

**am green**

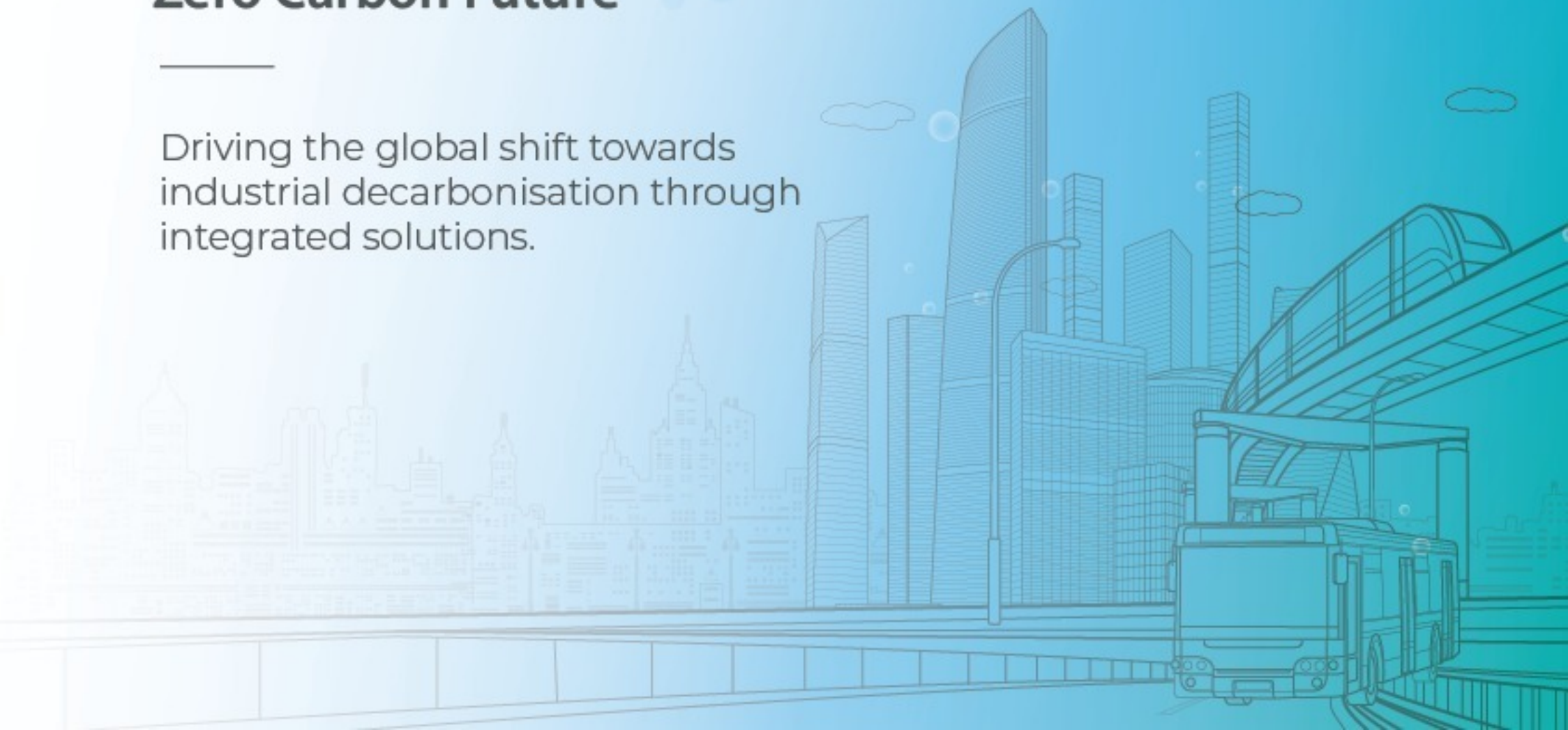
World's Leading Energy Transition &  
Green Solutions Platform



## Transition to a Zero Carbon Future

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Driving the global shift towards industrial decarbonisation through integrated solutions.



# World's First & Lowest Cost Providers of Carbon Free Energy & Carbon Free Molecules





AM Green, co-founded by the founders of Greenko Group, Anil Chalamalasetty and Mahesh Kolli, is one of India's leading energy transition solutions providers. AM Green is developing production capabilities for green molecules including green hydrogen, green ammonia, biofuels, e-methanol, sustainable aviation fuels and various downstream high-value chemicals for global industrial decarbonisation.



**Anil Chalamalasetty**  
Founder, Group Chairman & CEO

**Mahesh Kolli**  
Founder & Group President

## Our Vision & Philosophy

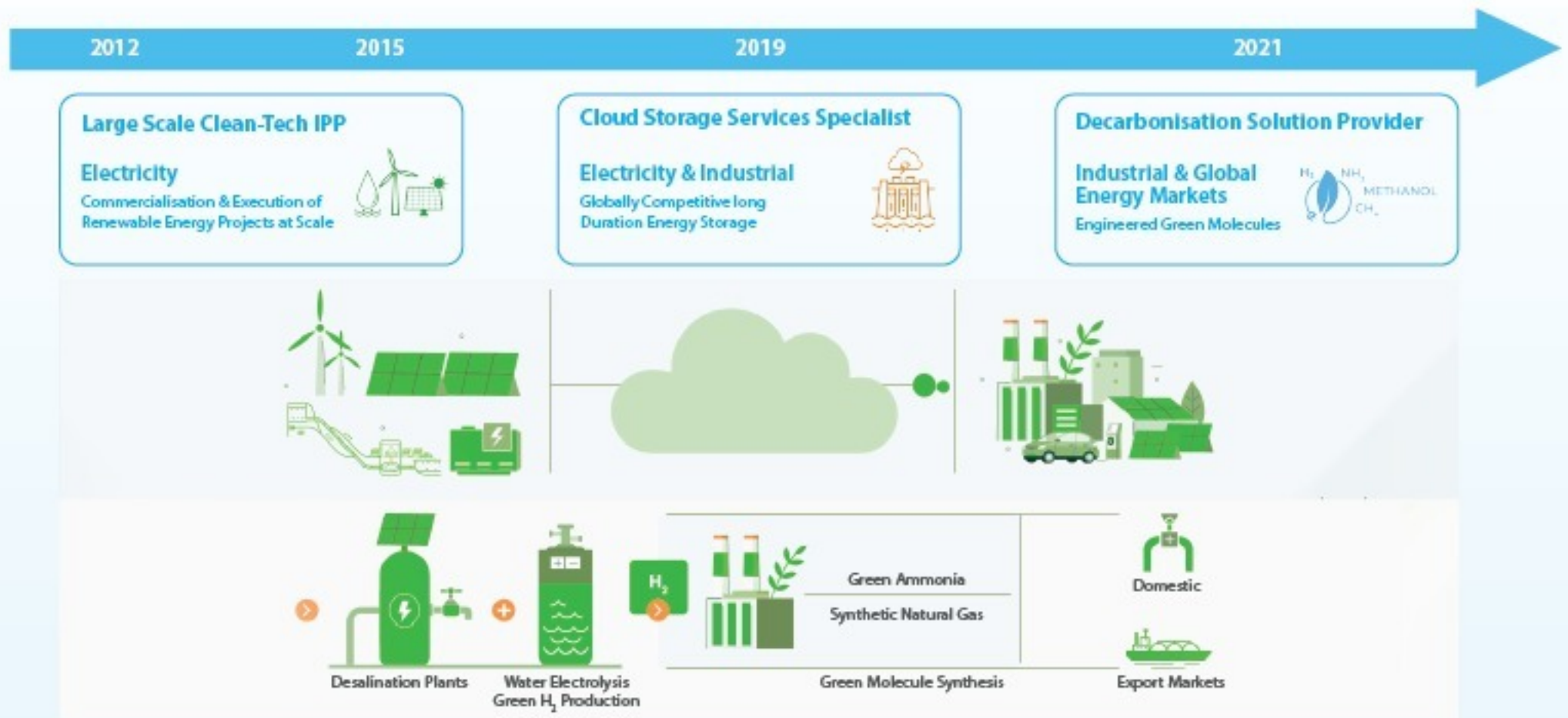
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AM Green aims to lead the world towards a carbon-free future through innovative, sustainable products and technology solutions. AM Green is committed to a transformative future where industrial growth drives global sustainability. Through innovative green molecules and their derivatives, AM Green provides the essential building blocks for a cleaner, more sustainable, and carbon-free future.



# GENESIS OF GLOBALLY LARGEST STORAGE & GREEN MOLECULE PLATFORM

- Greenko was founded by Anil Chalamalasetty and Mahesh Kolli in 2004.
- Greenko Group is world's leading Energy Transition and Decarbonisation solutions company.
- 100 Gwh Long Duration Energy Storage asset under construction, to be operational by 2028 making it world's largest Renewable Energy Storage Platform.





Greenko's Operational  
Generating Capacities

**12 GW** -by 2024

**17 GW** -by 2026

**25 GW** -by 2028

# World's First & Largest Integrated Renewable Energy Project



AP01 IREP  
Kumool, India

The IREP is a fulcrum of both Carbon-Free Energy & Zero Carbon Molecules which are critical in Deep Decarbonisation

IREP makes RE as Firm, Flexible & Dispatchable & hence truly Carbon-Free Energy

To be Commissioned in 2024

Long duration energy storage is critical for synergistic & congruent development of RE capacity to enable transition towards decarbonisation free of economic friction

AatmaNirbhar Bharat 100% Made in India

## Project Overview

Capacity	1680 MW
Storage Capacity	6 Hours / cycle / day 1680 X 6 = 10,080 MWh / cycle / day
Connectivity	400+ KV CTU National Grid
Location	Andhra Pradesh, India
Type	Integrated Renewable Energy Storage Project - Off Stream Closed Loop Pumped Storage
Asset life	75+ Years
RE Integration Capacities	Solar: 4000 MW Wind: 1000 MW
AP01 Services / Products	Carbon Free Energy Round The Clock Renewables CFE for Green Molecules Ancillary Grid Services Renewable Firming and Energy Shifting



## GREENKO's INTELLIGENT ENERGY CLOUD PLATFORM

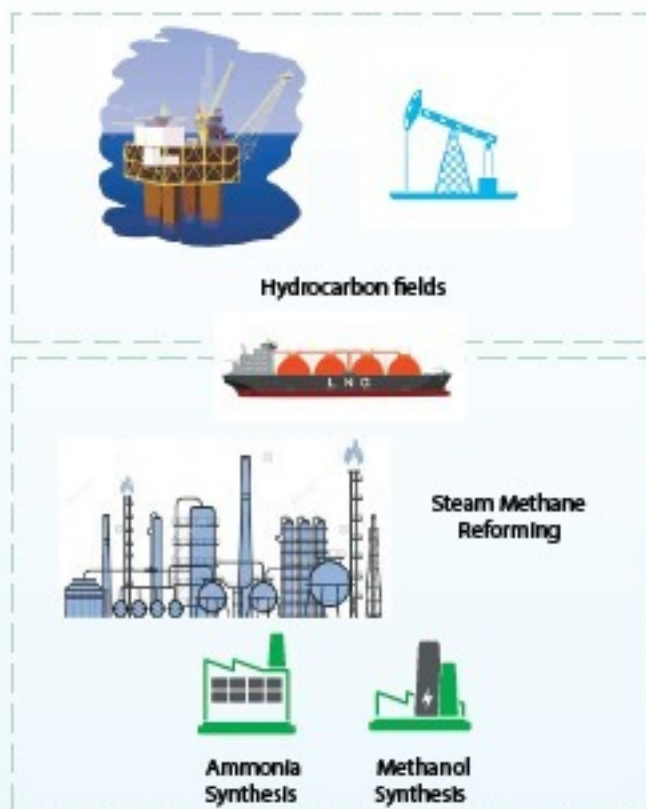
(Digital Energy Management, Artificial Intelligence/Machine Learning based Energy Forecasting & Scheduling, Portfolio Dispatch, VPP, IoT Platform)

## Products & Services from IRESP

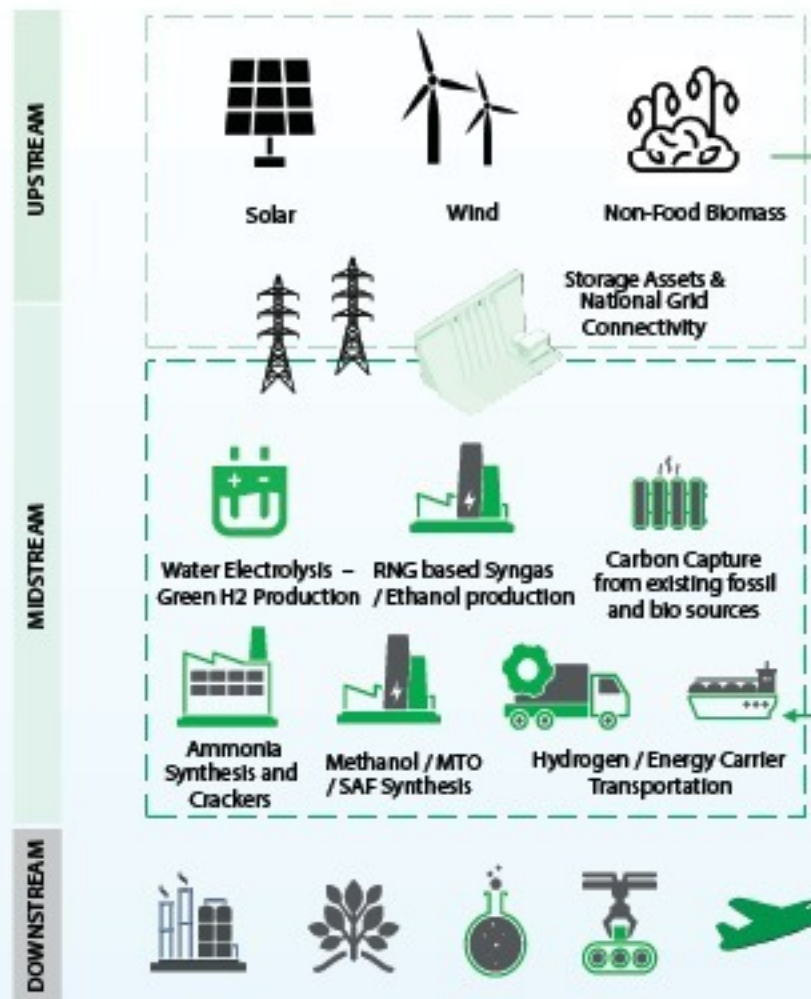
SECI MW Peak Power	Green Steel	RE IPPs	Green H <sub>2</sub> / Ammonia	Ancillary Service
Peak power supply to Rajasthan, DVC & Bihar	Green steel production in Arcelor Mittal's Gujarat steel plant	Third party services for their storage and energy firming needs.	Production of Green Hydrogen, Green Ammonia and Green Methanol to export across the World	<ul style="list-style-type: none"> <li>Frequency regulation</li> <li>Voltage Regulation</li> <li>Black start service</li> <li>Inertial response</li> </ul>

# Energy Transition: AM Green's New Global Architecture

Traditional Energy Value Chain



New Energy Value Chain





## AM GREEN AMMONIA

Green Ammonia production involves a sustainable process that utilises renewable energy sources. Unlike conventional ammonia production, which relies on fossil fuels and emits significant carbon dioxide, Green Ammonia production generates zero-carbon emissions.

Ammonia is crucial for fertilisers, plant nutrition, and various industrial processes, including plastics, explosives, and cleaning agents production.

Additionally, ammonia efficiently stores excess renewable energy and releases it to stabilise the grid, ensuring a steady energy supply. It can also be converted back into hydrogen for electricity generation.

## Green Ammonia Projects



5 MTPA of Green Ammonia  
production capacity by 2030

# AM Green's Unique Green Molecule Platform



# AM Green Molecules



## Green Hydrogen

AM Green is revolutionizing clean energy with zero-emission hydrogen production.

- **Production:** Using 24/7 CFE
- **Applications:** Transportation fuel, industrial feedstock, energy generation, and storage.
- **India's first Green Hydrogen installation at NRL, Numaligarh enabling 2.4 KTPA Green H<sub>2</sub> production.**



## Green Caustic Soda

AM Green is driving sustainable industrial processes with green caustic soda production.

- **Production:** Eco-friendly electrolysis of brine, powered by renewable energy.
- **Applications:**
  - **Chemical Manufacturing:** Various sodium salts, dyes, pharmaceuticals
  - **Industrial Solvent and Cleaning Agent**
  - **Catalyst in biodiesel production**
  - **Crude oil refining**



# WORLD'S FIRST AND LARGEST INTEGRATED GREEN INDUSTRIAL ZONE

Kakinada, Andhra Pradesh





**Green Ammonia**  
1+ MTPA\*

**Green Hydrogen**  
90 KTPA\*

**Electrolyser Manufacturing**  
2GW\*

**SAF**  
150 KTPA\*

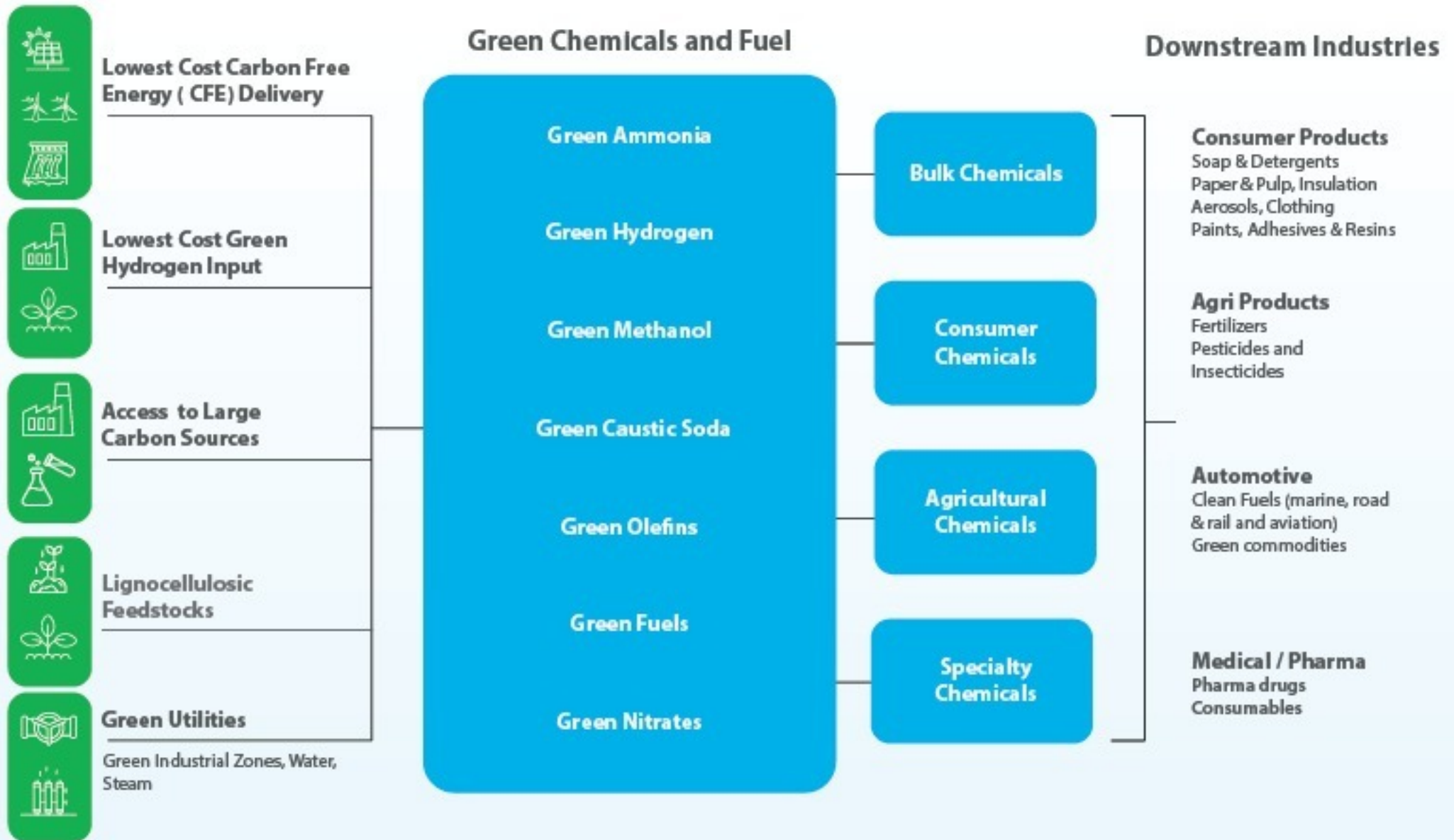
**Green Olefins**  
0.2 MTPA\*

**Pharmaceutical APIs**  
0.1 MTPA\*

**Green Utilities**  
Power  
Steam  
Raw Water  
Effluent Treatment Plant  
Chemicals

**Green Ammonium Nitrate**  
200 KTPA\*

# AM Green : Unique Architecture & Low Cost Advantage



# AM GREEN FUELS

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The energy sector faces a critical challenge with rising carbon emissions and reliance on traditional fossil fuels. This not only impacts our environment but also hinders progress towards global sustainability goals. AM Green is addressing this pressing issue with its innovative green fuels, derived from sustainable and renewable sources.

Our Sustainable Aviation Fuel (SAF) and green methanol significantly reduce carbon emissions, offering cleaner alternatives that are meeting the growing demand for carbon-free solutions in both aviation and industrial sectors. By leveraging cutting-edge technologies and renewable resources, AM Green is making substantial strides in decarbonising multiple industries.



## Sustainable Aviation Fuel

Our Sustainable Aviation Fuel(SAF) offers a renewable alternative to conventional jet fuel, reducing carbon emissions and enhancing environmental sustainability in aviation.



## SAF Projects



\*Proposed Projects



# SAF Architecture



## AM Green's SAF Strategy

### 1.5G Fuel

- Start supply with molasses-based ethanol feedstock
- Proven Alcohol to Jet process

### 2G / FT Fuel

- Gradually shift from 1.5G based feedstock to 2G lignocellulosic feedstocks
- Establish ethanol supply partners
- Scale up for international distribution
- Ramp-up FT process with bio-CO2 as 2G ethanol stabilizes to cater to increasing premiumized demand

### Drop in Fuel

- Integrate aromatics into linear molecule SAF to make 100% drop-in fuel
- Work with ASTM/ existing OEMs to get drop-in fuel approved

The only green fuels platform to provide 100% drop-in aviation fuel





## AM Green Methanol

AM Green is leading the production of green methanol, leveraging renewable resources such as biomass and industrial emissions to create a clean fuel that reduces greenhouse gases and supports a circular economy. Utilized in marine and automotive transport, chemical production, and power generation, green methanol demonstrates its adaptability across industries, enhancing AM Green's role in sustainable innovation. Its use in existing engines and olefin production underscores its transformative potential in the energy and chemical sectors. Integrating green methanol into AM Green's offerings furthers our sustainability objectives, converting environmental waste into valuable energy.

# AM GREEN TECHNOLOGY & SOLUTIONS

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## Aviation Fuel Equipment Manufacturing

AM Green is at the forefront of manufacturing cutting-edge equipment essential for the efficient and sustainable production of Sustainable Aviation Fuel (SAF). AM Green offers a comprehensive range of manufacturing solutions, including dehydration reactors and oligomerization reactors, crucial for processing renewable feedstocks efficiently. The in-house manufacturing capabilities combined with the usage of modular design allows for flexible and scalable systems.

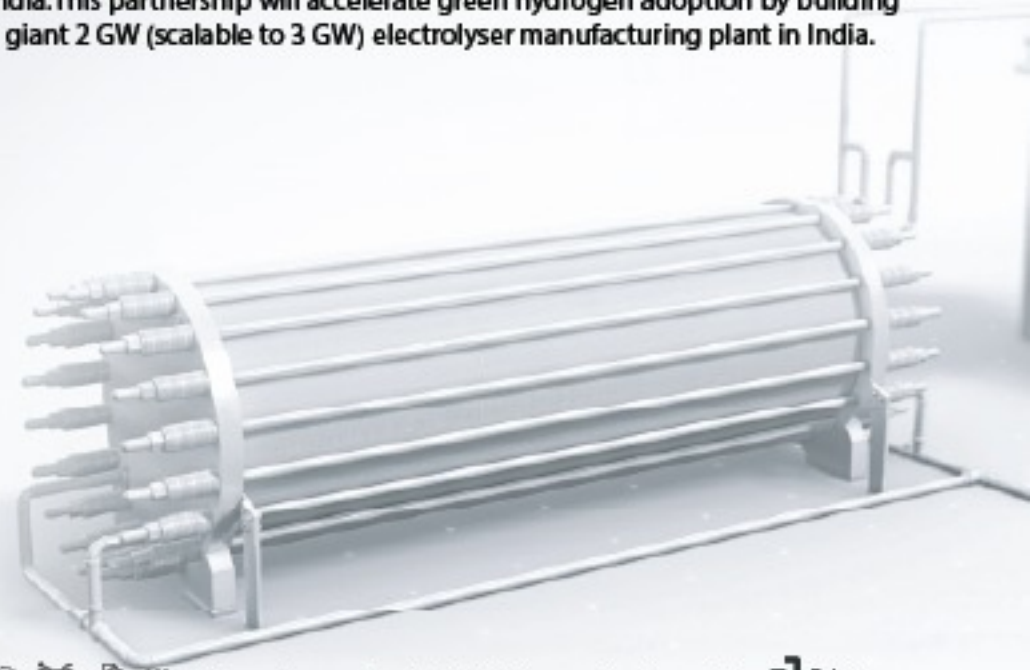
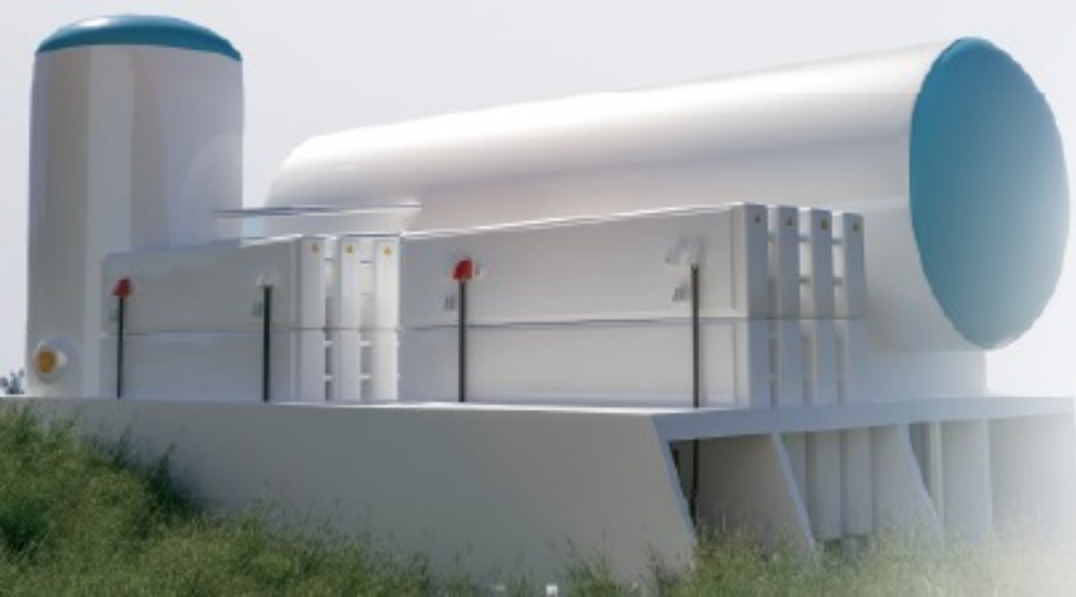
Additionally, our proprietary catalysts are capable of producing best-in-class yields. With its extensive range of equipment, AM Green is dedicated to fostering innovation and excellence in the aviation sector, all while adhering to EU-RFNBO standards.

## Electrolyser Manufacturing

Electrolysers split water using electricity (water electrolysis) to create green hydrogen, a clean alternative fuel that reduces carbon emissions. Integrating electrolyzers across various sectors like transportation, industry, and power generation facilitates a smooth transition to a low-carbon future.

Advancing hydrogen technologies fosters economic growth, creates jobs, and promotes the development of local supply chains and manufacturing facilities.

AM Green partnered with John Cockerill, a Belgium-based leader in high-capacity alkaline electrolyzers, to develop hydrogen electrolyzers in India. This partnership will accelerate green hydrogen adoption by building a giant 2 GW (scalable to 3 GW) electrolyser manufacturing plant in India.



Partnership with World's Largest electrolyser OEM



# AM GREEN INTERNATIONAL

AM Green International is developing capabilities for setup of renewables, PSPs and green molecules across strategic locations in the U.S., Europe and other regions globally. Leveraging local renewable resources and benefits including the Inflation Reduction Act (IRA) in U.S., these projects will optimize production and distribution logistics, enhancing operational efficiency. This strategic placement ensures AM Green delivers economically viable and environmentally sustainable energy solutions, significantly contributing to industrial decarbonisation and supporting the global shift towards a low-carbon economy.



## M&A and GreenField Opportunities Identified : International Renewables PSPs & Molecules Projects



Targeted project development across states with key evaluation parameters around grid availability, resource rich states, availability of licenses/approvals etc.



Electrolyzer shipment Installations from John Cockerill—JV and JC Global Supply chain



Opportunistic project development across Hydrogen hubs, RE potential areas, Ammonia pipelines, Strategic partner offtake sites



Primary Focus on US and Canadian markets (North America and European Union Focus)



Optimal utilization of Inflation Reduction Act (IRA) benefits

# GREENKO SCHOOL OF SUSTAINABILITY AT IIT HYDERABAD

Greenko Doctoral fellowships already started in Jul-23

Research proposals with Govt. of India on key topics across green steel, green ammonia etc.

Masters in Technology in Sustainable Engineering with graduation in Apr-25

Research collaborations across US and Germany in the fields of sustainability and transformative chemistry

Bachelors in Technology with Sustainable Engineering focus to be launched next year

Support to ~100 student entrepreneurs with mentorship, capital support under BUILD program



*am green* 

[www.amgreen.com](http://www.amgreen.com)