



الإمارات العربية المتحدة
وزارة الطاقة والصناعة

The Future of CCUS in the United Arab Emirates

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and Industry

United Arab Emirates

CSLF 7th Ministerial Meeting

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Agenda

- UAE – Acceleration towards Future
- Energy Strategy 2050
- Role of CCUS in UAE



UAE – Acceleration towards the Future

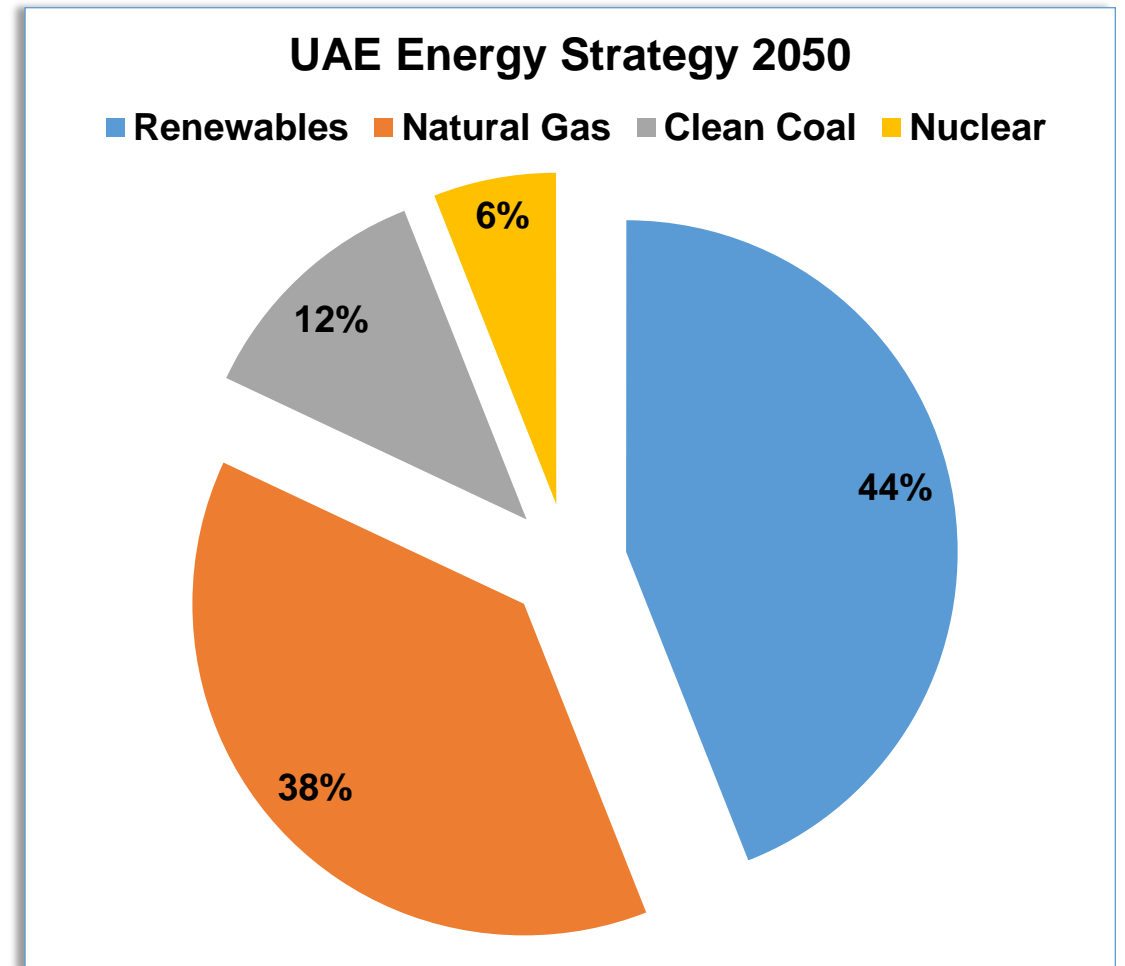
- UAE Government works to shape the future of UAE by defining a national agenda that will ensure happiness and wellbeing for the people of UAE.
- Accordingly, the UAE has developed a future strategy that focuses on 15 priority areas, including:
 - **Energy, Minerals & Wealth**
 - **Sustainability, Environment and Climate Change**
- To expedite readiness, the UAE cabinet established the world's first Government Accelerators, to accelerate the achievement of the National Agenda of the UAE Vision 2021.





UAE Energy Strategy 2050

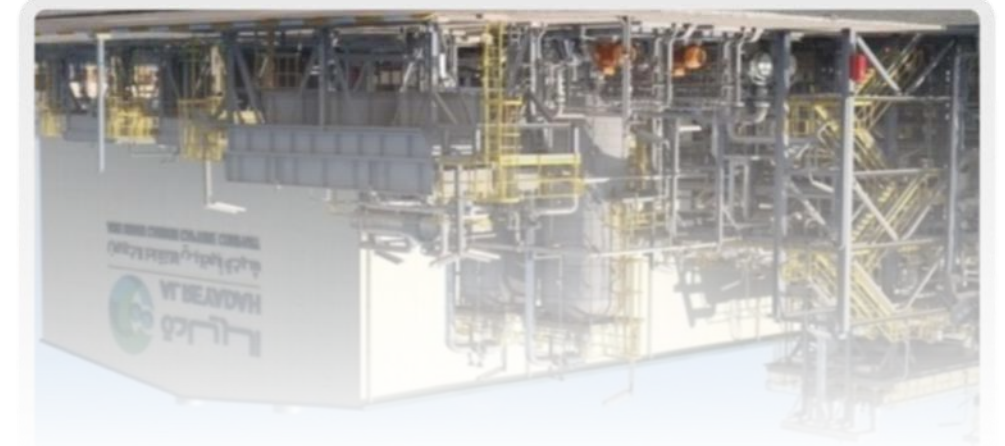
- Ambitious Energy Strategy aims at boosting Clean energy
- New strategy will reduce carbon emissions by 70%
- Energy Efficiency will improve by 40%
- Expected savings around Dh700 Billion





UAE model for CCUS – Al Reyadah project

- Al Reyadah is Middle East's 1st project for Developing Commercial-Scale Carbon Capture.
- The project consists of three elements:
 - ✓ Industrial capture of 800,000 tons of CO₂ annually
 - ✓ Processing the gas at Al Reyadah Carbon Capture Facilities (CCF)
 - ✓ Transportation of liquid CO₂ through a pipeline to oil fields for Enhanced Oil Recovery (**EOR**) injection.

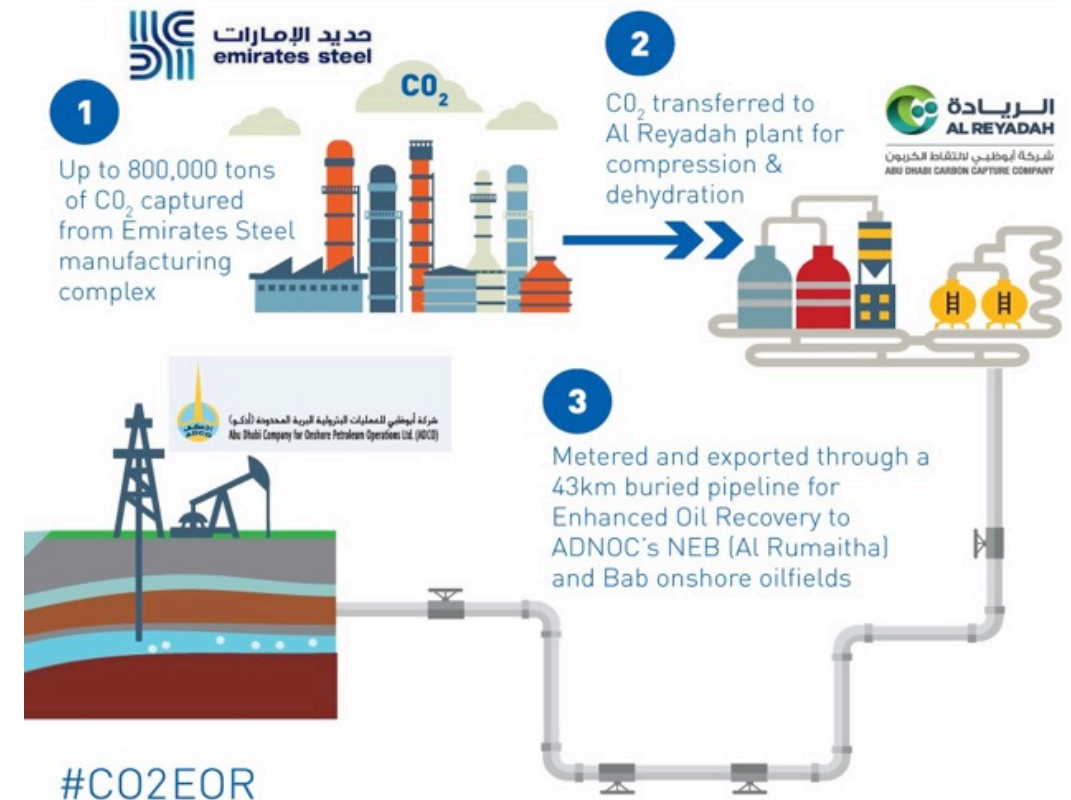




Al Reyadah project – Enabling CCUS

- Al Reyadah Project has proven that CCUS projects are doable and can add value.
- Al Reyadah Project has created a platform for future CCUS expansion projects.
- Al Reyadah project has become the hub for technology and R&D related to CCUS.
- Al Reyadah has provided a better understanding of the commerciality of a CCUS process.

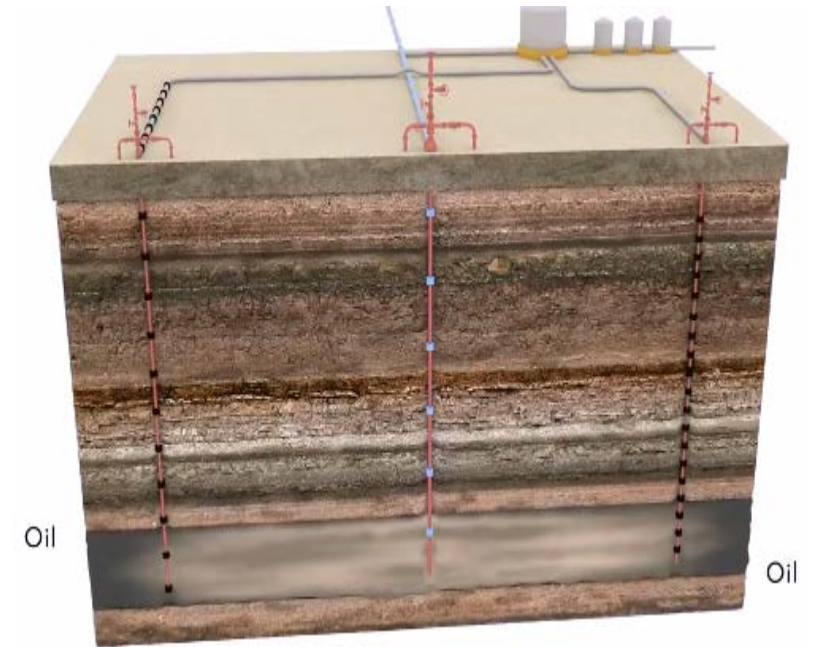
Al Reyadah Carbon Capture Usage and Storage (CCUS)





Expanding CCUS - Opportunities

- **Opportunity: Oil Production Sustainability**
Utilize CO₂ EOR as a key element to build production towards reaching 3.5 MMbd by 2018 and sustain it.
- **Opportunity: Natural Gas liberation**
Replace the used natural gas with CO₂ injection to increase natural gas availability for power sector
- **Opportunity: Reduce Carbon Footprint**
Low Carbon Power is part of energy strategy to reduce UAE's greenhouse gases whilst continuing to meet the country's growing energy demands





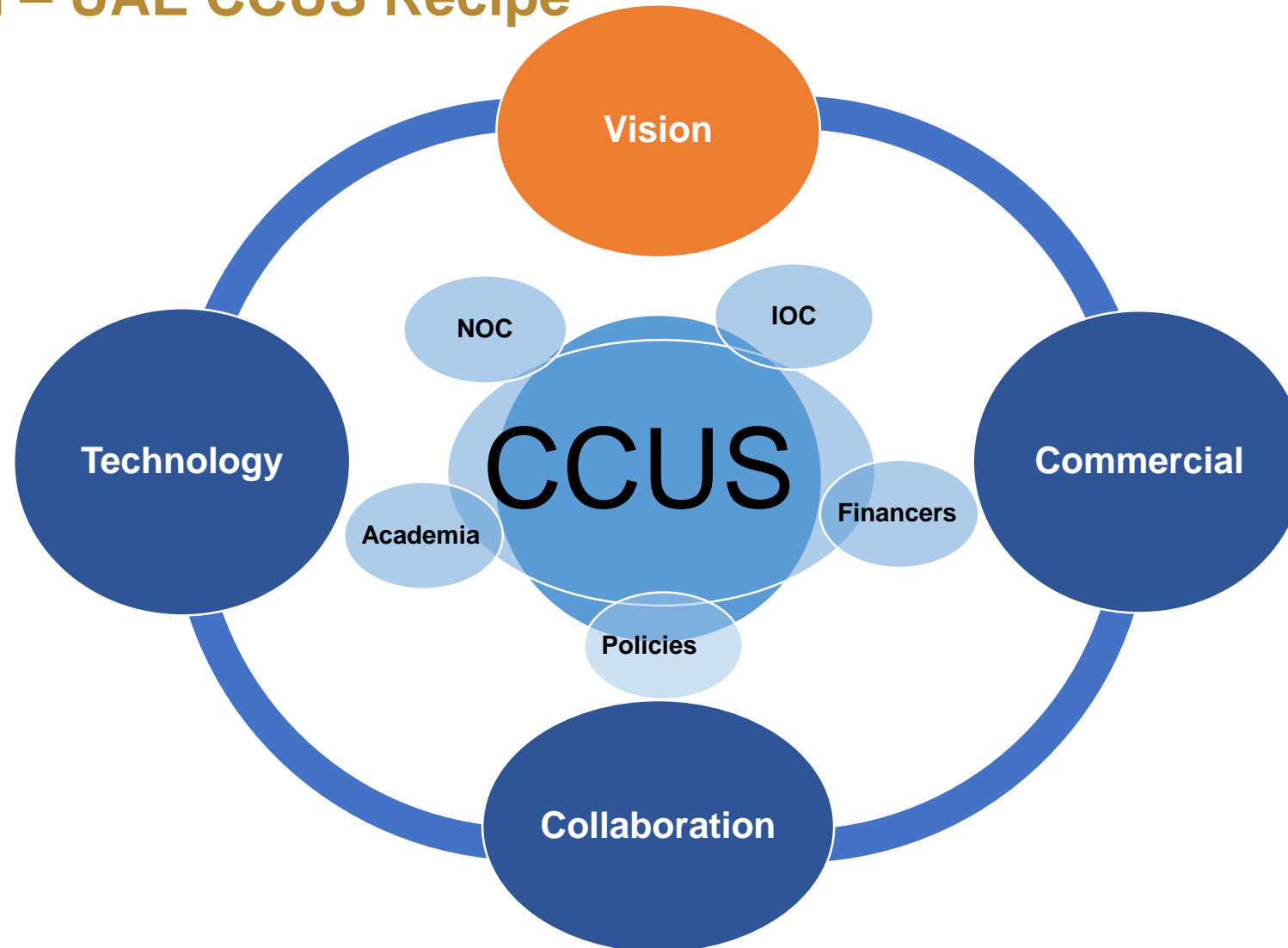
Expanding CCUS – New projects

- ADNOC plans to expand EOR projects as part of production building blocks.
- Carbon capture is going to expand accordingly as it is linked primarily with EOR.
- New Projects for CO₂ capturing
 - ✓ ADNOC (Habshan) – 2020 approved
800 Thousand Ton/a
 - ✓ ADNOC (Shah) – 2022+ planned
2.5 Million Ton/a
 - ✓ EMAL (Aluminum) – 2024+ potential
800 Thousand Ton/ a
 - ✓ Power (Taweelah) – 2030+ potential
5+ MillionTon/a





Way forward – UAE CCUS Recipe





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Thank you