International Partnership for Hydrogen and Fuel Cells in the Economy

United Arab Emirates Update

42nd IPHE Steering Committee Meeting

20 - 21 November 2024

Brussels, European Commission

The *United Arab Emirates* Journey of Energy Transition

An ambitious journey

The climate action journey in the energy sector to reach net zero by 2050

2017 — **Launch of the UAE Energy Strategy 2050,** the quantum leap in the energy sector in UAE

2020 — **Operation of the first nuclear power reactor**, while the second and third reactors came online in 2022 and 2023, respectively.

2021 — The launch of the UAE Net Zero by 2050 Strategic Initiative

2022 — **Converting the Hassyan Power complex to produce electricity** from natural gas, instead of clean coal

2023 — Declaring 2023 as the Year of Sustainability by the UAE President, HH Sheikh Mohamed bin Zayed Al Nahyan

2023 — **Launch the 1st revision of the UAE Energy Strategy 2050**

2023 — **Launch the National Hydrogen Strategy 2050**

2023 — **Launching the Emirates Wind Energy Program**

2023 — Issuing the operating license for the 4th unit of the Barakah plant

2023 — **Hosting COP28**

2050 — **Achieve Net Zero**

2071 — **UAE Centennial 2071**

The *UAE* has set an ambitious target to be a amongst the top global producers of low carbon hydrogen by 2031

To meet this target, the UAE National Hydrogen Strategy established a clear strategic framework with relevant targets and KPIs

Create a robust hydrogen economy in the UAE to support the national decarbonization efforts

2031 Target

25% emission reduction in hard to abate sectors

2050 Target

100% reduction In hard to abate sectors

Drive the hydrogen economy resulting in foreign direct investment, job creation and workforce upskilling

2031 Target

184,000 new jobs created

2050 Target

500,000 new jobs created

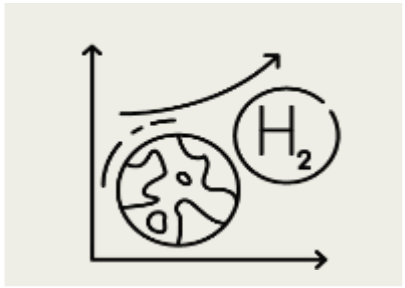
Embed innovation in the UAE's industrial clusters

2031 Target

R&D hydrogen center established

2050 Target

Globally recognized hub for hydrogen



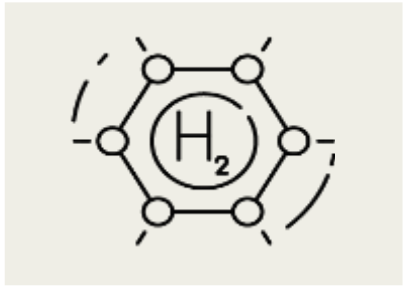
Establish the UAE as a leading global producer and exporter of low carbon hydrogen

2031 Target

Production of 1.4 mtpa of H2

2050 Target

Production of 14.9 mtpa of H2



Develop a resilient hydrogen supply chain to support domestic industry growth

2031 Target

Establishment of 2 hydrogen oasis in the UAE

2050 Target

Establishment of 5 hydrogen oasis in the UAE

United Arab Emirates initiatives

Abu Dhabi Public Policy on Low-Carbon Hydrogen

- Introduced by the Supreme Council for Financial and Economic Affairs (SCFEA)
- Aligns with the **UAE Energy Strategy 2050** and **Year of Sustainability**
- Promotes low-carbon hydrogen as a key future energy source
- Aims to ensure economic growth, energy security, and sustainable development
- Supports integration and cooperation between hydrogen, natural gas, and electricity sectors
- Ensures industry adaptability and sets technical standards for safety and consumer protection.
- Created in coordination with the Department of Energy and stakeholders.
- Establishes regulatory frameworks to support innovation and economic diversification.

United Arab Emirates initiatives

Masdar and EMSTEEL Announce Successful Pilot Project Using Green Hydrogen to Produce Green Steel

Masdar and Emirates Steel Arkan Collaboration: Successful completion of a pilot project using green hydrogen to produce green steel which marks a significant milestone in sustainable industrial practices within the UAE. Demonstrates the first production of green steel using green hydrogen in the Middle East and North Africa (MENA) region and showcases commitment to reducing carbon emissions and advancing the clean energy transition, strengthening the role of green hydrogen in achieving net-zero goals and supports the UAE's sustainability ambitions. Reinforces Masdar’s position as a leader in renewable energy solutions and Emirates Steel Arkan's commitment to decarbonizing the steel industry.

Fuel cells *United Arab Emirates* initiatives

ADNOC to Launch First High-Speed Hydrogen Refueling Station in the Middle East

- First of its Kind in the Middle East
- Support for Hydrogen-Powered Vehicles.
- Green and Low-Carbon Hydrogen: Offering green and low-carbon hydrogen to align with ADNOC’s decarbonization goals.
- Supports UAE's Net Zero by 2050 strategy and ADNOC’s sustainability efforts.

Fuel cells *United Arab Emirates* initiatives

ENOC Group Opens First Integrated Fuel Station with Green Hydrogen in Collaboration with DEWA

- First Integrated Fuel Station in Dubai: ENOC and DEWA's collaboration to open a station offering multiple clean energy options.
- The station provides green hydrogen, produced using renewable energy sources, supporting the UAE’s clean energy goals.
- Situated at Expo City Dubai, the station serves a wide range of customers, promoting sustainable fuel options.
- The station is equipped with solar panels, reinforcing ENOC’s commitment to renewable energy usage.
- Supporting the UAE’s 2050 clean energy and net-zero strategies.

United Arab Emirates– Profile November 2024

Leading Government Initiatives

- UAE Hydrogen Leadership Roadmap
- National Hydrogen strategy 2050
- Abu Dhabi Public Policy on Low-Carbon Hydrogen
- International Hydrogen Trade Forum

Funding

ALTÉRRA, a USD 30 billion climate investment fund

Thank you

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