



وزارة الطاقة والبنية التحتية
MINISTRY OF ENERGY & INFRASTRUCTURE

UAE's Energy Transition

September 2026

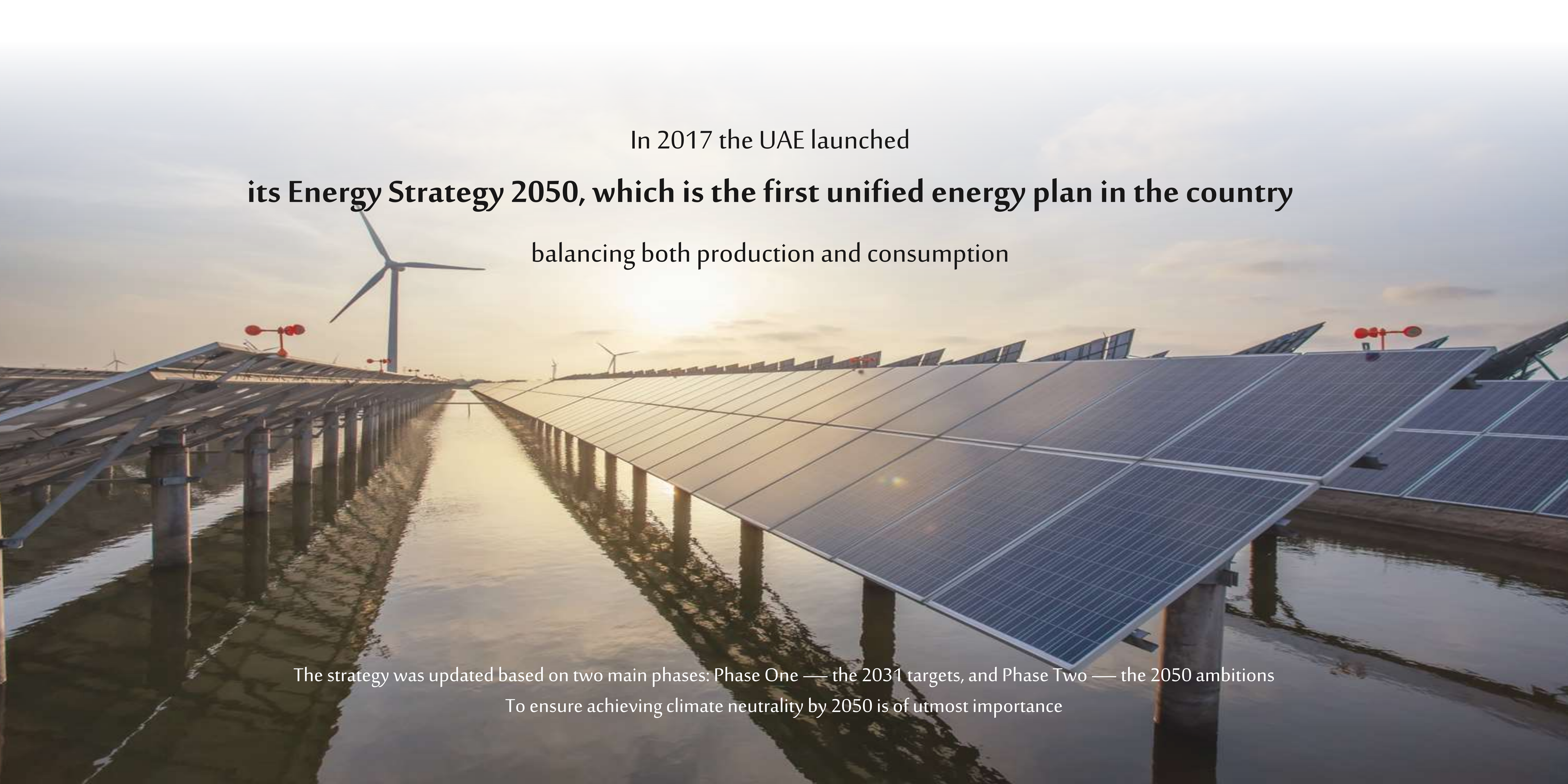


COP28
UAE

We will continue to **consolidate the UAE's position as a provider of reliable energy and supporter of global energy security**, which is the backbone of **global economic growth and development**"

H.H. Sheikh Mohamed bin Zayed Al Nahyan, President of the UAE





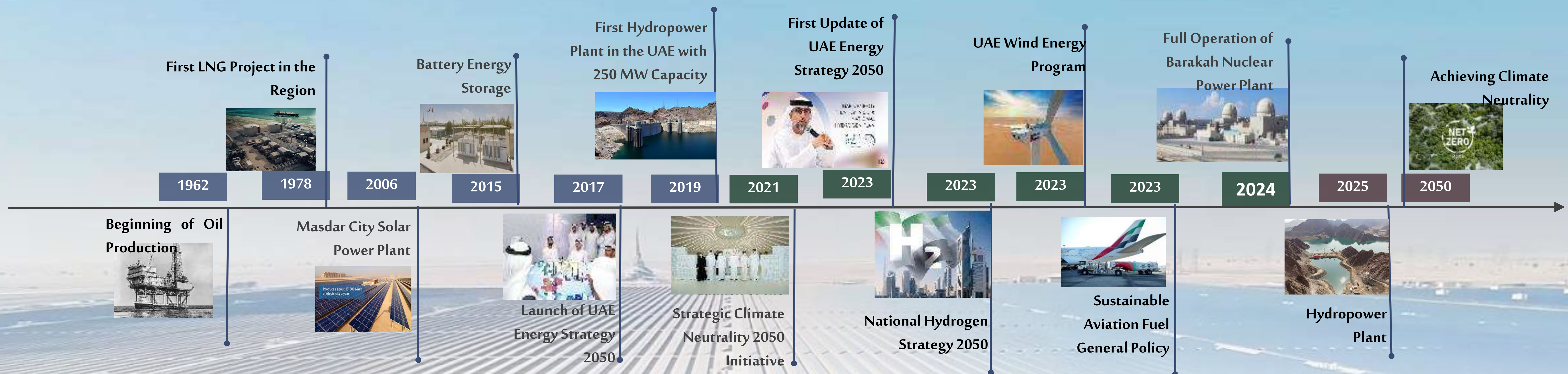
In 2017 the UAE launched
its Energy Strategy 2050, which is the first unified energy plan in the country
balancing both production and consumption

The strategy was updated based on two main phases: Phase One — the 2031 targets, and Phase Two — the 2050 ambitions
To ensure achieving climate neutrality by 2050 is of utmost importance

UAE's Journey in Energy Sector Transformation

An Ambitious Journey

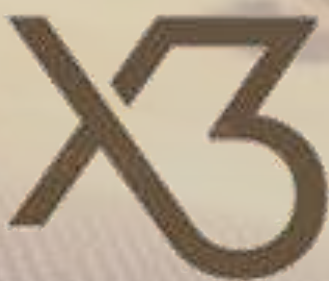
Climate action journey in the energy sector toward climate neutrality by 2050



The UAE leads a pioneering path consolidating its position at the forefront of global energy competitiveness toward climate neutrality 2050

Updates of UAE Energy Strategy 2050

Raising the target from 32% to
35% Clean Energy Production from Energy Mix for
2031
(National Target)



Triple the renewable energy contribution by
2030.

2.30

1.90

1.69

Base Year



Clean Energy Production from Energy
Mix

32.4%

30.3%

27.4%

17.8%

2025

2024

2023

2022

2025

2024

2023

2022

Facts & Figures under the UAE Energy Strategy 2050

+23 Installed renewable energy capacity in the UAE by 2031

%25 Nuclear energy meets 25% of the UAE's electricity needs

- Avoids up to 22.4 million tonnes of carbon emissions annually
- Equivalent to removing 4.8 million cars from the roads

UAE Grid Emission Factor Compared to the Global Average

kWh

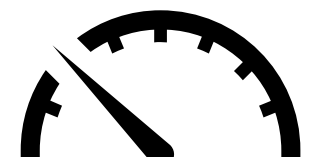
0.556 kgCO2



 2021

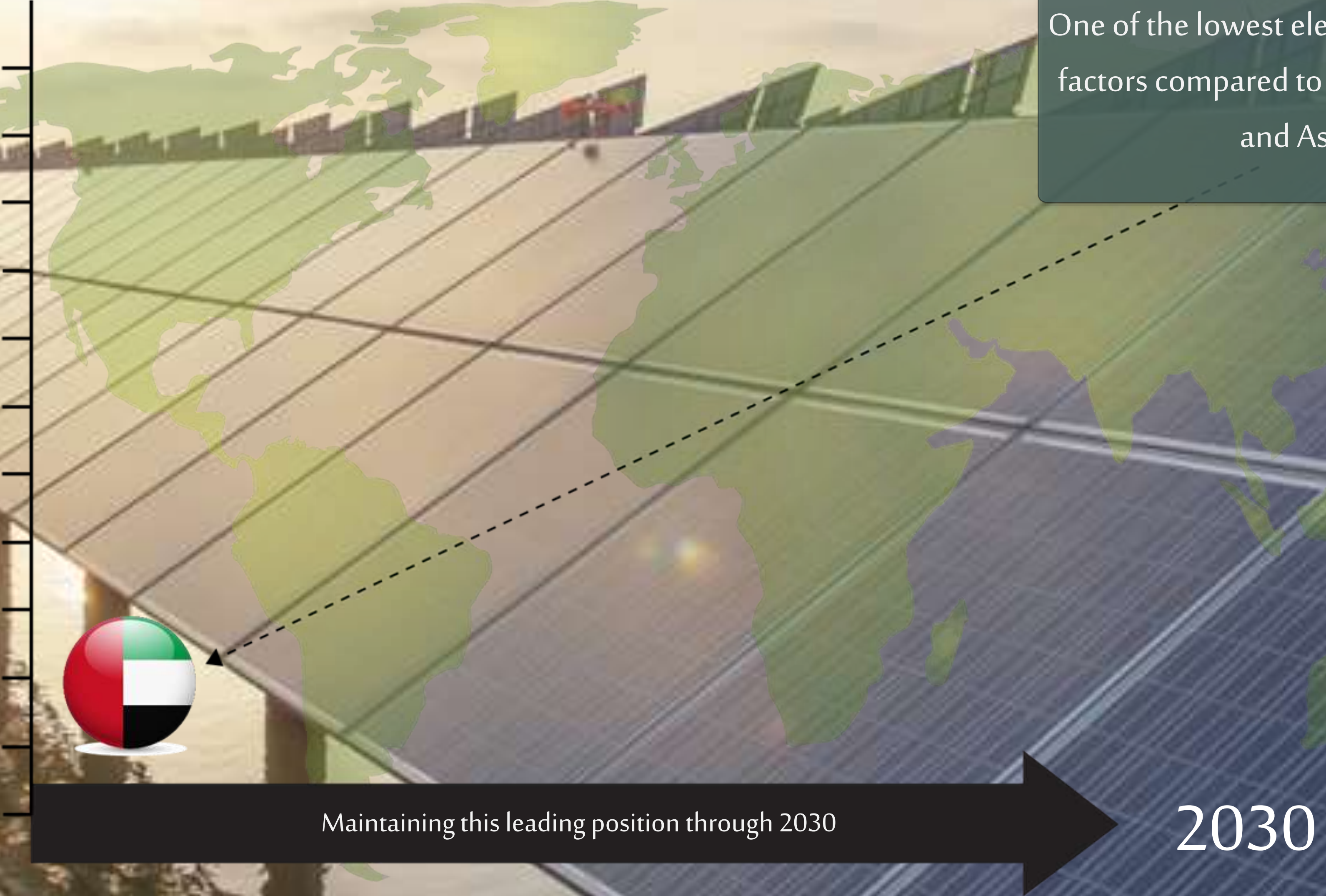
kWh

0.270 kgCO2



 2030

One of the lowest electricity emission factors compared to the Middle East and Asia

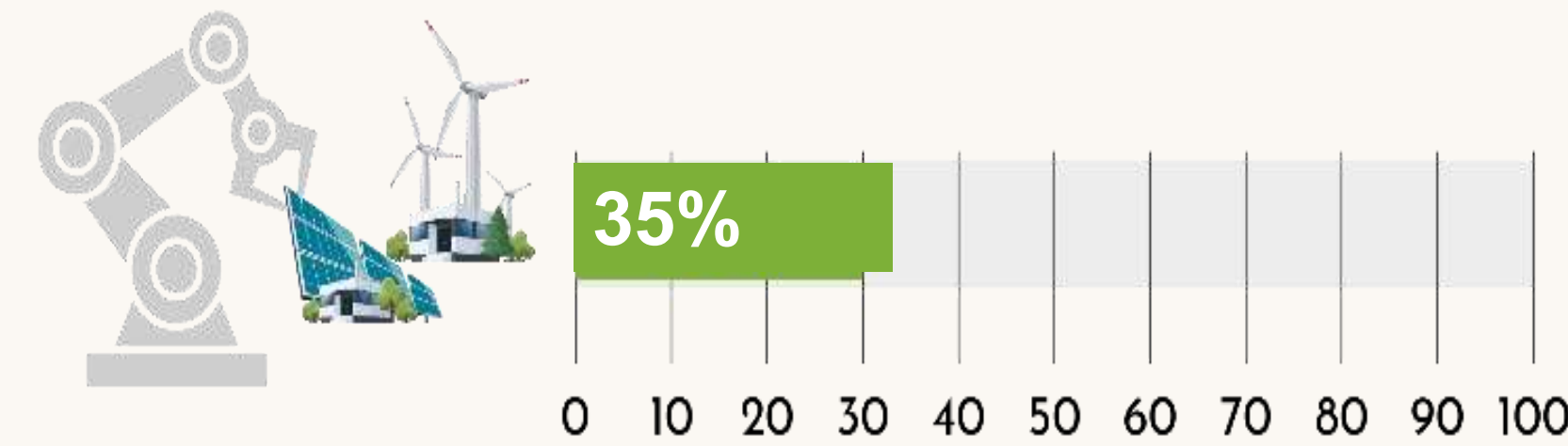


2030

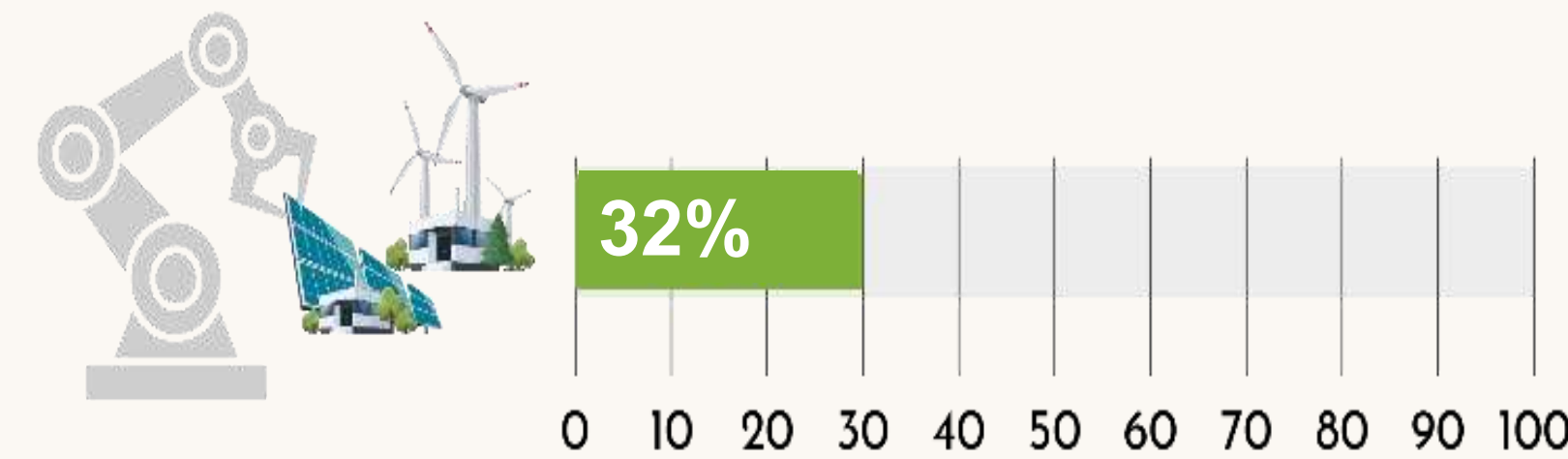
* The UAE's grid emission factor is approximately 10.57% lower than the average for the Middle East and Asia, and around 9.5% lower than the global average.

Based on 2021 data

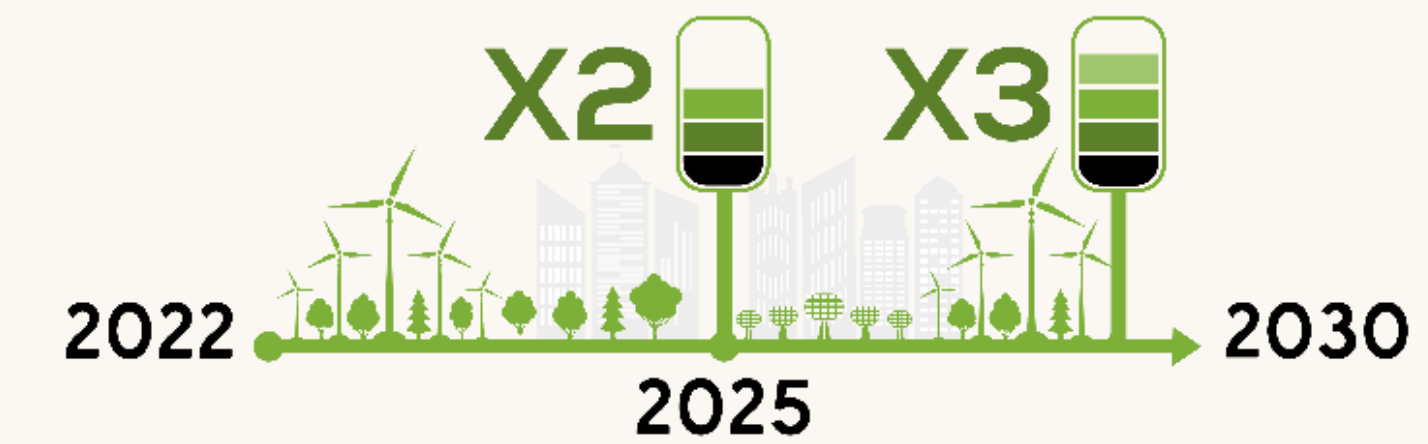
Energy Sector Transformation Targets in the UAE



Clean energy
generation share of
35% by 2031



Installed clean energy
share of **32% by 2031**



Triple Renewable
Energy capacity by
2030



Achieving a grid emission
factor of **0.27 kg**
CO₂/kWh h by 2030

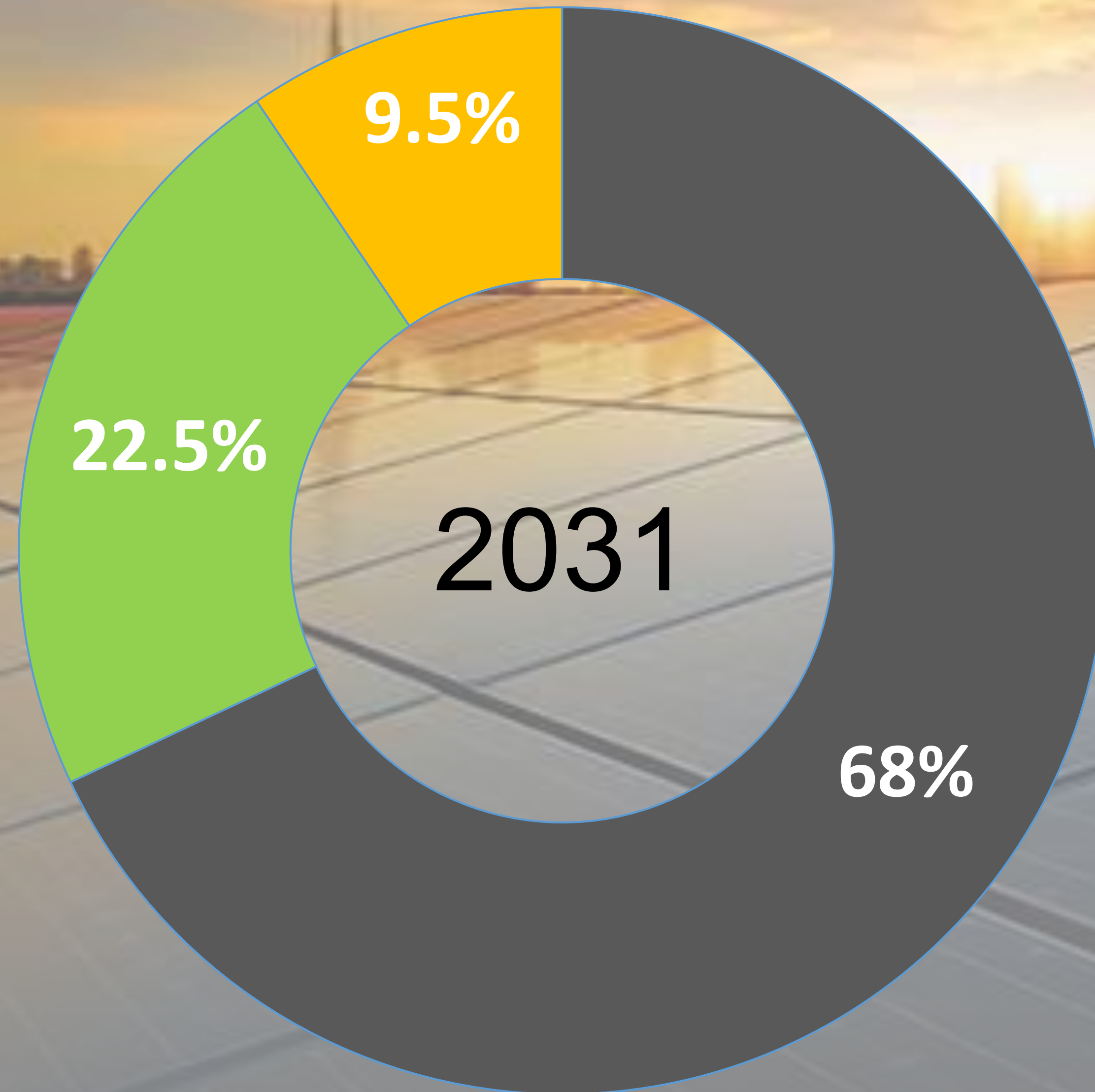


Eliminate clean coal share
in the current and future
energy mix (in the electricity
and water sector) **to**
become 0%.

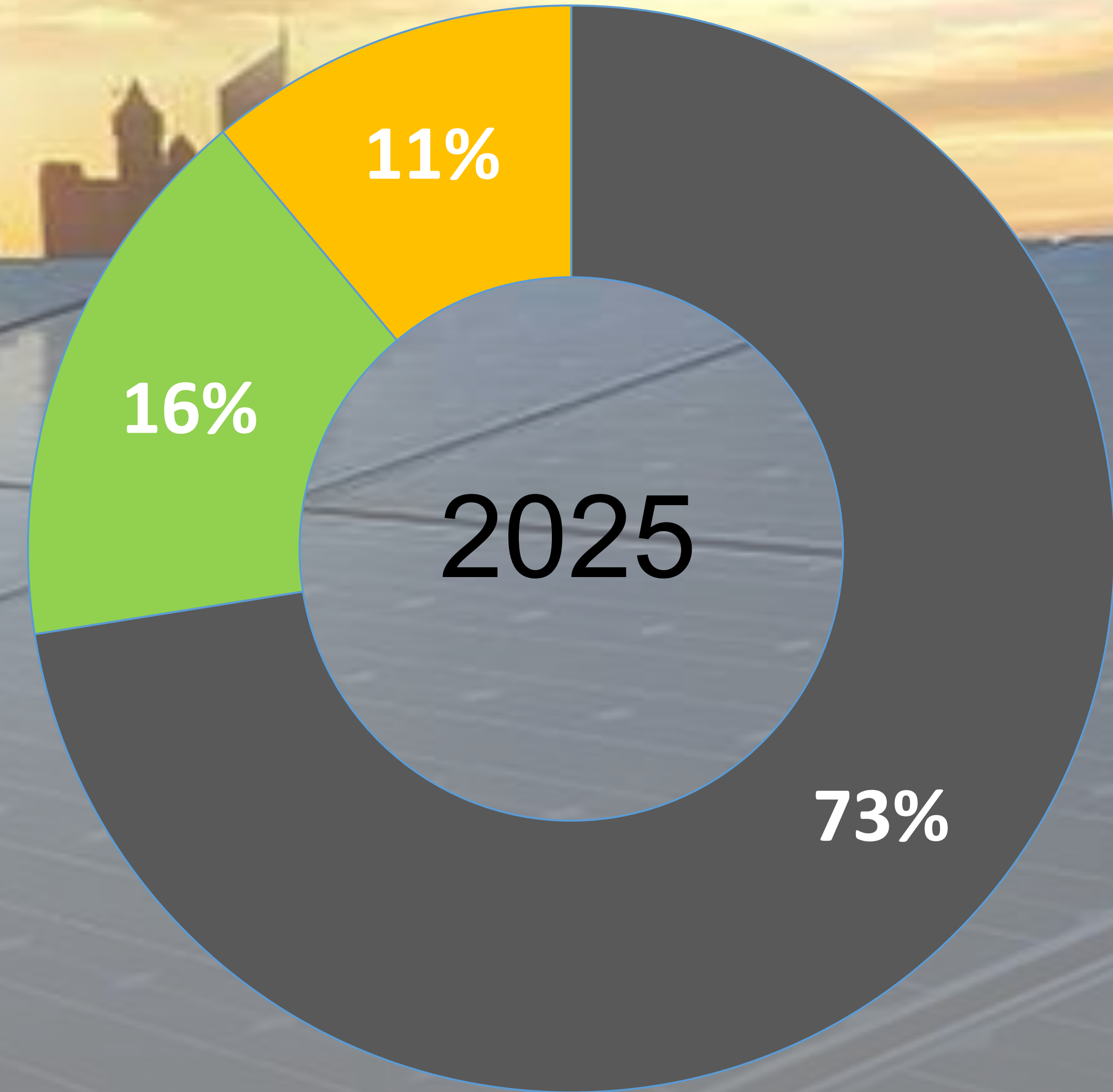


Increase energy consumption
efficiency for individuals and
institutions by up to **to 45% by**
2050

INSTALLED CAPACITY FROM ENERGY SOURCES FROM THE TOTAL ENERGY MIX IN THE ELECTRICITY AND WATER SECTOR



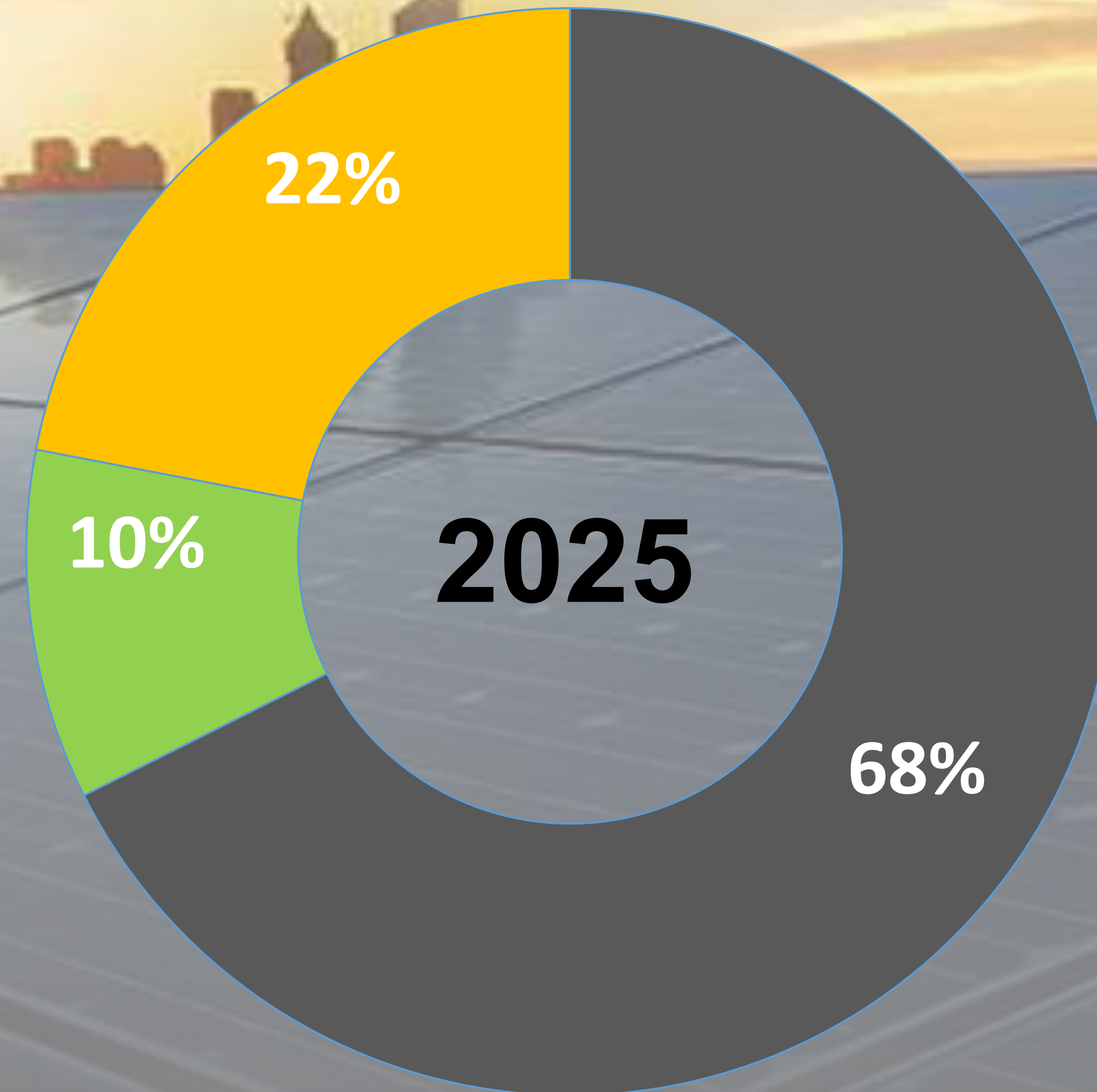
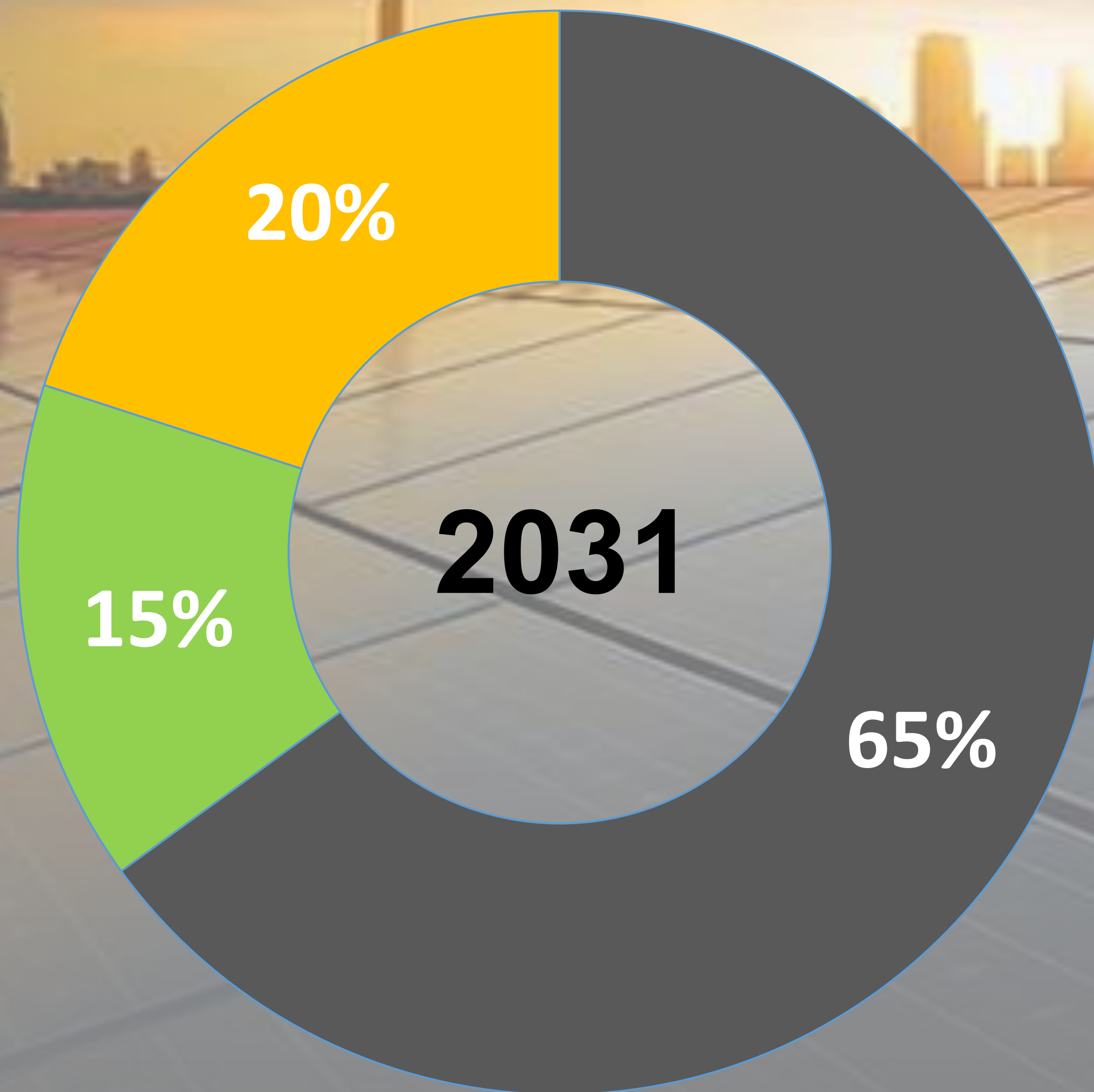
Approved energy mix for 2031
based on updates to energy projects by
partners



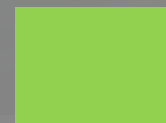
 Renewable Energy  Nuclear Energy  Gas

ENERGY SOURCE PRODUCTION

WITHIN THE ENERGY MIX IN THE ELECTRICITY AND WATER SECTOR



Approved energy mix for 2031
based on updates to energy projects by
partners

 Renewable

 Nuclear

 Gas



Distributed Solar Energy Regulation



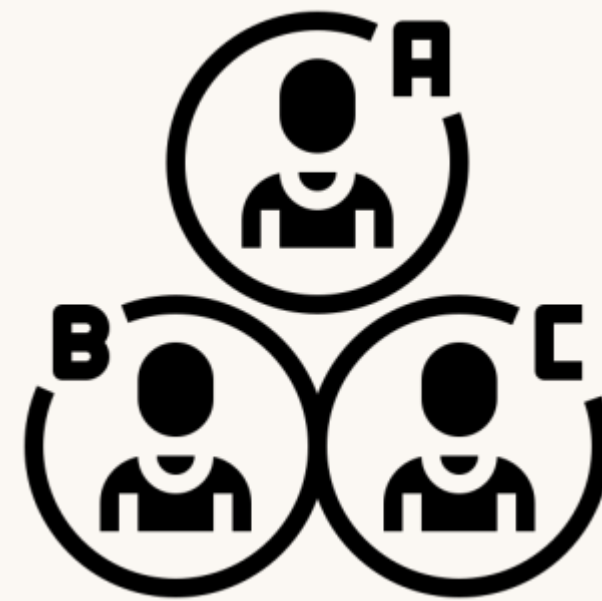
Establishing Federal
Decree -
Law No. 17 of 2022



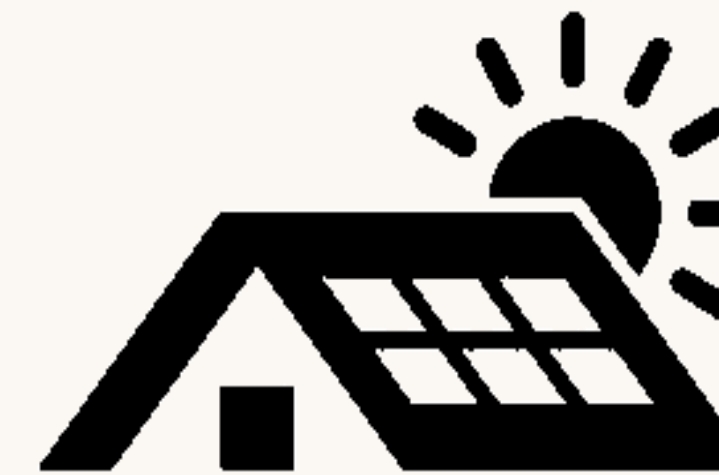
Net metering as a
compensation
mechanism



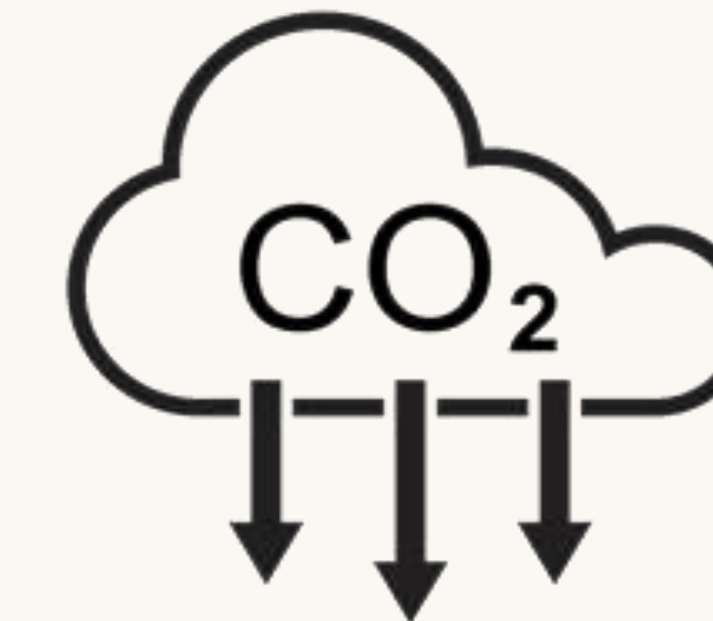
Establishing **regulatory
documents**



Targeting various sectors:
Industrial, Residential, Commercial,
Government and Agricultural

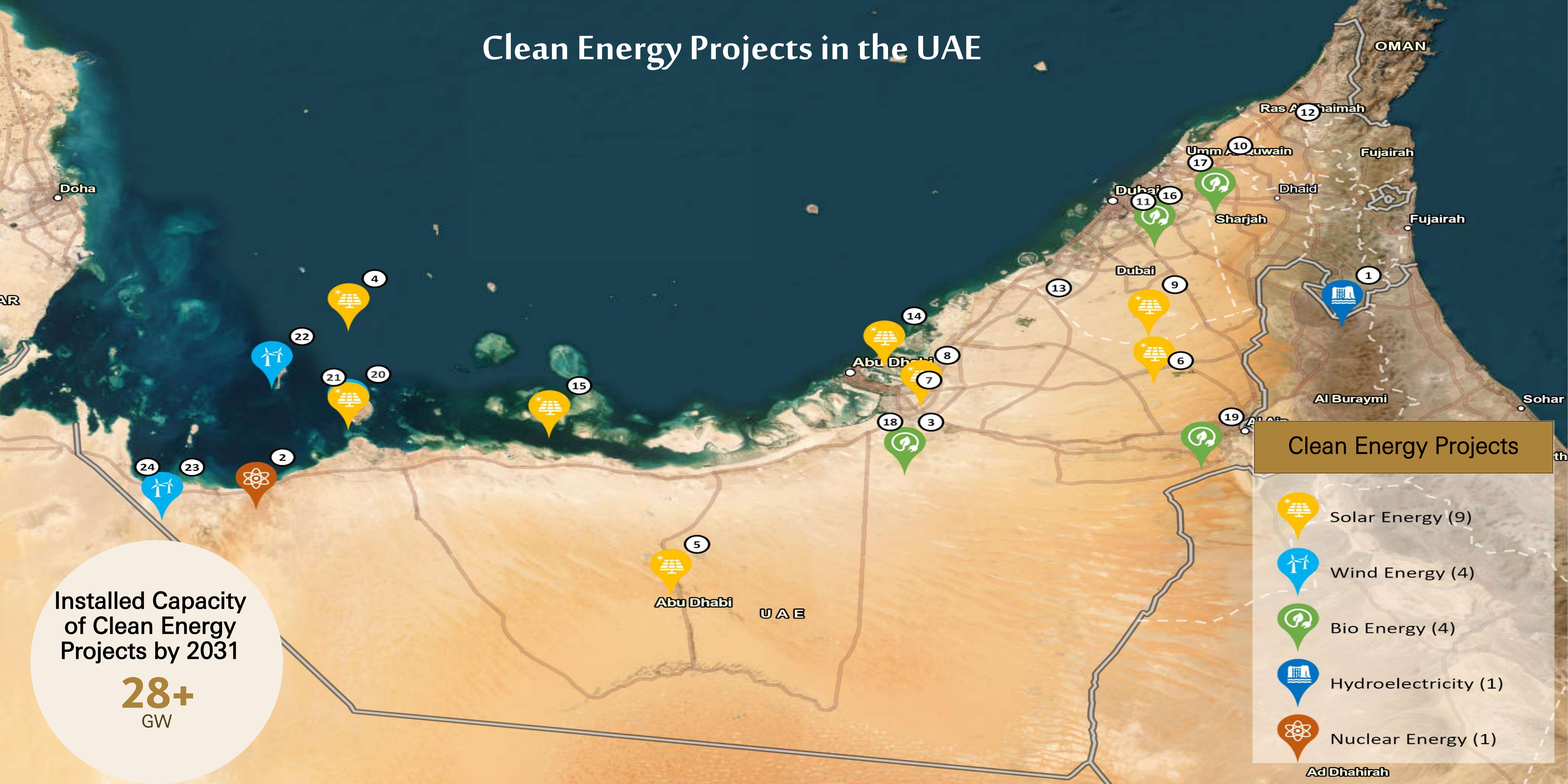


More than **1,000 MW**
of distributed solar
installations across
the UAE



Reducing **more than ~577,500**
tons of CO₂ annually

Clean Energy Projects in the UAE



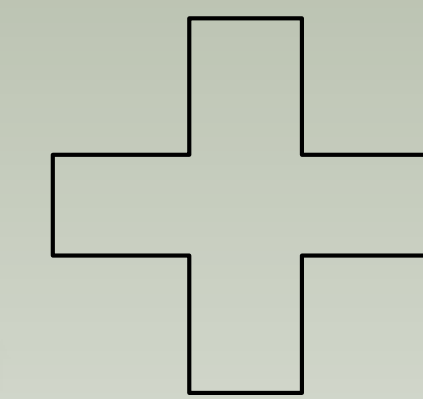
Installed Capacity
of Clean Energy
Projects by 2031

28+
GW

Energy Investment Projects

Billion AED

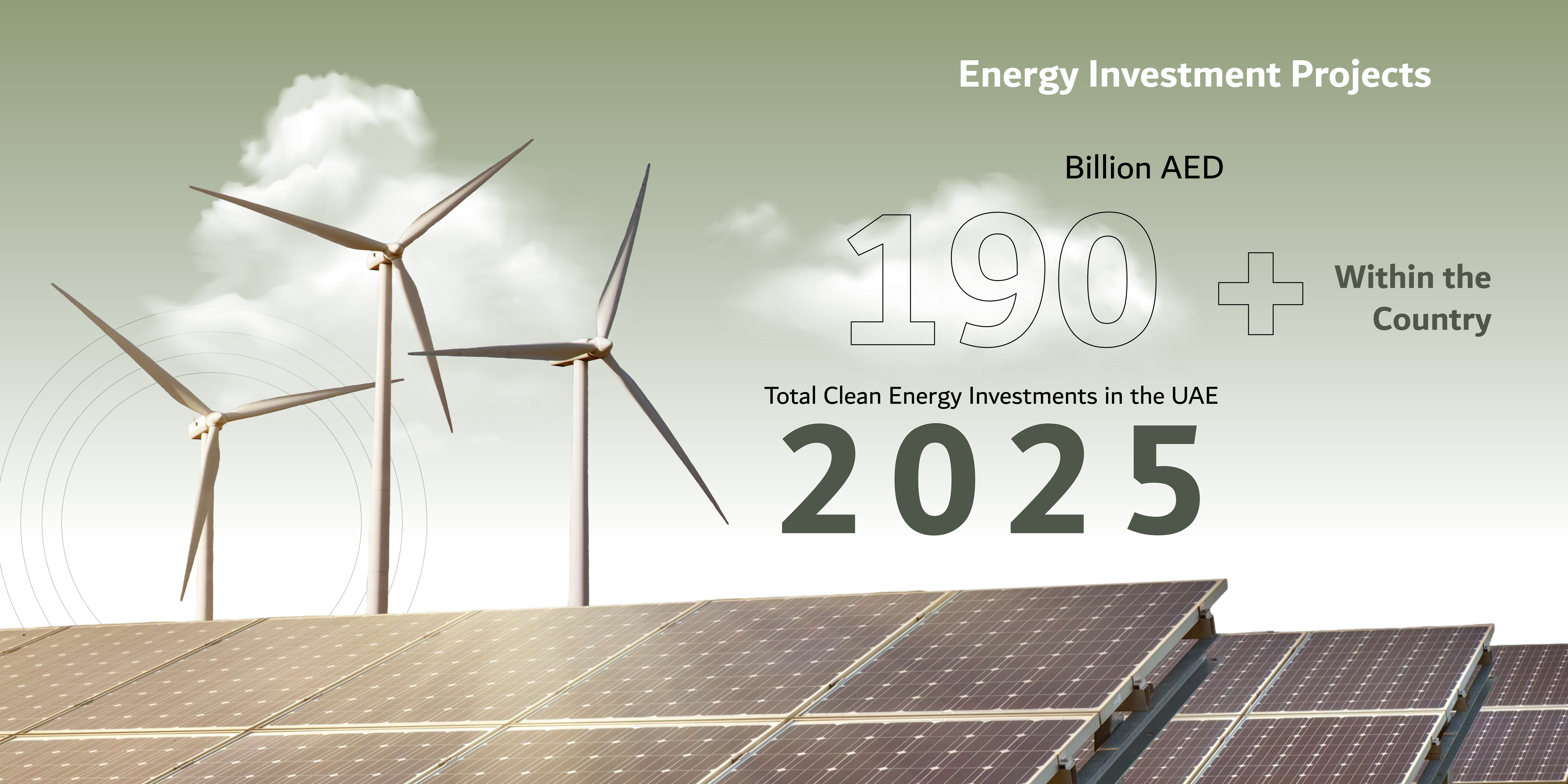
190



Within the
Country

Total Clean Energy Investments in the UAE

2025



65GW

Energy Investment Projects

Outside the Country – MASDAR

Total MASDAR global renewable energy project portfolio for "MASDAR" globally, including:

100GW

Renewable Energy target for
"MASDAR" by 2030

20GW

Under Advanced
Development

45GW

In Operation or
Committed

+40

Countries since 2006 global
project scope

\$35-30B

Additional planned investments
during the current decade

\$45B

Total MASDAR
investments to date



GLOBAL IMPACT

Developed and partnered in clean energy projects in more than **40 countries** across **six continents**



By 2030

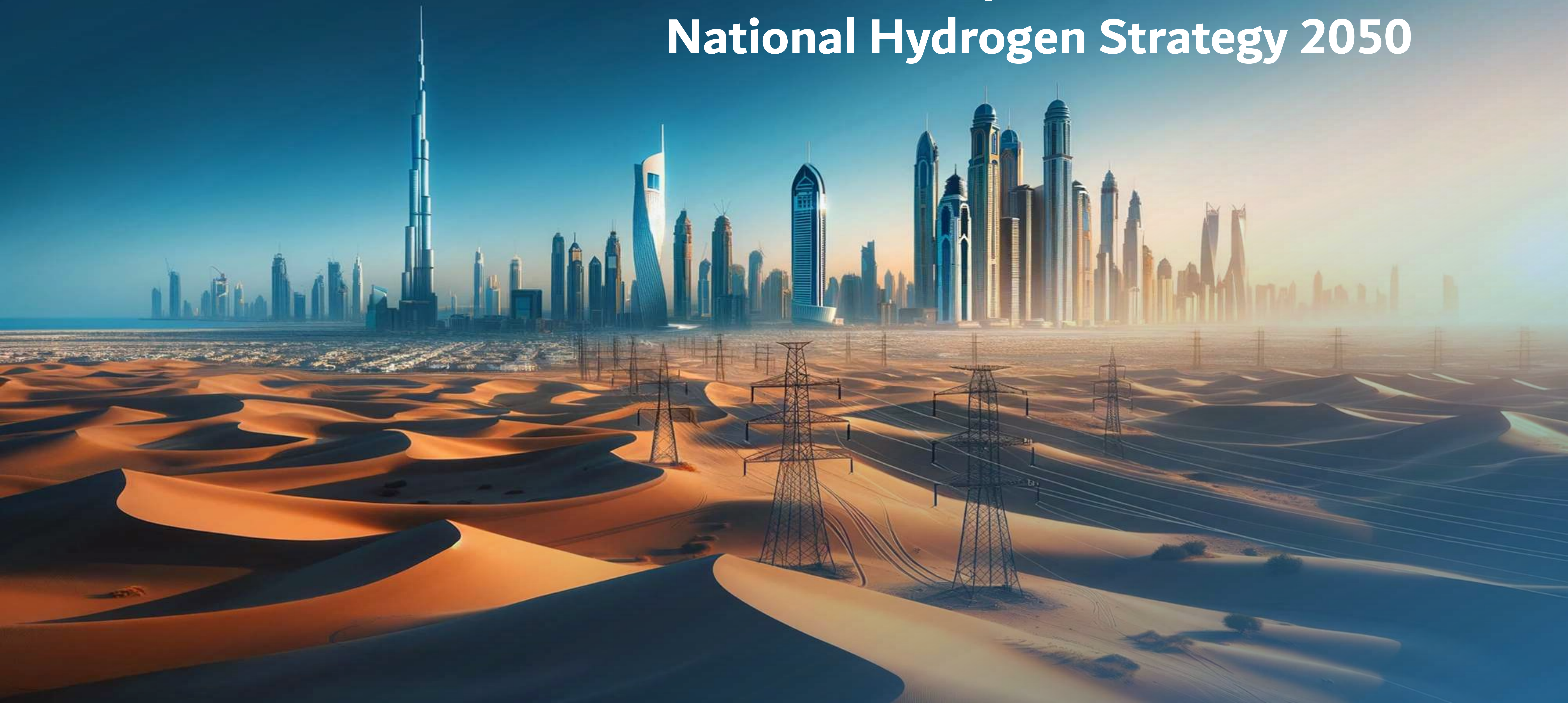
 Global clean energy capacity of **100GW** from **65+ GW** today

 Cement position as a **global** clean energy leader

 **US\$45bn** invested to date



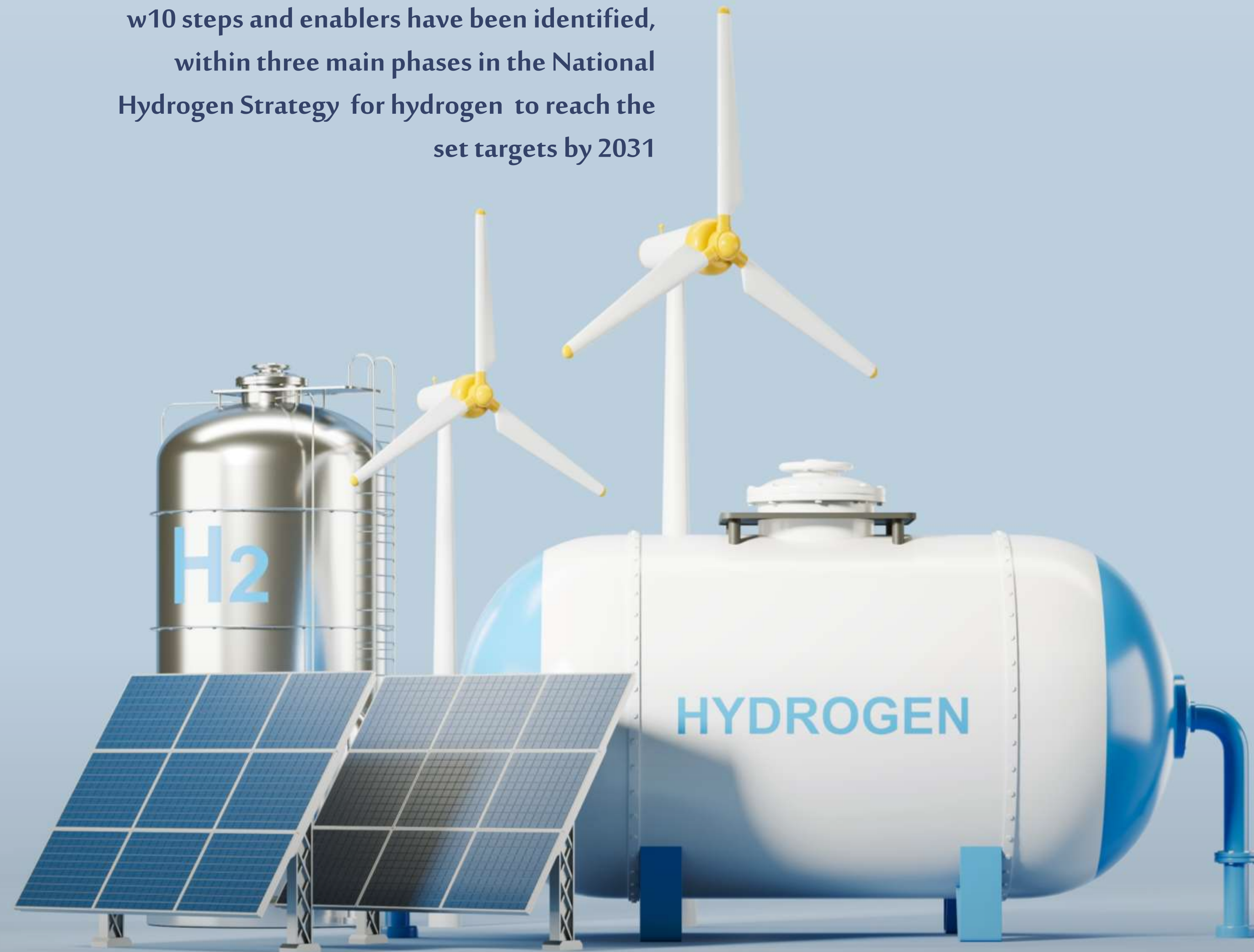
Updates National Hydrogen Strategy 2050



We also aspire for the UAE to become one of the leading countries in hydrogen production **to produce hydrogen by 2031**

under the We the UAE 2031 Vision

w10 steps and enablers have been identified, within three main phases in the National Hydrogen Strategy for hydrogen to reach the set targets by 2031



Developing a flexible hydrogen supply chain to support local industry growth

The country aspires to consolidate its role as a leading global producer and exporter of low-emission hydrogen

Promoting innovation in UAE industrial zones

The UAE aims to build a strong hydrogen economy supporting the country's decarbonization efforts at the national level

Key Current and Future Projects in Hydrogen Energy and Derivatives

2050 Targets

100%

15 Million Tons
Annually

International
accreditation of the
Research Center

5 Hydrogen Oases

Reducing high-emission sector
emissions by

Annual Hydrogen Production

Hydrogen Research Center

Establishing Hydrogen Oases

2031 Targets

25%

1.4 Million Tons
Annually

Establishing a
Hydrogen Research
Center

2 Hydrogen Oases

10 steps and enablers have been identified, within three main phases in the National Hydrogen Strategy for hydrogen to reach the set targets by 2031

International Cooperation

Building international partnerships to create investment opportunities in the hydrogen economy.

Resource and Asset Allocation

Leveraging natural resources and existing assets to competitively enable future energy markets.

Social, Climate and Security Factors

Directing the community to adopt hydrogen use to support climate neutrality by 2050.

Infrastructure Enablement

Establishing and qualifying infrastructure to link production with demand and accelerate hydrogen availability.

Research and Innovation

Adopting and accelerating hydrogen technology development through research and innovation incubators in production and consumption phases.

Setting Legislation, Policies and Regulations

establishing right mechanisms to support low-carbon hydrogen transition.

Financing and Investment Allocation

Creating an attractive investment environment for hydrogen projects and developing local green financing mechanisms.

Industry Development and Activation

Providing required confidence and support for industrial sector to ensure transition and accelerate the hydrogen ecosystem.

Sustainable Economic and Commercial Model

Creating mechanisms and incentives for globally competitive hydrogen pricing.

Education and Skills Development

Attracting and developing highly skilled workforce to drive the hydrogen transition.



Global Leadership and Competitiveness in the Energy and Hydrogen Sector

Achieved Results

Global Competitiveness of the Country's Energy Sector





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MINISTRY OF ENERGY & INFRASTRUCTURE

Thank You

September 2026