



Accelerating Toward a Carbon Free Economy

# The Optimized Deployment of Clean Ammonia Production



<https://flexih.energy/>







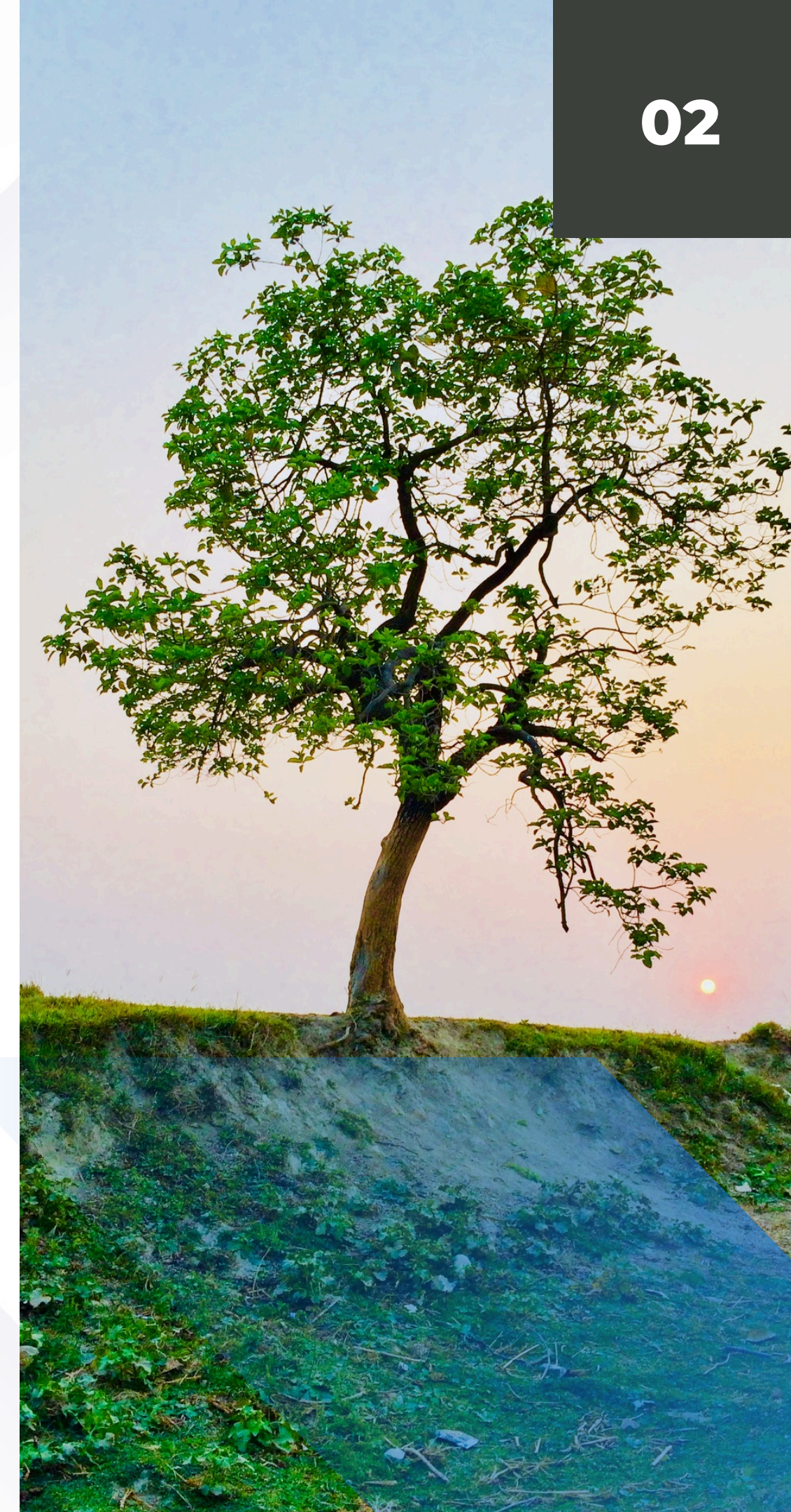
# About the Company

## Revolutionizing Industrial Decarbonization

Our breakthrough technology captures and neutralizes carbon emissions at the source under mid-air atmospheric pressures, reducing costs while enhancing sustainability and operational efficiency for a cleaner, greener future.

## Value Proposition

We provide cost-efficient, eco-friendly energy solutions through clean ammonia production, supporting the hydrogen economy and offering scalable and sustainable alternatives with minimal environmental impact.





# Major Constraints

Industrial Decarbonization & Hydrogen Economy

## NH<sub>3</sub> as One of the Major CO<sub>2</sub> Emitters

Direct emissions from NH<sub>3</sub> are estimated at 450 Mt of CO<sub>2</sub>/year, while 90% of global NH<sub>3</sub> is produced using Haber Bosch process requiring pressures 150-250 bar.

## Centralized Production

Vulnerable to disruption, less flexibility to local markets (ex. California H<sub>2</sub> refueling case Sept 2023).

## Limited Infrastructure

Higher transportation cost, increased inventory cost, increased risk of supply chain disruption.



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# Clean Ammonia for On-Site Hydrogen Generation

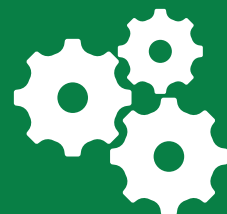


## Innovative Approach

- **Abundant Free and Flexible Feedstock**  
Free Air (Nitrogen) and Renewable Steam
- **Scalability**  
Electrodeless plasma system ensures reliable operation, successfully applied in 3 MW plant
- **Decentralized Production**  
On-site hydrogen production through matured ammonia infrastructures allows localized energy solutions



# Results Lower Cost



Current commercial scale production  
\$1.50 - \$2.00 per kg.



Compression, distribution & storage  
\$6.00 - \$10.00 per kg.



Overhead & low demand  
\$6.00 - \$10.00 per kg.

Current Commercial Cost:  
\$13.50 - \$22.00 per kg.

Our Cost:  
< \$5.50 per kg.





# Market Opportunity

## Market Growth

Global ammonia market is projected to exceed \$110 billion by 2028, while the hydrogen economy is expected to surpass \$1.4 trillion by 2050.

## Transportation

Innovations in fuel cell, hydrogen, and ammonia combustion engines are transforming the automotive industry, driving the future of zero-emission mobility.

## Decarbonization

Breakthrough technologies like direct carbon capture are accelerating the transition to cleaner, more sustainable industrial processes.



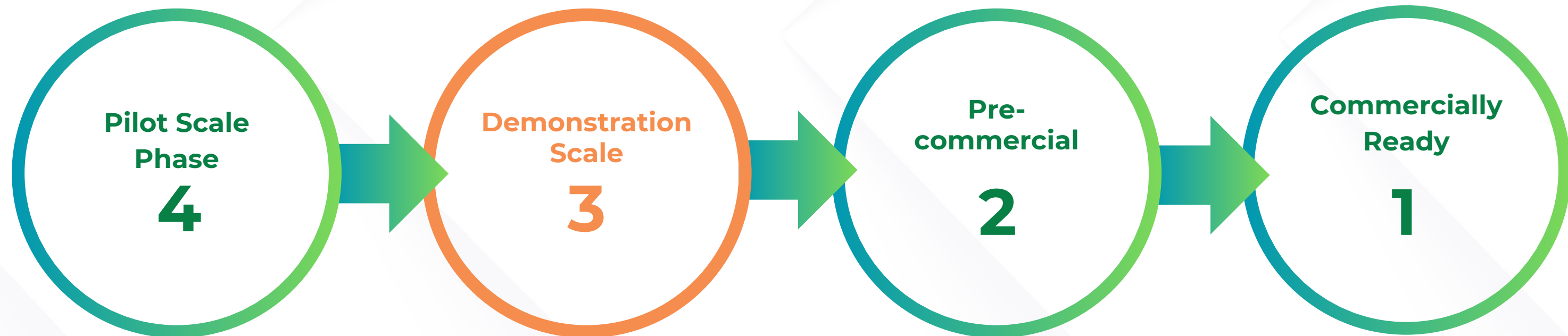
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# Competitive Analysis

FlexiH is in the Demonstration Scale phase and advancing rapidly toward the Pre-commercial Phase, driving market readiness.





# Downstream Product Capability

Free Air / Nitrogen



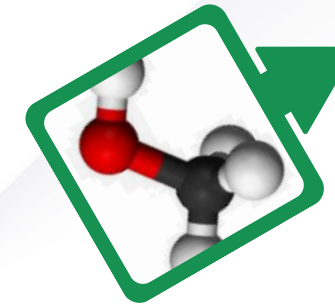
**E-Ammonia**

FlexiH **carbon neutral** synthesis from N<sub>2</sub>/air and steam at 1 atm.



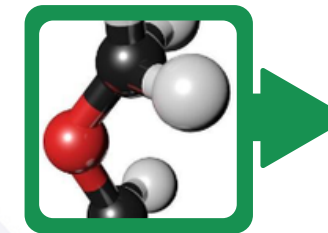
**E-Hydrogen**

FlexiH **carbon-neutral** synthesis process at 1 atm. Used for fuel and primary building block of other chemicals.



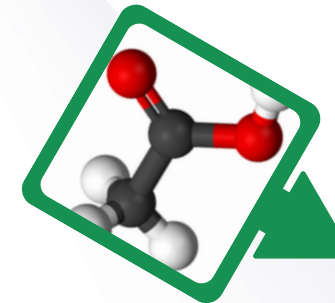
**E-MeOH**

FlexiH **carbon negative** synthesis from H<sub>2</sub> and CO<sub>2</sub>. Used for solvent, chemical reagent, and fuel.



**E-DME**

FlexiH **carbon negative** synthesis from H<sub>2</sub>. Used for solvent, fuel, and propellant.



**E-Acetic Acid**

FlexiH **carbon negative** synthesis from MeOH, CO<sub>2</sub> and H<sub>2</sub>. Used for plastics production.



Renewable Steam



**Flexi**





# Product Development Roadmap

## PS100

Modular Unit Supporting  
Various Applications



Global Player in the Carbon Free Economy



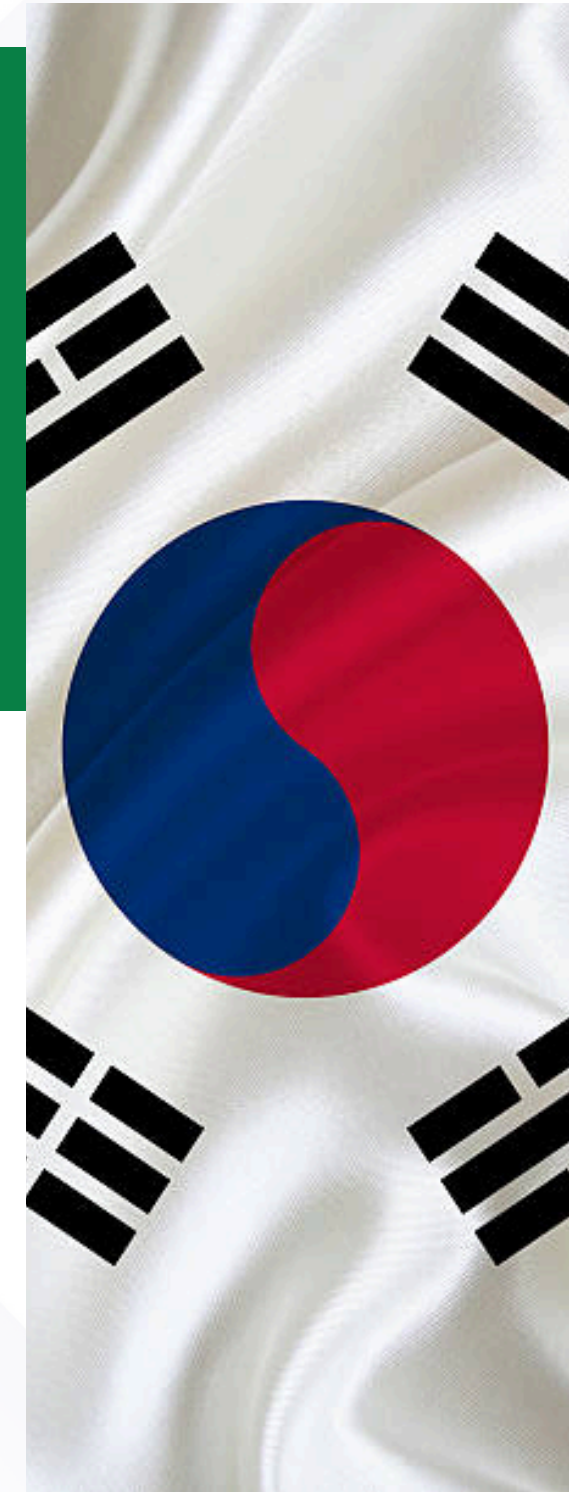
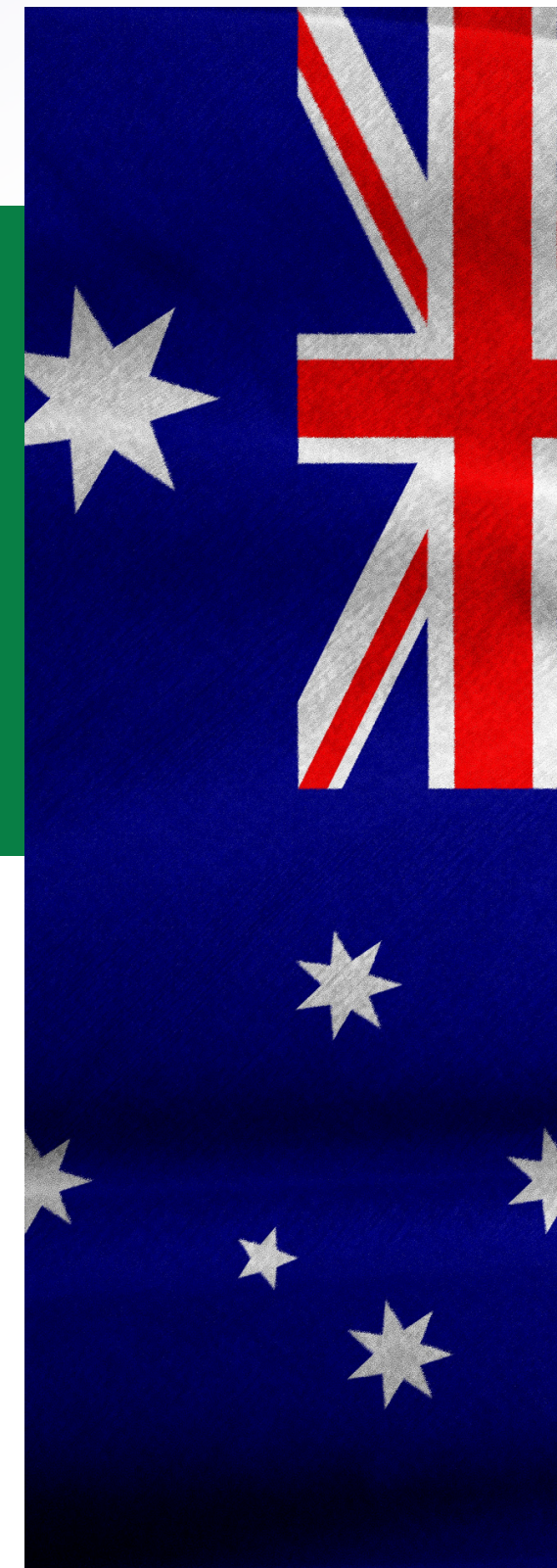


# Core Market Adoption

Countries such as Australia, South Korea, Indonesia, and several European nations are rapidly adopting Electrodeless Microwave Plasma technology, driving innovation across industries.



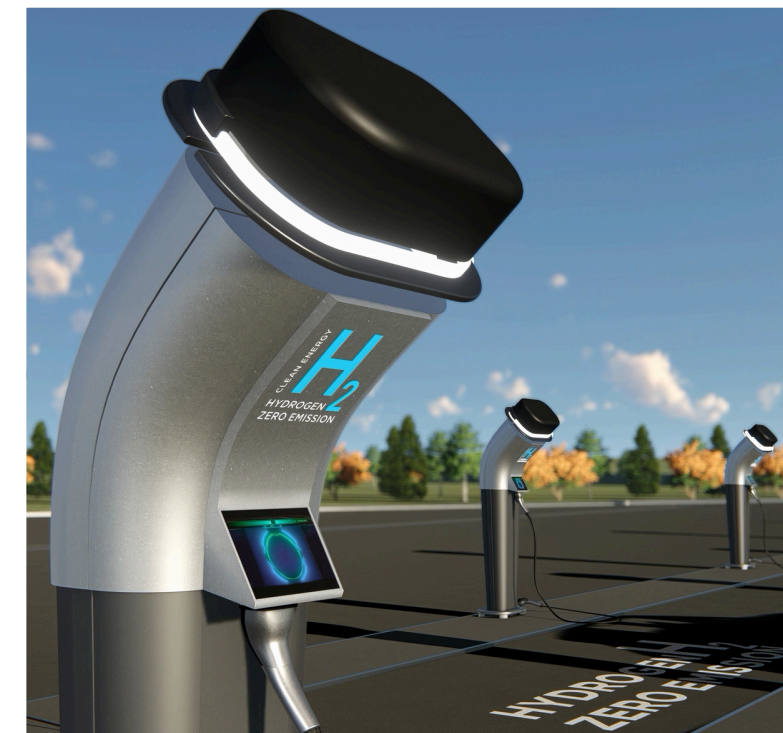
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## B2B Solutions

- Hydrogen Fuel Stations - fuel cell electric vehicles
- Renewable Energy Companies - storage and grid balancing
- Industrial Manufacturers - clean energy applications
- Chemical and Petrochemical Companies - sustainable processes
- Agriculture - cleaner ammonia production





# — Our Team



**CEO**

**Natarianto Indrawan**  
**Founder**

PhD in Env Science,  
20 Years' Experience in  
Power and Energy



**COO**

**Prakashbhai Bhoi**  
**Co-Founder**

PhD in Mechanical Eng.  
20 Years' Experience in  
Syngas Production



**CMO**

**Tarek Addwebi**

PhD in Science,  
10 Years' Experience in  
Scaling Labs, EU & US



**CFO**

**Salman Alam**

BS in Science,  
15 Years in Corporate  
Finance and Bus Dev.





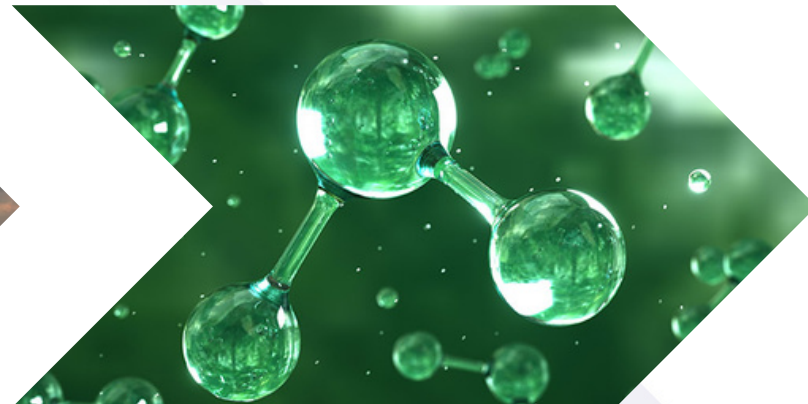
# Funding Requirements

Expenses	Estimate
Tech and Product	2,700,000
Design and Construction	1,350,000
Business Operation and Marketing	135,000
Overhead	1,490,000
<b>Total</b>	<b>5,675,000</b>





# Thank You



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