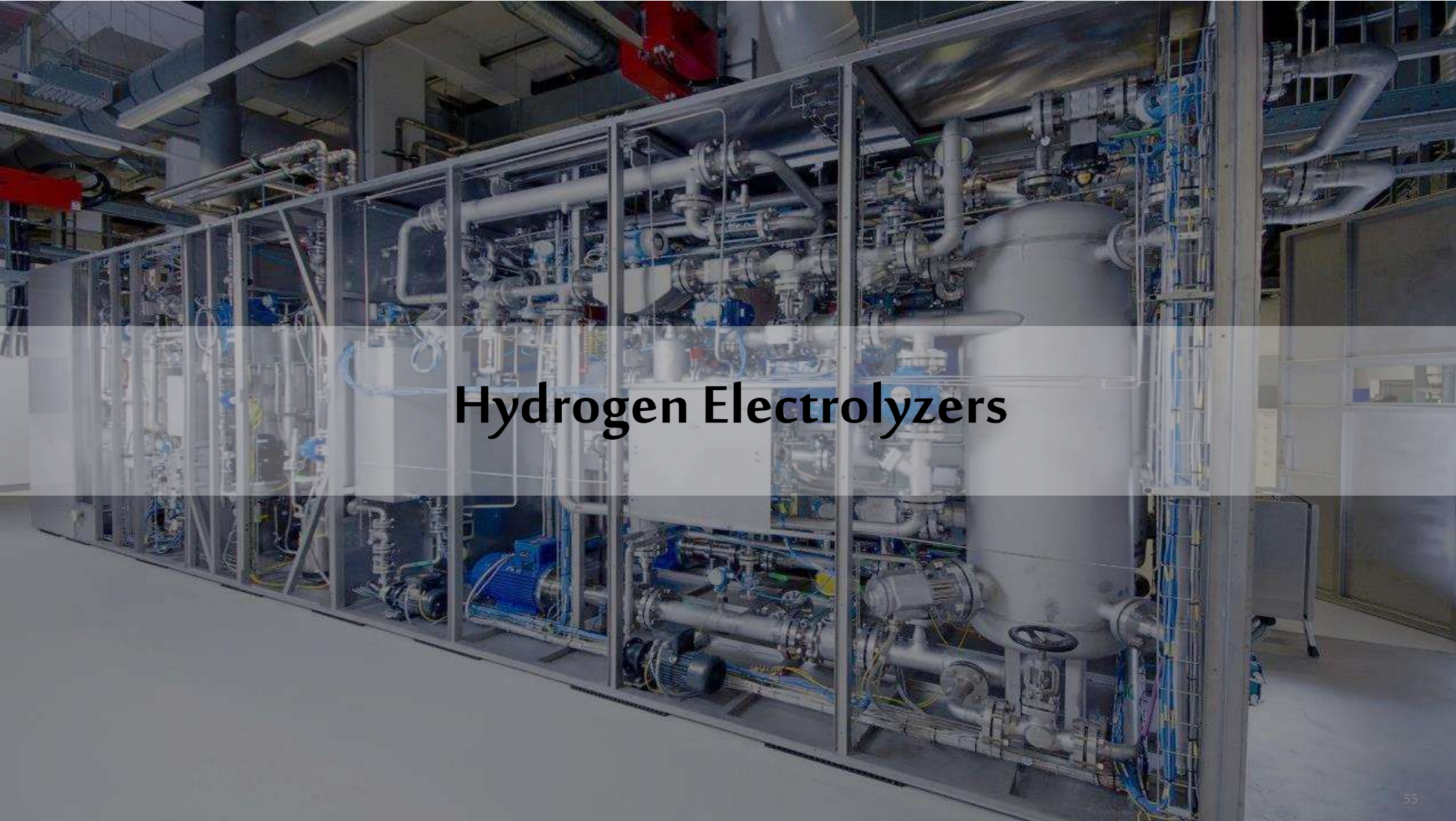




UNITED ARAB EMIRATES  
MINISTRY OF INDUSTRY  
& ADVANCED TECHNOLOGY

# Industrial Investment Opportunities



# Hydrogen Electrolyzers

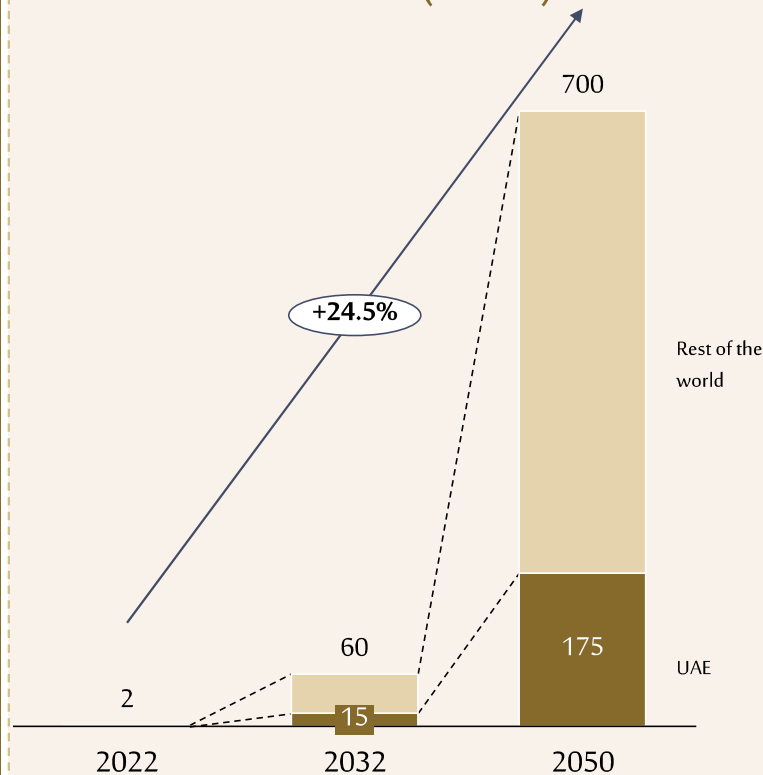
## Hydrogen Electrolyzers

Hydrogen electrolyzers produce H<sub>2</sub> by separating water into H<sub>2</sub> and O<sub>2</sub> through an electrical current

### Investment case

- Build UAE-based Hydrogen electrolyzer manufacturing plant
- Investment size = AED 2.5 – 3.0 Bn
- Plant capacity = 2 GW per year
- IRR = 15 – 25%
- NPV = AED 500 – 700 Mn

### Global and UAE Electrolyzer market size 2022 – 2050 (Bn AED)



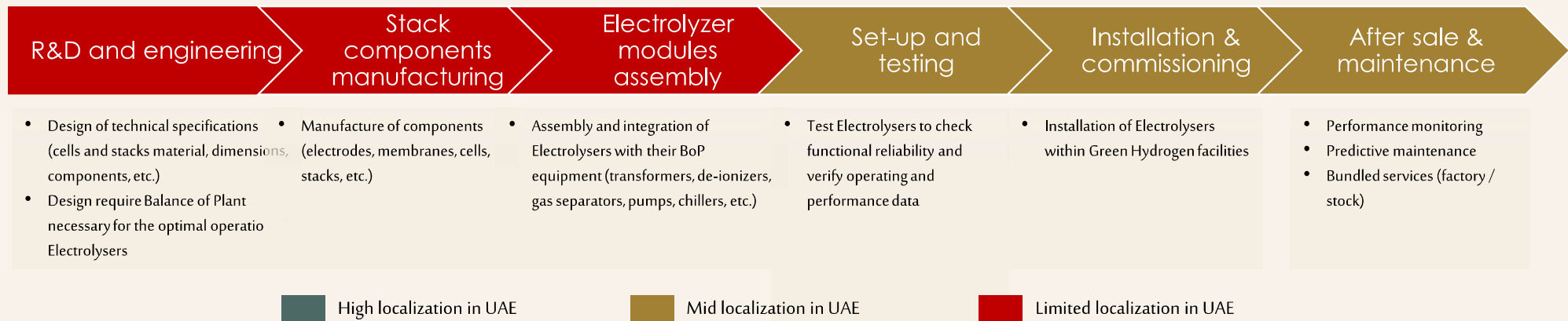
### Global trends & demand drivers

- Global demand for hydrogen electrolyzers expected to multiply 15x times in the next 10 years
- Carbon Neutrality targets have been recently announced by multiple countries for 2050-2060 strengthening the need for decarbonized solutions
- Hydrogen will play an important role in reducing GHG emissions as a fuel substitute in sectors responsible for >65% of global emissions
- UAE Ambition of becoming global hydrogen hub and capturing 25% global market share will drive demand for electrolyzers
- Countries keen to localize electrolyzer manufacturing to be in control of future cost reductions and own IP



## Hydrogen Electrolyzers

### Value chain analysis



### Value proposition

- Potential electrolyzer offtakers from Masdar, ADNOC, and ADQ
- Highly competitive costs of Renewable energy (Solar: USD 13.5 per MWh2 LCOE3 55% below global average of USD 30 per MWh)
- Availability of raw material in steel, mechanical, and electrical equipment
- UAE ranked 16<sup>th</sup> globally in Ease of Doing Business (WB)
- UAE ranked #10 globally for world class infrastructure in (LPI)
- High quality of life attractive for skilled talent
- 100% foreign business ownership and low VAT (5%)

### Enablers

- Up to 80% project financing by Emirates Development Bank
- 2-year grace periods and low interest-rate loans for CAPEX, working capital, and supply chain financing
- Export credit and insurance via Etihad Credit Insurance and Abu Dhabi Exports
- Access to Free Trade Agreements with high-growth markets such as GCC, Arab countries, India, Israel, Indonesia, and others
- Customs exemptions for raw materials