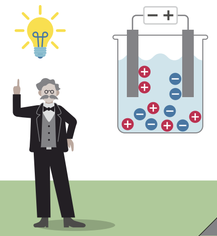
Timeline of the formation and evolution of the global hydrogen industry

Selected examples

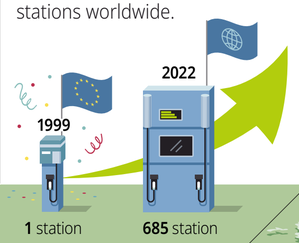
1766
Discovery of hydrogen by the Briton Henry Cavendish.

1800 – 1838
Discovery of the principle of electrolysis and the fuel cell.

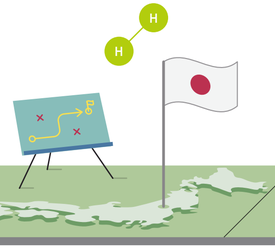


1960s
General Motors builds the world's first hydrogen passenger vehicle – a fuel cell van.

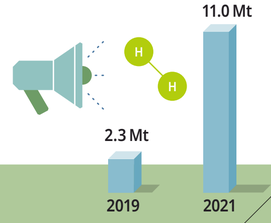
1999
Europe's first hydrogen filling station opens. By February 2022, there are 685 hydrogen filling stations worldwide.



2017
Japan is the first country to adopt a national hydrogen strategy.

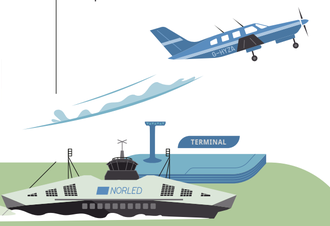


2019 – 2022
Project announcements for the production of hydrogen increase from 2.3 Mt to 11.0 Mt.



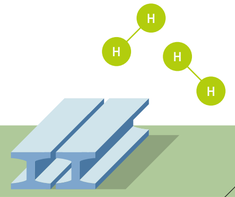
2020
Germany adopts its hydrogen strategy.

2020 – 2021
First liquid hydrogen terminal and ship are launched and demonstrated, first fuel cell airplane takes off.



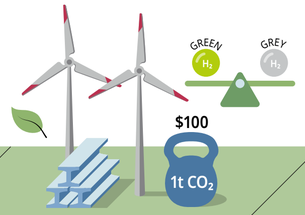
2022
By mid-2022, around 30 countries worldwide have adopted a hydrogen strategy.

2025
Several steel producers aim to produce hydrogen-based steel by the middle of this decade.

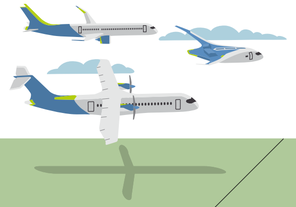


2025 – 2030
Daimler Truck plans for mass production of fuel cell trucks between 2025 and 2030.

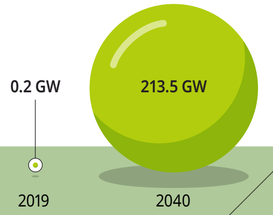
2030
Green hydrogen could become competitive to conventional alternatives by 2030. Green hydrogen-based steel could become competitive by 2030, assuming a carbon price of 100 USD per ton of CO_2.



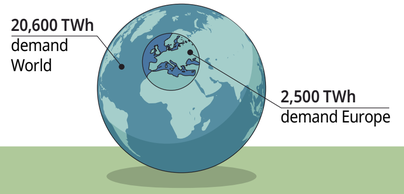
2035
Airbus plans on having three kinds of hydrogen aircrafts operational by 2035 and considers options such as fuel cells and hydrogen combustion.



2040
Electrolyser capacity could increase a thousandfold from 0.2 GW in 2019 to 213.5 GW by 2040.



2050
Global hydrogen demand is estimated to reach up to 20,600 TWh of which Europe could contribute up to 2,500 TWh.



Sources