

**Strategy Report** 

# Argus Low Carbon Hydrogen

Part Three: Americas

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# **Executive summary**

- · Overview of the study
- Mandates for low-carbon hydrogen in Europe and Asia
- · Americas low-carbon hydrogen target market
- Country-level assessment of low-carbon hydrogen
- · Americas low-carbon hydrogen supply
- Low-carbon hydrogen domestic demand in North America
- · Low-carbon hydrogen domestic demand in Latin America
- Americas breakeven price comparison

# Introduction to hydrogen

- Hydrogen specification and definitions (grey, blue, and green)
- Hydrogen potential end-uses and advantages
- Countries with hydrogen strategy (global perspective)
- Current use of hydrogen
- Different hydrogen production routes
- Existing and new application of hydrogen in different sectors

# Country level analysis

#### US

- Country Overview: key macro indicators, emissions
- Feedstock price forecast
- Decarbonisation strategy overview
- Hydrogen strategy and assessment: key takeaways, potential impact of President Trump on US hydrogen, country scorecard, national clean hydrogen strategy and roadmap
- Low-carbon hydrogen/ammonia export opportunity: key takeaways, announced low-carbon ammonia production capacity, offtake agreements (blue and green)
- Funding: Bipartisan Infrastructure Law, Inflation Reduction Act (IRA), impact of IRA on hydrogen production costs (blue and green)
- Infrastructure: hydrogen pipelines, geologic storage (current and planned), CO2 storage (current and planned)
- Supply: announced low-carbon hydrogen production capacity, advanced low-carbon hydrogen projects, clean hydrogen hubs
- Demand:
  - Country assessment
  - Demand summary
  - Demand summary rationale
  - Sector specific overview and corresponding sector hydrogen development plans
  - Comprehensive long-term hydrogen demand analysis for refining, ammonia/fertilisers, road transport and steel sectors
  - Long-term breakeven price analysis for refining, ammonia/fertilisers, power generation, gas blending, road transport and steel sectors



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#### Canada

- Country Overview: key macro indicators, emissions
- Feedstock price forecast
- Policies: key decarbonisation policies, Emissions Reduction Plan, carbon pricing
- Hydrogen strategy and assessment: country scorecard, national clean hydrogen strategy, provincial-level hydrogen strategies
- · Funding: Clean hydrogen investment tax credit
- Infrastructure: geologic storage (planned), CO2 storage (planned)
- Supply: announced low-carbon hydrogen production capacity, advanced low-carbon hydrogen projects, clean hydrogen hubs
- Demand:
  - Country assessment
  - Demand summary
  - Demand summary rationale
  - Sector specific overview and corresponding sector hydrogen development plans
  - Comprehensive long-term hydrogen demand analysis for refining, ammonia/fertilisers, road transport and steel sectors
  - Long-term breakeven price analysis for refining, ammonia/fertilisers, power generation, gas blending, road transport and steel sectors

#### Mexico

- Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies, national strategy for electricity, national strategy for hydrocarbons and natural gas
- Hydrogen strategy and assessment: country scorecard
- Infrastructure: trade corridor, ammonia terminals, port expansion, pipelines, storage
- Supply: announced low-carbon hydrogen production capacity, renewables and hydrogen production potential

### **Latin America**

#### **Brazil**

- Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies
- Hydrogen strategy and assessment: country scorecard, national hydrogen strategy
- · Funding: low-carbon hydrogen tax credits, industrial decarbonisation funding
- Infrastructure: port expansion, carbon storage (planned)
- Supply: announced low-carbon hydrogen production capacity, renewables and hydrogen production potential
- Demand:
  - Country assessment
  - Demand summary



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- Demand summary rationale
- Sector specific overview and corresponding sector hydrogen development plans
- Comprehensive long-term hydrogen demand analysis for refining, ammonia/fertilisers and steel sectors
- Long-term breakeven price analysis for refining, ammonia/fertilisers and steel sectors

#### Chile

- Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies, national energy policy
- Hydrogen strategy and assessment: country scorecard, national hydrogen strategy
- Funding: Chilean Production Development Corporation, green hydrogen development fund
- Supply: announced low-carbon hydrogen production capacity, hydrogen hubs
- · Demand:
  - Country assessment
  - Demand summary
  - Demand summary rationale
  - Sector specific overview and corresponding sector hydrogen development plans
  - Comprehensive long-term hydrogen demand analysis for refining and gas blending
  - Long-term breakeven price analysis for refining, ammonia/fertilisers, gas blending and steel sectors

#### **Argentina**

- Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies, national energy transition plan
- Hydrogen strategy and assessment: country scorecard, national hydrogen strategy, provincial-level hydrogen strategies
- Infrastructure: hydrogen hubs and corridor, ammonia terminals, port expansions, pipelines, storage
- Supply: announced low-carbon hydrogen production capacity, renewables and hydrogen production potential

#### Colombia

- Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies, long term climate strategy
- Hydrogen strategy and assessment: country scorecard, national hydrogen strategy
- · Supply: announced low-carbon hydrogen production capacity, renewables and hydrogen production potential
- Demand:
  - Country assessment
  - Demand summary
  - Demand summary rationale
  - Sector specific overview and corresponding sector hydrogen development plans
  - Comprehensive long-term hydrogen demand analysis for road transport
  - Long-term breakeven price analysis for road transport



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#### **Uruguay**

- · Country Overview: key macro indicators, emissions
- Policies: key decarbonisation policies, energy transition strategy
- Hydrogen strategy and assessment: country scorecard, national hydrogen strategy
- · Infrastructure: port expansions, pipelines, rail
- Supply: announced low-carbon hydrogen production capacity, renewables and hydrogen production potential

# Sustainable Aviation Fuel (SAF)

- Introduction to SAF
- Americas SAF policies
- Americas aviation fuel and hydrogen demand analysis

#### Marine fuel

- Introduction to marine bunker fuel
- Marine fuel decarbonisation policies
- Analysis of potential low carbon bunker fuels (ammonia, methanol, and hydrogen)
- Demand:
  - Methodology for zero-carbon maritime fuels
  - Americas long-term marine fuel demand forecast
  - Americas long-term e-fuel demand
  - Americas long-term hydrogen demand in marine sector
  - Long-term breakeven price analysis for marine (ammonia)

