



مؤتمر عجمان
الدولي السادس للبيئة
Ajman 6th International
Environment Conference



UAE Hydrogen Leadership Roadmap

TOWARDS >>>>

2071

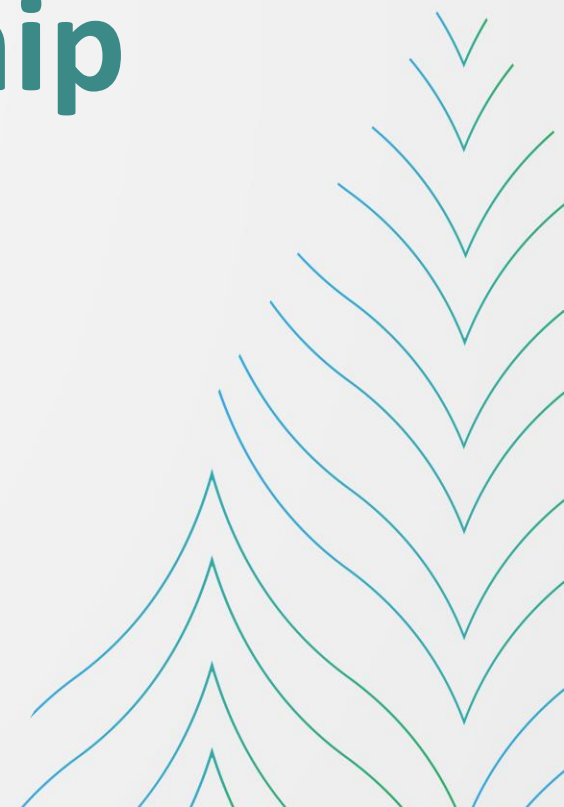
SHAPING THE

FUTURE

FOR ENVIRONMENTAL

SUSTAINABILITY

Public - عامة





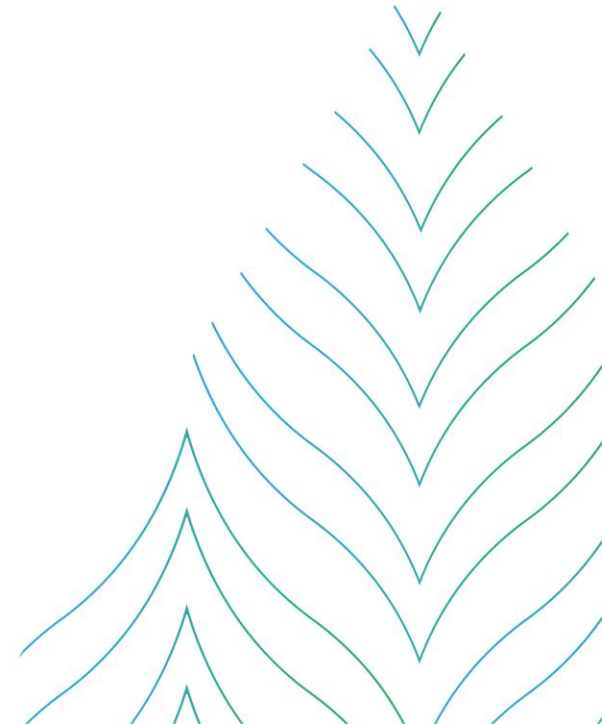
مؤتمر عجمان
الدولي السادس للبيئة
Ajman 6th International
Environment Conference



AIEC2022

Ajman 6th International Environment Conference on
TOWARDS 2071 SHAPING THE FUTURE FOR ENVIRONMENTAL SUSTAINABILITY

UAE Hydrogen Leadership Roadmap





مؤتمر عجمان
الدولي السادس للبيئة
Ajman 6th International
Environment Conference



AIEC2022

Ajman 6th International Environment Conference on
TOWARDS 2071 SHAPING THE FUTURE FOR ENVIRONMENTAL SUSTAINABILITY

UAE Hydrogen Leadership Roadmap



Hydrogen Landscape and UAE Competitive Advantage



Low carbon hydrogen expected to be a 400+ billion-dollar business in 2050 and a key measure to combat climate change



The UAE is well positioned to be a leader in low carbon hydrogen with natural competitive advantages in both blue and green hydrogen



Hydrogen to play a significant role in the UAE National Energy Strategy 2050 and UAE Net Zero by 2050 Strategic Initiative



The UAE with strong financial capabilities and a stable political and regulatory environment for long term investments



Hydrogen will further enable the diversification of the UAE economy through the expansion in existing industries and growth of new industries



New alliances are already in place with partners who are excited to be part of the hydrogen future with the UAE and who bring new capabilities and technologies



The UAE Hydrogen Leadership Roadmap is already being underpinned by National Champions with world-leading low carbon hydrogen projects, pilots, and test cargoes



The UAE is fostering innovation to enable the global energy transition, providing the right ecosystem for low carbon hydrogen projects



UAE advocates for the development of low carbon hydrogen



Key climate measure

Low carbon hydrogen is needed for net zero with a long-term commitment required



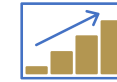
Massive potential

~350 Mtpa global demand and +\$400B market potential by 2050 in 2°C path



International momentum

45 countries with national hydrogen strategies or actively developing them



Improving economics

The UAE well positioned to be a top quartile producer of H₂ through low-cost gas and world leading solar PV



The UAE is well positioned to be a leader in low carbon hydrogen

Low-cost gas will help the UAE to play a leading role in developing and maturing the low carbon hydrogen market

UAE amongst the countries globally with the lowest solar costs for green hydrogen and with available land for solar PV

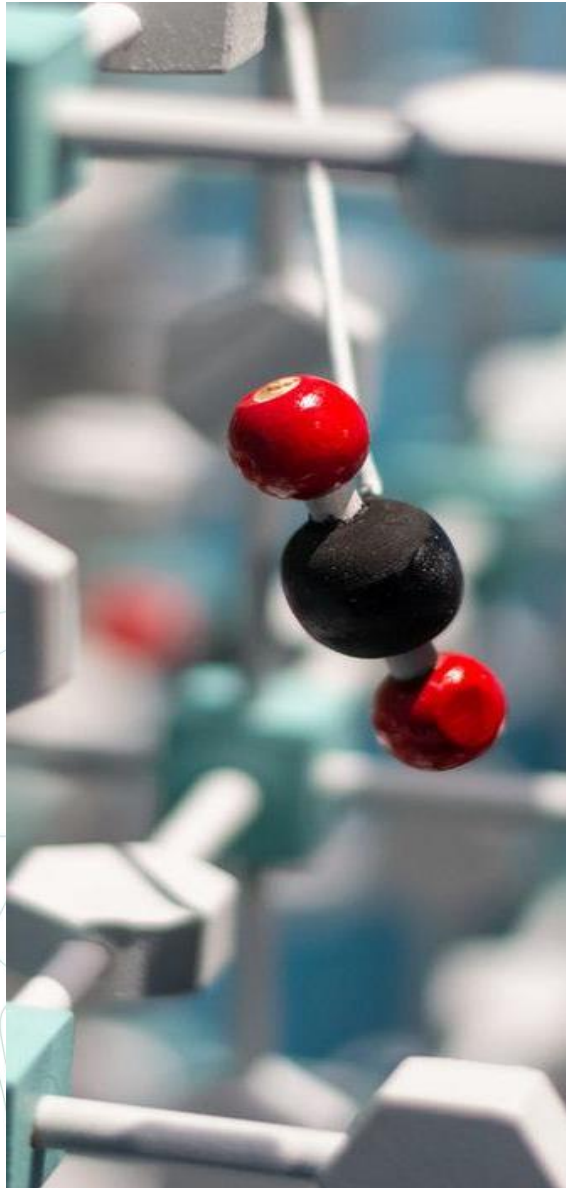
UAE National Champions are already present across the end-to-end value chain for hydrogen and ammonia

UAE starts from a position of strength, with 7+ projects underway, developments on the ground, and 4 test cargos sold

Existing alliances forged in Japan, South Korea and Europe with key off-takers, infrastructure players and technology leaders and more alliances are to be created

Favorable geographic positioning of the UAE to key future low carbon hydrogen markets in both Asia and Europe

The UAE ranked the fourth best country to live and work in the world and is the highest value nation brand in the Middle East

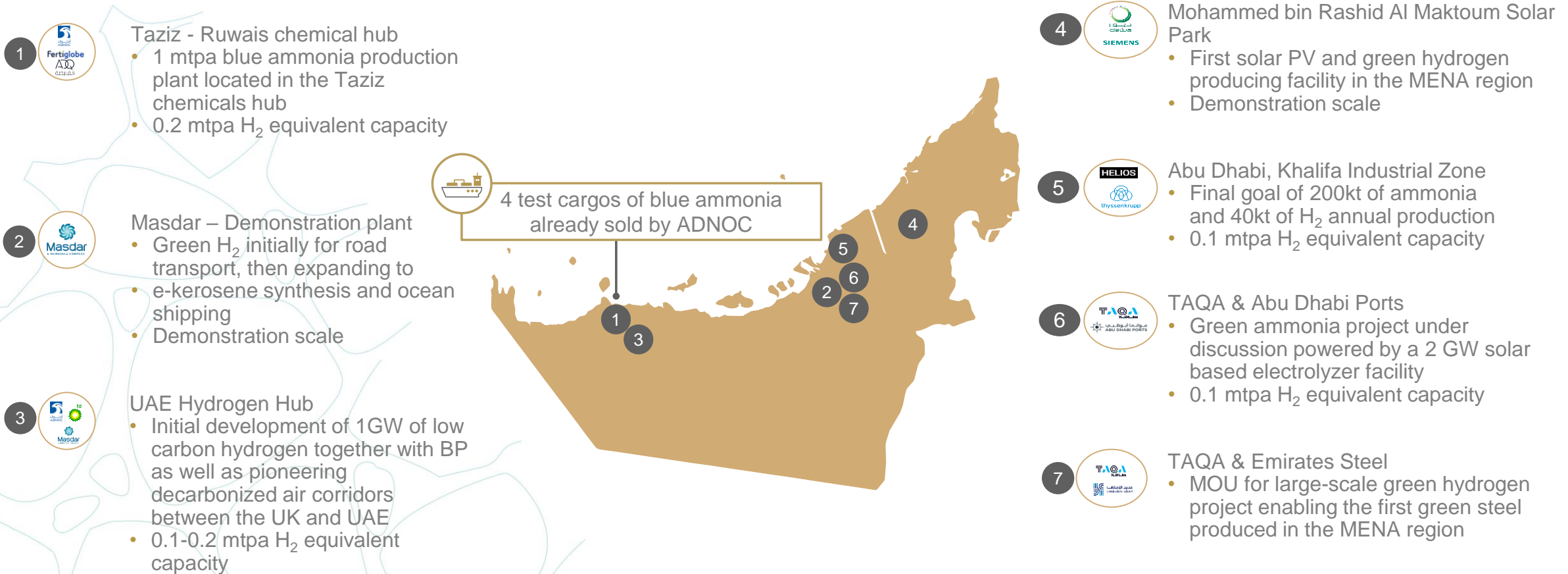


The UAE is targeting 25% market share of low carbon hydrogen and derivatives in key import markets by 2030 with an initial focus on Japan, South Korea, India, and Europe while in parallel pursuing export opportunities across other markets.

- Global leader in hydrogen
- UAE with ambition to be a global leader in low carbon hydrogen
- 25% market share
- We will target a 25% market share in key import markets
- 7+ projects announced
- We are well on the way with 7+ projects planned to deliver 0.5 mtpa hydrogen



The UAE is well on its way to champion the development of low carbon hydrogen projects





UAE's Hydrogen Leadership Roadmap - 3 Key Objectives



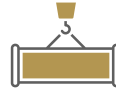
Ambition: UAE as a global leader in low carbon hydrogen and home to a robust and vibrant low carbon hydrogen ecosystem

1



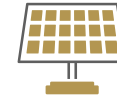
Generate new sources of value for UAE through low carbon hydrogen and derivatives exports

2



Provide low carbon hydrogen and derivative industrial opportunities in the UAE

3



Enable UAE Net Zero by 2050 Strategic Initiative in hard to abate sectors

Enablers

Provide a clear regulatory framework backed by policies, incentives, standards, certifications, and clear roles among UAE entities

Develop new low carbon hydrogen technology and competencies through value adding partnerships and domestic R&D efforts

Leverage existing and new Government to Government relationships to accelerate growth of domestic ecosystem

Provide land and associated infrastructure resources to support UAE production and develop the domestic ecosystem

Access green financing through the UAE and international capital markets



UAE Net Zero by 2050 Strategic Initiative and UAE National Energy Strategy 2050 Hydrogen a key enabler

Mtpa H₂ in 2050

4-10



Domestic UAE Hydrogen
demand in net-zero 2050

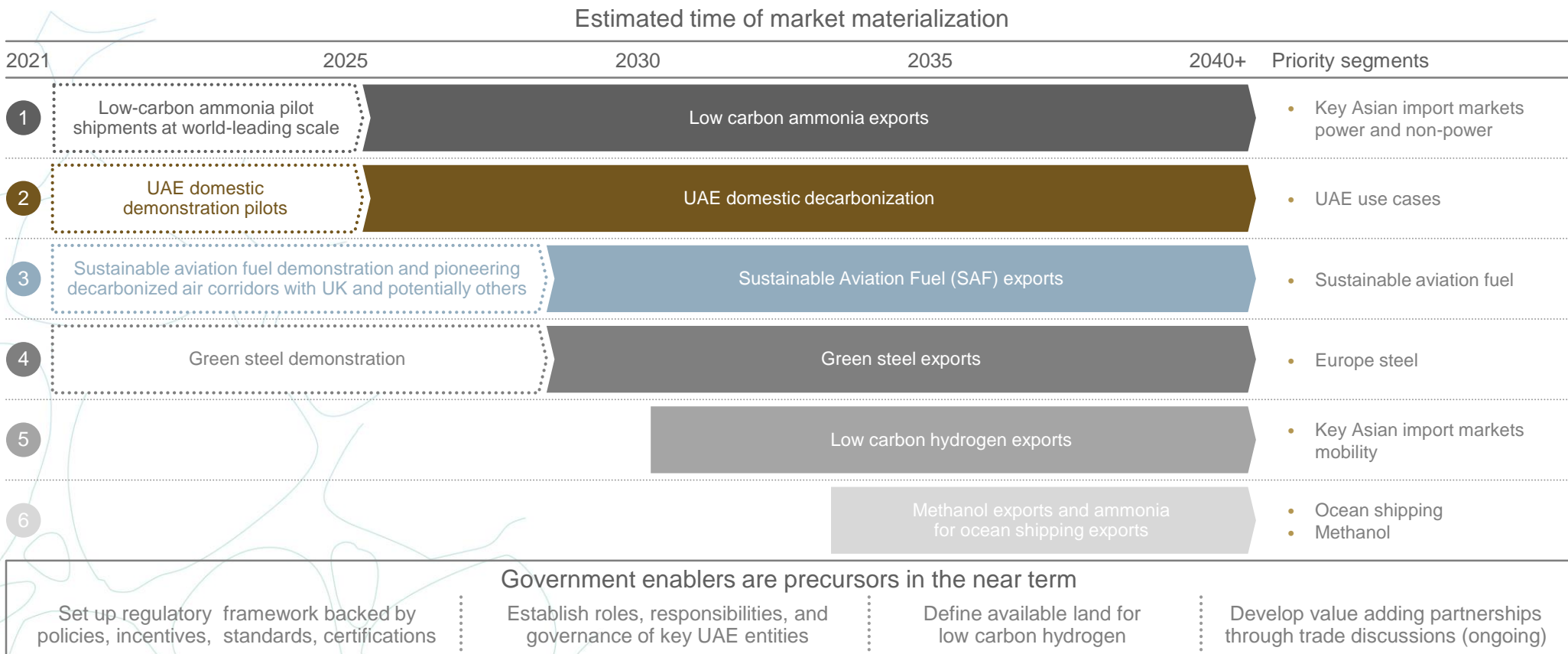
Target applications

-  Oil refining and ammonia
-  Industrial heat and steel
-  Power storage
-  Heavy road transport
-  Ocean shipping
(optional international travel)
-  Sustainable aviation fuel
(optional international travel)

Incumbent fuel demand:  Grey hydrogen  Natural gas  Crude-oil based products

Note: Assuming aggressive decarbonization to arrive at net-zero by 2050 – underpinning regulation yet to be defined
Source: IEA World Energy Balances; IEA WEO 2020; GlobalData; Nexant

UAE's Hydrogen Leadership Roadmap to be ramped rapidly with first demonstrations already underway





Partners

Abu Dhabi Hydrogen Alliance



National Hydrogen Technical Committee



Thank you



www.moei.gov.ae



MOEIUAE

Under the patronage of His Highness **Sheikh Humaid Bin Rashid Al Nuaimi**,

Member of the Supreme Council and Ruler of Ajman

Municipality and Planning Department-Ajman is pleased to organize
Ajman 6th International Environment Conference on

"TOWARDS 2071 SHAPING THE FUTURE FOR ENVIRONMENTAL SUSTAINABILITY"

Monday & Tuesday, 28 -29 March 2022 at Sheikh Zayed Centre for Conferences
and Exhibitions of Ajman University of Sciences and Technology (AUST) Campus in Ajman,
United Arab Emirates (UAE)



Ajman 6th International Environment Conference

Conference Sessions

- **Session 1:** Environmental Sustainability And Artificial Intelligence
- **Session 2:** Roadmap for Carbon Neutrality 2071
- **Session 3:** Shaping the Future of Sustainable Cities and Communities
- **Session 4:** Fourth Industrial Revolution environmental peritonitis
- **Session 5:** The Future Of Clean Energy - Resilience & Sustainability

THANK YOU

#AIEC2022 | WWW.AIEC.AE