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## Adani New Industries Limited

Green Ammonia – Pivot for a Successful Clean Energy Transition



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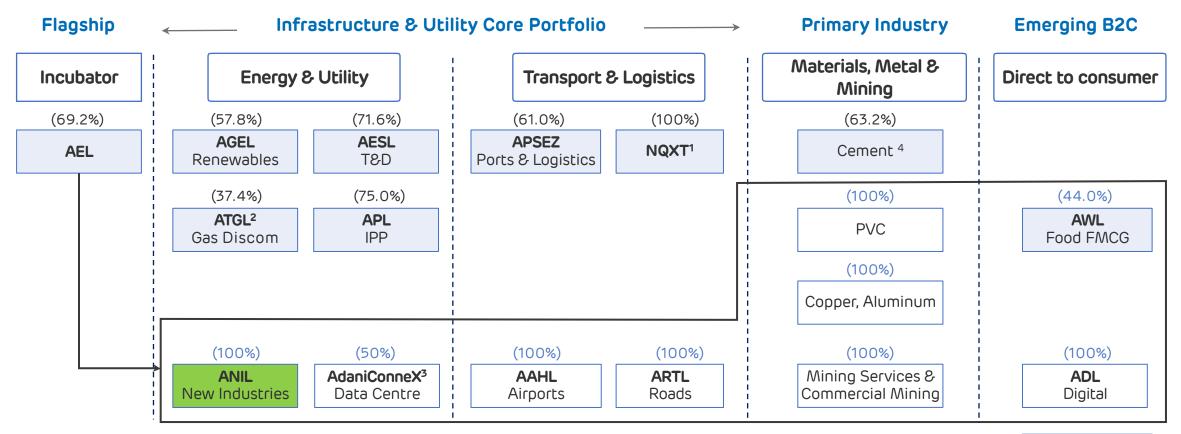
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## Adani: A World Class Infrastructure & Utility Portfolio

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Adani Portfolio's Listed Entities

(%): Promoter equity stake in Adani Portfolio companies (%): AEL equity stake in its subsidiaries

#### A multi-decade story of high growth centered around infrastructure & utility core

1. NQXT: North Queensland Export Terminal | 2. ATGL: Adani Total Gas Ltd, JV with Total Energies | 3. Data center, JV with EdgeConnex, AEL: Adani Enterprises Limited; APSEZ: Adani Ports and Special Economic Zone Limited; ATL: Adani Transmission Limited; T&D: Transmission & Distribution; APL: Adani Power Limited; AGEL: Adani Green Energy Limited; AAHL: Adani Airport Holdings Limited; ARTL: Adani Roads Transport Limited; ANIL: Adani New Industries Limited; AWL: Adani Wilmar Limited; ADL: Adani Digital Limited; IPP: Independent Power Producer

4. Cement business includes 63.15% stake in Ambuja Cement which in turn owns 50.05% in ACC Limited. Adani directly owns 6.64% stake in ACC Limited

#### What it takes to win

#### Competitive cost Green Electron

- Input power cost accounts for ~70% of cost of Green Hydrogen
- Economies of scale to facilitate lowest per unit cost infrastructure such as pipelines

#### End-to-end supply chain and resource control

- Execution Risk mitigated by full integration of supply chain
- Tighter control on cost and resources

## adani New Industries

#### How we are delivering it

#### Large scale with high quality resources

- Investment of **USD 50 bn** over next decade in Green  $H_2$  ecosystem

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 Securing ~ 50GW equivalent wind and solar land for RE production

#### Mine to module manufacturing ecosystem

 All key components of Green H2 projects within ANIL – Solar, wind, electrolyzers

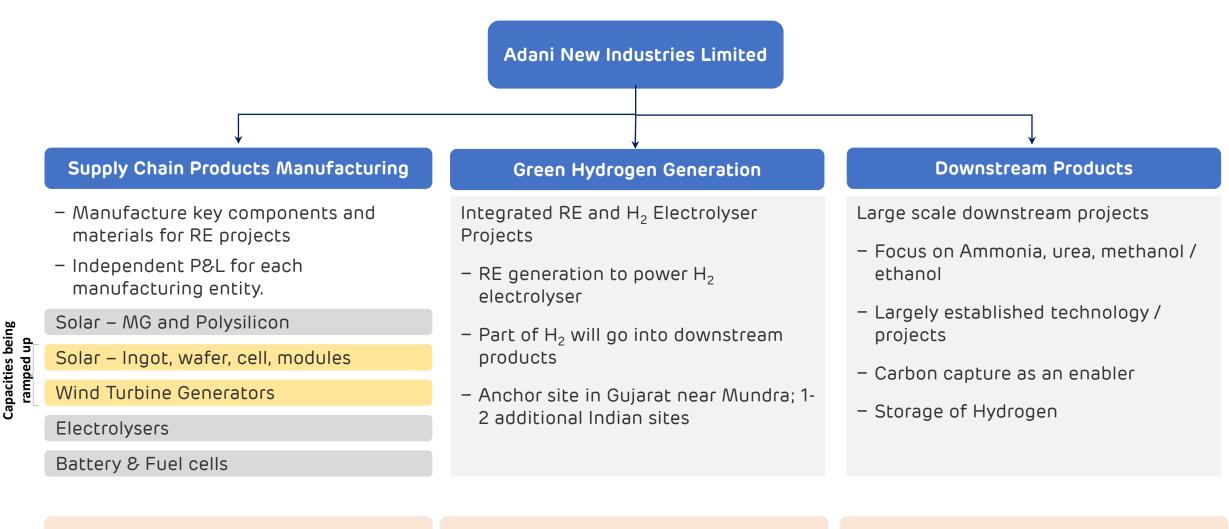
#### Leveraging broader Adani ecosystem – RE, Ports, Logistics, Gas

- Green H<sub>2</sub> consumption and industrial hub at Mundra, Gujarat
- Plug and play infrastructure at Mundra along with potential off-takers

#### Integrated Green H2 ecosystem



Integrated development across the value chain – pipelines/transport options, storage facilities, port facilities and terminals

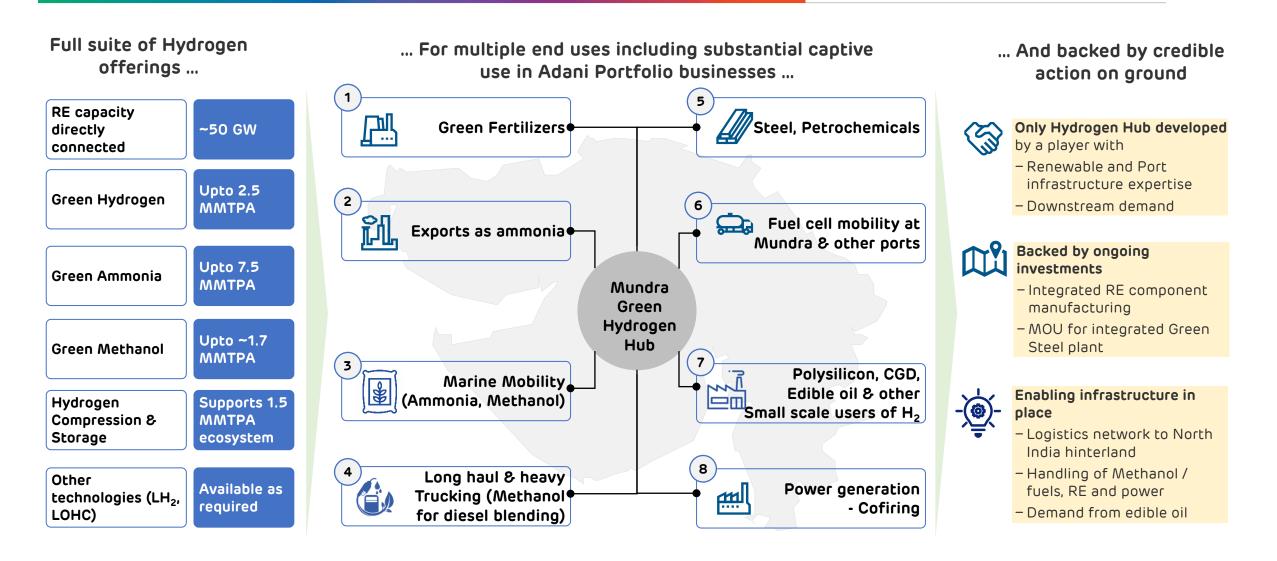


End to end supply chain control

High quality resources deployed at scale

Well integrated with Adani ecosystem

### Ecosystem: The largest integrated Green Hydrogen Hub in the world at Mundra SEZ



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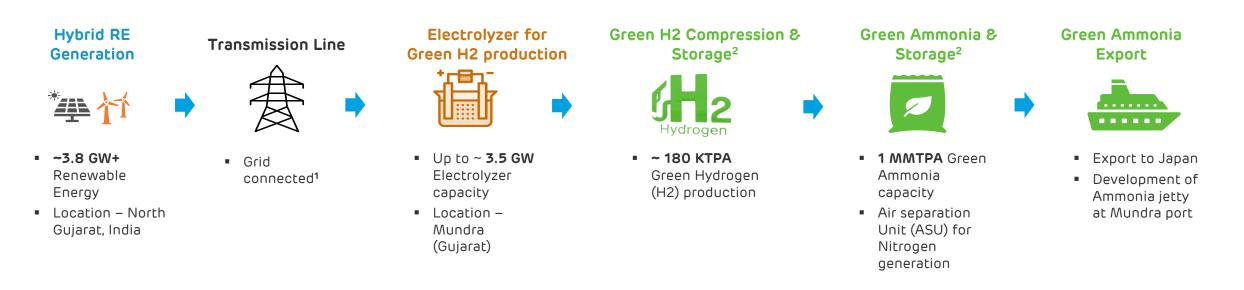
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## Green Ammonia – the bedrock for a successful energy transition



Promising ene amongst	ergy density clean fuels Existing Supply Chain	Safety Track Record
End-use Applications	Description	Timelines
Existing Sectors	<ul> <li>Fertilizer is the largest end-use sector, accounting for ~85% of the existing total demand</li> <li>Green Ammonia can displace incumbent sectors such as phosphates, nitrates, etc.</li> </ul>	Immediate readiness
Power Generation	<ul> <li>Retrofitting of existing coal power plants to enable co-firing with ammonia</li> <li>Pathway to provide clean base load power</li> </ul>	Implementable by FY 2027
Bunkering	<ul> <li>As an alternative marine fuel - will transform maritime sector</li> </ul>	Future usage
Hydrogen Carrier	<ul> <li>Most optimum way for Hydrogen transportation and Storage</li> <li>Higher boiling temperature than hydrogen (-33°C against -253°C), which makes liquefaction and transportation easier.</li> </ul>	Immediate readiness

## ANIL: 1st Project of 1 MMTPA Green Ammonia



Particulars	Highlights
Land	- Land allocation process under final stages (equivalent to ~ 2 MMTPA Green Hydrogen)
Feasibility Study	<ul> <li>Leading Global Engineering company</li> </ul>
Carbon Emissions	<ul> <li>Complying with International Standards</li> </ul>
First Drop of Ammonia	– By H1 (first half) of CY 2027

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## Ammonia Co-firing Pilot in Mundra Thermal Power Plant





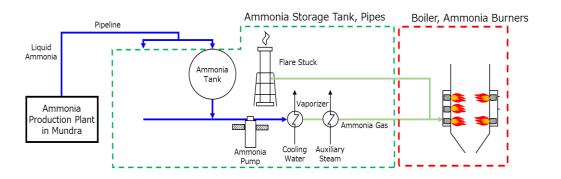




Clean Energy Transition utilizing breakthrough technology from Japan				
Location	Unit 1 – 330 MW, Mundra Thermal (Coal) Power Plant			
Description	<ul> <li>Feasibility study on potential modification in Mundra Power Plant to achieve 20% liquid ammonia co-firing</li> <li>Phase 1 and Phase 2 is supported by Japanese Government Agency NEDO</li> <li>MoU between Adani, Kowa Company and IHI Corp.</li> </ul>			



Phase	Description	End Date	Status
Phase 1	Technical Evaluation	Successfully Completed	
Phase 2	Co-firing Combustion Test & FEED	Q1- 2024	Underway
Plan: Phase 3	Construction & Demonstration	Plan: 2027	Plan: 2024 – 2027



20% Ammonia co-firing expected to reduce ~ 400,000 tons of  $CO_2$  emissions per annum<sup>1</sup>

1: Estimated in initial study

Thank You