

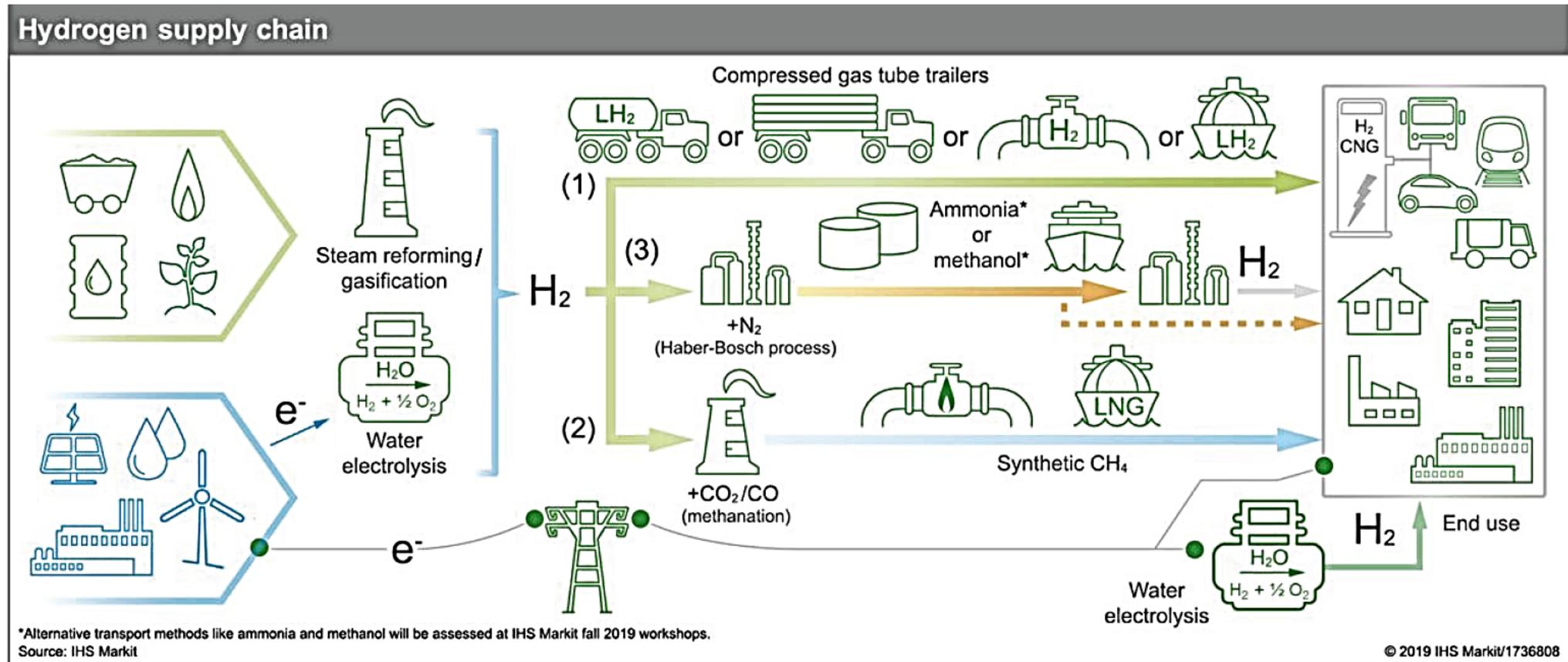
The Potential of Hydrogen to Reduce Carbon Emissions in APEC

The 54th Meeting of APEC Expert Group on Renewable Energy Technologies (EGNRET)
Nov 10th, 2020

Manuel Heredia, Visiting Researcher



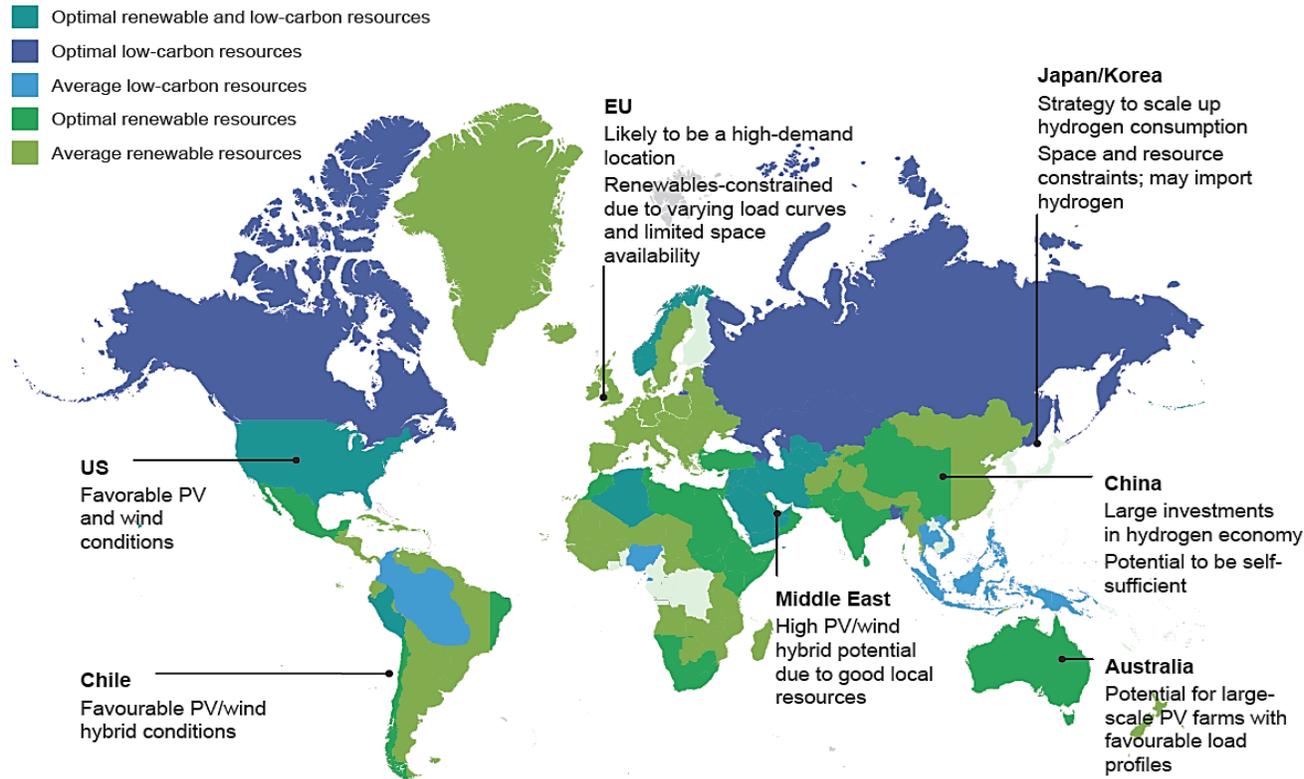
Why hydrogen & where does it come from?



Source: Hydrogen and Renewable Gas Forum Retrieved from <https://ihsmarket.com/products/hydrogen-global-market.html>

Why hydrogen & where does it come from?

Best source of low-carbon hydrogen in different regions

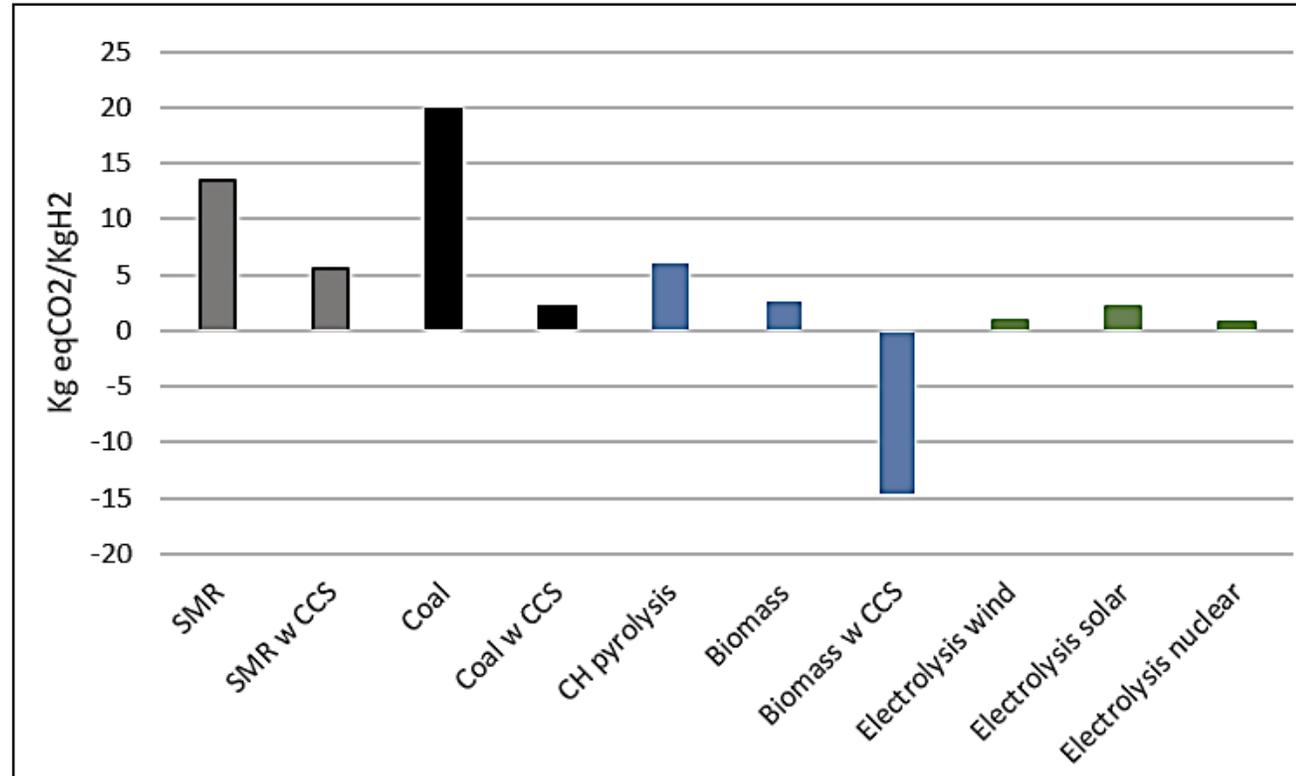


SOURCE: IEA; McKinsey

“Within five to ten years — driven by strong reductions in electrolyser capex of about 70-80% and falling renewables’ levelised costs of energy — renewable hydrogen costs could drop to about \$1-1.50 per kg in optimal locations, and roughly \$2-3 per kg under average conditions.”

Path to Hydrogen Competitiveness (2020)

CO₂ Emissions from Hydrogen Production Technology



Source: Parkinson & al (2018) *Levelized Cost of CO₂ mitigation from Hydrogen Production Routes*. DOI:10.1039/c8ee02079e

Plans & Roadmaps

The Strategic Road Map for Hydrogen and Fuel Cells

- Industry-academia-government action plan
to realize a “Hydrogen Society” -

March 12, 2019

Hydrogen and Fuel Cell Strategy Council

Korea Hydrogen Economy Roadmap 2040

Source: IEA/IRENA Renewables Policies Database

Last updated: 14 September 2020

In January 2019, Korea announced its Hydrogen Economy Roadmap. The Roadmap outlines goal of producing 6.2 million fuel cell electric vehicles and rolling out at least 1200 refilling stations by 2040. Additionally, the plan aims to roll out on the street at least 35 hydrogen buses in 2019 ramping this number up to 2000 by 2022 and 41000 by 2040. In terms of the energy sector, the roadmap outlines an objective to supply 15 GW of fuel cell for power generation by 2040.

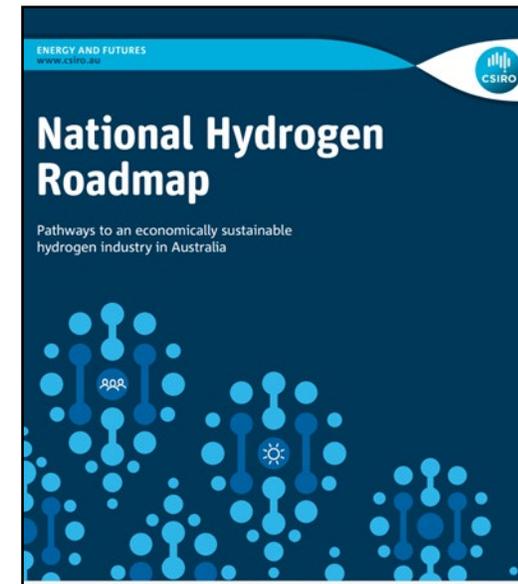
Want to know more about this policy ? [Learn more](#) ↗



ENGLISH VERSION

Hydrogen Fuel Cell Vehicle Technology Roadmap

Developed by the
Strategy Advisory Committee of the Technology Roadmap
for Energy Saving and New Energy Vehicles



Projects

The Asian Renewable Energy Hub

Renewable energy at oil & gas scale

[Learn More](#)

02 October 2020

Enel Green Power, together with AME, announces plans for first pilot project for green hydrogen production in Chile

Yong-Liang Por, Financial Analyst, IEEFA Contributor
August 2020



Institute for Energy Economics and Financial Analysis
IEEFA.org

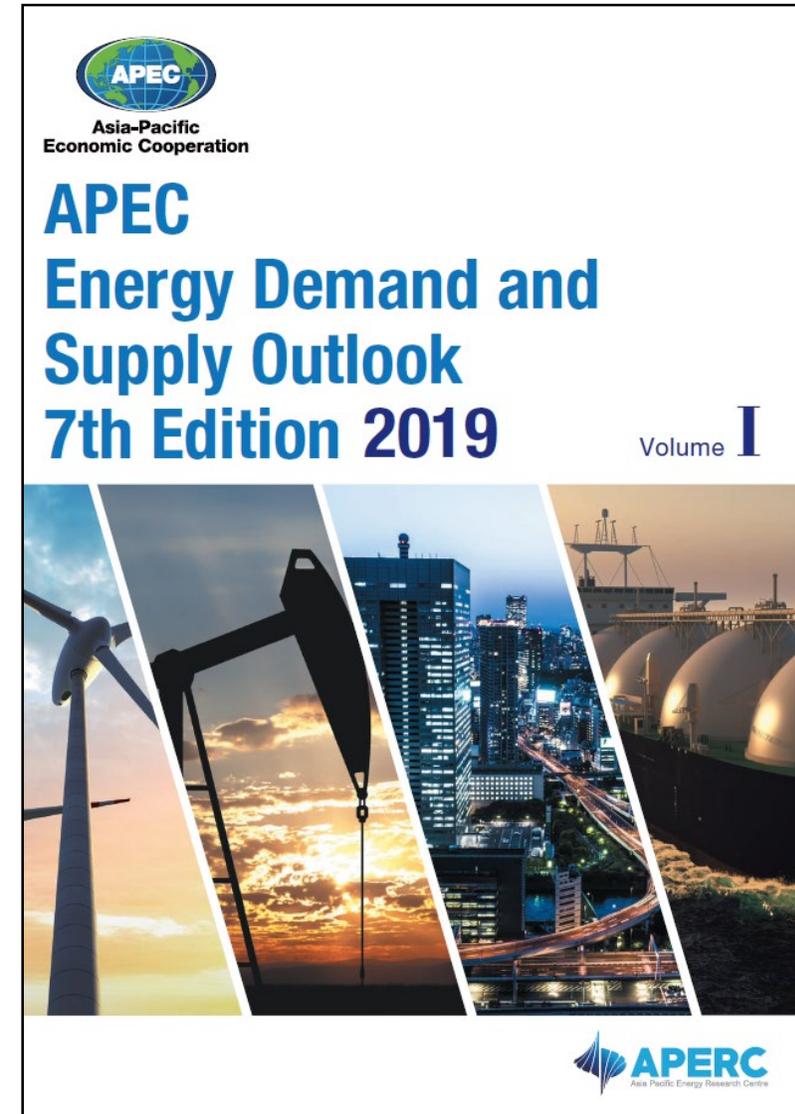
Great Expectations

Asia, Australia and Europe Leading Emerging Green Hydrogen Economy, but Project Delays Likely

Energy Outlook 8th Edition

Goals:

- Develop a prospective of hydrogen demand in different economies.
- Evaluation of the role of hydrogen.
- Identify the major drivers that affect the development of the hydrogen industry in the APEC region





Thank you!