

Hydrogen investments & strategies for key nations positioned w.r.t different archetypes

Part -1 (Hydrogen ecosystem development and identification of key future market growth clusters in India)

RES, Power & Utilities

Assessing business case of hydrogen in India

Europe leads globally in the number of announced hydrogen projects, with with Australia, Japan, Korea, China and the USA following as additional hubs

GLOBAL DEPLOYMENT AND MARKET MOMENTUM

At the beginning of 2021, over 30 countries have released hydrogen roadmaps, the industry has announced more than 200 hydrogen projects and ambitious investment plans, and governments worldwide have committed more than USD 70 billion in public funding. This momentum exists along the entire value chain and is accelerating cost reductions for hydrogen production, transmission, distribution, retail, and end applications. Of the total hydrogen projects existing across the value chain, 85% of them are originating in Europe, Asia, and Australia, and activity in the Americas, the Middle East and North Africa accelerating as well.

If all projects come to fruition, total investments will exceed USD 300 billion in hydrogen spending through 2030 – the equivalent of 1.4% of global energy funding. However, only USD 80 billion of this investment can currently be considered “mature,” meaning that the investment is either in a planning stage, has passed a final investment decision (FID), or is associated with a project under construction, already commissioned or operational. The global shift toward decarbonization backed by government financial support and regulation is supporting this momentum. For instance, 75 countries representing over half the world’s GDP have net zero carbon ambitions and more than 30 have hydrogen-specific strategies. Governments have already pledged more than USD 70 billion and included new capacity targets and sector level regulation to support these hydrogen initiatives.

”

EU has announced a 40 GW electrolyzer capacity target for 2030 (up from less than 0.1GW, presently)

– Hydrogen Council

With the advent of hydrogen giga-scale projects , hydrogen production costs can continue to fall

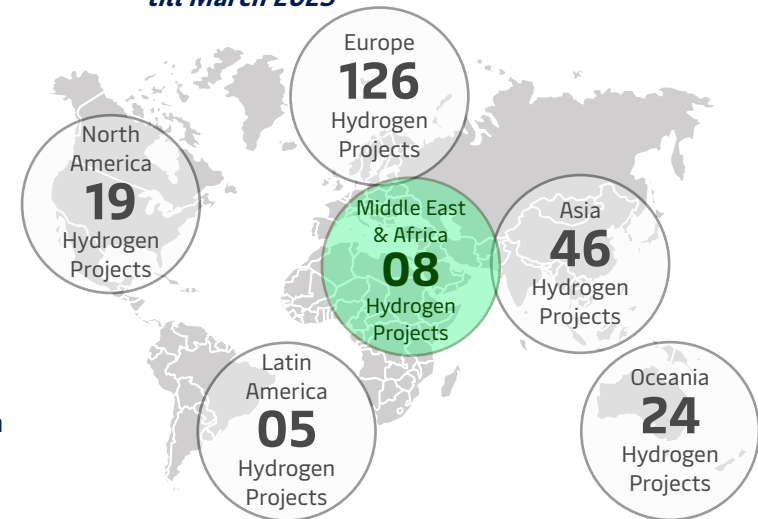
For example, the EU has announced a 40-gigawatt (GW) electrolyzer capacity target for 2030 (up from less than 0.1 GW today) and more than 20 countries have announced sales bans on internal combustion engine (ICE) vehicles before 2035. In the US, where federal emission standards for new vehicles have lagged behind those in the EU, state-level initiatives in California and 15 other states have set ambitious targets to transition not only passenger cars but also trucks to zero-emission status by 2035. In China, the 2021-24 fuel cell support program will see the equivalent of USD 5 billion spent on fuel cell vehicle deployment, with a strong emphasis on the development of local supply chains.

Key statistics for global hydrogen market

Announced - Projects in press announcements or preliminary study stage. Also includes required investment to reach national targets and government funding pledges

Investment split of global hydrogen projects announced till March 2023

Total hydrogen projects announced globally till March 2023



Planning - Projects that are at the feasibility study or front-end engineering and design stage

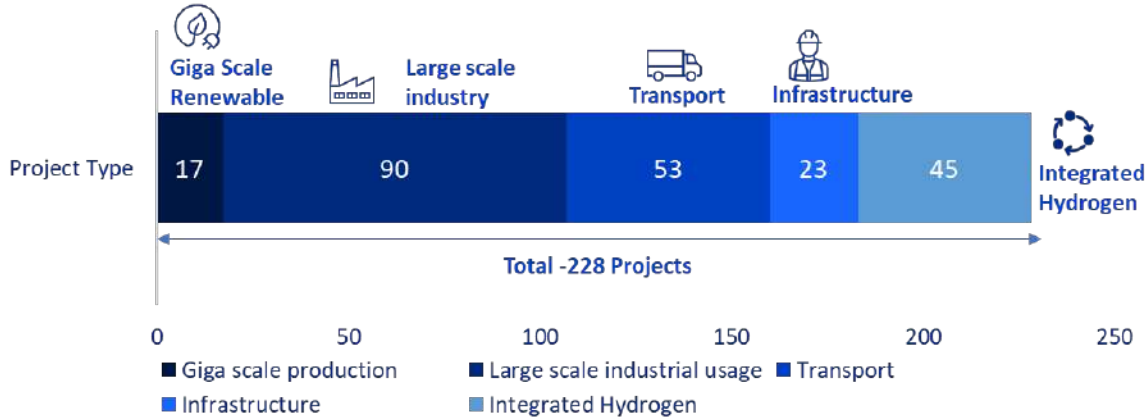
Realized - Projects where a final investment decision (FID) has been taken, under construction, commissioned and operational

With the advent of hydrogen giga-scale projects , hydrogen production costs can continue to fall

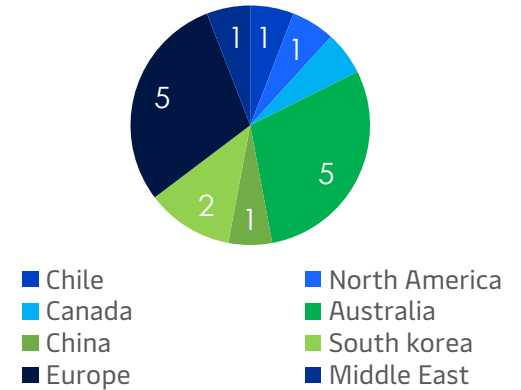
Key statistics for global hydrogen market (contd.)

Total hydrogen projects split as per end consuming industry

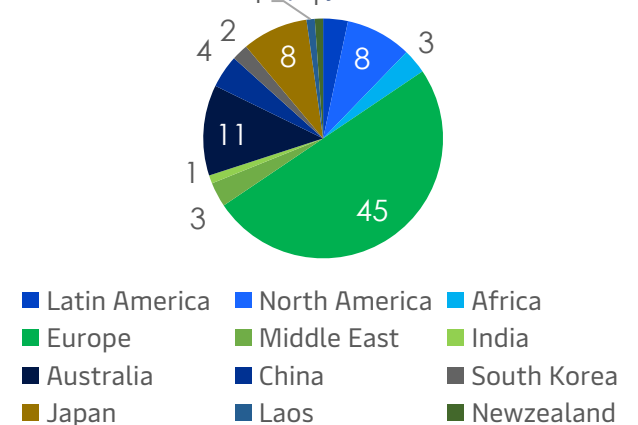
Giga scale production : renewable H2 projects > 1GW and low carbon H2 projects >200 kt p.a.



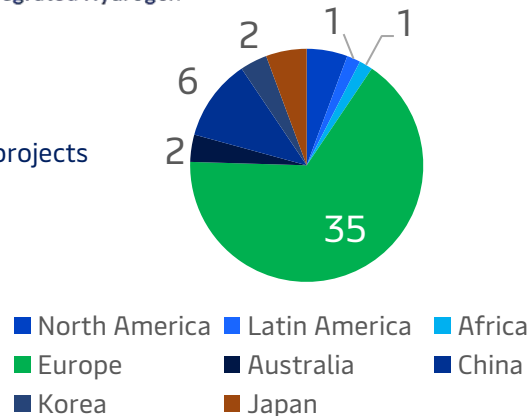
Region wise split of giga scale renewable hydrogen projects



Region wise split of large scale industrial projects

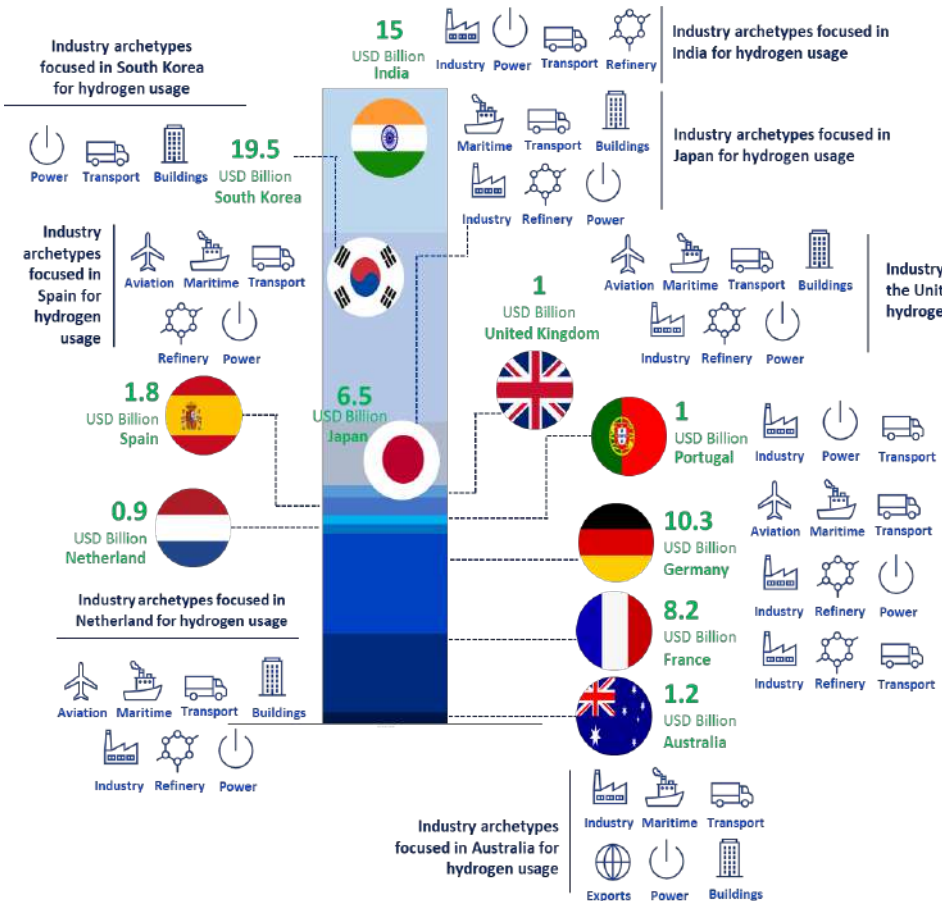


Region wise split of transport projects

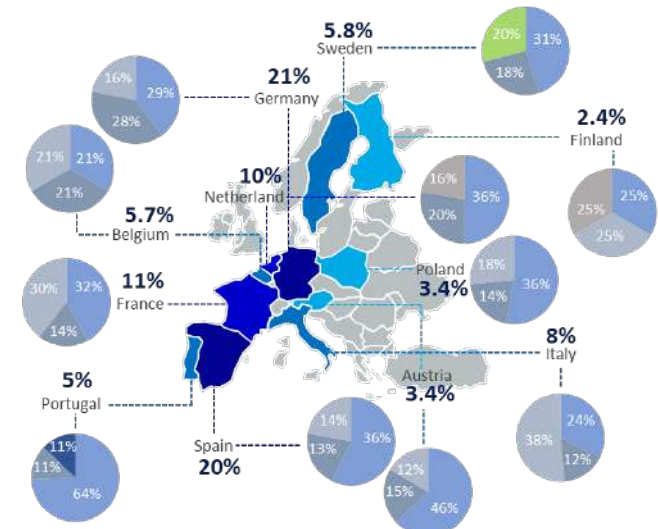


Hydrogen strategies and investment targets for key nations w.r.t. different archetypes

Public funding targets of key nations for developing their domestic hydrogen market till 2030



Concentration of upcoming hydrogen projects across few countries in the EU and their industry archetypes (percentage split of leading contributors)



WANT TO LEARN MORE ABOUT THE REPORT ?

WRITE OR CALL TO US

at connect@eninrac.com

+91 93190 48963/47963, +91 72900 16953