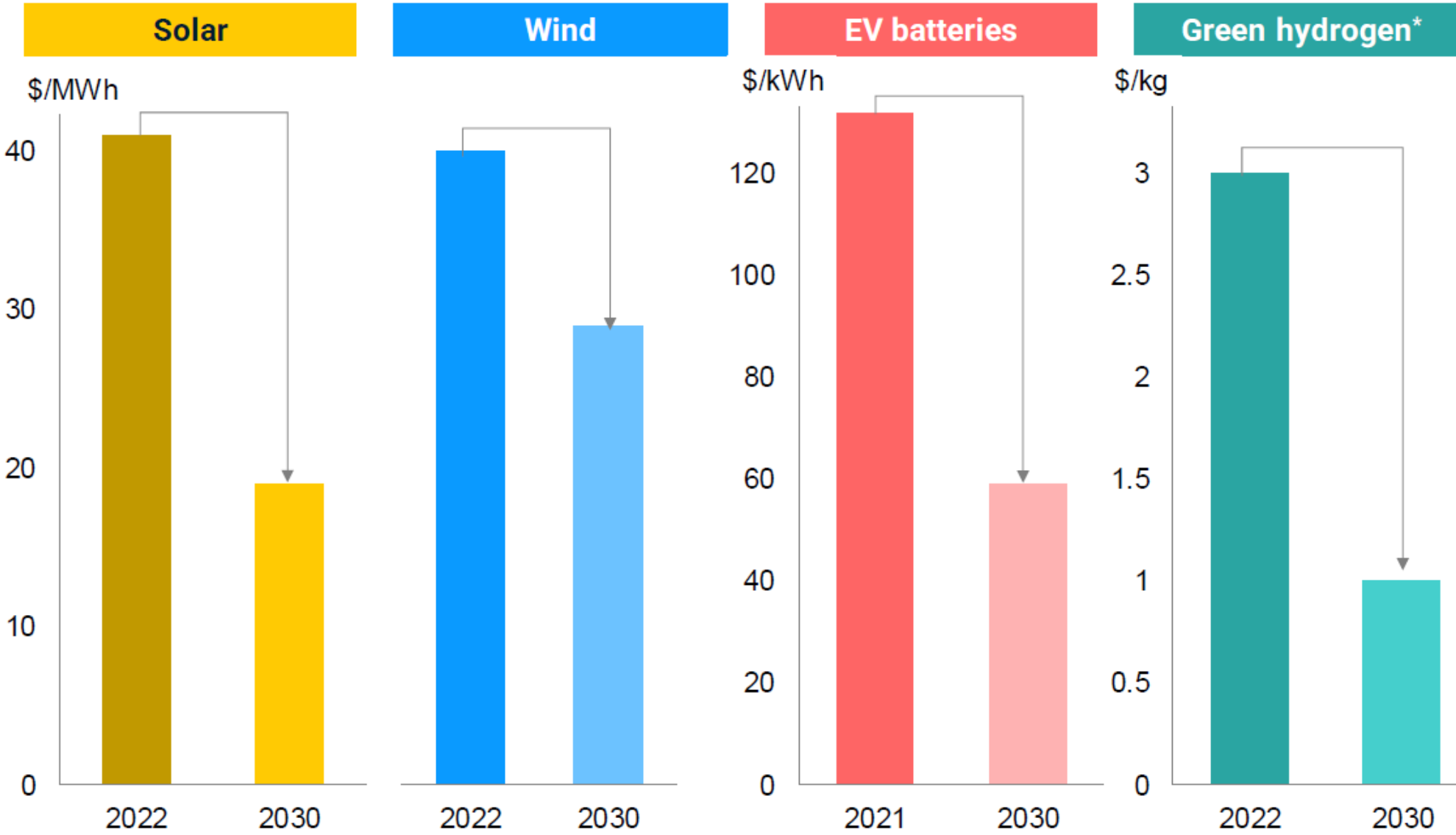
- Renewable costs are falling on learning curves
- Renewable sales are growing exponentially
- Capital is shifting to renewables



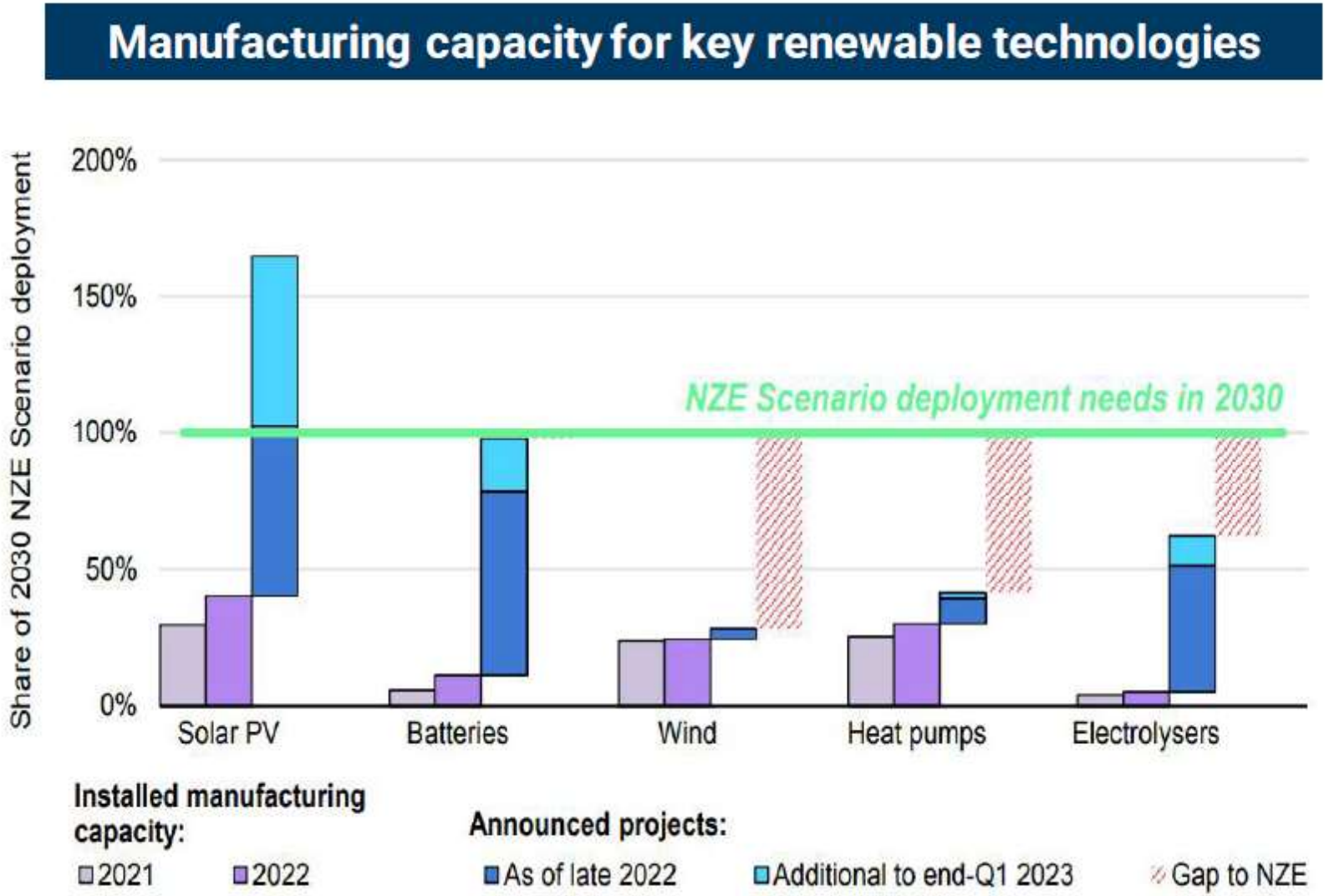


Cheap renewables open up a new paradigm

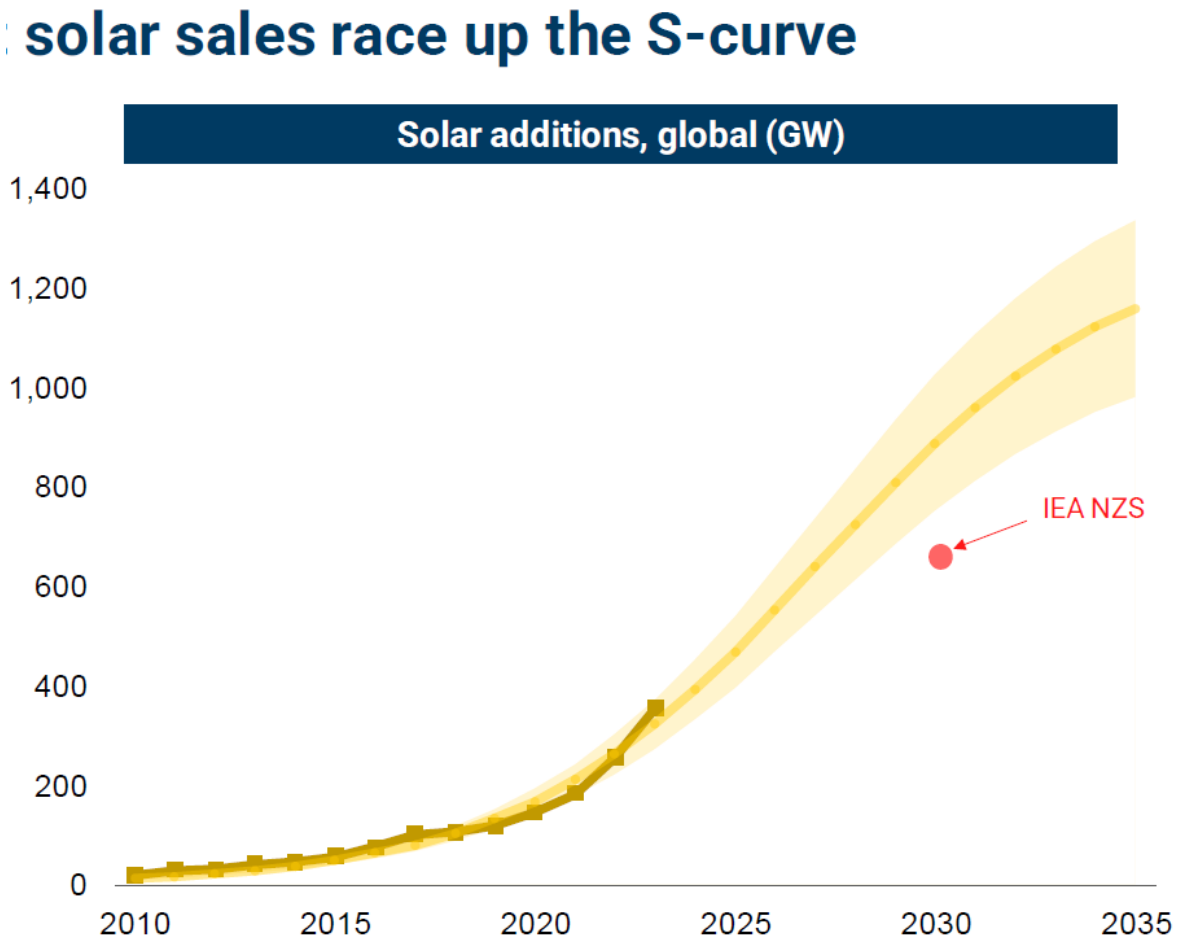
- If we continue on existing learning and growth rates, then by 2030 the world will enjoy: sub $20/MWh solar, $30/MWh wind; $60/kWh Li-ion batteries and $1/kg green hydrogen (in optimal locations).
- Which means renewable technologies much cheaper than any fossil fuel alternative.
- Low prices and the desire for technology leadership drive a new race to the top — for business, for finance, and for government.



Source: BNEF, RMI, Oxford INET. *competitive locations. $ real 2021.



Manufacturing capacity is even anymore a bottleneck



Change of paradigm for solar PV accelerating and reaching 1 TWp/y nearly by 2030

Challenges (at least seen from the French perspective) :

- How to reverse the Trend ?
- Why to invest in R&D would change the vicious circle ?
- In which segment(s) the race can be fair ?