

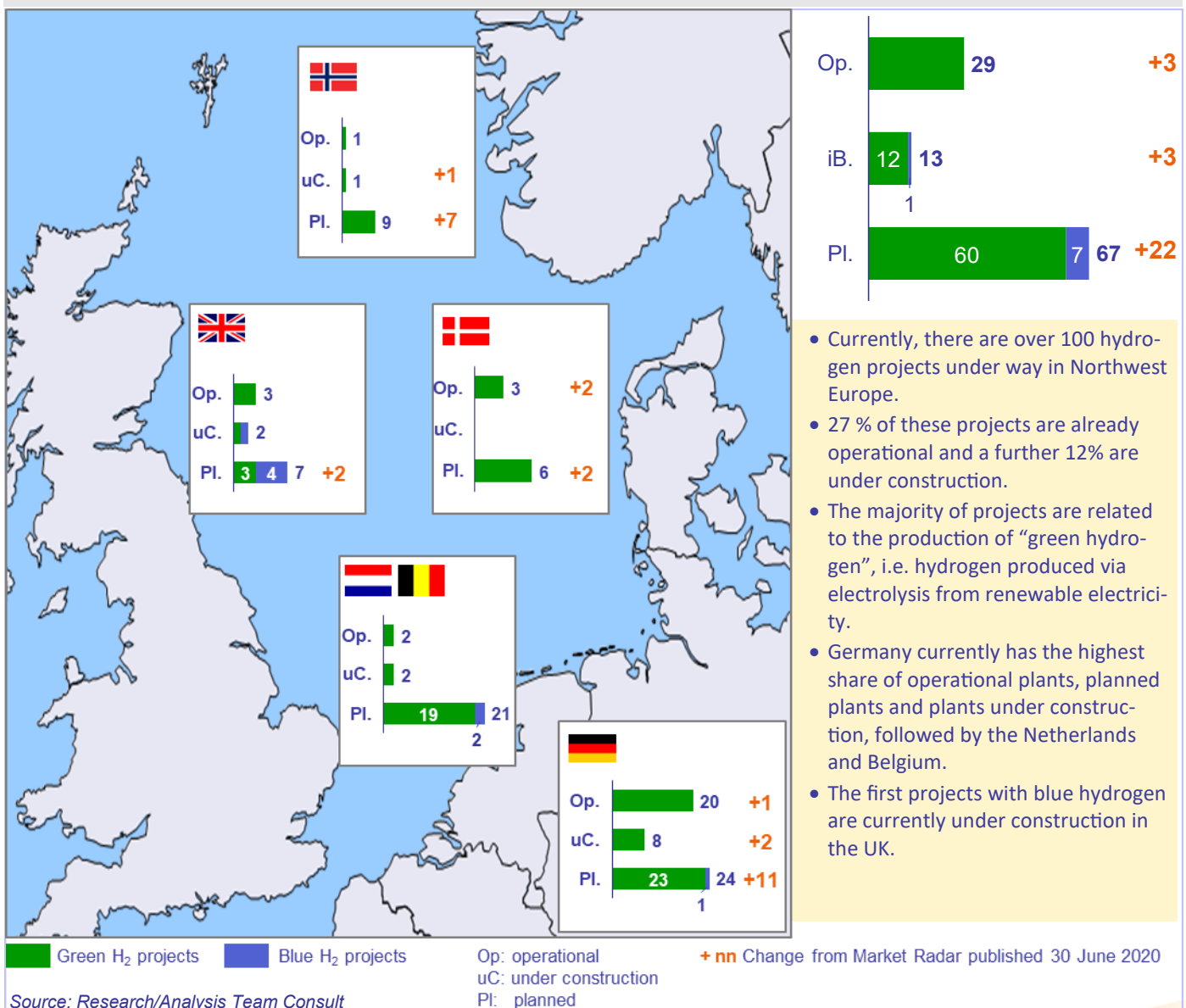
# H<sub>2</sub> MARKET RADAR

26.10.2020

## KEY FACTS

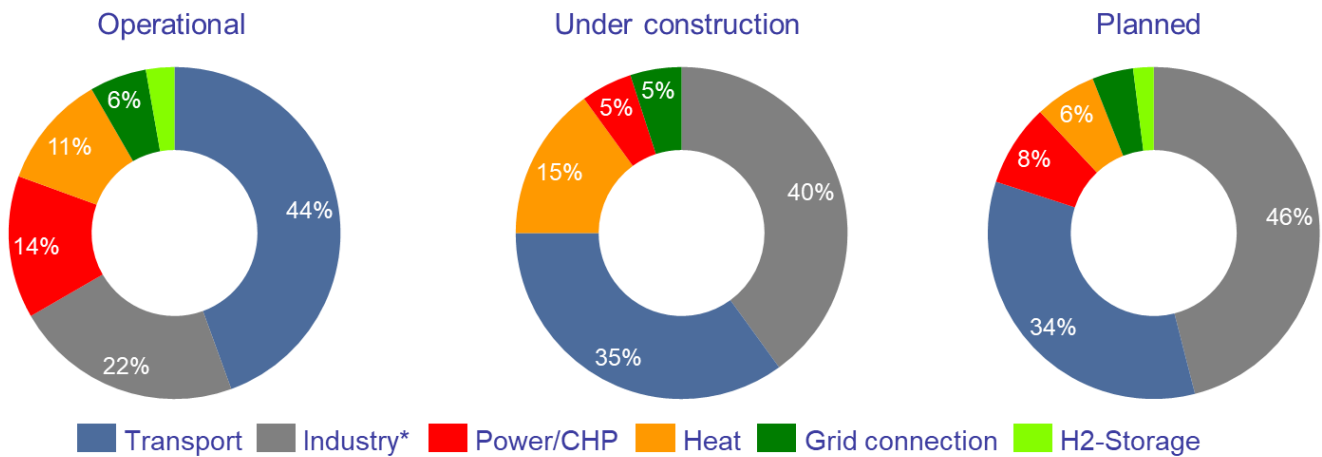
- Hydrogen is a key element of the European 'Green Deal'. Its important role as a future energy was strengthened once again by the hydrogen strategy of the EU, which was adopted in July 2020.
- Internationally hydrogen generates much attention and next to Germany, the Netherlands, France, Norway, Spain and Portugal in Europe also Australia, Japan and Korea adopted national hydrogen strategies.
- The most important goals of all these strategies are the avoidance of greenhouse gas emissions, the stimulation of growth and technological development as well as the further integration of renewable energies.
- The already proclaimed national goals for scaling up hydrogen production are by no means sufficient to reach the EU target of producing 10 million tonnes of hydrogen per year in 2030.
- Project activities gathered further pace - the lion's share of the projects are focussing on applications in the sectors transport and industry.

## H<sub>2</sub>-map of Northwest Europe (Number of projects)



- Currently, there are over 100 hydrogen projects under way in Northwest Europe.
- 27 % of these projects are already operational and a further 12% are under construction.
- The majority of projects are related to the production of "green hydrogen", i.e. hydrogen produced via electrolysis from renewable electricity.
- Germany currently has the highest share of operational plants, planned plants and plants under construction, followed by the Netherlands and Belgium.
- The first projects with blue hydrogen are currently under construction in the UK.

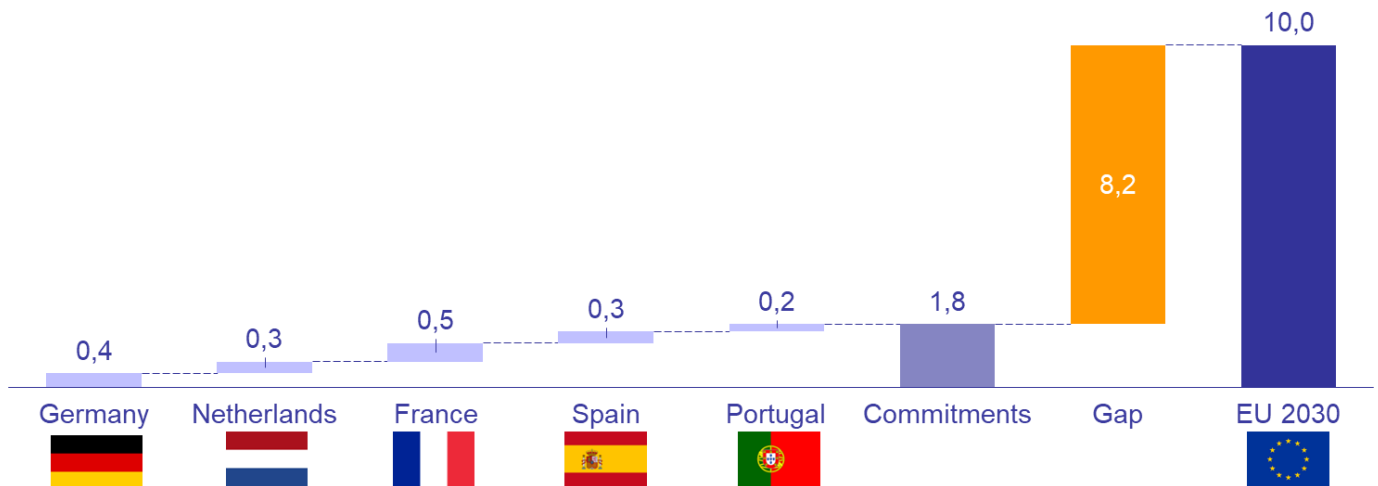
## Application areas of hydrogen projects in Northwest Europe



Source: Research/Analysis Team Consult; \*Includes refineries

- In Northwest Europe, the most important application areas across all countries are the transport and industrial sector.
- In industrial projects, hydrogen supply is to be realized either through local production or in the long-term by a connection to a yet to be created hydrogen grid. Hydrogen can be used as feedstock or for the generation of process heat. An important application is the substitution of coal in the steel industry.
- In the transport sector, hydrogen is currently mostly used in local bus fleets and passenger cars. Many projects are also focussing on heavy duty transport. The limiting growth factors in this sector are the variety and availability of suitable fuel cell vehicles. In Norway, there are some projects to supply ships with hydrogen.
- Another requirement for using hydrogen in the transport sector is the further expansion of the hydrogen filling station infrastructure. With currently over 80 hydrogen stations, Germany is the leading nation in Europe.

## Comparison of national and EU hydrogen strategies (planned H<sub>2</sub>-Output in Mt in 2030)



Source: National Hydrogen Strategies & Team Consult analysis

- In its Hydrogen Strategy the EU announced to build up a H<sub>2</sub>-production of 10 Mt hydrogen p.a. in 2030.
- Several EU-countries published and pursue national hydrogen strategies. A comparison of the national and the EU hydrogen strategies shows that there is much more effort of all member states necessary to close the gap between the ambitions of the EU and the current national commitments.

### Imprint

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