

THE INDUSTRIAL CARBON BLUEPRINT

Transforming CO_2 and Phosphogypsum Liabilities into Infrastructure-Grade Yield

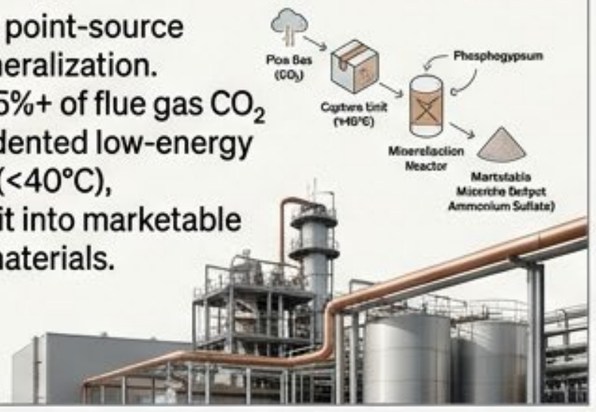
Executive Summary: The Shift from Cost to Yield

The Thesis

Airovation transforms the world's largest environmental liabilities—industrial CO_2 and toxic phosphogypsum—into a decentralized, high-margin manufacturing platform that subsidizes the cost of green/blue hydrogen.

The Technology

Proprietary point-source circular mineralization. Captures 95%+ of flue gas CO_2 at unprecedented low-energy thresholds (<40°C), converting it into marketable industrial materials.



The Market

Penetrating a $821.6B building materials market (Calcium Carbonate) and a $285B fertilizer market (Sulfuric Acid/Ammonium Sulfate).

Building Materials Market: **$821.6B**

Calcium Carbonate

Fertilizer Market: **$285B**

Sulfuric Acid/Ammonium Sulfate

Unit Economics

Generating $109–$159 Net Profit per ton of CO_2 captured, fundamentally decoupling decarbonization from subsidy reliance.

Net Profit per ton CO_2	$109–$159 ↗

Project Returns

Demonstrating a 24.9% Equity IRR and 36.9% EBITDA margins on standard 100k-ton commercial facilities.

Equity IRR

24.9%

EBITDA Margins

36.9%

Commercial Traction

De-risked 2.0M ton global pipeline secured with Tier-1 conglomerates including ICL, Marubeni, Prayon, and NewMed Energy.



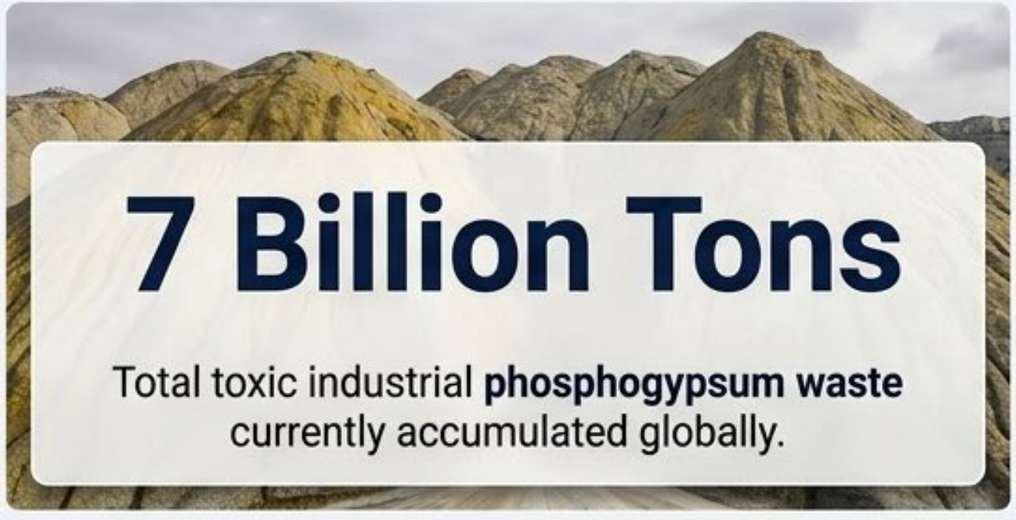
ICL | Marubeni | Prayon | NewMed Energy

The Dual Liabilities Stalling the Energy Transition



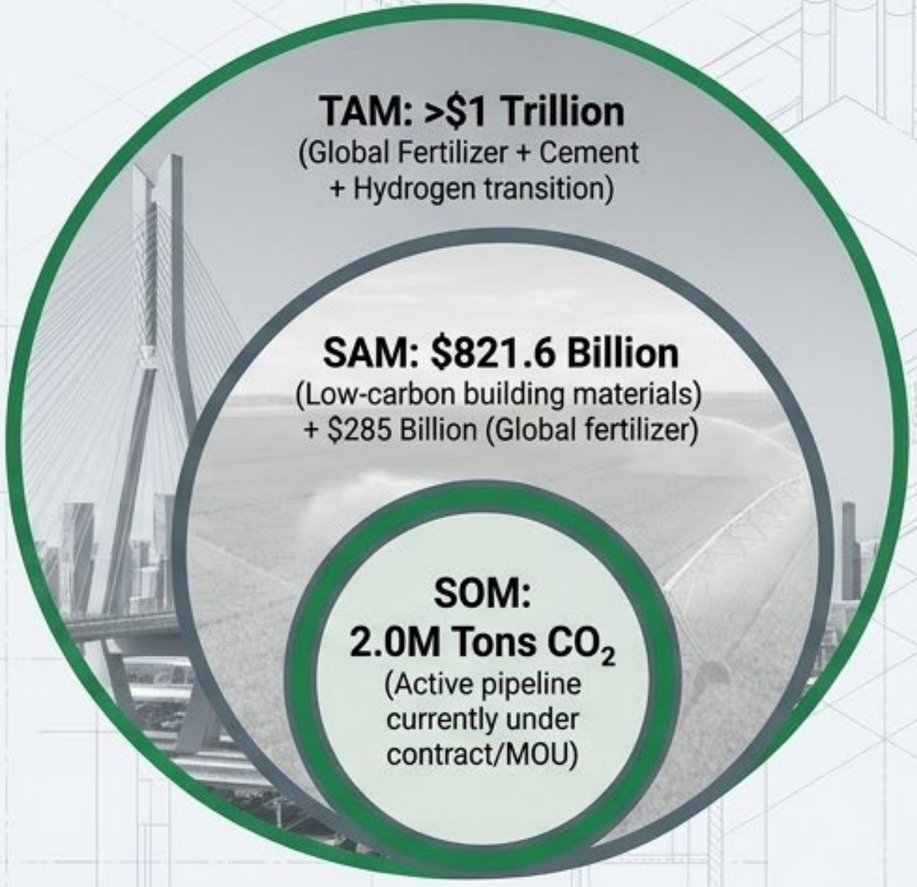
1.2 Billion Tons

Annual CO_2 emitted globally strictly as a by-product of Grey Hydrogen production (8–10 tons of CO_2 emitted for every 1 ton of H_2).



7 Billion Tons

Total toxic industrial **phosphogypsum waste** currently accumulated globally.

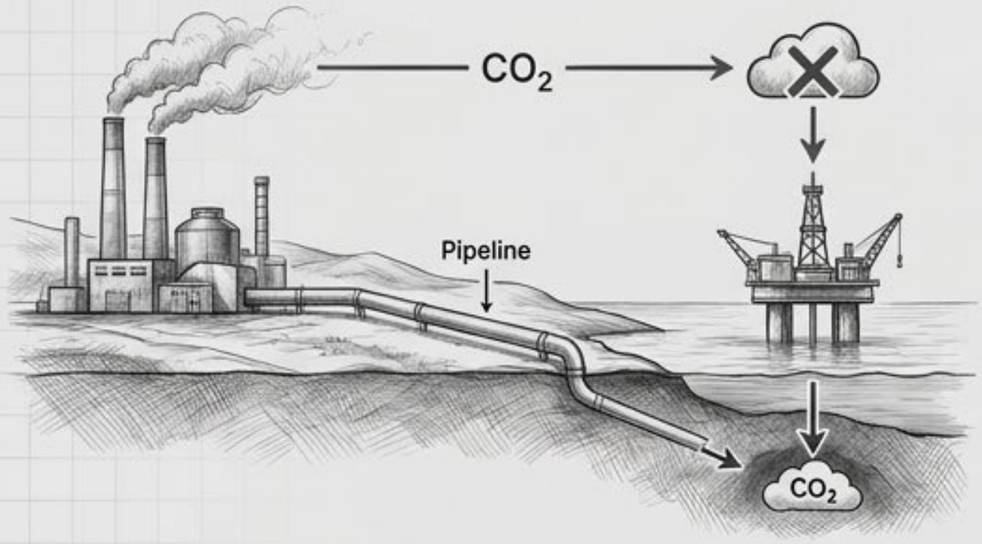


The Economic Barrier

Low-carbon hydrogen remains economically unviable without massive, unsustainable government subsidies. Heavy industry, representing 22% of global emissions, is stalled.

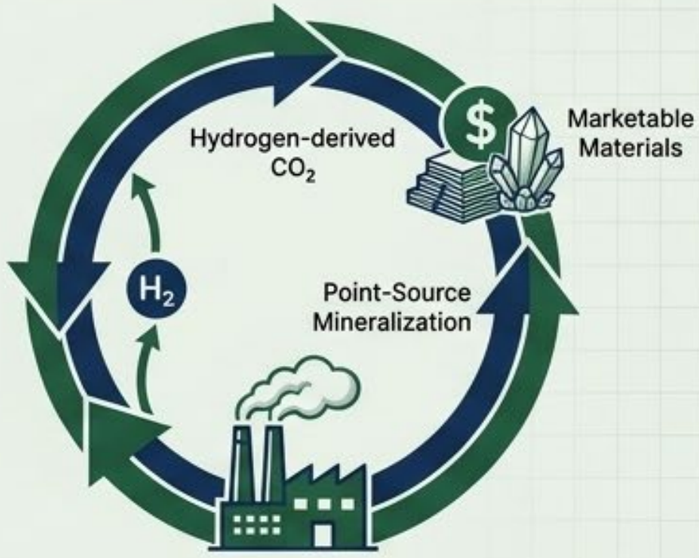
The Paradigm Shift from Subsidized Cost to Structural Profit

The Flawed Status Quo (Traditional CCS/DAC)



- **Financial Model:** Linear waste disposal. A pure, perpetual cost center.
- **Unit Economics:** Requires >$100–$200 cost per ton of CO_2.
- **Infrastructure:** Ties up massive capital in dedicated transport pipelines and underground storage risk.
- **Vulnerability:** 100% dependent on fluctuating government subsidies and carbon tax credits to survive.

The Airovation Paradigm



- **Financial Model:** Point-source circular manufacturing. A verifiable profit center.
- **Unit Economics:** Generates **$109 to $159** Net Profit per Ton of CO_2 Captured.
- **Infrastructure:** On-site factory integration. Zero transport pipelines or deep-well injection required.
- **Vulnerability:** Profitable strictly on industrial commodity offtake. Carbon credits provide pure upside margin.

The Mineralization Engine and Intellectual Property Moat

The Inputs



Flue Gas
achieving 95%+ capture efficiency directly from the source

1 Ton of CO_2



Phosphogypsum Waste
utilizing legacy toxic accumulations

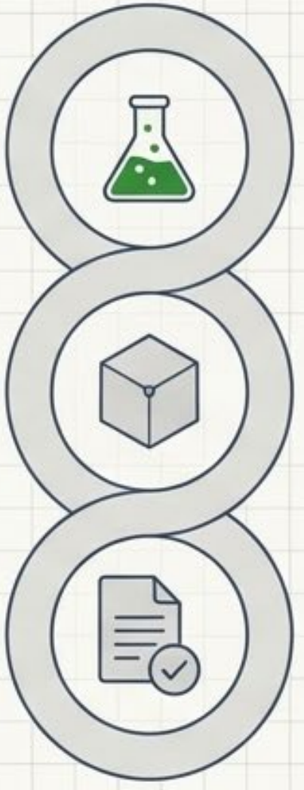
3.1 Tons of Phosphogypsum Waste



The Process

Proprietary carbonation and thermal decomposition operating at highly efficient, low-energy thresholds (<40°C reactions)

The Outputs



2.1 Tons of Low-Carbon Sulfuric Acid

2.3 Tons of Low-Carbon Calcium Carbonate

0.7 Tons of Verified Carbon Credits

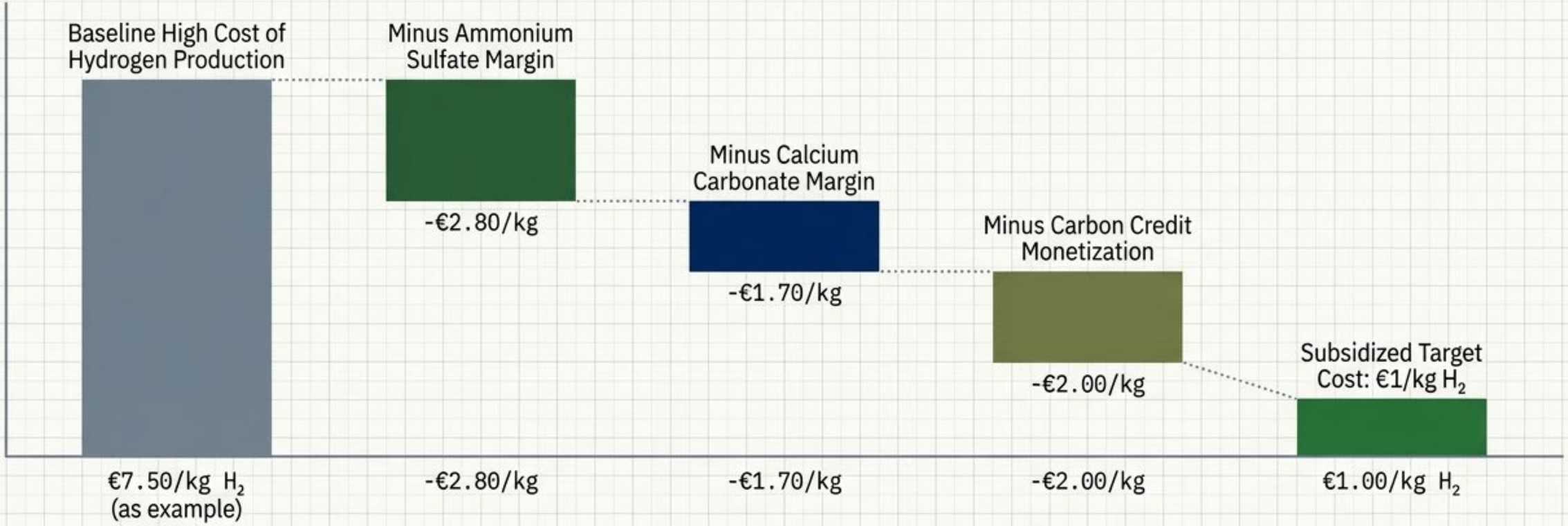
Unrivaled Global Benchmark

300 kg CO_2 footprint per ton of carbon captured. Independently validated by Solar Impulse, EU Horizon 2020

Diluting OPEX to Unlock €1/kg Low-Carbon Hydrogen

The Hydrogen Challenge

"Standalone low-carbon hydrogen cannot achieve price parity with fossil fuels without massive external funding."

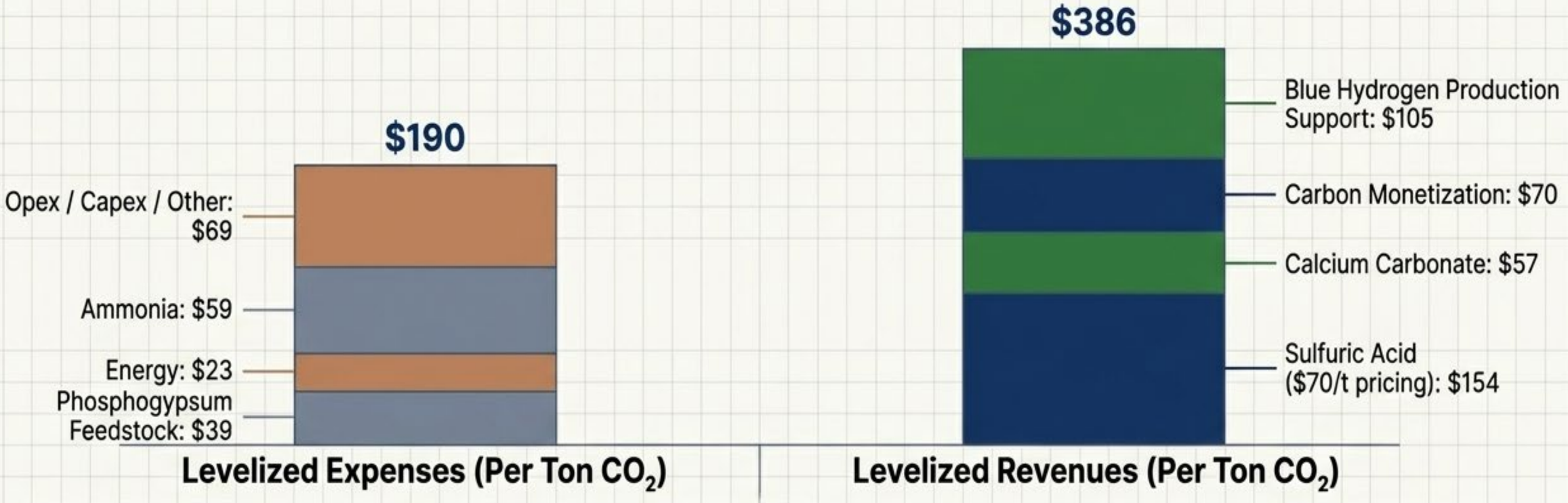


Strategic Outcome: By intelligently allocating CAPEX and distributing OPEX across all generated material products, hydrogen transitions from a standalone commodity into the strategic anchor of a highly profitable ecosystem.

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Standardized Unit Economics: The 100,000 Ton Commercial Blueprint

Baseline Facility Profile: Assumes 100,000 tons of CO_2 captured and processed annually.



Net Margin: Generating $109 to $159 Net Profit per ton of CO_2 processed.

Project-Level Financial Profile (SPV View)

5-Year Average P&L (100k Ton Facility)

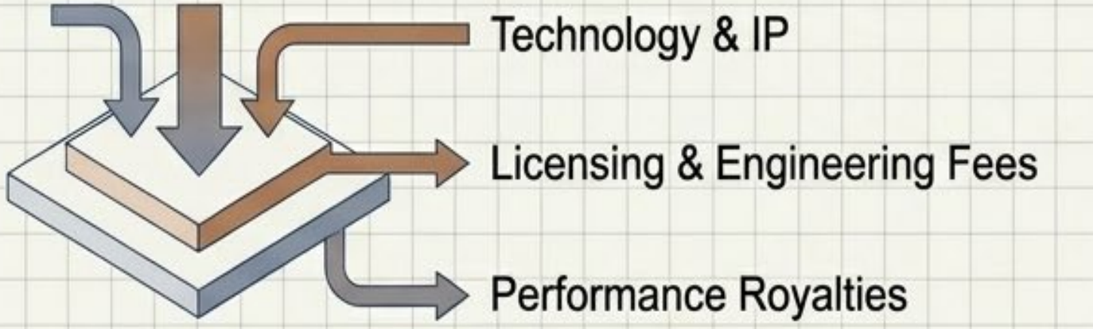
Revenues:	**$~58,228,000 annually**	
Operating Costs:	**Total $36,746,000**	
Material Costs:	$~21,415,000	58.3%
Energy Costs:	$~5,181,000	14.1%
Maintenance:	$~3,932,000	10.7%
Labor:	$~3,895,000	10.6%
Other:	$~2,323,000	6.3%
Yield Metrics		
EBITDA:	$~21,482,000	36.9% Margin
Free Cash Flow:	$~14,210,000	24.4% CF Yield

EBITDA	Free Cash Flow	Equity IRR	Project NPV (@10%)
$~21,482,000 (36.9% Margin)	**$~14,210,000** (24.4% CF Yield)	**24.9%**	**$~100,187,000**

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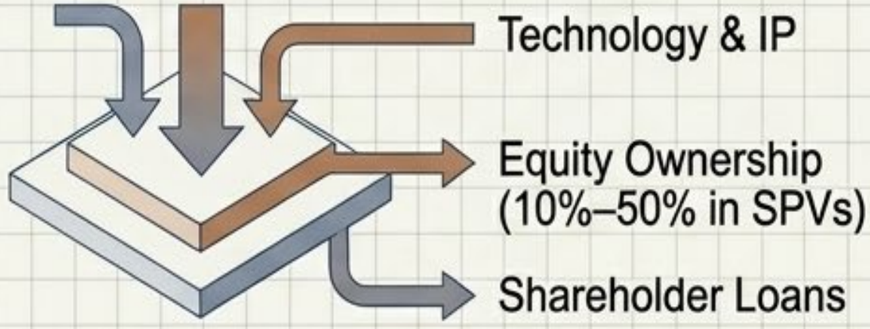
Airovation Corporate Business Model & Capital Structure

Model A: Asset-Light Expansion (Licensing & Engineering)



- **Mechanism**: Upfront technology licensing, engineering fees, and recurring performance royalties.
- **Profile**: Extremely high margin, **infinite ROIC**, allowing rapid global scaling through EPC partners like GS E&C and JGC.

Model B: Asset-Heavy Ownership (DevCo Equity & SPVs)



- **Mechanism**: Airovation converts a portion of its royalties and licensing fees into 10%–50% equity ownership in project SPVs.
- **Profile**: Secures massive, recurring **EBITDA** and builds long-term tangible asset value on the balance sheet.

The Partnership Ecosystem


Natural Gas Producers


Fertilizer Giants

Balance Sheet Capital

Technological Unlocking Mechanism


Airovation

Natural gas producers and fertilizer giants provide the balance sheet capital; Airovation provides the technological unlocking mechanism.

De-Risked Commercial Traction: The 2.0M Ton Global Pipeline

De-Risked Deployment Map



Region	Strategic Partners	CO_2 Capacity Potential	Project Status
Israel & Middle East	ICL, NewMed Energy	Up to ~1,000,000 t CO_2	Commercial agreements signed
Korea & Asia-Pacific	GS E&C, Namhae Chemical	Up to ~300,000 t CO_2	Framework agreement
Japan & Asia-Pacific	Leading Japanese Corporations under the NEDO Program	Up to ~300,000 t CO_2 by 2030	Collaboration / MOU
Europe (Belgium Launchpad)	Prayon	Up to ~200,000 t CO_2	MOU stage
India	Coromandel International	~200,000 t CO_2	MOU signed

Global Recognition:
Officially recognized as 1 of only 13 global finalists for the IFA Cultivate 2026 Challenge, unlocking direct development finance access.

Strategic Geopolitical Catalysts: Europe & Norway

The European Launchpad



- **2 Billion tons** of phosphogypsum exist as accumulated legacy waste across Europe.

Airovation acts as the immediate regulatory solution, turning a toxic burden into a localized **Blue Hydrogen Engine** without requiring new raw material extraction.

Norway: The Future Blueprint



The Strategic Catch: Extracting this asset inherently requires generating a **5-to-1 toxic waste ratio**. Airovation is the mandatory unlocking mechanism required to process this volume cleanly and profitably.

Capital Raise & Value Inflection Architecture

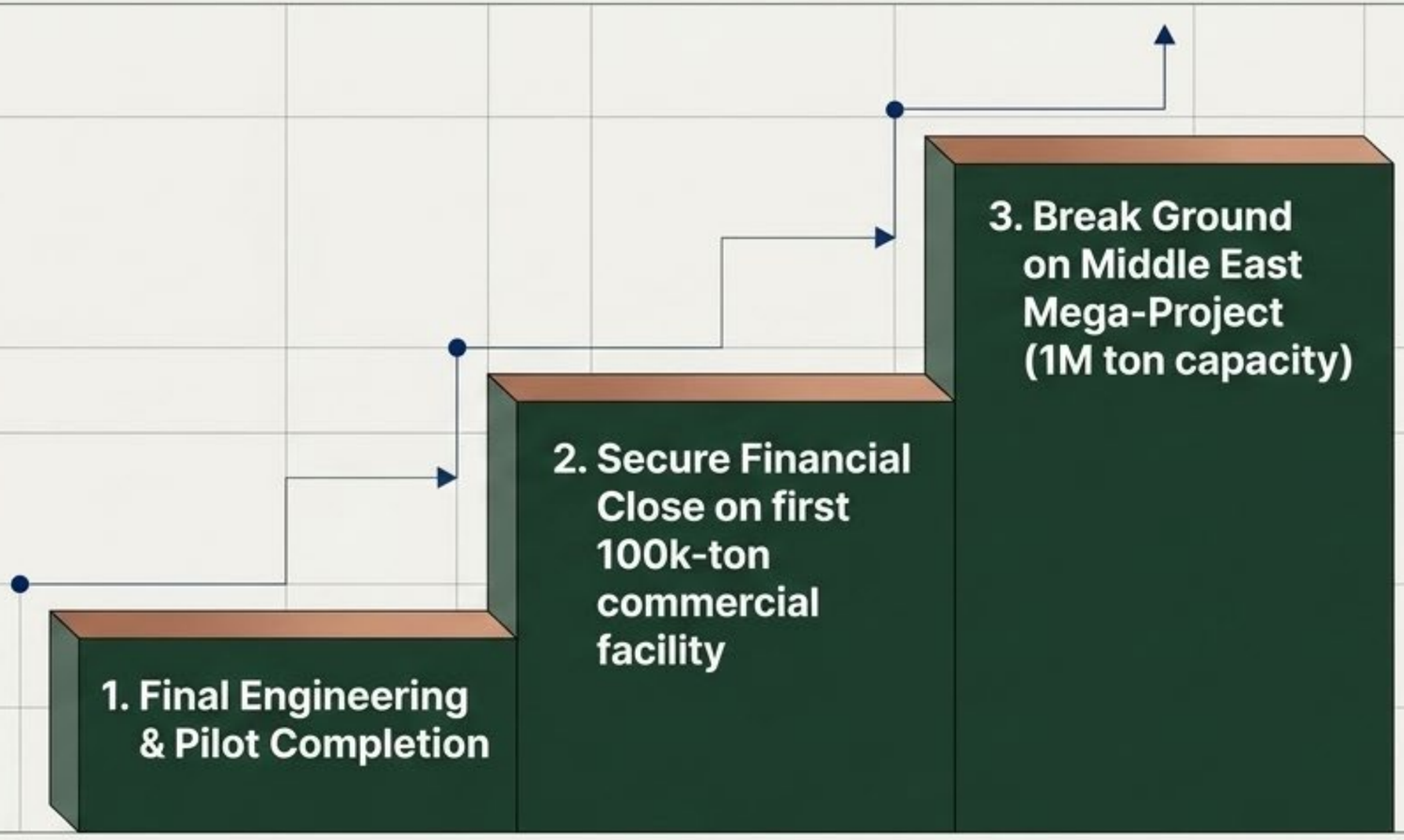
Capital Requirement

$40M

Growth Equity

Use of Proceeds

1. Final engineering and commercial pilot completion.
2. SPV equity co-investment alongside strategic partners.
3. Expansion of global commercial and EPC development teams.



Valuation Methodology

Capitalizing on a blended approach utilizing DCF of secured SPV project cash flows (Infrastructure valuation) combined with standard EBITDA multiples (Specialty Chemicals / Climate Tech).

The Investment Case: Leading the Industrial Carbon Economy

Defensible Proprietary IP

Unrivaled **LCA footprint (300kg)** and **low-energy (<40°C)** thresholds form a permanent economic moat against traditional CCS.

Unprecedented Unit Economics

Generating **24.9% Equity IRRs** and **$109–$159 Net Profit** per ton of CO_2, completely decoupling returns from carbon subsidy reliance.

Diversified Structural Yield

Simultaneously monetizing multiple **billion-dollar markets**: low-carbon building building materials, fertilizers, blue hydrogen, and carbon credits.

Massive Tier-1 Pipeline

2.0M ton active capacity under contract/MOU with the largest energy and chemical conglomerates globally (ICL, Marubeni, GS E&C, NewMed).

Lead the next industrial revolution with Airovation.
Join us in building the future of profitable decarbonization.