Environmental Investment Fund of Namibia | ensuring sustainability

Namibia Green Hydrogen Programme



Namibia's Green Industries reference pipeline

November 2026

NAMIBIA'S POLICY DIRECTION SETS A CLEAR ROADMAP FOR BROADER GREEN INDUSTRIALIZATION – SETTING OUT PRODUCTION AND JOBS TARGETS

Vision 2030 highlights the need to diversify the economy – moving away from a primary-sector led structure toward increasing secondary sector share

National Development Plan 6 names Green Hydrogen a new economic sector – the sector diversification Vision 2030 calls for

Employment targets in NDP 6 require significant private sector project development and progress

Climate Financing concessional capital can
-Accelerate the transition of high emission industries to net-zero emissions practices
-via concessional capital to derisk First-of-a-kind private sector projects
-with impact on employment, skills development and access to finance critical features

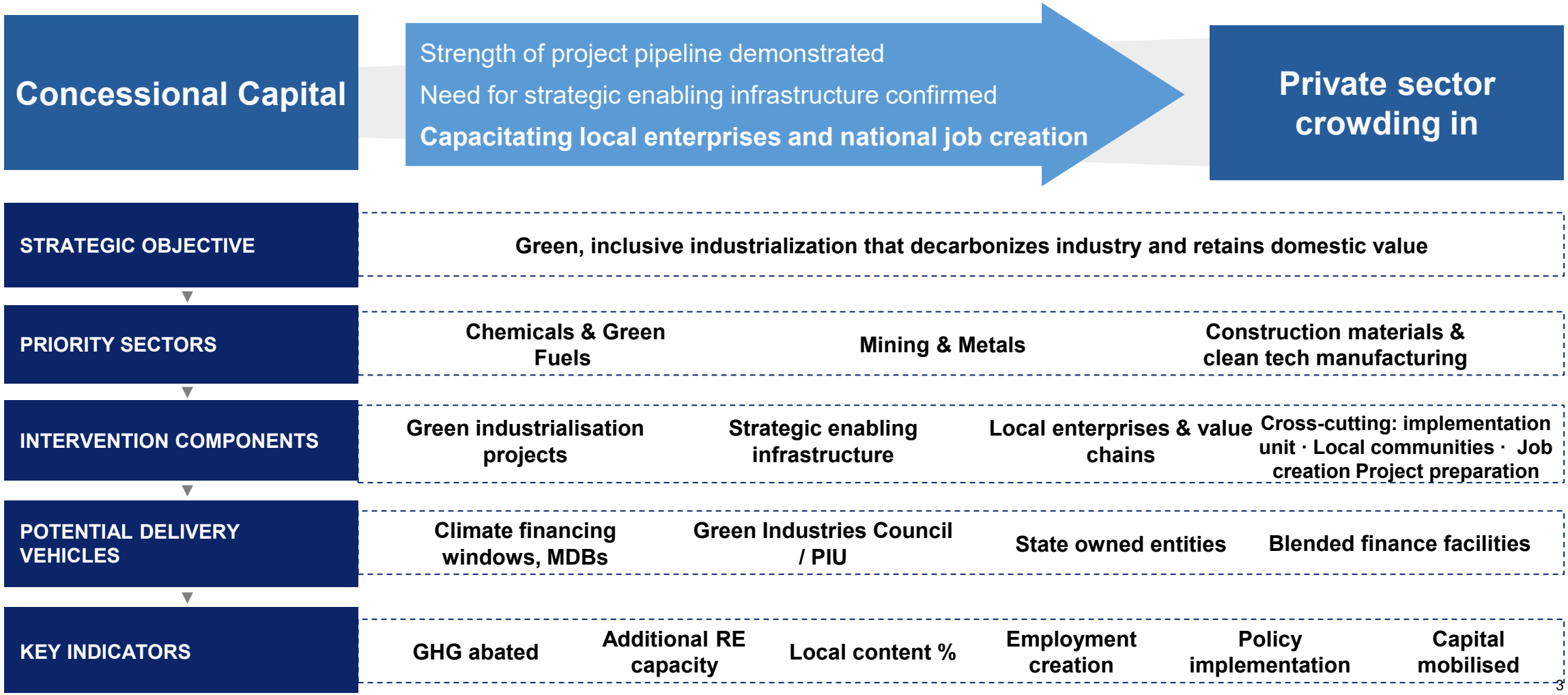
NDP6 Green-Industrial Targets for 2030

1.3MT Green Amonnia p.a.	**2 MT** Direct-reduced iron p.a.
+700 MW Renewable capacity (Baseline 367MW)	**30,000** Green industry jobs
18% Manufacturing Share in GDP	**80,000** Manufacturing jobs

Source: NDP6 (2025)

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Concessional climate financing provides a unique opportunity to transform Namibia's economy through green industrialization



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A structured process was pursued to identify the opportunity universe, invite project information and screen for suitability & readiness to a research pipeline

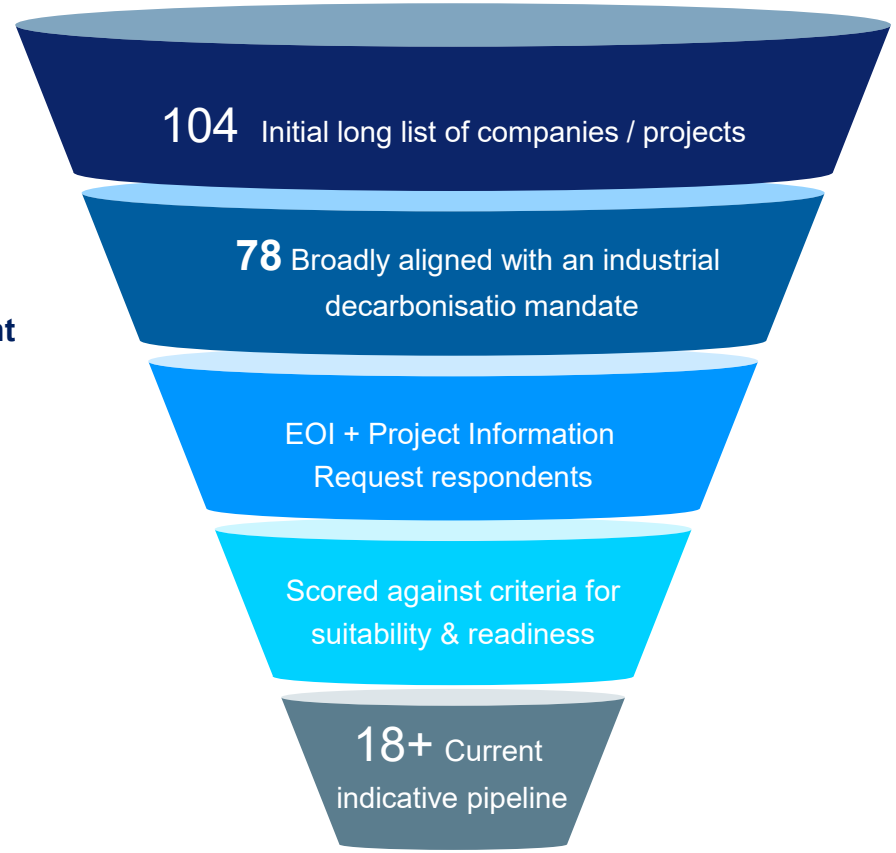
EOI and information gathering process

Open public EOI market scan
The programme issued a broad EOI across the green industry spectrum, covering projects from early concept to FID-ready opportunities, as well as adjacent industrial participants and enabling value-chain actors

High level industrial decarbonisation alignment screening
Projects were screened to identify which opportunities fit an industrial decarbonisation core mandate, and to assess the gap between market interest and an actionable intervention pipeline

PIR and interview-based scrutiny
Aligned projects were invited to submit Project Information Requests (PIR) and participate in detailed interviews, allowing suitability and readiness to be assessed against criteria and near-term FID potential for deep dive research conducted on jobs & skills

An overview of Namibia's dynamic landscape



Key factors considered in line with industrial decarbonisation + impact design

Mandate fit
Alignment with Industrial decarbonisation objectives: green industrialization in hard to abate sectors (Fuel, Chemicals, Construction materials and mining), priority value chains and Namibia's transition pathway

Suitability rationale
Clear case for concessional intervention: climate impact, additionality, market creation, public-good dimension and relevance to hard-to-abate or emerging green industries

Readiness
Evidence that the project can progress toward FID / financial close within the next 24 months: sponsor quality, project definition, site, permits, E&S, offtake and financing pathway

Strategic value
Potential to unlock broader industrial benefits: shared infrastructure, domestic value addition, jobs and skills, MSME participation, export potential and cluster formation.

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The pipeline is categorised into three priority sectors

01 Chemicals & Green Fuels

SUB-SECTORS

- Green hydrogen
- Green ammonia
- E-Methanol
- Fertiliser and biostimulants
- Energy storage
- Bio carbon and bio oil

02 Mining & Metals

SUB-SECTORS

- Green iron
- Critical-mineral beneficiation
  - Copper
  - Zinc
  - Manganese
  - Lithium
  - Rare earths

03 Construction Materials & Clean Tech Manufacturing

SUB-SECTORS

- Glass
- Ceramics
- Other construction materials
- Electrolyser & components assembly
- Solar components
- Wind components

Leveraging the Green Hydrogen ecosystem and creating adjacent sector and value chain spillovers

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Several projects have already delivered on pilot plants reducing the technology risk for the scale stage



CMB Tech — Cleanergy/ Hydrogen Dune
Green ammonia | Walvis Bay

- 10 Ha Solar Park
- 5 MW PEM Electrolyzer
- 5 MWh Battery
- H2 Refueling station
- On site training academy



Hy-Iron Oshivela
Direct reduction Iron | Arandis

- Operating since April 2025
- Phase 1 dimensioned for 15 000 t/yr
- 2 x 6 MW alkaline electrolyzer
- 25 MWp Solar farm
- 13,4 MWh BESS



Daures Green Hydrogen Village
Green fertilizer production | Daures Constituency

- Pilot phase operating since 2025
- 0.25 MW electrolysis capacity, producing 18 t/yr hydrogen and 100 t/yr ammonia
- 500 t/yr agricultural produce grown in parallel under the circular economy / agri-hydrogen model
- Indigenous community participation

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Namibia’s Green Industries reference pipeline - snapshot

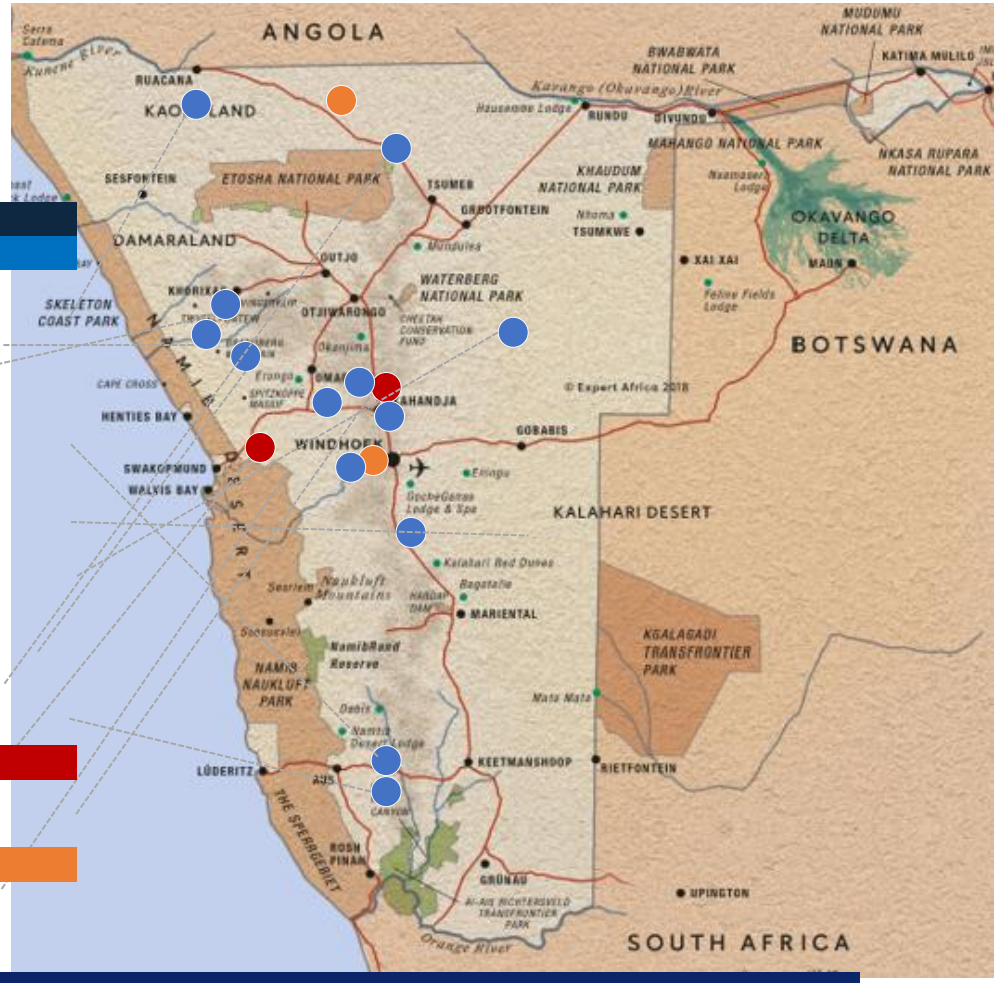
CAPEX colour bands (each its own scale):

- Anchor ≥ US$1bn
- Large US$250–999m
- Mid US$50–249m
- Small < US$50m

Total headline project value of the pool USD 16+ billion

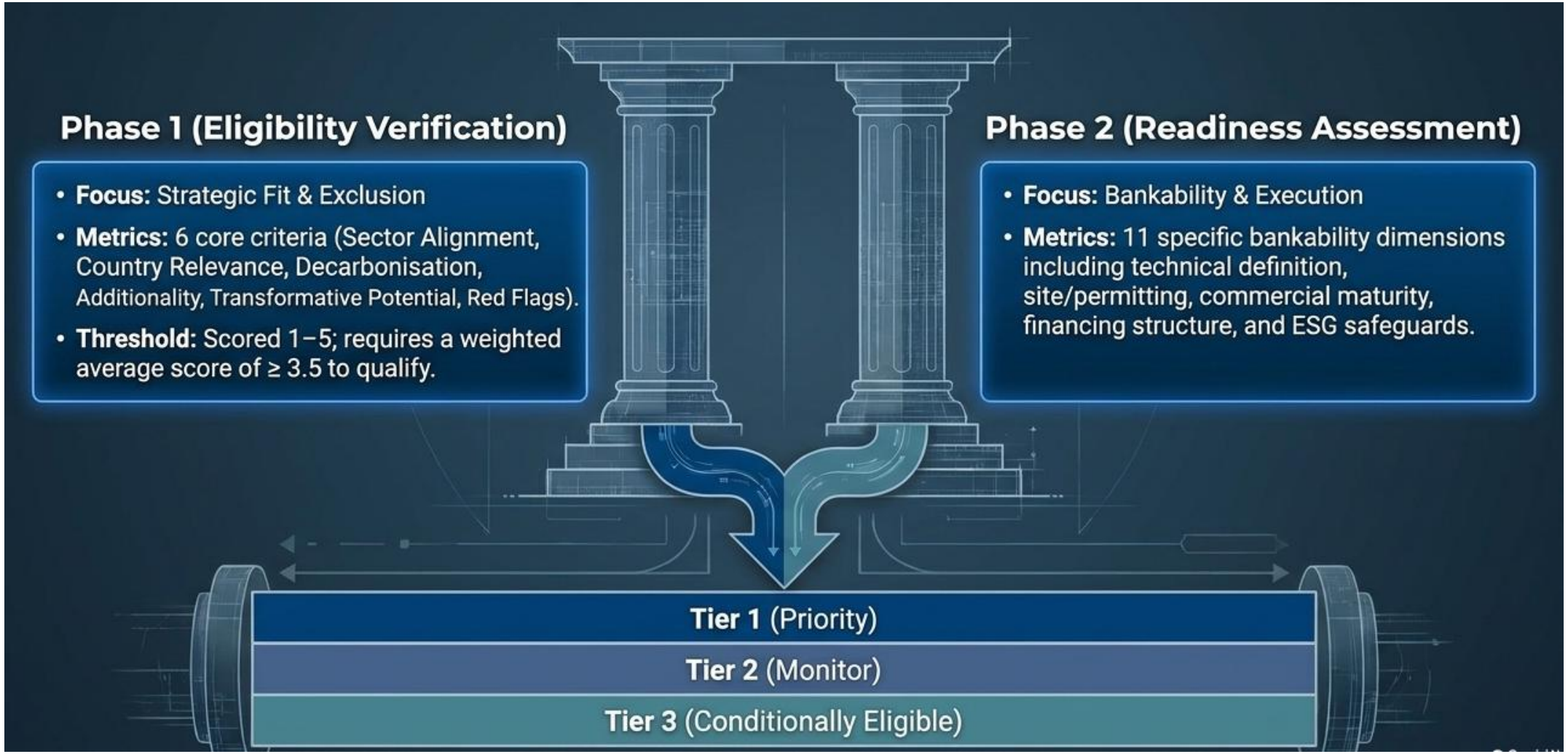
Subject to Due Diligence and external conditions

Project Name	CAPEX	FID Year	Segment / rôle
Chemicals & Green Fuels			
Invicta Hydrogen Systems Limited	Anchor	Wave 2	Green Fuels
Green Brine Technologies CC	Large	Wave 2	Value chain linkage
Hy-ON	Large	Wave 2	Domestic Value Add
Revoenergy	Small	Wave 2	Green Fuels
Hyphen Hydrogen Energy	Anchor	Wave 2	Anchor
Zhero	Anchor	Wave 1	Anchor
Nopal	Anchor	Wave 2	BioCircular Domestic/Value add
Cleanergy	Anchor	Wave 1	Anchor
Hop Hydro	Anchor	Wave 2	Anchor
SKORPION Alternative Fuels	Small	Wave 2	Green Fuels
HDF	Large	Wave 1	Enabling infrastructure
PyroNam	Small	Wave 1	BioCircular Domestic/Value add
Kelp Blue	Large	Wave 1	BioCircular Domestic/Value add
GreenGo Energy	Anchor	Wave 2	Anchor
Mining & Metals			
Green Metals Refining	Large	Wave 2	Critical minerals
HyIron	Large	Wave 1	Domestic Value Add
Construction Materials & Clean-Tech Manufacturing			
Hy-ON (Pty) Ltd	Small	Wave 1	Local capture
Namib Industry Ceramics (Pty) Ltd	Small	Wave 2	Materials



This list is to be read as a snapshot of a moving pool rather than a committed pipeline. Maturity and timing are inherently volatile; sustained project-development support is what converts a fluid pool into bankable, FID-ready pipeline

High level pipeline assessment methodology



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The Green Industries reference pipeline – by grouping & category

Chemicals & Green Fuels

Mining & Metals

Construction Materials & Clean Tech Manufacturing



TIER 1- PRIORITY

Hyphen	Mega scale exporter
Zhero	Mega scale exporter
Cleanergy	Domestic value & manufacturing
HyIron	Domestic value & manufacturing
Hy-ON	Domestic value & manufacturing
Kelp Blue	Bio-circular & agricultural integration
Nopal	Bio-circular & agricultural integration
Daures	Bio-circular & agricultural integration

TIER 2- MONITOR

Renewstable HDF	Advancing renewables & e-fuels
Skorpion	Advancing renewables & e-fuels
Hop Hydro	Advancing renewables & e-fuels
Revoenergy	Advancing renewables & e-fuels
PyroNam	Clean tech assembly & bio carbon
GreenGo	Clean tech assembly & bio carbon
Invicta	Clean tech assembly & bio carbon

TIER 3- CONDITIONALLY ELIGIBLE

Green Brine	Eco-system enablers
Green Metals Refining	Eco-system enablers
Namib Ceramics	Eco-system enablers

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The Green Industries pipeline uses chemicals & green fuel anchor demand to unlock value chains, shared infrastructure and opportunities for local enterprises

Domestic value capture is not automatic, it must be engineered and coordinated. The process pursued by Namibia is such that the eco-system is capable of delivering projects that have a global environmental relevance but also capture significant in-country value.

OPPORTUNITY	BARRIERS	PROGRAMME RESPONSE	EXPECTED TRANSFORMATION
• World class renewable + critical minerals • GH2 anchor demand at scale • Key import markets do not have the land and renewable energy resources to be competitive • First mover export window	• Bankability gap • Infrastructure bottlenecks • Skills, MSME & supplier readiness • Coordination & sequencing challenge	• Green industrialisation projects • Strategic enabling infrastructure • Local enterprises & value chains • Cross-cutting initiatives	• Bankable projects reach FID • Local value retained, not leaked • Jobs, suppliers & skills deepened • A replicable green industrial platform established

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The economic impact of Green Industries sector progressing to FID will be a game-changer for Namibia…



01

Project Revenue

USD 3.4bn total projected revenue, based starting in 5 years post operational stage over 15 years, covering the large-scale GH + anchor projects



02

Economic Impact Multiplier

N$2.9bn Economic impact multiplier on construction spend/ capex based on projects under development to Namibian GDP



03

Government Funding

N$750m of seed funding from SDG N1 fund. Return to GRN of non-reimbursable G2G grant upon Final Investment Decision of projects



04

Construction Cost

USD 12bn of construction spend over 5 - 6 years



05

Local Value Creation

N$2.9bn p.a. opportunity for estimated construction workers during construction phase



06

Job Creation

Up to 11 400 jobs in construction during the next 5 years

And up to 3 375 permanent jobs during project operations

Source: *Namibia Green Hydrogen Programme (NGH2P) economic multiplier analysis; job estimates based on NGH2P assessment / local content model*

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Policy is the conversion layer from endowment to bankability

POLICY / INSTITUTIONAL INSTRUMENT	ROLE IN THE CONVERSION CHAIN	STATUS
Green Hydrogen & Derivatives Strategy	Sets strategic direction & Hydrogen-Valley framing	Adopted
Green Industrialisation Blueprint	Sector roadmap & enabling-infrastructure plan	Adopted
NDP6 (National Development Plan)	Anchors green industry in national development	Current plan
Green Industries Council	Cross-government coordination platform	Operationalising
SEZ framework	Fiscal & investment regime for anchor projects	Expected
Electricity-sector reform	Power-market & grid-access enablement	Expected
SESA / H_2 standards & safety framework	Bankability, certification & ESG safeguards	Pending
Green Industries Policy	turns the roadmap into government priorities, support principles and institutional accountability.	Pending

Reaching project FID still requires operationalising coordination, finalising investment rules and converting policy intent into regulations that create policy certainty that enables long term investment

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Key feedback from stakeholder consultations suggest broad buy in – but clearly articulated request to extend support to affected communities

Workshop with project sponsors – Windhoek

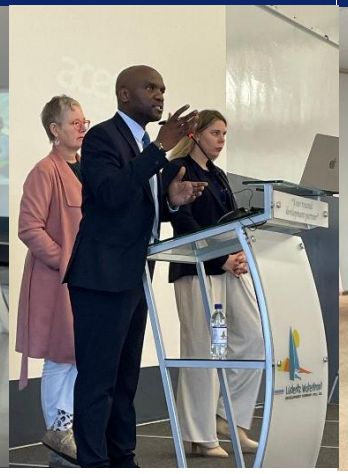


Key feedback emerging

- Two community consultations held to date: Walvis Bay (21–22 April 2026) and Lüderitz (8 June 2026), convened by NGH2P and bringing together traditional authorities, local government, project developers, SOEs, civil society and youth representatives
- Four short-term "game changers" for affected communities emerged consistently
  - Access to training and jobs
  - Access to project preparation / MSME funding
  - Access to clean water
  - Access to electricity
- Longer-term concerns centered on environmental protection and community ownership in projects, signaling a need for benefit-sharing mechanisms beyond the construction phase

Stakeholder workshops – Lüderitz





Stakeholder workshops – Walvis Bay





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Annexure –
Pipeline details



Tier 1 Priority : Mega-Scale Exporters

Tier 1

Hyphen Hydrogen Energy

Flagship mega-project targeting 2 million t/yr of ammonia powered by ~7.5GW of renewable energy. Pre-FEED complete; SEIA advanced.

- Lüderitz, //Karas
- ~$10B full build-out
- Target FID Q4 2027

Tier 1

Zhero Molecules

Off-grid 530,000 t/yr green ammonia export facility powered by 2.6 GW solar PV, 2 GWh BESS, and desalination.

- Arandis / Walvis Bay, Erongo
- $2.8B total
- Target FID Q1 2028

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Tier 1 Priority : Domestic Value & Manufacturing

Tier 1

Cleanergy Solutions (Expansion Phase)

Phased electrolysis facility serving domestic dual markets (mobility, shipping bunkering) plus a 54,000-tonne bunkering terminal.

- Walvis Bay, Erongo
- ~$200M
- FID within 24 months

Tier 1

HyIron (Oshivela Phase 2)

Expansion of the operational first-of-kind green DRI plant using proprietary rotary kiln technology.

- Arandis / Usakos, Erongo
- $250M (Phase 2 CAPEX)
- Target Phase 2 FID Q1 2027

Tier 1

Hy-ON BoP Manufacturing

Localised manufacturing and containerised skid assembly facility for electrolyser Balance-of-Plant (BoP) equipment.

- Erongo
- $20M
- FID within 24 months

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Tier 1 Priority : Bio-circular & agricultural integration

Tier 1

Nopal Renewable Energy

Cultivation of spineless cactus pear on marginal land for anaerobic digestion into biogas for green urea production.

- Maltahöhe, Hardap
- EUR 1.5M pilot / $250M commercial
- Target FID Q4 2027

Tier 1

Kelp Blue

Offshore cultivation of giant kelp over a 6,500 ha marine concession to process harvested biomass into eco-friendly agricultural biostimulants.

- Lüderitz, //Karas
- $110M envelope
- Scaling through 2027

Tier 1

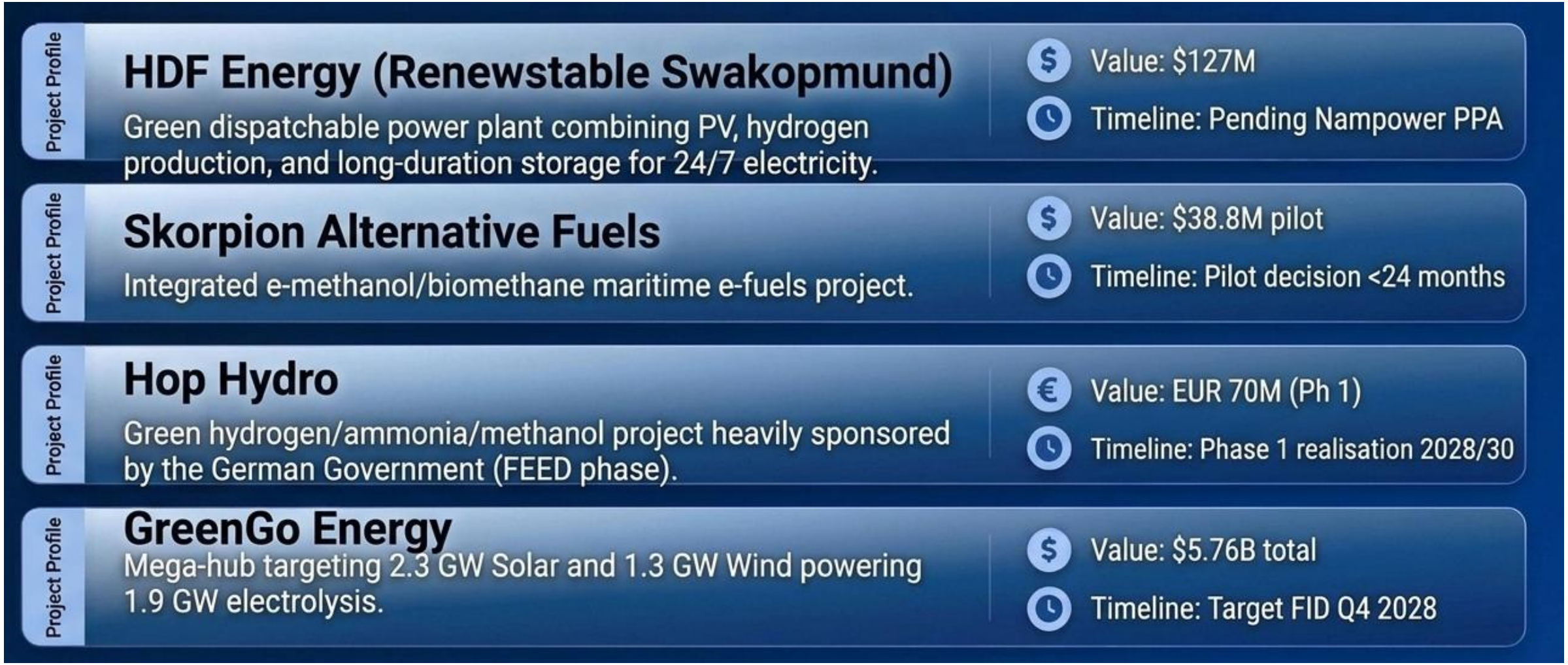
Daures Green Hydrogen Village (Phase 2)

Fully off-grid, circular-economy plant expanding to produce 80,000 t/yr of ammonium sulphate fertiliser.

- Daures, Erongo
- $170M (Phase 2)
- Target FID mid-2028

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Tier 2 Monitor: Advancing renewables & e-fuels



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Tier 2 Monitor: Clean Tech Assembly & Bio-carbon

Project Profile

Revoenergy Solar Assembly

Assembly-led solar PV manufacturing (400 MW-rated line) driving deep workplace-embedded skills development.

$ Value: $42M initial

Timeline: Target FID Q3 2027

Project Profile

PyroNam Biocarbon

Metallurgical biocarbon (fossil coal substitute for steelmaking) and bio-oil (renewable fuel/feedstock).

$ Value: $70M total

Timeline: Target FID Q2 2027

Project Profile

Invicta (INGAH)

Green ammonia plant (600k t/yr) targeting EU green steel offtake, integrated with 1,000 MW solar and BESS.

$ Value: $750M total

Timeline: Target FID Q3 2027

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Tier 3 Conditional: The next wave of eco-system enablers



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The end

Thank you

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NDP6