



**Hydrogen in Decarbonization
Strategies in Asia and the Pacific**

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DRAFT

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ABOUT US

OUR MISSION

Supply firm, dispatchable, and cost-competitive renewable electricity around the clock through the innovative use of hydrogen

OUR POSITION

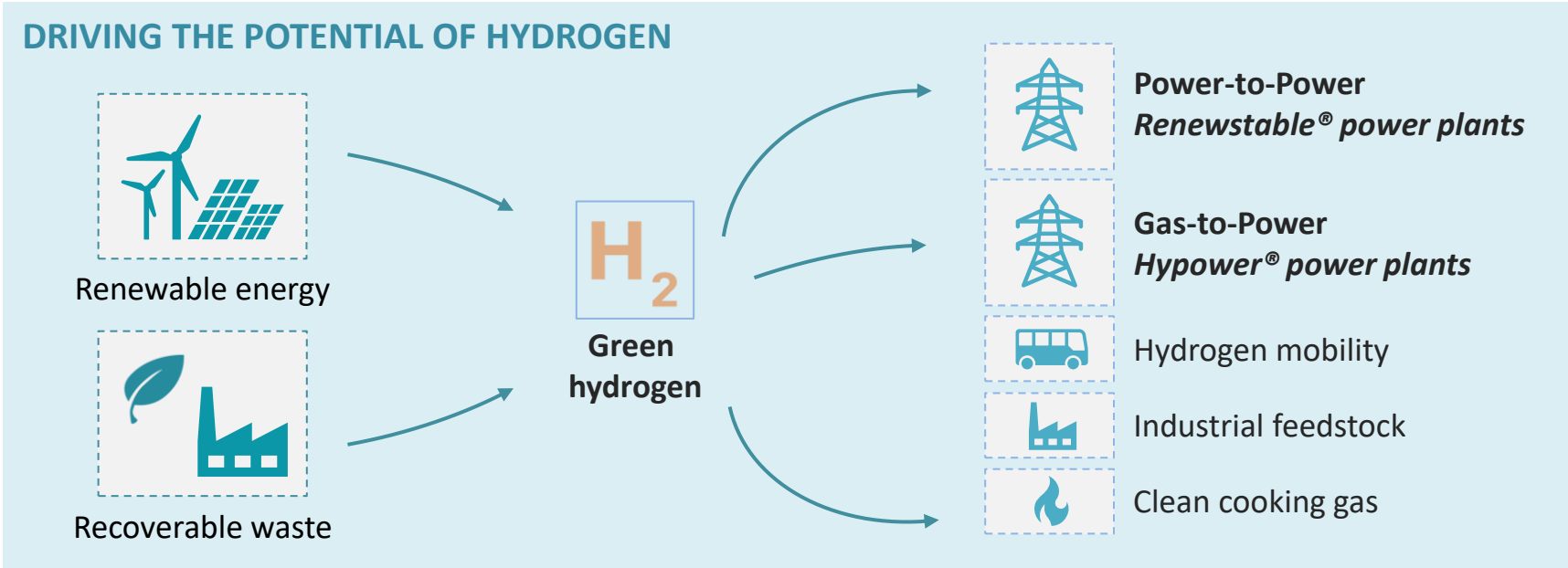
The global pioneer in hydrogen power
HDF Energy offers two multi-MW scale hydrogen power plant solutions: RENEWSTABLE (Power-to-Power) and HYPOWER (Hydrogen-to-Power)

OUR PROGRESS

- Helping to create hydrogen markets in more than 15 countries across Europe, Asia, South Africa, Australia, and Latin America
- IPO for 150 M€ in 2021, the 2nd largest IPO of a clean tech firm on Euronext Paris in last 10 years
- Market capitalisation of more than 400 M€
- Largest hydrogen project currently in construction, with a total investment of 180 M€

ABOUT US

**MULTIPLE
POSTIONING
ON THE USE
OF
HYDROGEN**



CORE BUSINESS: POWER-TO-POWER AND GAS-TO-POWER STATIONARY APPLICATIONS

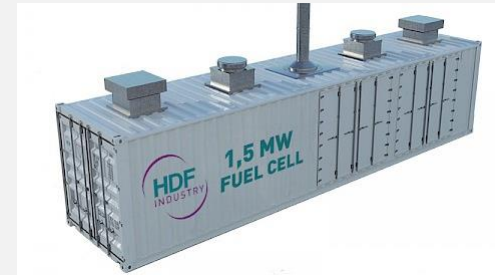
RENEWSTABLE

POWER TO POWER



HYPOWER

GAS TO POWER



OVERALL OPINION



- Hydrogen among limited options to decarbonize the 'hard to abate' sectors
- Focus on Asia for heavy H2 consumers sectors
- Overview of H2 country roadmap among Asia

REVIEW



- The study covers APAC but underlines mainly that the PRC is the leading player in H2

- In terms of H2 consumption, it would had been interesting to get a picture in more detail per country:
 - consumption of H2 per country
 - what sectors are driving the consumption per country
 - how the H2 is produced per country
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- Regarding H2 production, a classification of the countries with the best green H2 potential and minimum transport constraints would be relevant:
 - highest wind and solaresourceses
 - constraints to transport the H2

Price is an eternal challenge :

- the ratios may be too approximate between grey and green H2
- it could be relevant to understand the impact of the volatility of the gas & coal prices on grey H2 prices, what prices green H2 needs to match, there is a different grey H2 price per country
- leverages to support green H2: carbon tax? Different levels per country?

RECOMMENDATION FOR BETTER POLICY IMPLEMENTATION



- Sharp view on the context :
 - understanding which sectors per country are driving the existing H2 demand and costs
 - Strengths and weaknesses of each country to elaborate a sort of regional strategy

- Developed and Middle Incomes countries = different strategy
 - Countries who can bring leverage should share a clear scheme: FIT, grant, concessional loan, taxes exemption...
 - Countries that cannot bring financial leverage should implement friendly regulations to welcome innovative projects which can bring sustainable learning curves in the short run

THANK YOU



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