MENA Energy Outlook 2025

Renewables, Hydrogen and Energy storage insights 2030

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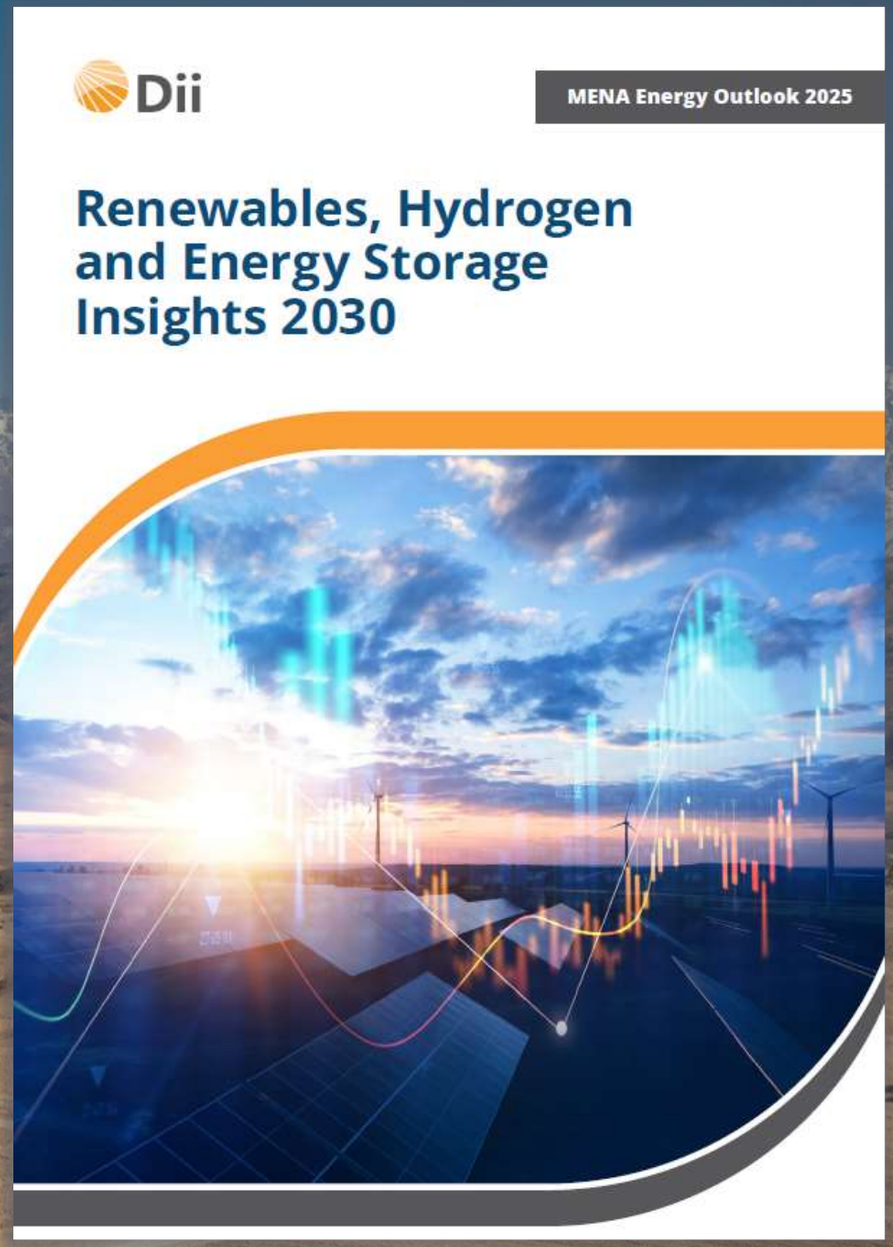
Online presentation | 20th February 2025



Enabling cooperation and partnerships in MENA

For the energy transition to realize its full potential, fostering cooperation and partnerships is essential.

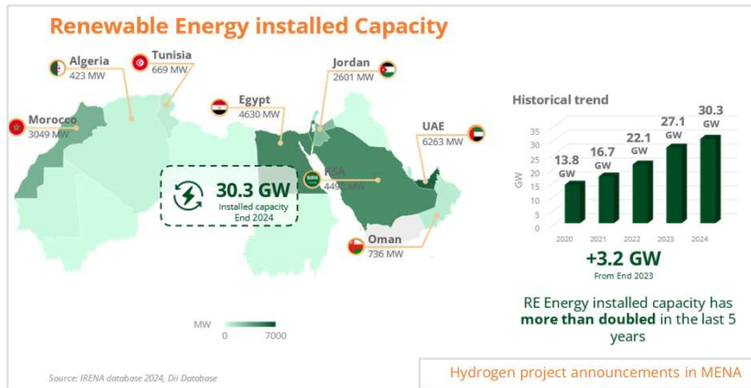
Dii Desert Energy plays a crucial role in this by acting as a **collaborative platform**, **market enabler** and **catalyst** for practical solutions and innovations.

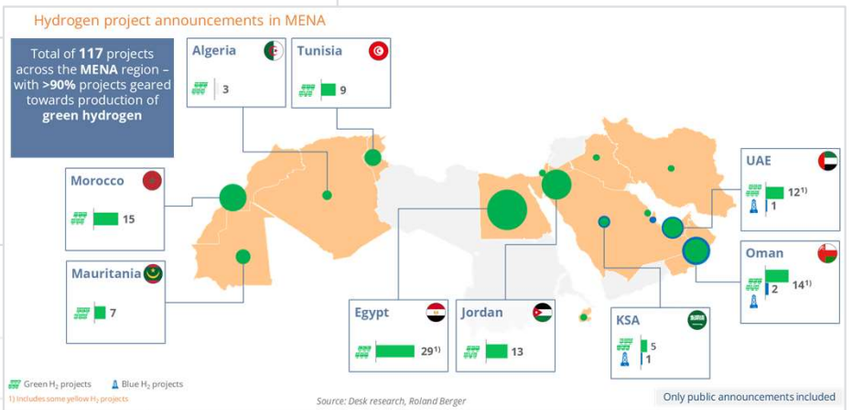
- **Market enabler**
  - Accelerating the energy transition through increased **pressure on emissions costs**.
  - Expansion of **infrastructure** for clean energy carriers across regional and global energy value chains.
- **Collaborative platform**
  - **Bringing together** the private sector, public sector and academia.
  - Creating unique **business opportunities** for partners.
  - **Sharing** practical solutions based on field experiences and lessons learned.

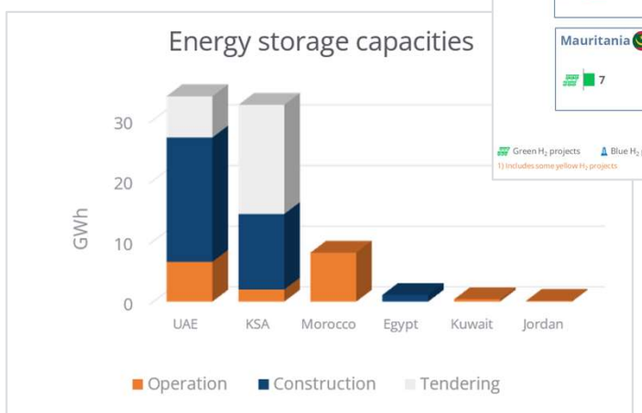
Tracking Renewables, Hydrogen and Energy storage

Dii Desert Energy, a leading **energy transition think tank in the MENA region since 2009**, tracks advancements toward a clean energy system in the MENA region.

- **Dii Desert Energy databases**
  - **Renewable Energy Projects Database**: more than 700 projects
  - **MENA Hydrogen Tracker** in cooperation with Roland Berger: 117 projects
  - **Energy storage database**: 16 projects
- **Unique insights**
  - Leveraging on the **exceptional regional knowledge** of the MENA region, being close to the latest developments of projects and markets.
  - Invaluable resource for understanding the **current landscape and future trajectory** of renewable energy, hydrogen and energy storage.
  - The **first-of-a-kind forward-looking picture** of energy transition in MENA by 2030.



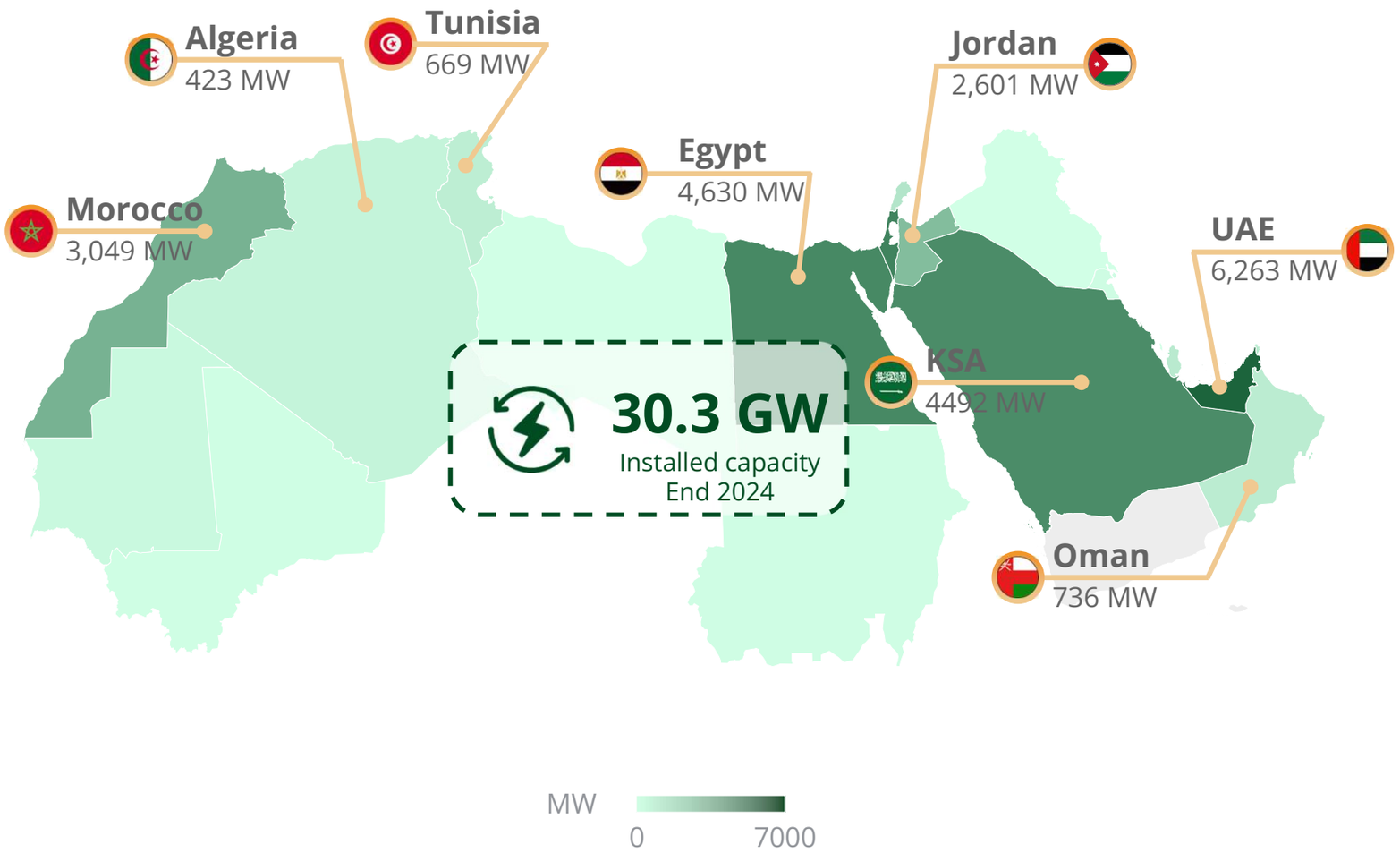




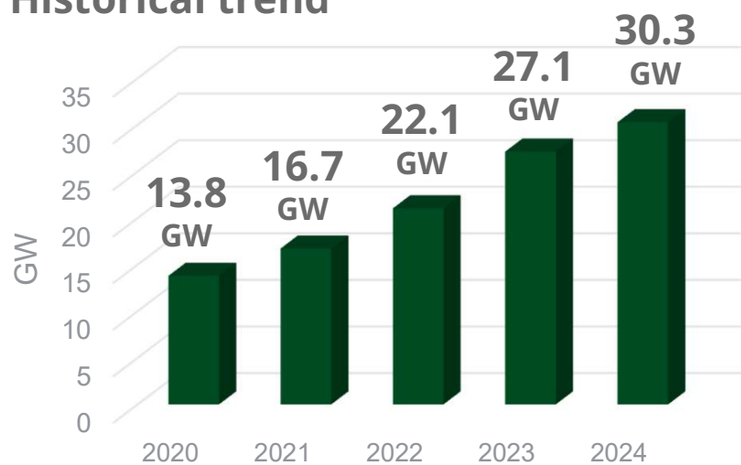
Renewables

Solar and Wind

Renewable Energy installed Capacity



Historical trend



+3.2 GW

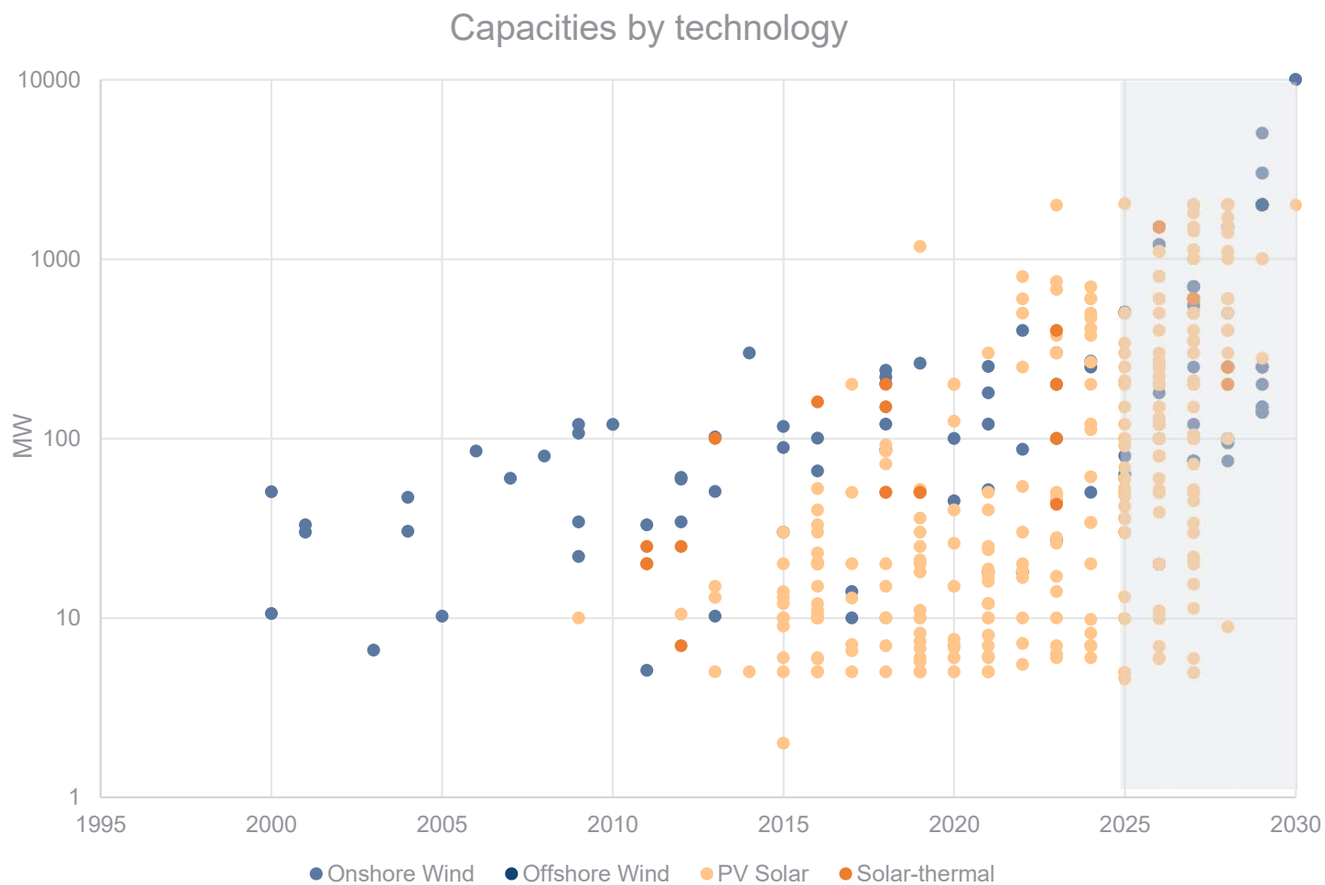
From End 2023

RE Energy installed capacity has **more than doubled** in the last 5 years

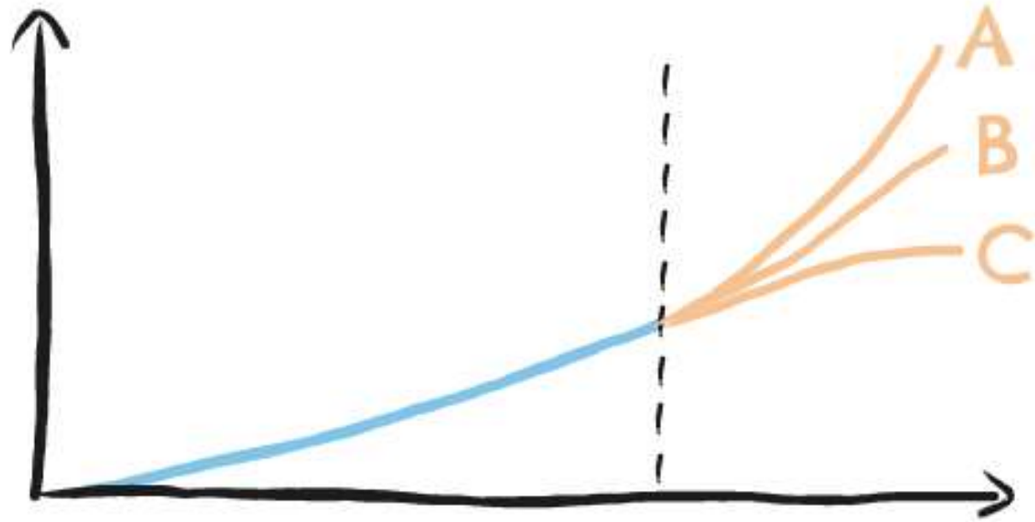
Source: IRENA database 2024, Dii Database

Increasing feasibility of large-scale RE projects

- Ongoing advancements in solar photovoltaic (PV) and wind technologies have significantly **increased their efficiency**.
- The decreasing costs associated with solar PV and wind technologies are **driving down the overall expense** of renewable energy projects.
- Recent projects are being announced with much **larger capacities compared to those in the past**.
- The trend is particularly evident for wind projects, for PV solar we still see projects <50 MW in smaller countries (Bahrain) or in private projects (mines, resorts and properties).



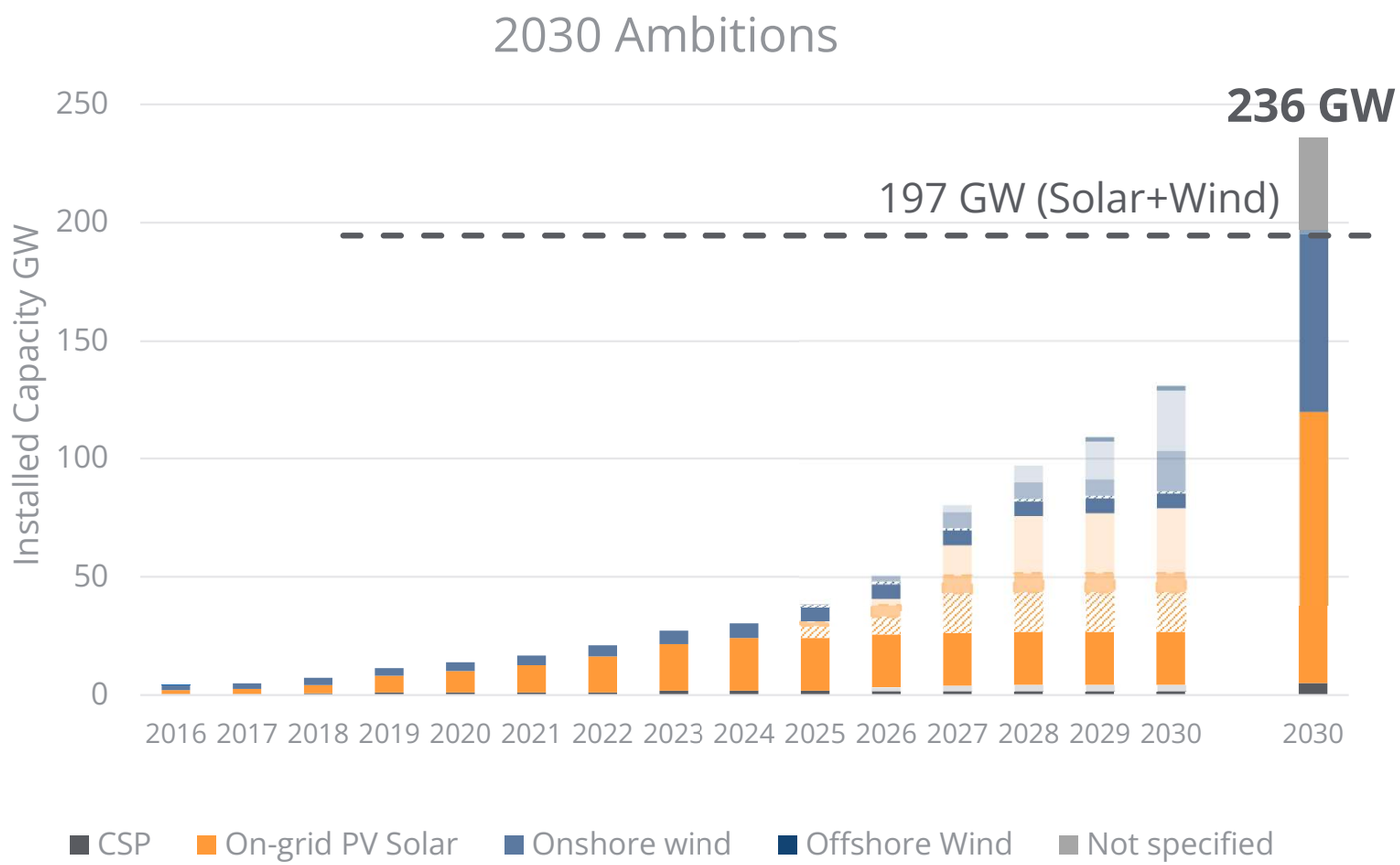
Scenarios to 2030



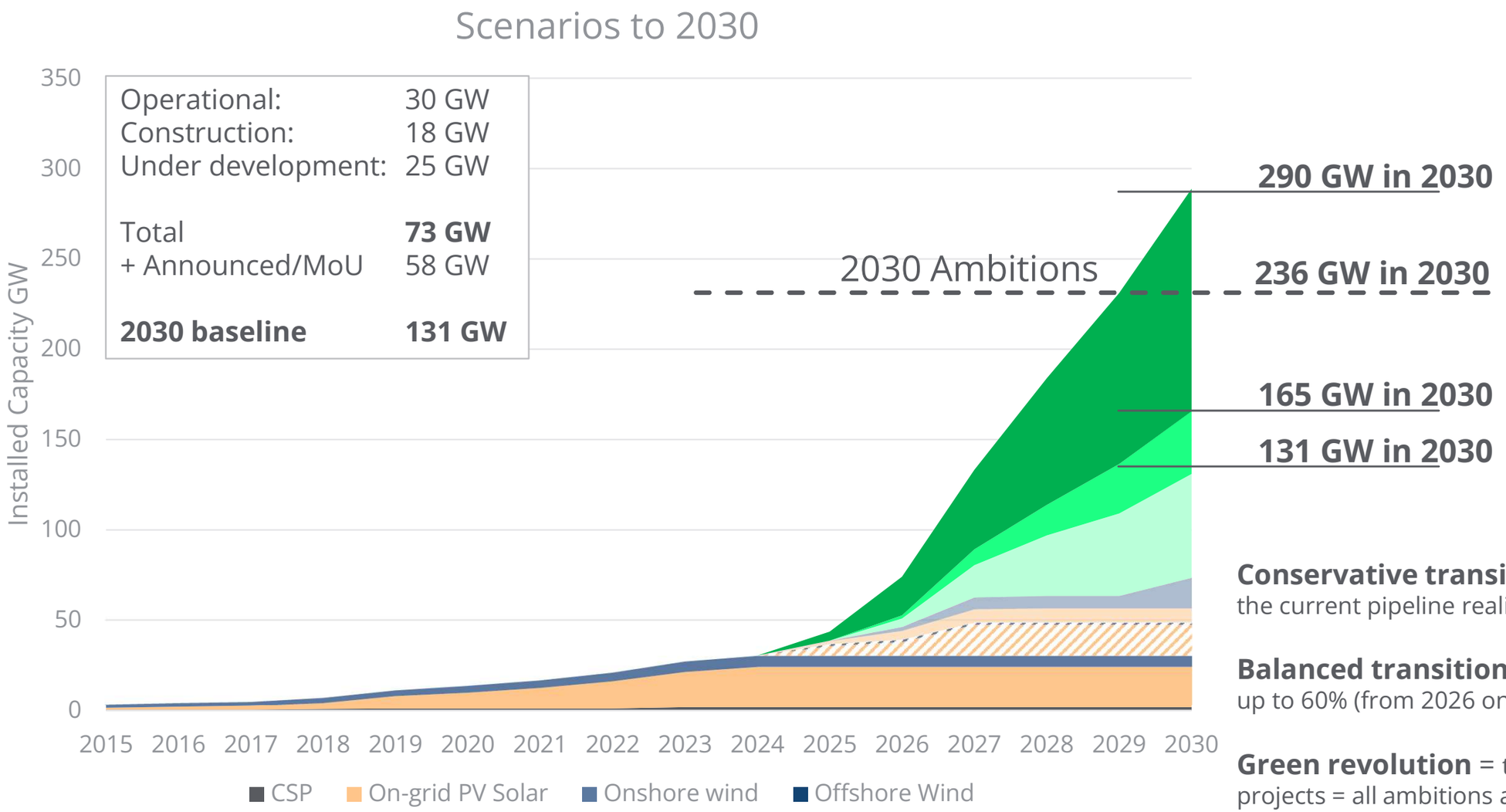
Tripling capacities to meet the 2030 ambitions

- **Solar PV** is set to reach **more than 115 GW** in 2030 – if all ambitions are met
  - The current project pipeline tops up to **75 GW** – if all projects materialize
  - More announcements are expected to align with the 2030 ambition

- **Wind** should reach **75 GW** in 2030 – if all ambitions are met
  - The current project pipeline is **52 GW** – if all project materialize
  - Of this, **20 GW** come from 2 mega-projects (10 GW each) in Egypt



MENA Outlook to 2030 - scenarios



Conservative transition = only projects in the current pipeline realize

Balanced transition = additional projects up to 60% (from 2026 onwards)

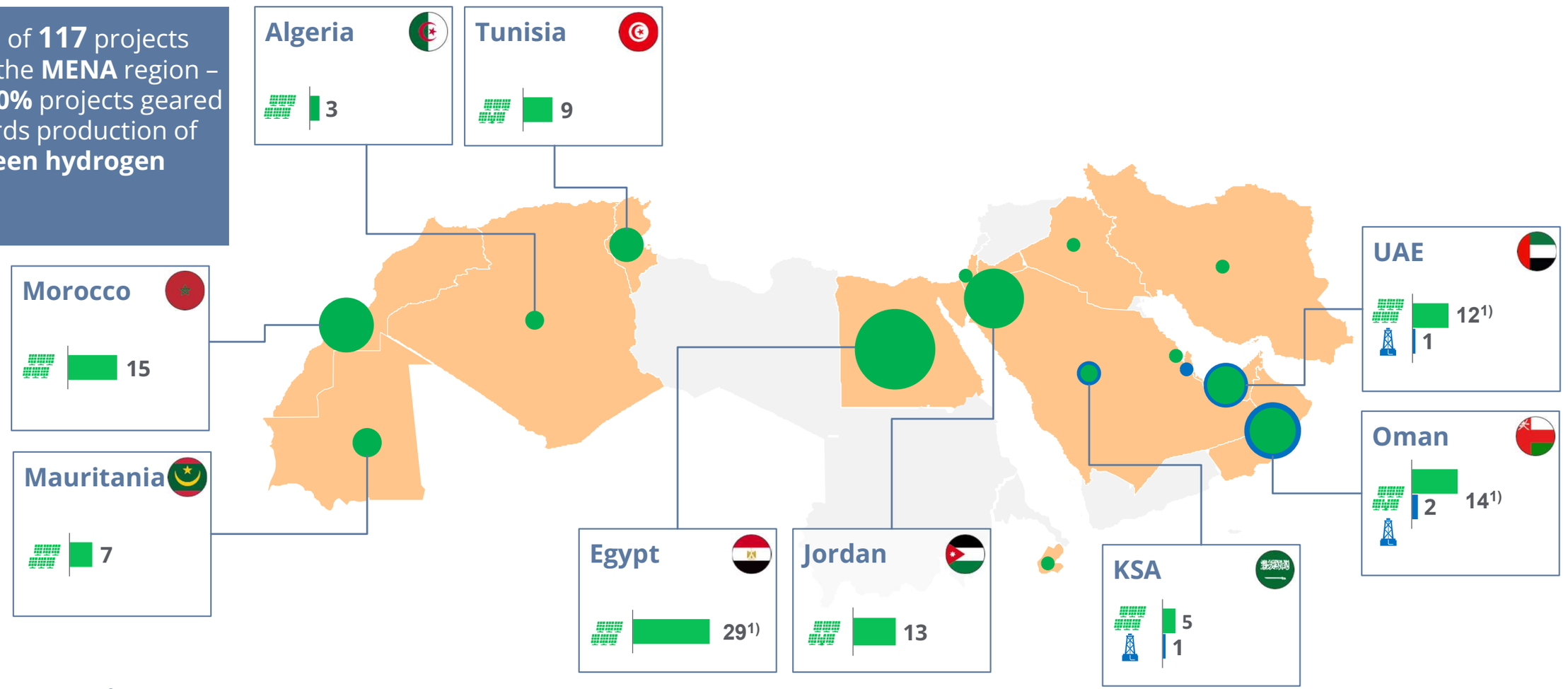
Green revolution = tripling announced projects = all ambitions are met

Hydrogen

MENA Hydrogen Tracker - 117 projects

Hydrogen project announcements in MENA

Total of **117** projects across the **MENA** region – with **>90%** projects geared towards production of **green hydrogen**



Green H_2 projects Blue H_2 projects

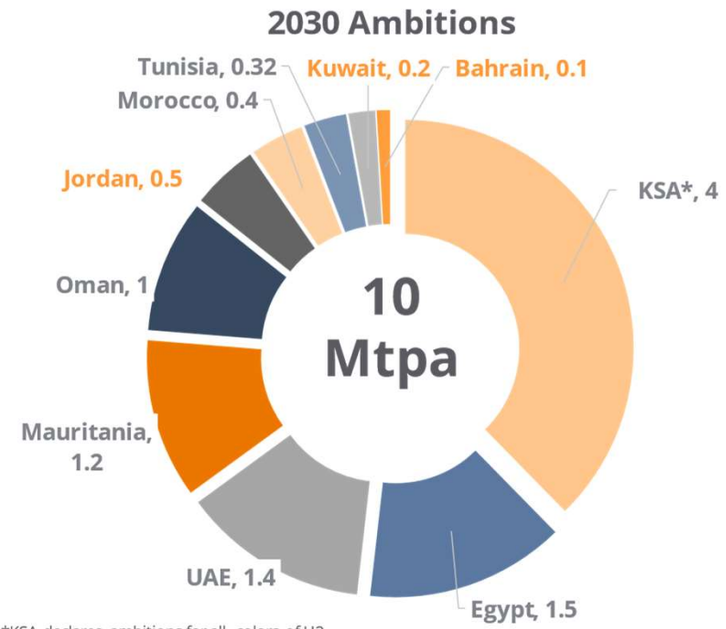
1) Includes some yellow H_2 projects

Source: Desk research, Roland Berger

Only public announcements included

Road to 2030

Driving Green H2 growth to 10 Mtpa in 2030



*KSA declares ambitions for all colors of H2 without specifying which portion is green

In **orange**, unofficial targets

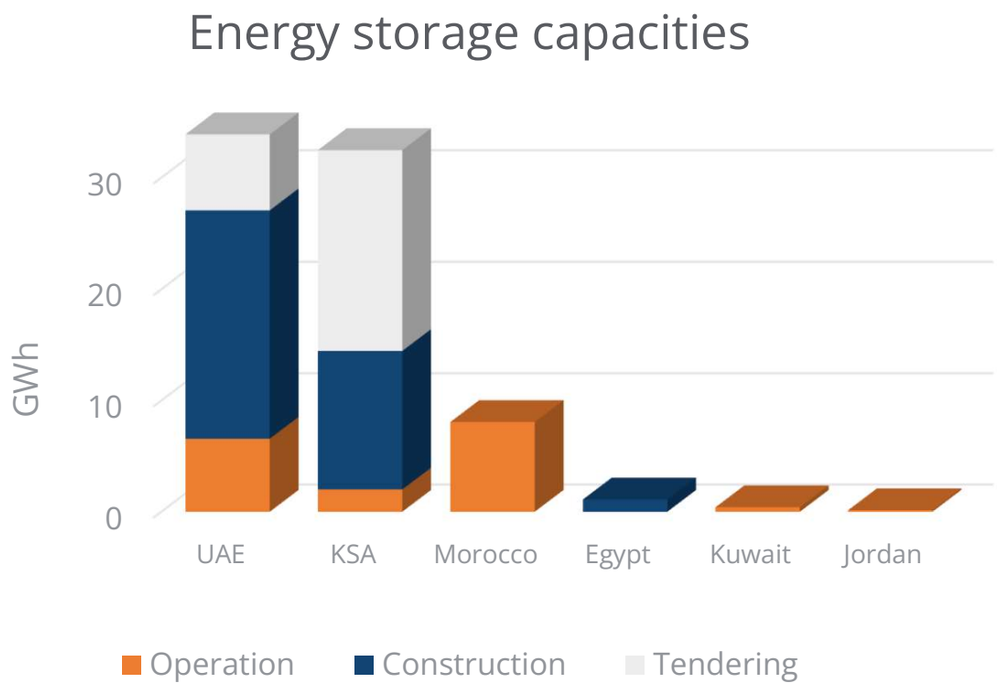
- Several countries in MENA have **declared H2 ambitions** to 2030
- MENA region aims at producing a total of **10 Mtpa in 2030**, the majority of which will be green hydrogen (with a RE requirement of **~140 GW**)
- **Saudi Arabia** has the highest target but that includes all hydrogen colors

Energy storage

Storage Capacities in the MENA Region

- The majority of projects are **BESS** (Battery energy storage systems).

	Total	Operational	Construction	Tendering
Saudi Arabia	16	1	6	9
UAE	8	4	2	2
Egypt	3		3	
Jordan	3	3		
Morocco	3	1	1	1
Kuwait	1	1		
Total	33	9	11	12



Country focus

Country focus

MENA & Central Asia

Thank you for your attention