



## Market Insights: Hydrogen – 2022

**Market Insights: Hydrogen - 2022** is one in a series of reports published as part of NexantECA's **Markets & Profitability** program.

NexantECA's Market Insights report provides a comprehensive review of the global hydrogen market, including various sources of hydrogen supply and demand in refining, steel, industrial heat, passenger vehicles, road freight, aviation, rail, space heating, ammonia, methanol and other. The scope covered includes:

- Increased focus on decarbonization, viable pathways for hydrogen production, and hydrogen end-use
- NexantECA's market outlook for each specific region: China, Asia Pacific, North America, South America, Western Europe, Central and Eastern Europe, Middle East, and Africa. Forecast period: 5 years history and 15-year forecast to 2035
- Market influencing factors, key challenges, and potential barriers
- Hydrogen pricing, production costs, levelized cost of hydrogen (LCOH) and potential challenges in techno-economic analyses

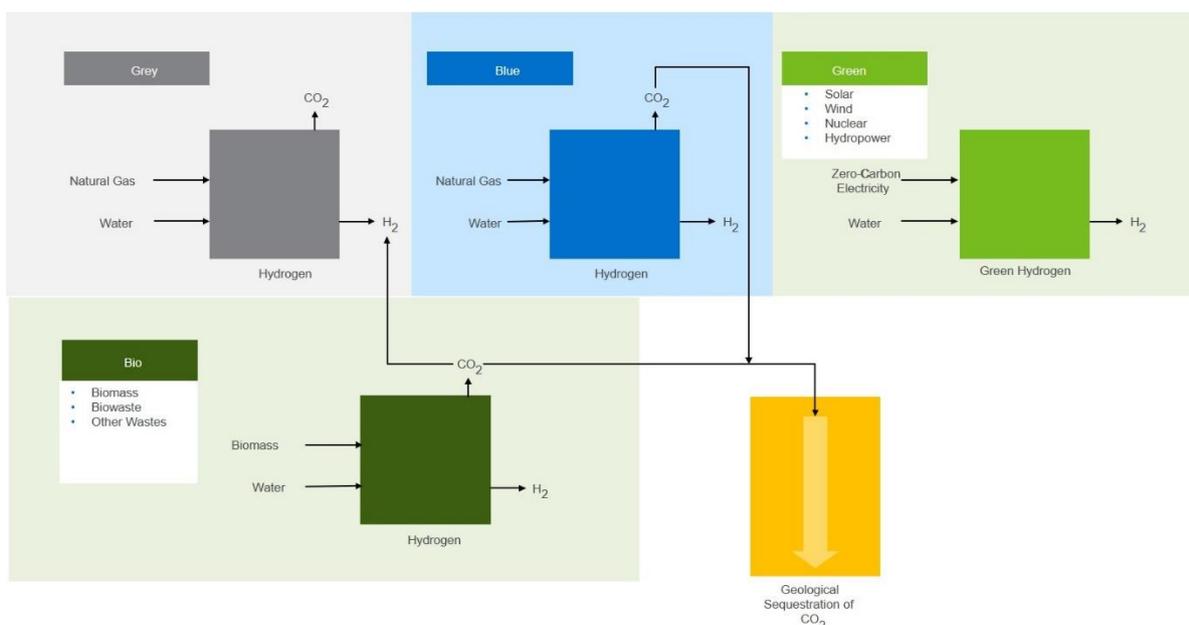
Along with the written report, data is provided in Excel including market and competitiveness data.

Publication: August 2022

### Report Abstract:

For achieving **"net-zero"** emissions by 2050 to constrain the global temperature rise to **1.5 to 2.0 degrees** Celsius (°C), negligible or minimal (low) carbon hydrogen is receiving much attention. Hydrogen is typically used in the chemical industry for several important products such as ammonia, methanol, cyclohexane, hydrogen peroxide, aniline, and oxo alcohols, amongst others. Hydrogen is also used in the refining sector to reduce the sulfur content of certain fuel streams as well as in many other industries. In recent years, there is a growing emphasis on adopting hydrogen as an **"energy carrier"** in fuel cell applications which would open a potentially large new market. Different types of hydrogen are defined based on a colour palette classifying hydrogen based on its potential environmental footprint and resulting impact. An illustrative example is provided for some of the different colours of hydrogen.

**Different Colours of Hydrogen - Illustrative**



Market drivers, key challenges, and potential barriers are reviewed and evaluated including regulatory framework and policies for stimulating overall hydrogen demand. Hydrogen pricing is reviewed and a comparative costs analysis of the main colours of hydrogen (e.g., grey, blue, and green) is performed.

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Chapter 4, Market Outlook includes:

- Key data and information sources
- Key underlying assumptions
- Key take-aways covering:
  - Market Overview
  - Market Drivers
  - Market Constraints
  - Competitive Landscape
  - Supply and Demand

## Report License Details:

Access to **Market Insights: Hydrogen - 2022** is via a report license agreement and includes:

- 12 month access to the PDF report via NexantECA website, with unlimited downloads of PDF reports
- Excel file
- Consultation time with the project team

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