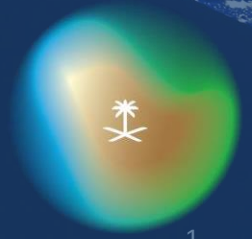
43rd JCCP International Symposium

Global Energy Collaboration Powering a Sustainable Future

للطاقة وطن
ENERGY HAS ITS HOME

وزارة الطاقة
MINISTRY OF ENERGY



The Kingdom of Saudi Arabia and Japan Strengthening Ties for a Sustainable Future

70 Years of Close Cooperation

في هذا العام 2025 ، تحتفل اليابان والمملكة العربية السعودية بالذكرى السبعين لتأسيس العلاقات الدبلوماسية بينهما

今年、2025年、日本とサウジアラビア王国は国交樹立70周年を迎えます。

This year 2025, Japan and the Kingdom of Saudi Arabia celebrate the 70th anniversary of the establishment of diplomatic relations

The Kingdom of Saudi Arabia is a global Energy leader

17th Economy Worldwide

$ 1067B
GDP in 2023

Young and
fast growing population

32.2 M
~70% below 40 years old
Population 2022 +1.0% p.a. 2020-2040

Ambitious
Transformation Program

VISION رؤية 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

Crude Oil Producer
~ 8.9 MMBD Production in 2024

Crude Oil Reserves
267 BB Proven reserves

Natural Gas Producer
~ 9.9 BSCFD Produced in 2024

Raw Gas Reserves
341 TCF Proven reserves

Strong track record of supply reliability, with 99.8% of delivery obligations fulfilled within 24 hours

Key Energy Transition Pillars

- Energy Efficiency Enhancement
- Emissions Management
- Energy Mix Transformation

MMBD – Million Barrels per Day; BB – Billion Barrels; BCFD – Billion Cubic Feet Per Day; TCF – Trillion Cubic Feet; GW – Giga Watt

Source: General Authority of Statistics Saudi Arabia, OPEC, WERA; World Bank

We are deploying renewables rapidly and at scale

2020 — BY END OF 2024 — 2030

1st Renewable Project

300 MW Project (Sakaka)

44 GW Tendered

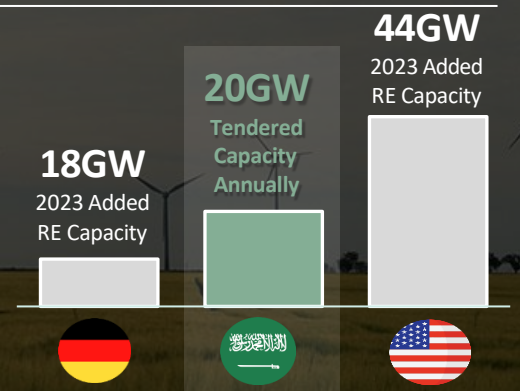
44 GW represents[1] about:

- **50%** of UK's installed capacity
- **90%** of Sweden's installed capacity
- **100%** of Switzerland and Austria installed capacity
- **100%** of Malaysia's installed capacity

130 GW based on demand growth

20 GW

Will be tendered annually



National Geographical Survey

850,000 km² = + or +

1,200+ stations

Note: (1) Installed capacities by 2023 UK: 100 GW; Sweden: 49 GW; Switzerland: 22 GW; Austria: 24 GW; Malaysia: 45 GW – Source: BNEF 2023

Power export driving global partnerships for a sustainable energy future

KEY BENEFITS

To import cost-competitive renewable power

To achieve net-zero emission targets

To optimize electricity supply via capitalizing on renewable energy considering time zone differences

KSA EXISTING AND UNDER CONSTRUCTION AGREEMENTS

KSA has made major strides in clean hydrogen and has greater ambitions looking forward

CURRENT PROGRESS

- World's **1st cross-continental shipment** of Clean H_2 to Japan
- **8+ commercial shipments** of Clean Ammonia to **Europe & Asia**

- **10% of the world's committed Clean H_2 capacity**
- World's **largest Clean H_2 plants**

- **KSA joins the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)**

OUR AMBITION

Export green energy in the form of renewable power and clean hydrogen

Domestically utilize and export clean products to decarbonize hard-to- abate sectors (e.g., green steel, green aluminum, e-fuels, clean chemicals, heavy duty vehicles, and shipping)

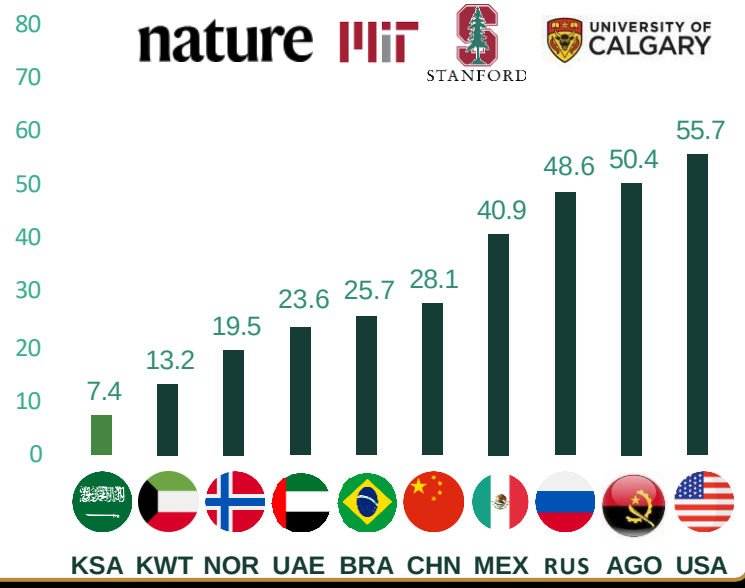
Supporting global efforts to develop the clean hydrogen economy and achieve net-zero emissions by 2060 or before under the Circular Carbon Economy framework.

We are leading in emissions management

Lowest upstream carbon intensity among major crude oil producers

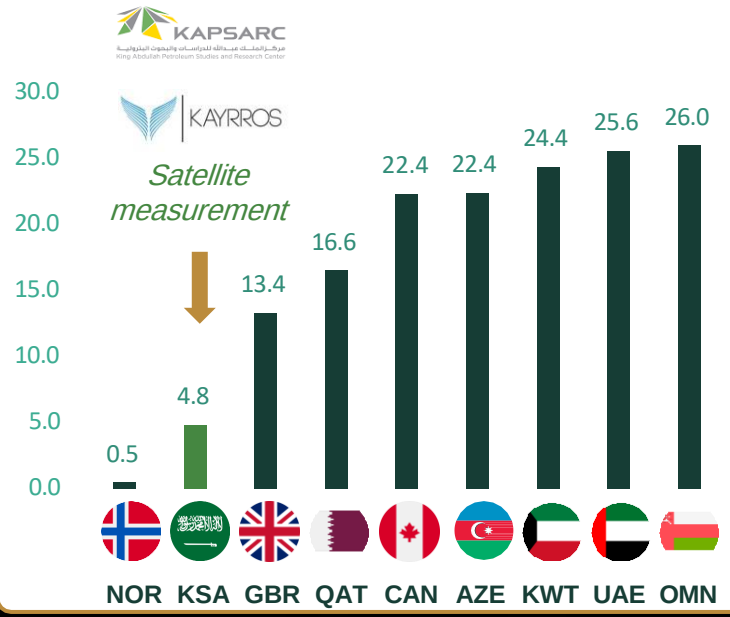
Average crude upstream carbon intensities for major producers, 2023 (kg CO_2eq/bbl)

Journal and institutions of main contributors



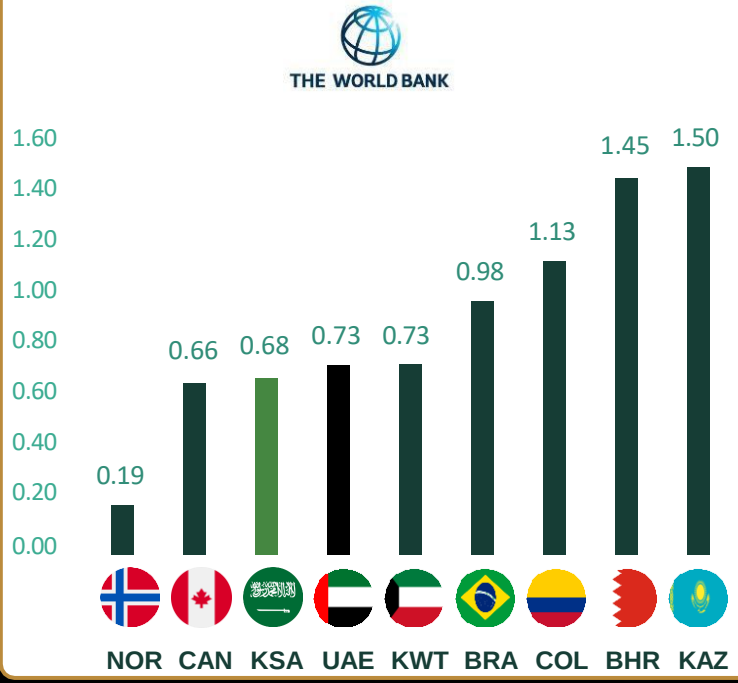
2nd lowest methane intensity from O&G amongst major O&G producing countries

Methane intensity ranking based on IEA data 2023 (kgCO_2 eq/boe)



3rd lowest flaring intensity among top 40 producers, after Norway and Canada

Flaring intensity for top 9 countries, 2023 (m^3/bbl)



Notes and sources: Methane intensity (leftmost figure): [1] Nations with >1M boepd production ; [2] Annual oil and gas production data taken from Saudi Aramco, Global Data, and Rystad. KAPSARC study based on Kayrros data on satellite emissions; Flaring intensity (middle figure): Initially, the World Bank wrongly allocated flaring in the Saudi/Kuwait neutral zone to Saudi Arabia, however, they will redistribute the volume among Saudi and Kuwait based on the actual flaring locations in the future. The ranking shown above is after adjustment to take this into consideration. Carbon intensity (rightest chart): based on Dixit, Y., El-Houjeiri, H., Monfort, JC. et al. Carbon intensity of global crude oil trading and market policy implications. Nat Commun 14, 5975 (2023); Data shown in the chart was supplemented with data from Masnadi et al (2018) which was used in this study to estimate the oil production carbon intensities using the latest version of the Oil Production Greenhouse Gas Emissions Estimator (OPGEE)

Economic Corridor Connecting India, Middle East and Europe

A new economic corridor connecting India, the Middle East, and Europe to strengthen global trade and energy integration

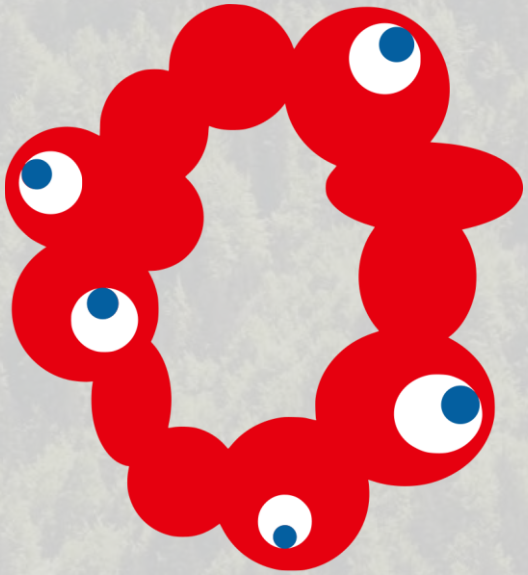
- Development of critical infrastructure railways, ports, and pipelines
- Reduced transport distances, leading to lower emissions and greater efficiency
- Enabling the transfer of clean hydrogen and electricity to support energy security
- Creating sustainable economic opportunities and jobs

We are engaged with the global community to deliver on our joint aspirations

Saudi Arabia is actively collaborating with the global community to achieve shared aspirations for a sustainable and energy-secure future

- Net zero producers forum member
- Global methane pledge participant
- World bank’s zero routine flaring by 2030 initiative
- Saudi / Middle East green initiatives targets

World Expos global gathering of nations



Designing Future Society for Our Lives

Foresight for Tomorrow