

POWERING THE CHANGE: CLEAN ENERGY PROJECTS ACROSS THE MIDDLE EAST

The Middle East has overcome all manner of economic and geopolitical roadblocks in its path to make a rapid transformation of its regional energy industry. Closely tied with its respective nations' economic diversification plans, harnessing clean energy is essential for providing long-term stability, prosperity and environmental sustainability.

The size of the clean energy transition opportunity is vast. Multi-billion-dollar projects are becoming an almost routine announcement, while the pipeline of new facilities continues to expand in size, scope and ambition.



BIG PICTURE PROJECTIONS THE CLEAN ENERGY TRANSITION IS ACCELERATING

Approximately **18 GW** of clean energy was installed by the Middle East in 2023 with **16 GW** dedicated to solar energy.

This capacity total is expected to grow by more than **5x** in the next 5 years, hitting **100GW** by 2030

Green hydrogen will be essential for pushing a **30%** annual growth rate for Middle East clean energy

Major growth drivers include:

- Reduced hardware/material costs
- Increasing FDI inflows
- Supportive regulatory measures
- Higher confidence in regional joint ventures

50 companies representing more than **40%** of global oil production signed the **Oil & Gas Decarbonization Charter**, aiming for a net-zero industry by **2050**

Saudi Arabia, the UAE, and Oman are projected to contribute **2/3** of regional solar capacity by 2030.

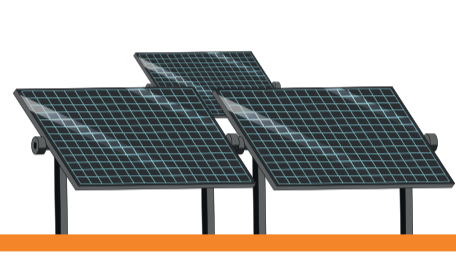
Clean energy integrations (solar / green hydrogen) are also driving **decarbonisation of hydrocarbon facilities.**

MAPPING THE CLEAN ENERGY TRANSFORMATION

Across the Middle East, multi-billion-dollar investments are making an unprecedented pipeline of major upcoming solar, wind and hydrogen production facilities. While the UAE and Saudi Arabia lead, the breadth and ambition of projects should be seen as a regional commitment to clean energy.



SOLAR PROJECTS



DUBAI, UAE

Noor Energy 1

- \$ 4.3 billion
- End of 2024
- 950 MW (Concentrated Solar Power (CSP) and photovoltaic (PV) technology)

Key Partners/Owners:

- Managed by **DEWA**
- The lead developer is **ACWA Power** with participation from the **Silk Road Fund**

Notes: This will include the **world's tallest solar tower (260 metres)**, making it one of the most advanced mixed solar technology projects in the world.

SAUDI ARABIA

Red Sea Solar Project

- \$ 1.5 billion
- 2025
- 400 MW

Key Partners/Owners:

- The lead developer is **ACWA Power, Red Sea Global** and **Saudi Public Investment Fund (PIF)**.

Notes: The project will provide power to the Red Sea Development, which has a 100% renewable energy target. Part of Saudi Arabia's broader push for sustainable tourism.

OMAN

Rabab Harweel Integrated Solar Project

- \$ 1.5 billion
- 2025
- While this is an integrated solar and gas project, the solar component contributes to powering enhanced oil recovery (EOR) operations.

Key Partners/Owners:

- The primary developer is **Petroleum Development Oman (PDO)**

Notes: The solar portion helps reduce the carbon intensity of oil extraction, a major step towards greener fossil fuel production in Oman.

L&T 2 GW Solar PV Project

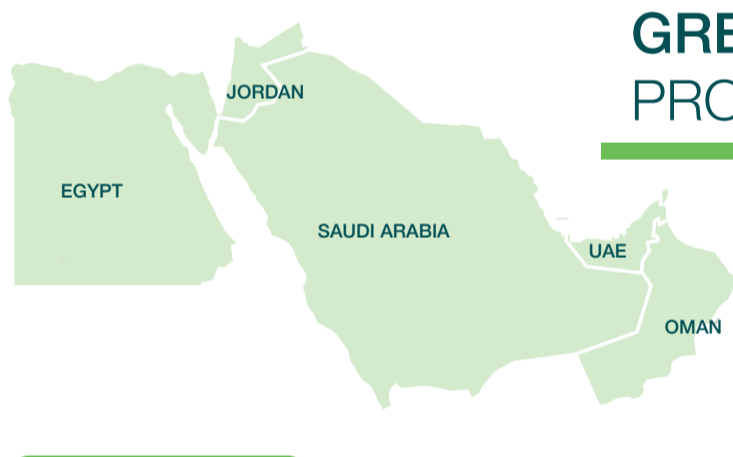
L&T 2 GW Solar PV Project

- \$ 2.5 billion
- 2025
- 2 GW

Key Partners/Owners:

- Developed by **Larsen & Toubro (L&T)**

Notes: One of the largest solar projects in the region



GREEN HYDROGEN PROJECTS

ABU DHABI, UAE

Masdar Hydrogen Production

- Undisclosed, part of Masdar's \$30 billion renewable energy investment pipeline.
- Phase 1 operational by **2025**

Key Partners/Owners:

- Masdar, ADNOC and BP

Details: Expected to produce **up to 1 million tons of hydrogen** annually, supporting clean ammonia and methanol production for domestic and export markets.

SAUDI ARABIA

NEOM Helios Green Fuels Project

- \$ 5 billion
- End of 2026
- Production of 650 tonnes of green hydrogen per day, using 4 GW of solar and wind power.

Key Partners/Owners:

- Owned by the **Neom Company**, part of the Saudi Vision 2030 initiative
- ACWA Power and Air Products are key partners
- Supported by Saudi Arabia's Public Investment Fund (PIF)

Notes: Though primarily focused on green hydrogen production, the solar power component will be integral to producing zero-carbon fuels for global export.

EGYPT

Ain Sokhna Green Hydrogen Plant

- \$ 5 billion
- 2026
- Production of 650 tonnes of green hydrogen per day, using 4 GW of solar and wind power.

Key Partners/Owners:

- Egyptian government
- Scatec
- Fertigllobe

Details: Will produce 100,000 tons of green hydrogen per year. Marks Egypt's entry to green hydro production.

OMAN

Oman Green Hydrogen Project

- \$ 38 billion
- Phase 1 by **2028**
- While this is an integrated solar and gas project, the solar component contributes to powering enhanced oil recovery (EOR) operations.

Key Partners/Owners:

- Oman Hydrogen Company, OQ (Oman's energy company), Marubeni Corporation and BP

Details: Oman is positioning itself as a global hydrogen hub with plans to produce 1 million tons of green hydrogen annually by 2030. Various projects will leverage Oman's extensive solar and wind resources.

JORDAN

AMEA Power Green Hydrogen Project

- \$ 1 billion
- 2025

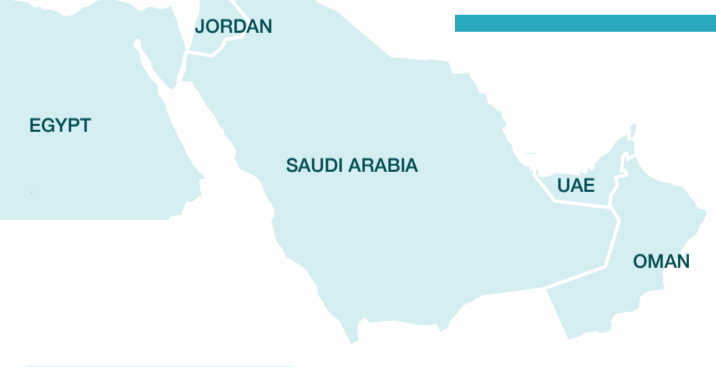
Key Partners/Owners:

- AMEA Power
- Jordanian Government
- Royal Dutch Shell

Details: Targeted production of 40,000 tons of hydrogen annually



WIND PROJECTS



FUJAIRAH, UAE

Fujairah Wind Farm

- \$ 200 million
- 2025
- 103.5 MW

Key Partners/Owners:

- Developed by **Masdar** in partnership with the **UAE Ministry of Energy and Infrastructure**.

Details: Expected to power up to **60,000 homes in the region**

SAUDI ARABIA

Dumat Al Jandal Wind Farm

- \$ 500 million
- Fully operational by end of 2024
- 400 MW

Key Partners/Owners:

- Developed by **EDF Renewables** and **Masdar**
- Backed by **Saudi Arabia's Public Investment Fund (PIF)**

Notes: This project will be the **largest wind farm in the Middle East**. The wind farm will provide enough electricity to **power up to 70,000 Saudi households annually**.

HARWEEL, OMAN

Oman Wind Farm

- \$ 200 million
- 2025
- 50 MW

Key Partners/Owners:

- Jointly developed by Masdar and Rural Areas Electricity Company (Tanweer)

Details: Oman's first large-scale wind energy project

EGYPT

Gulf of Suez Wind Farm

- \$ 700 million
- End of 2024
- 500 MW

Key Partners/Owners:

- Developed by **Siemens Gamesa** and funded by the **European Investment Bank (EIB)** and **KfW Development Bank**.

Details: One of the largest wind farms in the region that will provide power to hundreds of thousands of households.

JORDAN

Tafilah Wind Farm Expansion

- \$300 million + expansion costs (undisclosed)
- 2025
- 217 MW

Key Partners/Owners:

- Joint venture between **Masdar** and **Tafila Region Wind Energy (TRWE)**

Details: Jordan's first large-scale wind project

For more information about the sources of this infographic, click [here](#).