



Global Hydrogen Review 2023

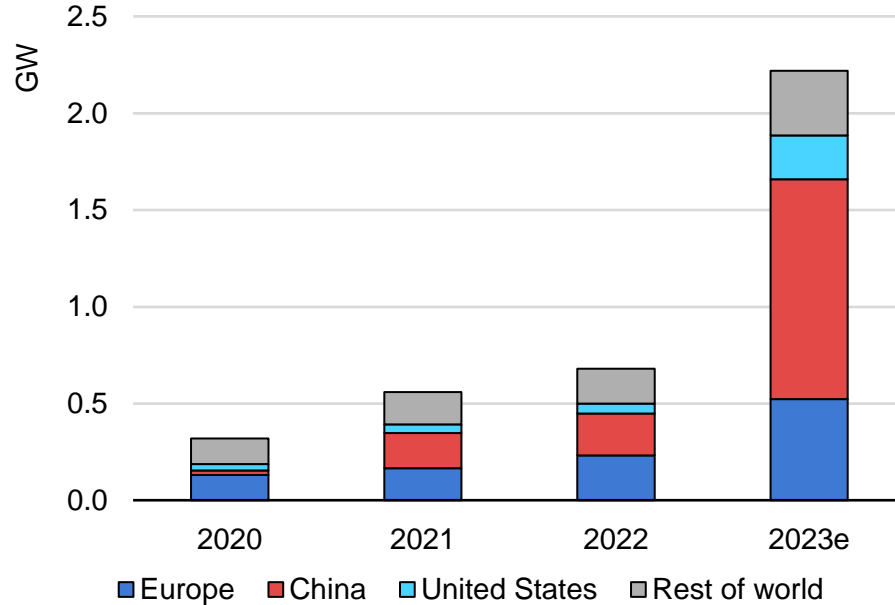
Francesco Pavan, Hydrogen and Alternative Fuels Unit

Brussels, 3rd October 2023

- Production can increase massively but faces cost challenges
 - Number of announced projects growing rapidly
 - Slow implementation of government support schemes delaying investment decisions
 - Increasing equipment and financial costs putting projects at risk
- Efforts to stimulate demand are not sufficient to meet climate ambitions
 - Limited policy action on demand creation
 - First off-take agreements small and non-binding
 - Unclear demand signals from co-operation initiatives
- What are the key priorities to turn momentum into deployment?

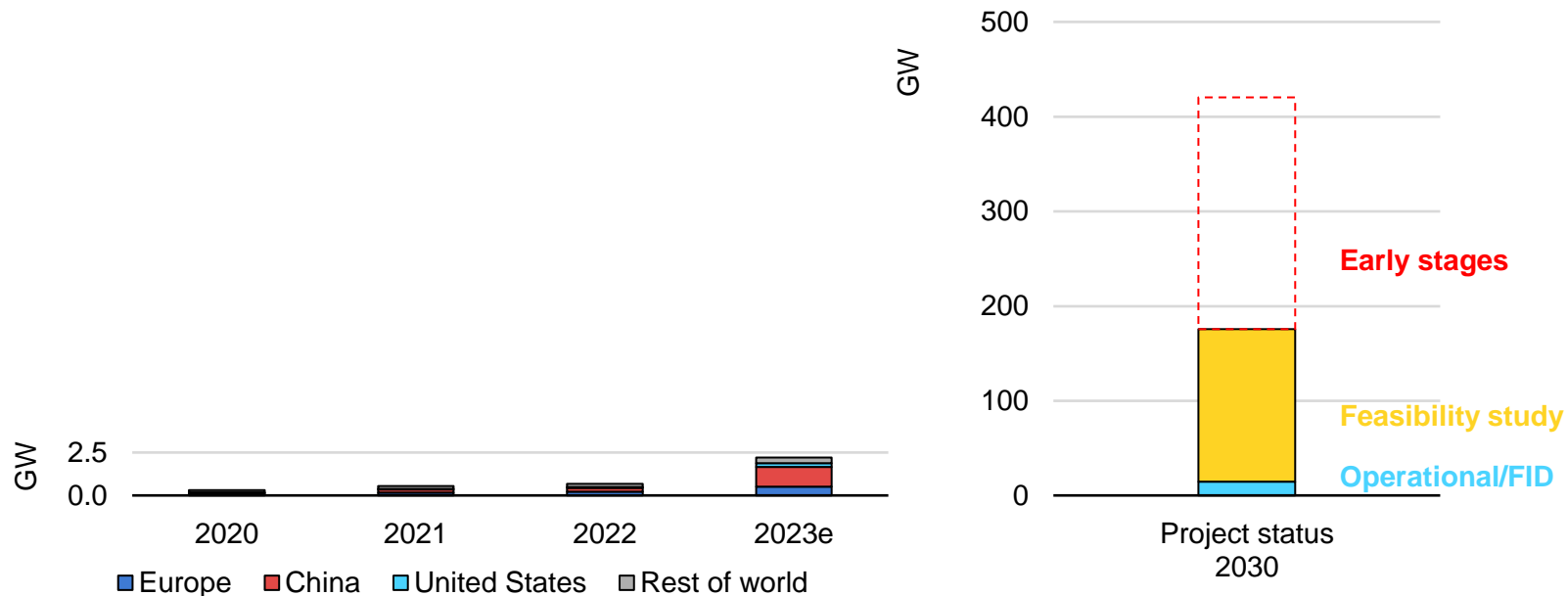
Growth in electrolyser projects has mushroomed

Historical deployment of water electrolyzers and capacity in 2030 based on announced projects



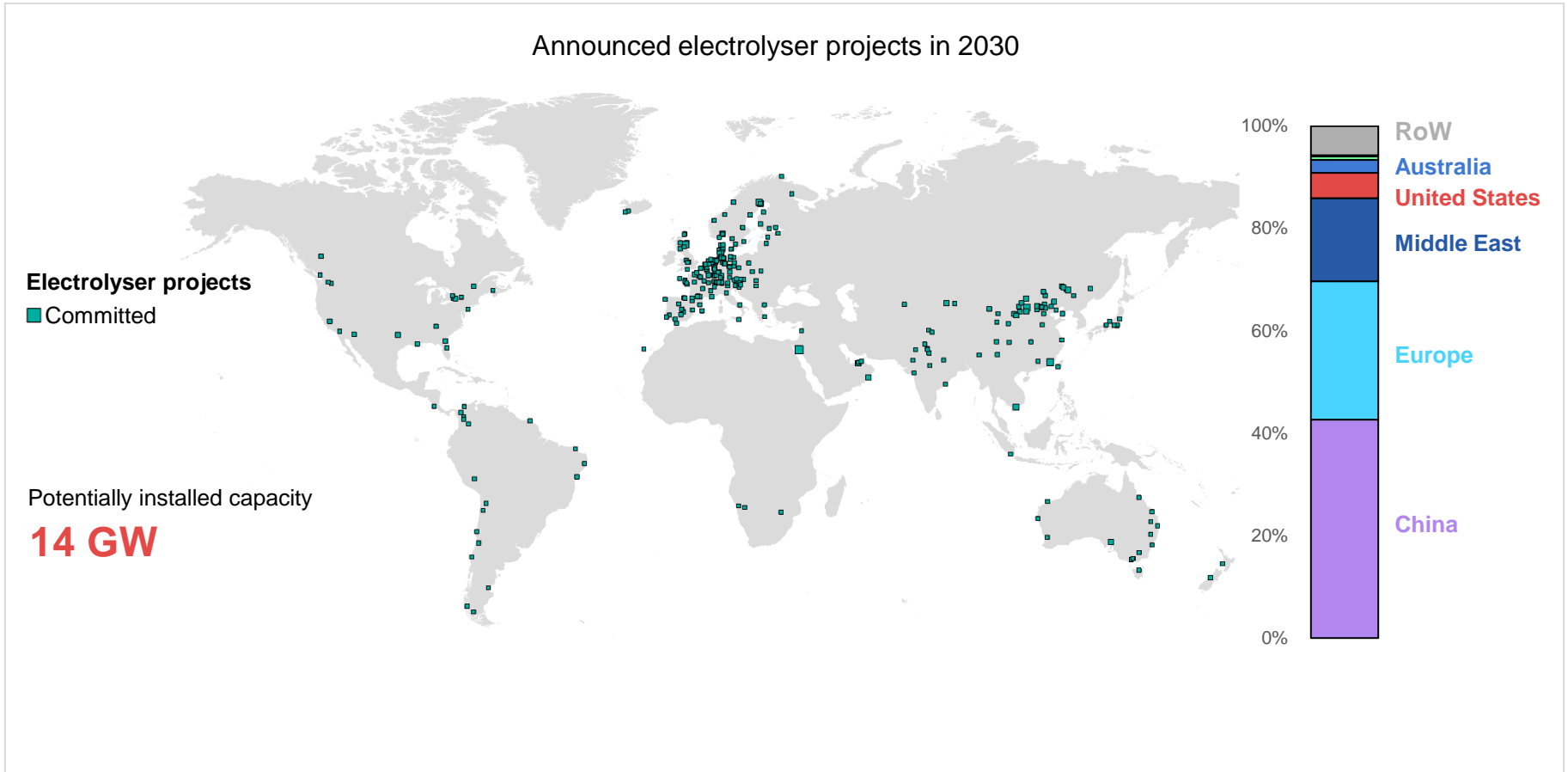
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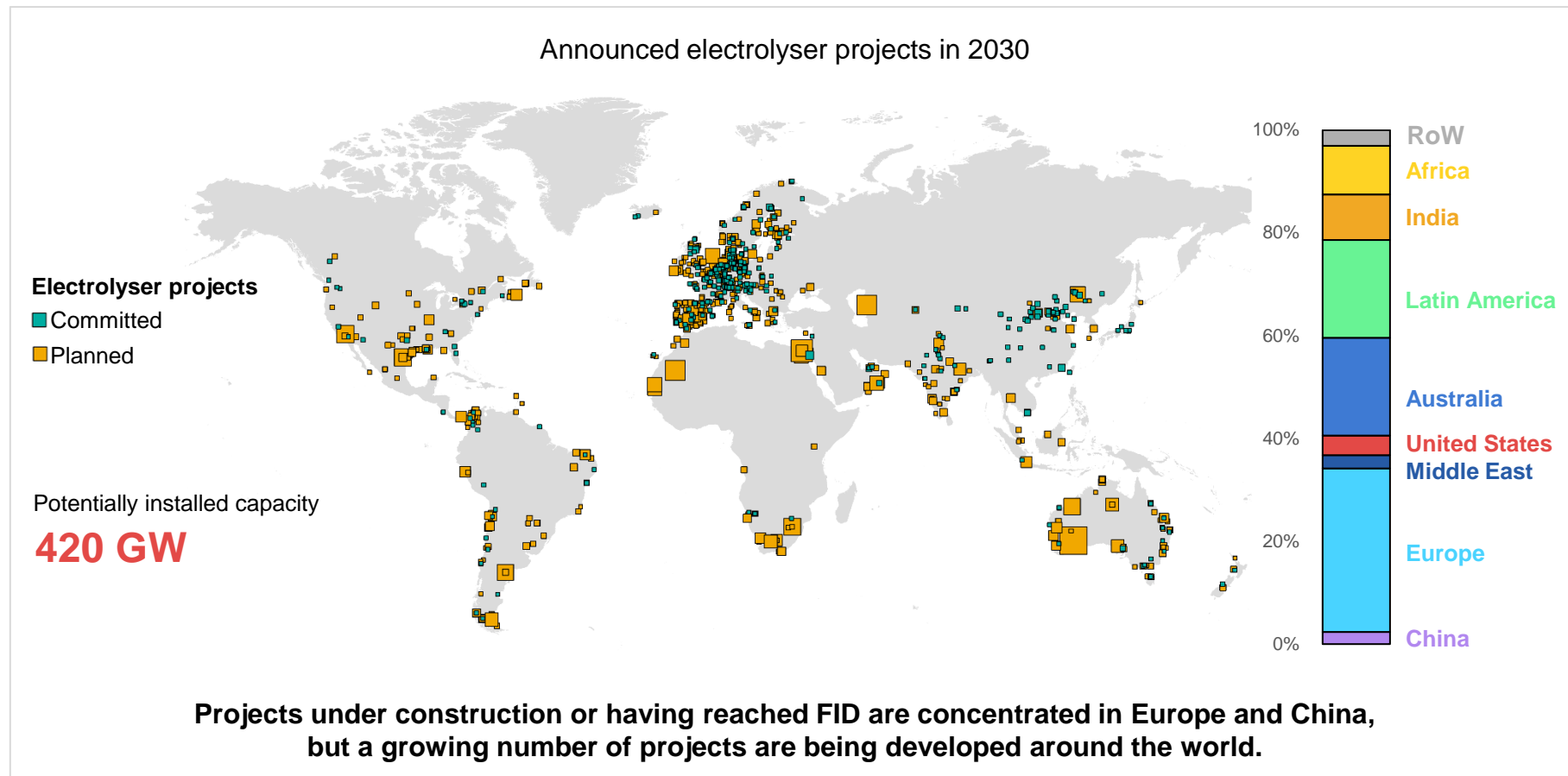


Based on announced projects, 420 GW could be installed by the end of the decade, with a trend towards larger projects.

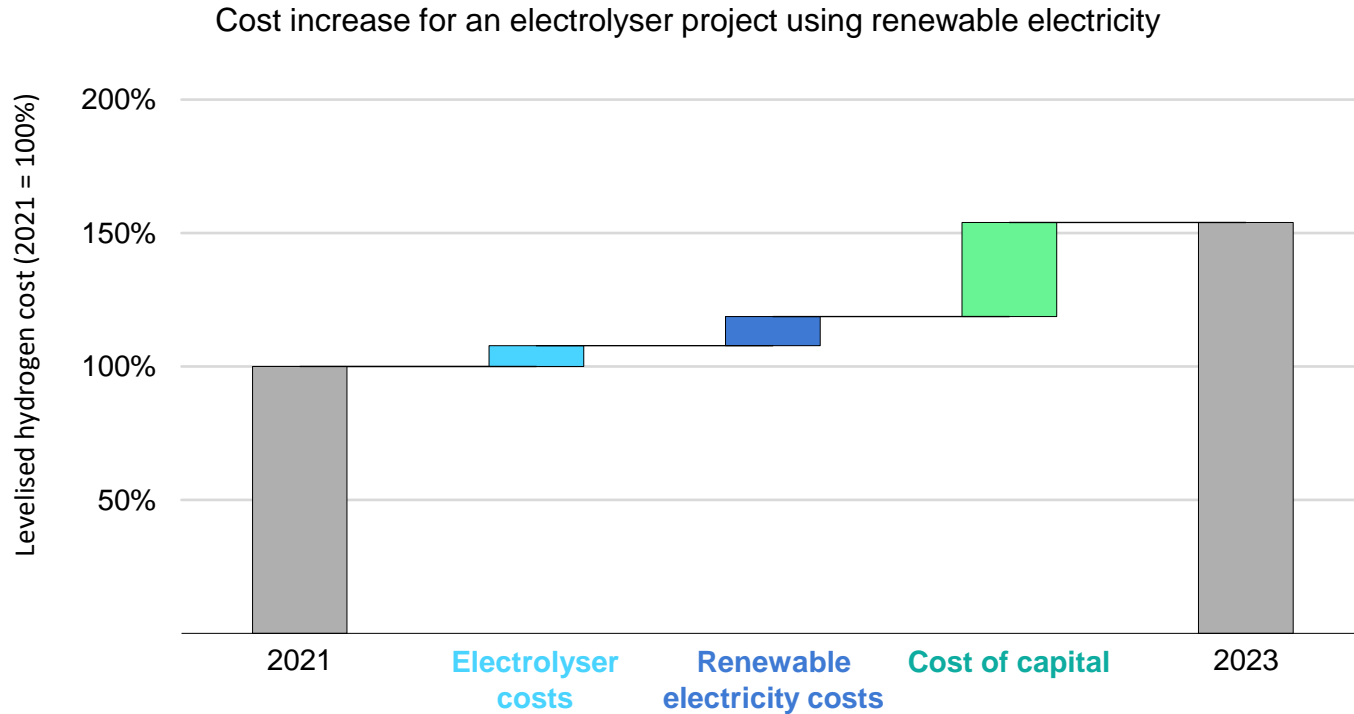
Geographical diversity of electrolyser projects is increasing



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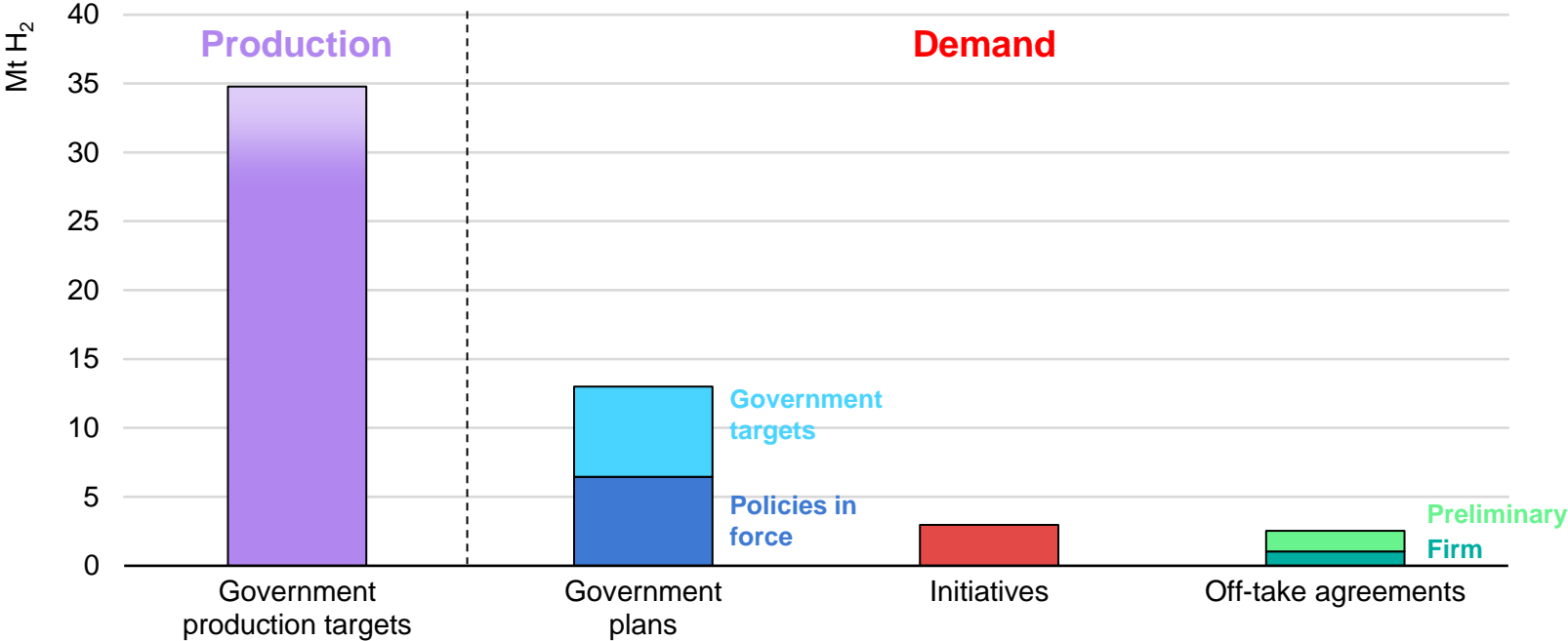
Costs for low-emission hydrogen projects are increasing



Inflation is having a strong impact on the costs of hydrogen production from proposed electrolyser projects, potentially impacting the economics of projects under development and delaying investment decisions.

Demand creation is falling behind production ambitions

Low-emission hydrogen production targets compared with potential demand



Actions from governments, international co-operation initiatives and the private sector fall short of production ambitions.

1. **Implement support schemes** for low-emission hydrogen production and use
2. **Take bolder action to stimulate demand** for low-emission hydrogen, particularly in existing hydrogen uses
3. **Foster international co-operation** to enable hydrogen certification and mutual recognition
4. **Address regulatory barriers**, particularly for project licensing and permitting
5. Support project developers to **keep momentum during the inflationary period** and to extend regional reach

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