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Global Hydrogen Trade & Korean H₂ Industry

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Current State of Green Hydrogen

Global hydrogen demand in 2021 : approximately **94 Mt**

54 Mt in **industrial uses**
(ammonia or methanol; DRI)

40 Mt in
refineries

New industrial uses and applications
(small percentage in **transportation**,
grid injection and **power generation**)

Estimated Global hydrogen demand by 2030 : more than **200 Mt**



Only 0.6 Mt (less than 1%)
from green or blue
hydrogen (IEA, 2022)



Low-carbon hydrogen will
increase to 70% in 2030
(IEA, 2021)



25% of global hydrogen
demand will be traded
internationally by 2050



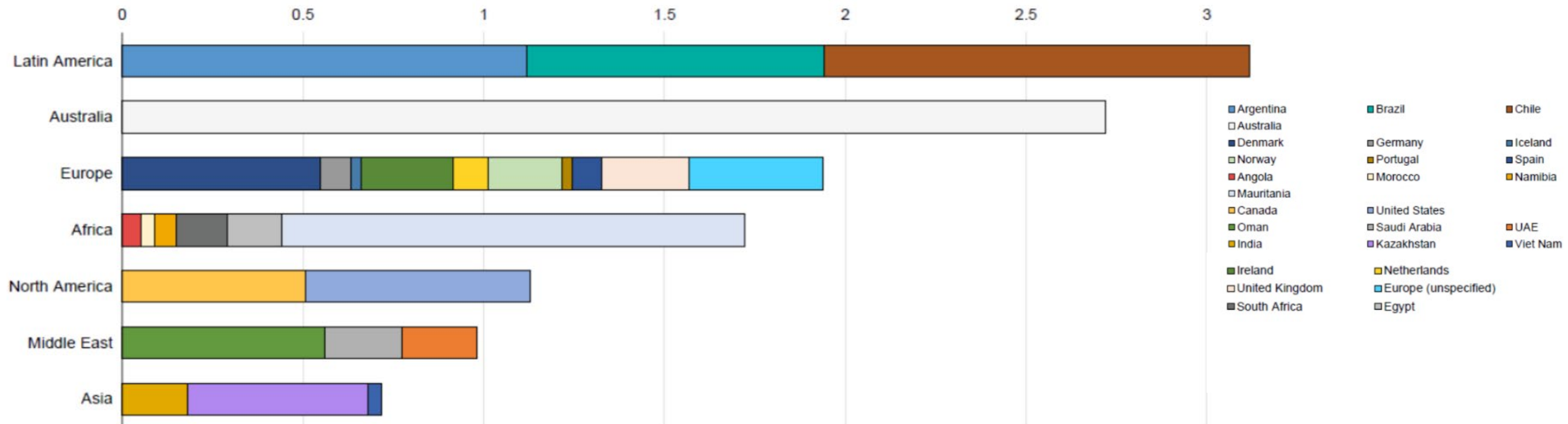
Pure hydrogen will be
a 'Regional' business while
Hydrogen derivatives will be
traded worldwide

Hydrogen Trade

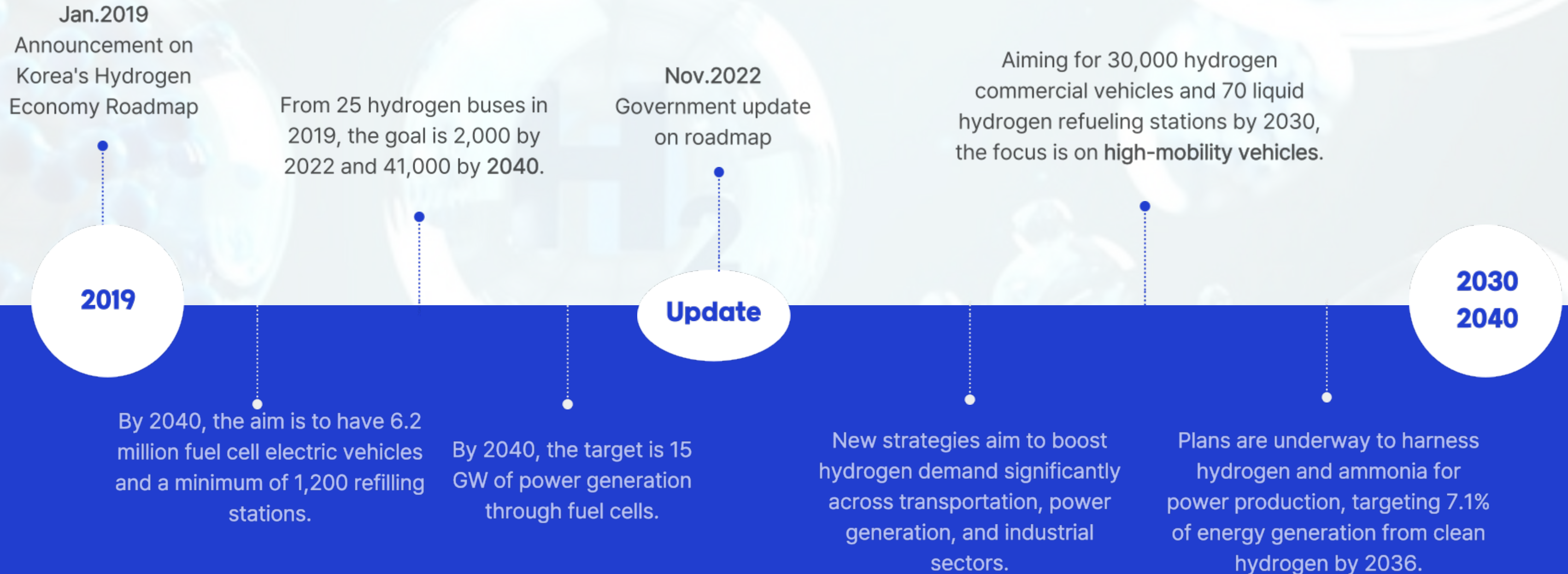
By 2030, 12 Mt of Low-Carbon hydrogen exports per year are expected

Planned hydrogen exports by region/country (2030)

Mt H2 equivalent per year by 2030



South Korea's Hydrogen Strategy



In September 2022, the South Korean company Posco announced its intention to implement hydrogen co-firing power generation technology, targeting an output of more than 950 GWh annually.

South Korea's Hydrogen Economy Sectors

Distribution

Present



70 hydrogen fueling stations

Testing/demonstration of blending hydrogen to natural gas pipeline (2022)

2030



660 hydrogen fueling stations

Hydrogen liquefaction plan (2027)

2050



Over 2,000 hydrogen fueling stations

Hydrogen port (2028)

Hydrogen pipelines (2050+)

Utilization

Present



10,000 Hydrogen vehicles
75 Commercial Hydrogen Vehicles

Hydrogen Fuel Cell power generation



2030

850,000 Hydrogen vehicles
30,000 Commercial Hydrogen Vehicles

Ammonia 20% Dual-fuel power plant

Hydrogen 50% Dual-fuel power plant

Tram Vessel

2050

5,150,000 Hydrogen vehicles
110,000 Commercial Hydrogen Vehicles

Ammonia power plant

Hydrogen power plant

Aircraft

Thank you

The background features a light blue gradient with several translucent blue spheres of varying sizes scattered across it. A solid blue vertical bar is positioned on the right side of the image.