



Global Hydrogen Review 2022

Amalia Pizarro, Energy Innovation Officer

4th International Forum on Long-Term Scenarios for the Clean Energy Transition

Session 5 – Incorporating global hydrogen insights for national LTES narratives



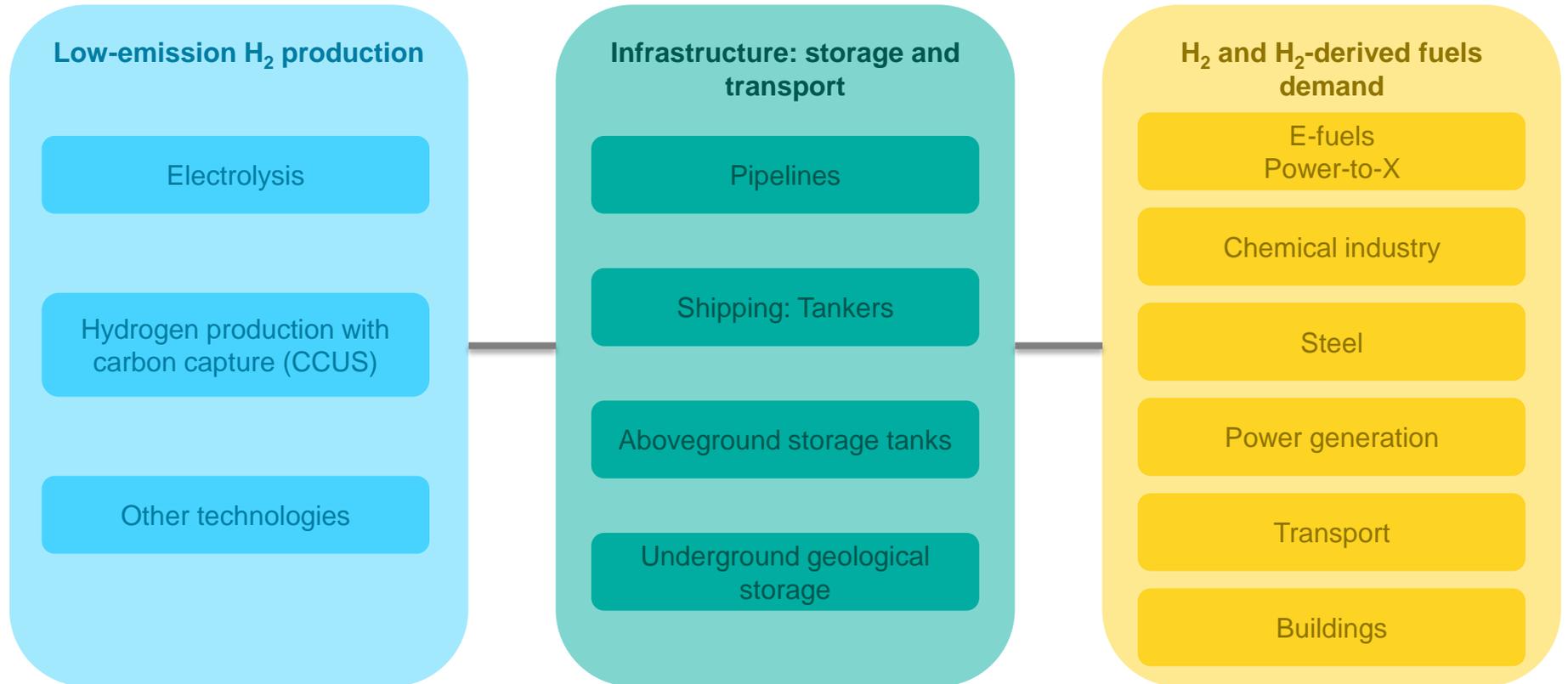
- Hydrogen plays an important role to support **climate goals**:
 - Provided it is produced with low emissions
 - Displacing the consumption of fossil fuels to meet traditional hydrogen demand
 - Displacing the use of fossil fuels by hydrogen in sectors whose decarbonisation is difficult, e.g. heavy industry and long-distance transport
- Hydrogen can also play an important role to provide **energy security**:
 - Minimising the consumption of natural gas to meet domestic hydrogen demand.
 - Displacing the use of fossil fuels by hydrogen or hydrogen-derived fuels
- Hydrogen momentum continues to be strong:

9 new national strategies were adopted last year (26 already existing in total)

Large hydrogen supply projects are reaching FID

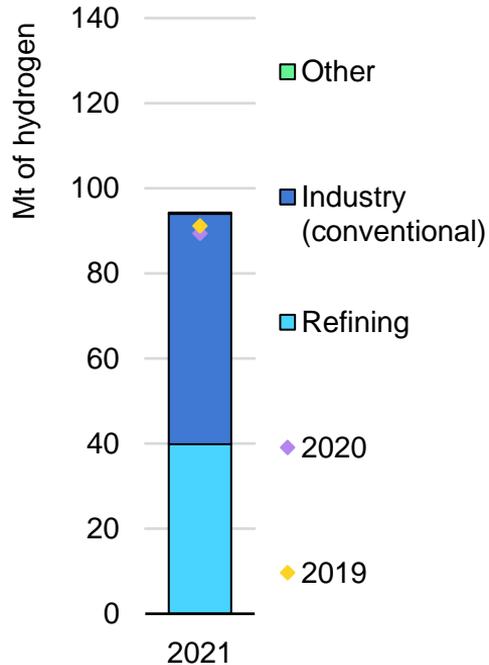
Major companies are signing off-take agreements

Growing international cooperation to develop hydrogen trade

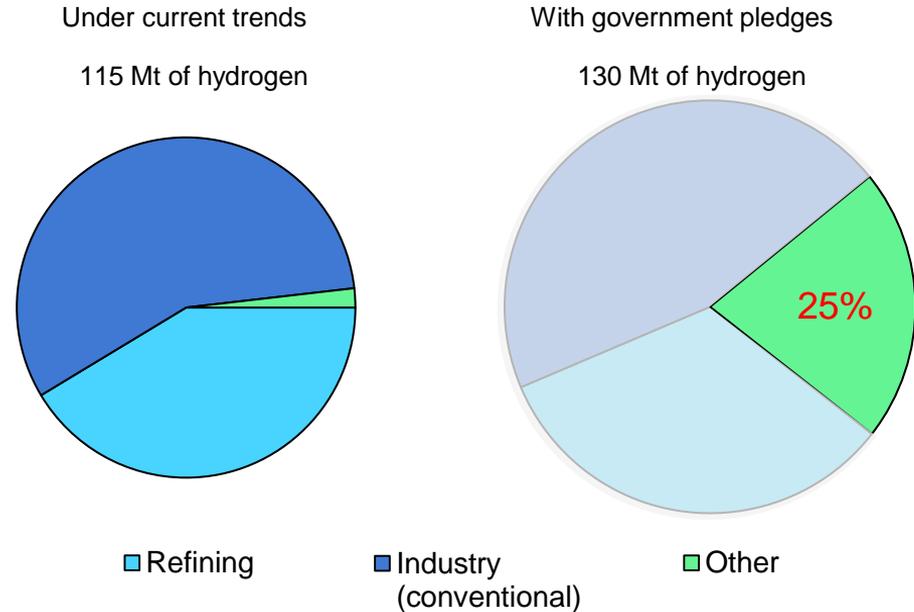


Demand is growing, with positive signals in key applications

Hydrogen demand, 2019-2021

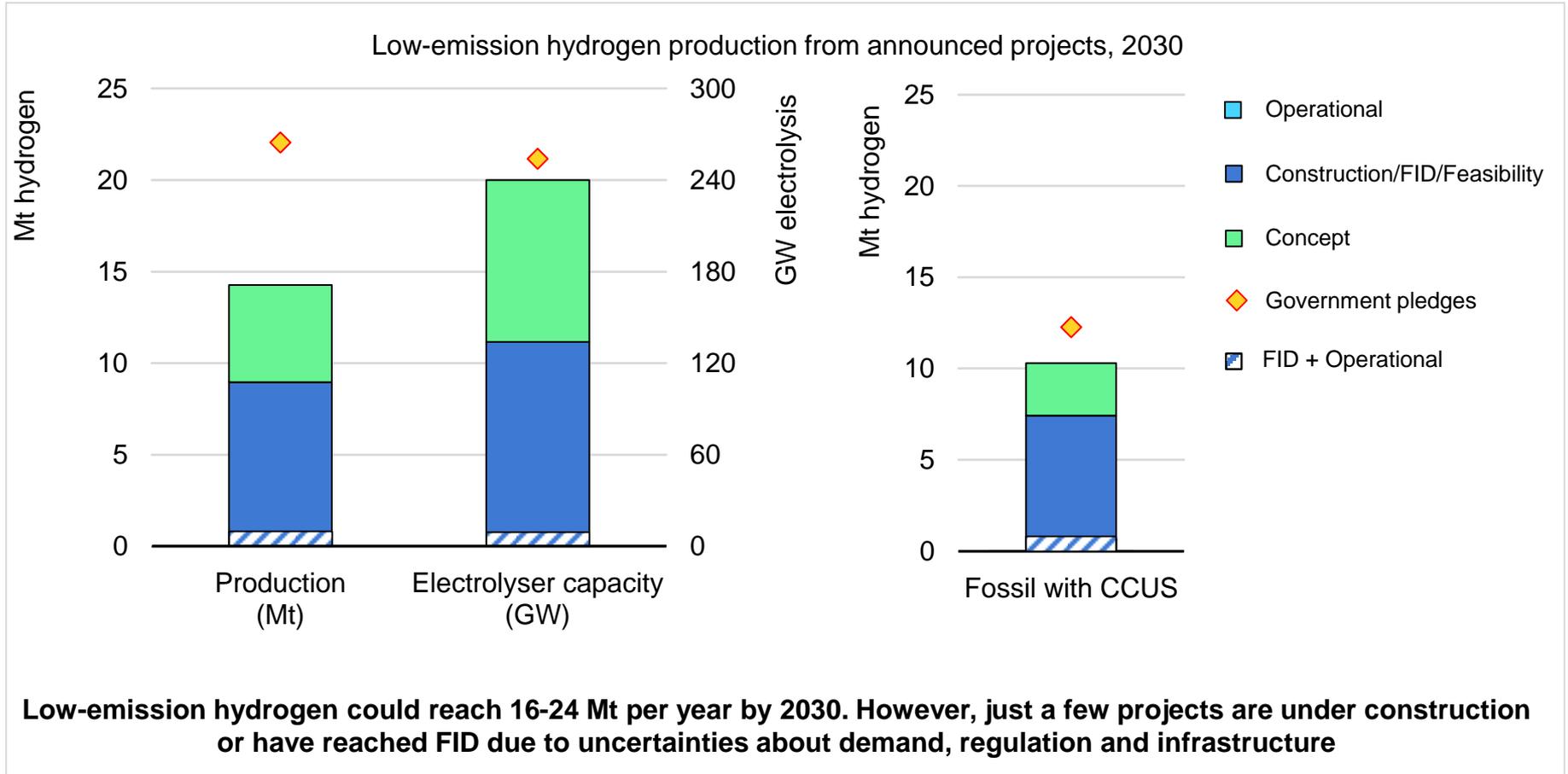


Hydrogen demand, 2030

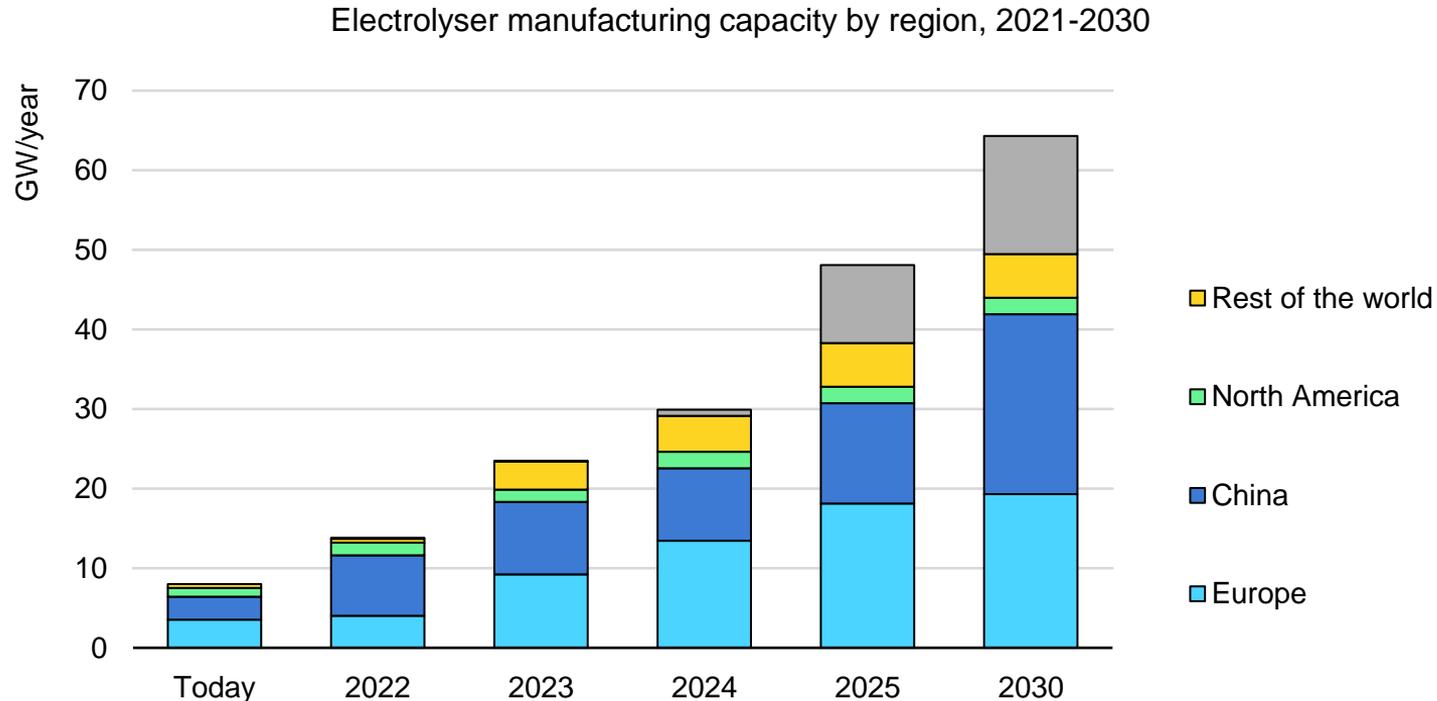


There are plans to increase hydrogen use in heavy industry, transport and power generation, but ambitious policies are needed for hydrogen to play its role in meet government climate pledges

An increasing project pipeline for low-emission hydrogen production



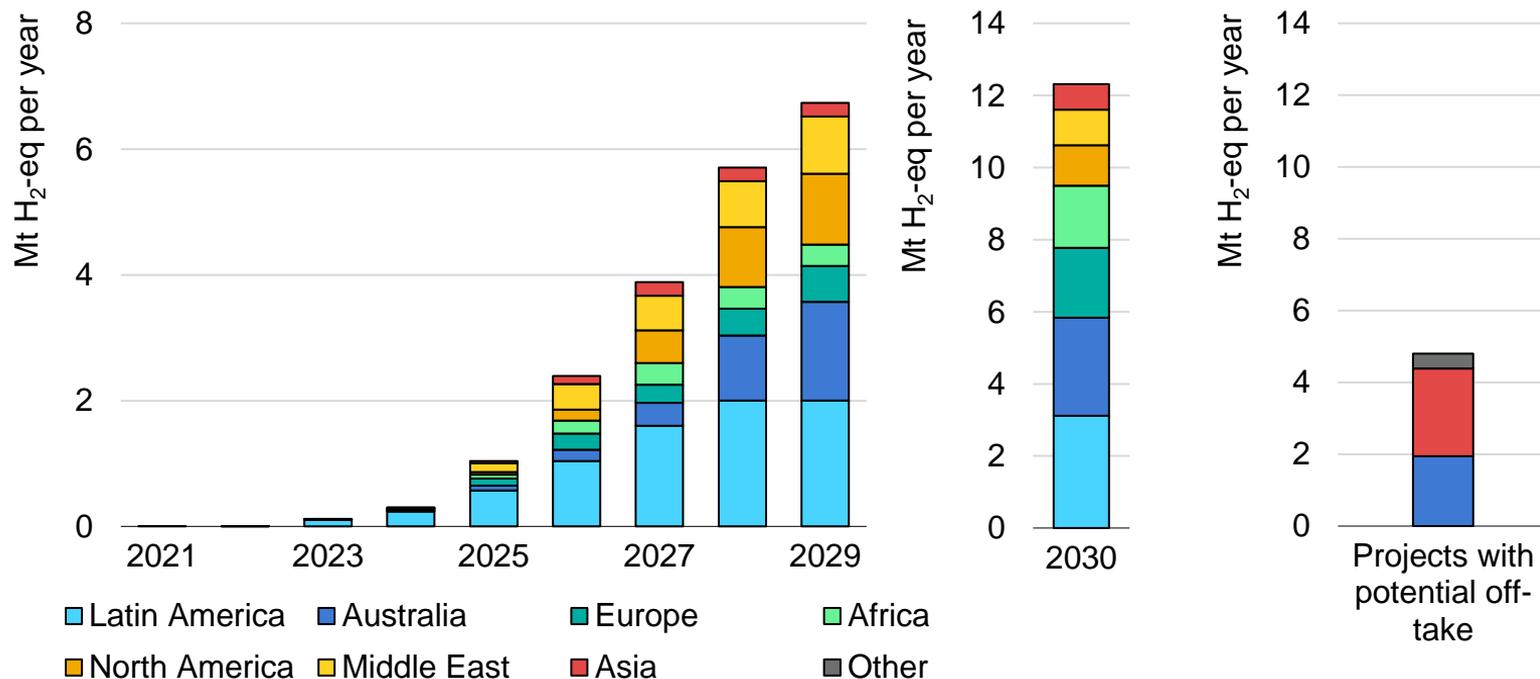
A new energy economy: the case of electrolyser manufacturing



Electrolyser manufacturing capacity could exceed 60 GW per year by 2030. This would be more than enough to support planned electrolyser projects and government targets.

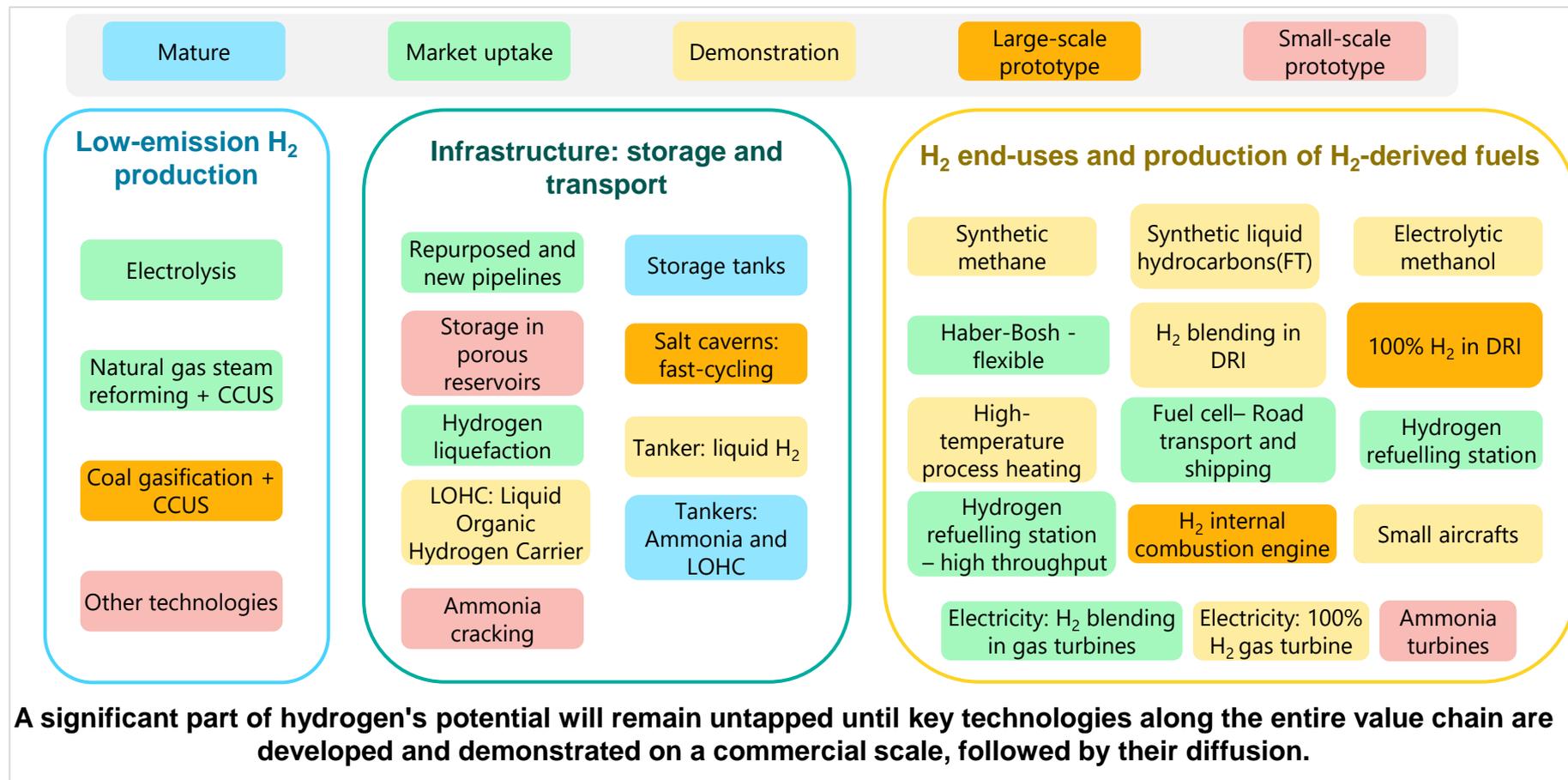
Hydrogen trade can kick start soon, but barriers remain

Planned hydrogen exports by year and exporting region, 2020-2030



Annual exports could reach 12 Mt of hydrogen and its derivatives by 2030, but off-take agreements are lagging behind. Key challenges remain in regulation, infrastructure, demand creation, value for exporters and trade rules

Innovation is needed across the hydrogen value chain



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