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Argus Low Carbon Hydrogen Market Report

Key features and insightful extracts

Gain a greater insight into the hydrogen market with our unique report which provides an in-depth analysis on the key sectors, countries and policies enabling hydrogen growth.



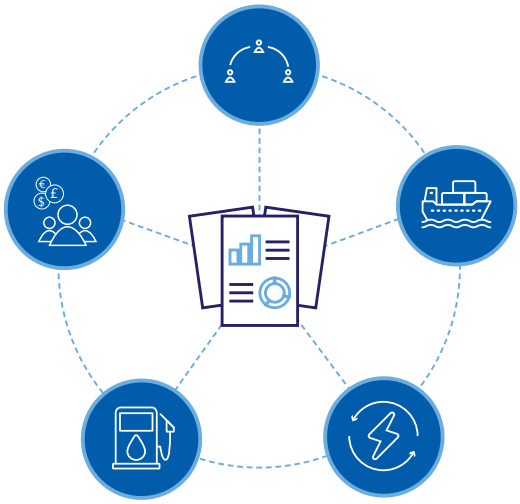
illuminating the markets®

Commodity Markets Intelligence
Consulting & Forecasts
Events



Who should use this report?

- **Shipping companies** looking to understanding the use of low carbon hydrogen (LCH) and carriers such as ammonia or methanol as their bunker fuel.
- **Power utilities** and **power generation** fuel suppliers looking to understand the trends and implications of hydrogen adoption.
- **Key Industry Strategic Planning** interested in using LCH as a possible fuel to lower their carbon footprint.
- **Investors** seeking to gain a better understanding of the opportunities arising from the wave of new hydrogen projects.



CLIENT	TASK	RESULT
Singapore's Prime Minister's Office (PMO): Roadmap to decarbonising the economy	The Singapore government's planning division (PMO) commissioned a study to assess the viability of developing a green hydrogen-based supply chain, with a focus on applications in power generation and transportation	The potential demand for hydrogen for the economy was examined at the sectoral level. The magnitudes and the entry price levels for each of the sectors was established. Thereafter, the most viable sectors were examined in greater detail, including a detailed cost analysis of the most likely hydrogen carriers, including ammonia.
A major European energy company	Bio-hydrogen market study - technology, material inputs, market potential and strategic recommendations	A comprehensive overview of the bio-hydrogen market was provided, including current and emerging sources of green hydrogen consumption, analysis of various technology pathways for production, as well as a supply chain analysis for raw materials, renewable electricity and transport logistics. Argus also provided strategic recommendations on how the client can best enter the green hydrogen market, including technology choices, production volumes and target markets.
A leading environmental advocacy group	North America hydrogen hub development study	A detailed analysis of the five North American hubs was provided, including demand and supply forecasts, supply chain and cost analysis, as well as breakeven pricing. Argus approximated demand at the sectoral level for each hub and used the breakeven pricing to identify the most promising downstream sectors for each hub.

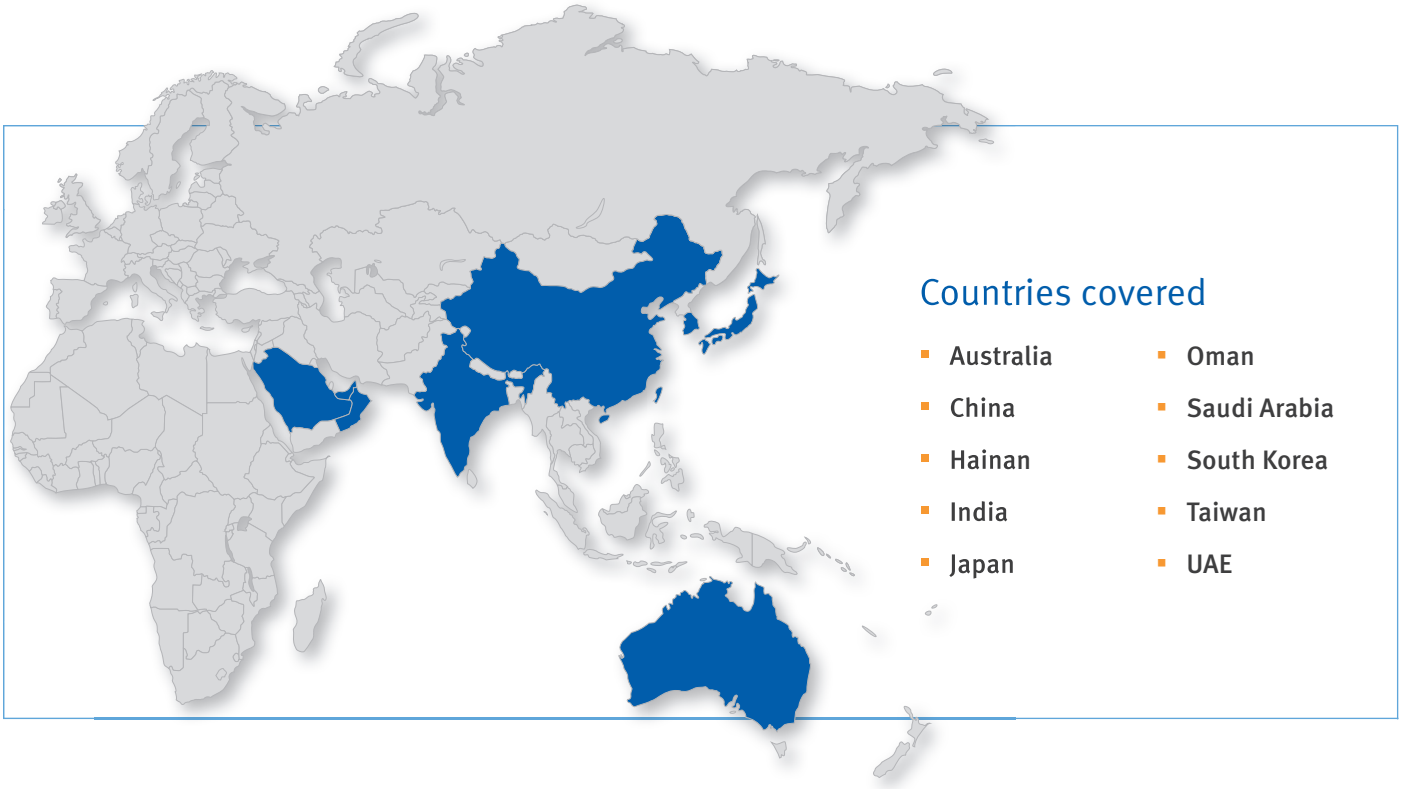
Key features

- Overview of hydrogen's role in world decarbonisation efforts and key sectoral trends driving this new market
- Country-by-country demand and supply forecast for key hydrogen markets until 2050
- Detailed analysis of the hydrogen strategy for key countries, including green policies and targets, hydrogen -specific policies and targets, sector specific plans, and financial incentive schemes
- Breakeven price analysis of hydrogen technologies versus sector incumbents and other alternative fuels
- Hydrogen project pipeline for each country including ownership; capacities for hydrogen production, renewable energy generation, and electrolysers; development timelines; and offtake agreements
- Independent assessment of the factors likely to facilitate or hamper the development of hydrogen as a fuel
- Access to the expert consultants behind Argus' long-term market analysis

This report is Part 1 of 3, with future reports to covering Europe and Africa, and the Americas.

Sectors covered

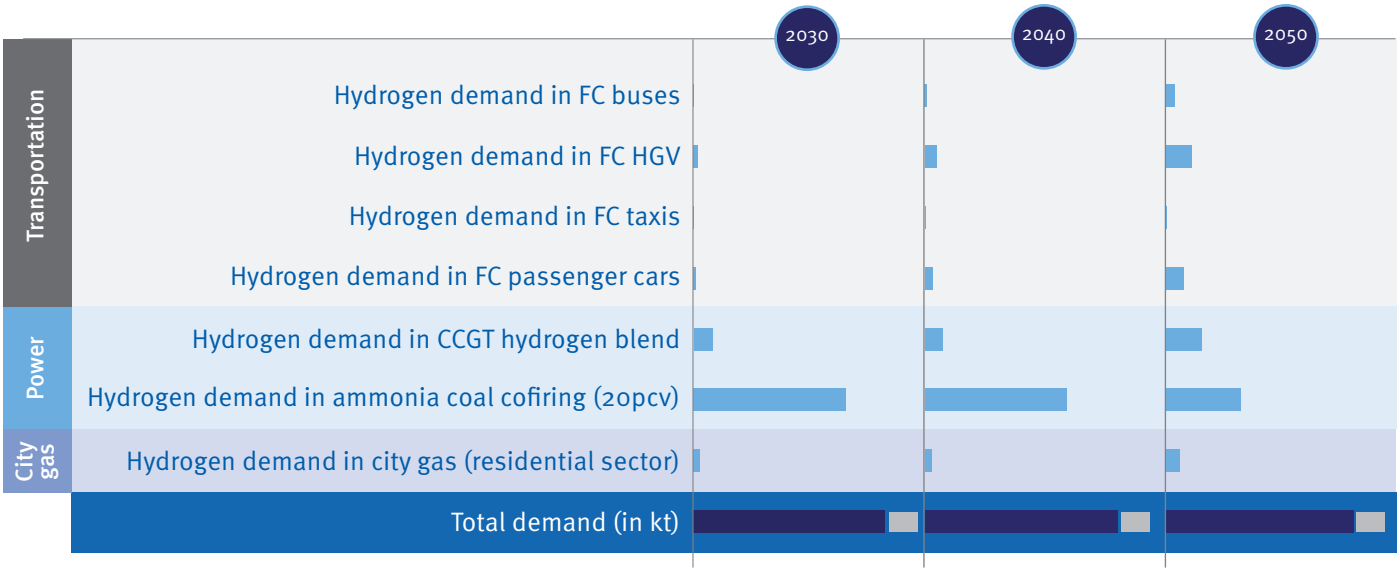
Refining | Fertilizer | Power | Transport | Steel | Maritime | Aviation



Countries covered

- Australia
- China
- Hainan
- India
- Japan
- Oman
- Saudi Arabia
- South Korea
- Taiwan
- UAE

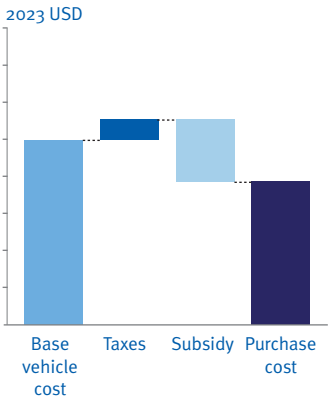
South Korea hydrogen demand summary



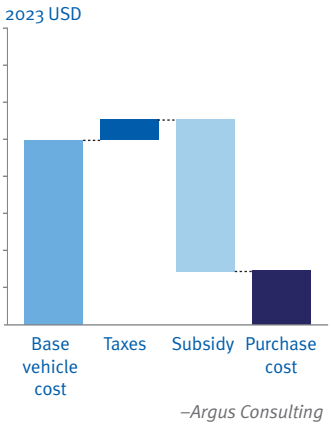
Purchase cost break-down of BEV and FCEV buses

FCEBs become a better alternative than BEBs due to the substantial amount of subsidy.

Purchase cost breakdown of BEV buses in 2023 (USD)



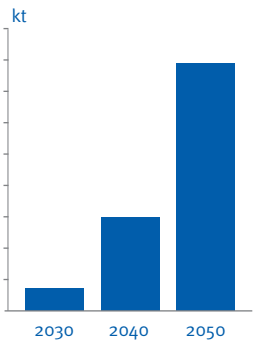
Purchase cost breakdown of FCEV buses in 2023 (USD)



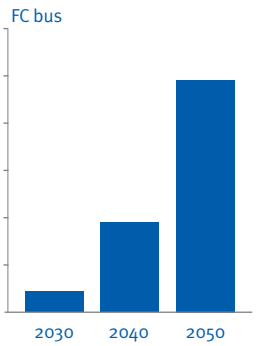
–Argus Consulting

Hydrogen demand in FC Buses in Japan

Hydrogen demand in FC Buses in Japan



FC Buses fleet in Japan



–Argus Consulting

Argus is pleased to announce that the Argus Low Carbon Hydrogen Strategy Report will be available soon! Read below for what the report will cover, and how to pre-register your interest.

Argus has provided a range of organisations with bespoke consulting work to support their strategic decision making in the low carbon hydrogen market. Low carbon hydrogen overlaps several sectors: generation fuels, transportation, steel, gas grids, fertilizers, SAF and marine fuels. The Argus Low Carbon Hydrogen Strategy Report draws all our sector expertise into one essential report for APAC and the Middle East region.

Provisional table of contents

Supply and demand summary

- Regional supply and demand overview
- Demand-oriented country and supply-oriented country identification.
- Regional total and firm supply overview

Introduction to hydrogen

- Hydrogen specification and nomenclature (grey, blue, and green)
- Countries with hydrogen strategy (global perspective)
- Current use of hydrogen
- Different hydrogen production routes
- Existing and new applications of hydrogen in different sectors

Country level analysis:

Japan

- Long-term hydrogen demand summary
- Japan's hydrogen economy policy development timeline
- Hydrogen policy targets and government support for hydrogen economy development
- Domestic low-carbon hydrogen supply
- Sector specific overview and corresponding sector hydrogen development plans
- Comprehensive long-term (till 2050) hydrogen demand analysis for transport and power generation sector
- Long-term breakeven price analysis for transport, power generation, steel, gas-grid, and refining sectors

South Korea

- Long-term hydrogen demand summary
- South Korea's hydrogen economy policy development timeline
- Hydrogen strategy targets and government support for hydrogen economy development
- Domestic low-Carbon hydrogen supply
- Sector specific overview and corresponding sector hydrogen development plans
- Comprehensive long-term (till 2050) hydrogen demand analysis for transport, power generation and gas grid sector
- Long-term breakeven price analysis for transport, power generation, steel, and gas-grid sectors

China

- Long-term hydrogen demand summary
- China's hydrogen economy policy development timeline
- Hydrogen policy targets and existing hydrogen consumption
- China provincial level hydrogen targets and hydrogen economy development plan
- Domestic low-Carbon hydrogen supply
- Sector specific overview and corresponding sector hydrogen development plans
- Comprehensive long-term (till 2050) hydrogen demand analysis for transport sector
- Long-term breakeven price analysis for transport and steel sectors

Australia

- Australia's hydrogen economy policy development timeline
- Hydrogen policy targets and government support for hydrogen economy development
- Domestic low-carbon hydrogen supply
- Sector specific overview and corresponding sector hydrogen development plans
- Hydrogen demand from existing grey hydrogen consumption replacement (fertilizers)
- Long-term breakeven price analysis for transport, power generation, steel, gas-grid, fertilizer, and mining sectors
- Clean hydrogen project funding details

India

- India's hydrogen economy policy development timeline
- Hydrogen policy targets and key highlights
- Support framework for the development of hydrogen economy
- Domestic low-carbon hydrogen supply

- Sector specific overview and corresponding sector hydrogen development plans
- Long-term breakeven price analysis for transport, steel, gas-grid, fertilizer, and refining sectors
- Overview on clean hydrogen development in ports

Middle East

- Middle East summary
- Regional supply-side summary

Oman

- Oman's hydrogen economy policy development timeline
- Oman's net-zero ambitions and decarbonisation targets
- Hydrogen policy targets and key highlights
- Support framework for the development of hydrogen economy
- Domestic low-carbon hydrogen and ammonia supply and project details
- Sector specific overview and corresponding sector hydrogen development plans
- Hydrogen demand from existing grey hydrogen consumption replacement (refining and fertilizers)
- Long-term breakeven price analysis for steel, fertilizer, and refining sectors

Saudi Arabia

- Saudi Arabia's hydrogen economy policy development timeline
- Saudi Arabia's net-zero ambitions and decarbonisation targets
- Domestic low-carbon hydrogen and ammonia supply and project details
- Sector specific overview and corresponding sector hydrogen development plans
- Hydrogen demand from existing grey hydrogen consumption replacement (refining and fertilizers)
- Long-term breakeven price analysis for steel, fertilizer, and refining sectors

United Arab Emirates (UAE)

- UAE's hydrogen economy policy development timeline
- UAE's netzero ambitions and decarbonisation targets
- Hydrogen policy targets and government support for hydrogen economy development
- Domestic low-carbon hydrogen and ammonia supply and project details
- Sector specific overview and corresponding sector hydrogen development plans
- Hydrogen demand from existing grey hydrogen consumption replacement (refining and fertilizers)
- Long-term breakeven price analysis for fertilizer, and refining sectors

Sustainable Aviation Fuel (SAF)

- Global SAF demand overview
- Asia Pacific (APAC) aviation fuel trade balance
- Long-term APAC aviation fuel demand summary (by sub-region and fuel type)
- Long-term aviation fuel demand summary for Southeast Asia and South Asia
- Asia-Pacific region-wise SAF policy analysis
- APAC SAF demand scenarios (conservative, base and CORSIA sensitivity)
- HVO and SAF capacity long-term outlook APAC
- Feedstock market analysis in APAC region
- APAC key country SAF analysis (China, India, South Korea, and Australia)
- Europe SAF-related policy coverage

Marine fuel

- Introduction to marine bunker fuel
- International Maritime Organization (IMO) decarbonisation goals
- Analysis of potential low carbon bunker fuels (LNG, biofuels, ammonia, battery, methanol, and hydrogen)
- Asia-Pacific long-term marine fuel demand outlook
- Asia-Pacific long-term green hydrogen and ammonia demand outlook
- Short-term regional (APAC) distribution analysis of green ammonia
- Long-term regional (APAC) distribution analysis of green ammonia

Pre register your interest to receive notification of the launch of the report, and associated complimentary content by emailing us: singapore@argusmedia.com

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