

Riding the US\$16 trillion Green Energy Wave

Massive post-COVID stimulus programmes
are transforming the renewable energy sector
creating unprecedented demand for critical metals



Germany's €130 billion EV supercharge

Angela Merkel has just announced the biggest ever financial support for the German auto industry with the UK, France and other EU countries quickly following suit.

€130 billion allocated to 70,000 charging stations and doubling the vehicle subsidy to €6,000 targeting annual production of 10 million vehicles by 2030.

Growing at 30% per year and on track to become a trillion dollar industry by 2040

Offshore Wind will be the major beneficiary of the European Green Deal with €25 billion invested over the next two years



The US\$20 billion North Sea Wind Power Hub will be six times more powerful than China's Three Gorges Dam

Located 140 km off the North Yorkshire coast the 1,000 km² array of 260-metre-high turbines will harness the North Sea's gale force winds and generate sustainable low-cost electricity for Germany, Holland and the UK.



Overwhelming demand from Offshore Wind and EVs will create shortages of critical magnet metals

Industry specialist Adamas Intelligence has warned that EVs will drive a 350% increase in magnet metal demand over the next five years leading to shortages in NdPr oxide supply.

The demand from offshore wind over the next 20 years is forecast to grow at 1,500% overwhelming the demand from EVs.



Chinese companies control 87% of the world's magnet metal production

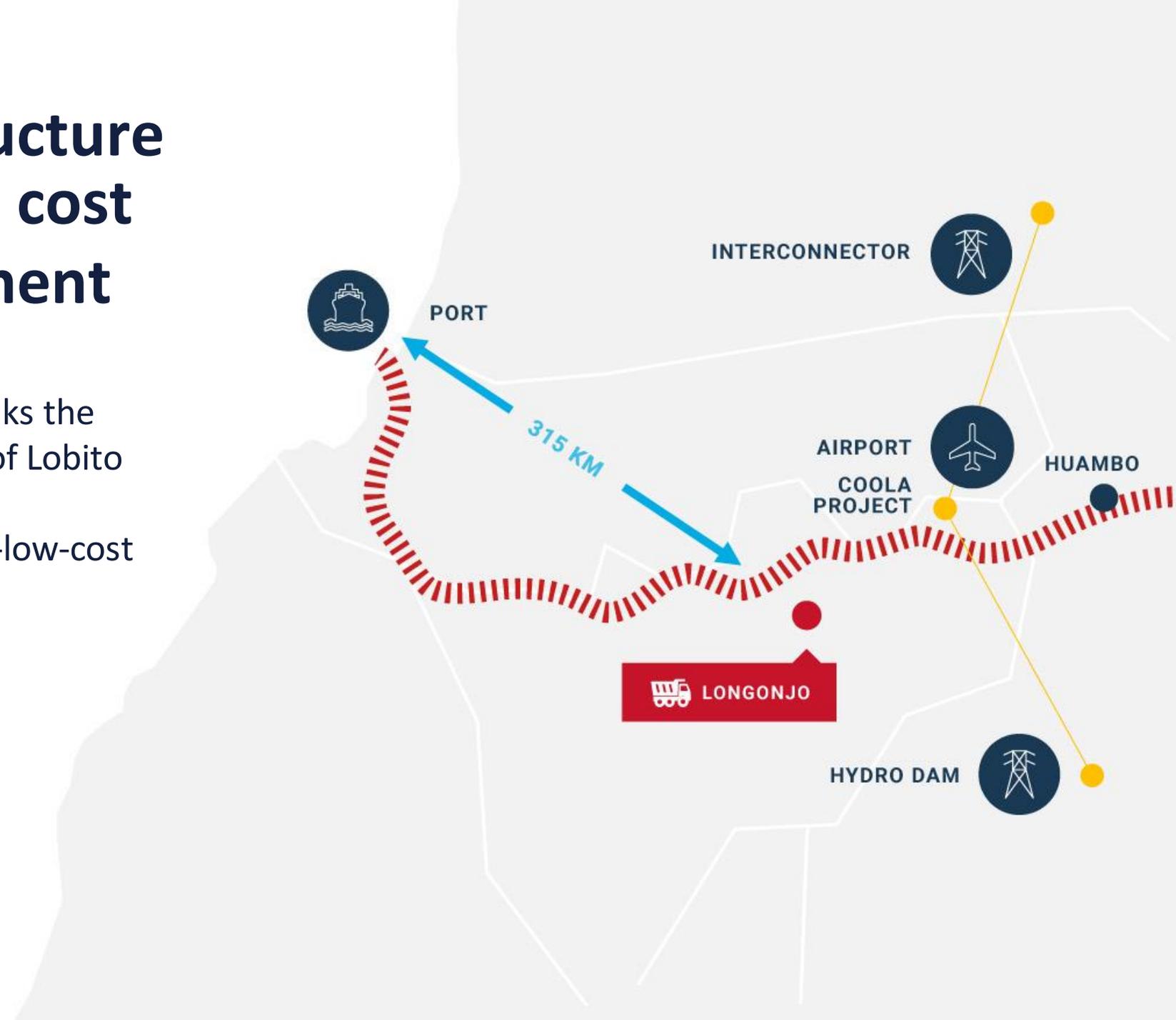


Source: ASX Lynas Corporation, Roskills

World class infrastructure means lower capital cost and faster development

The US\$2 billion Benguela rail line links the mine to the recently upgraded Port of Lobito

Sustainable power comes from ultra-low-cost hydroelectricity





**Recently commissioned
US\$1.8 billion rail line links
Longonjo with the Port of Lobito**

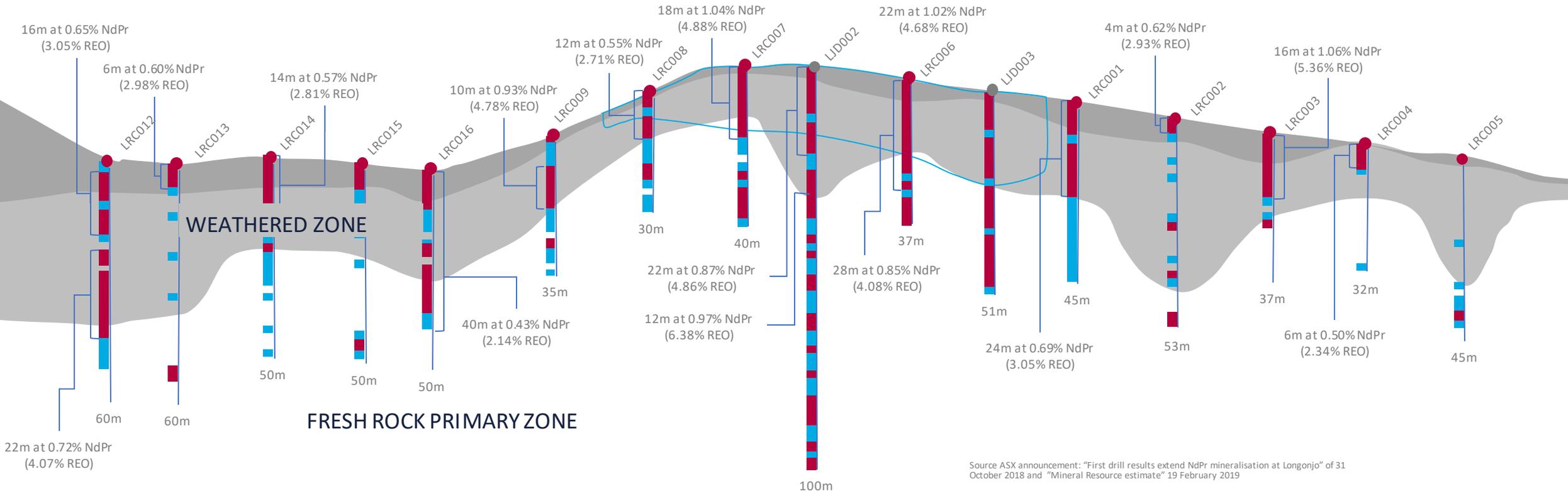
Port of Lobito recently
refurbished at a cost
of US\$2 billion



One of the world's largest Rare Earth deposits

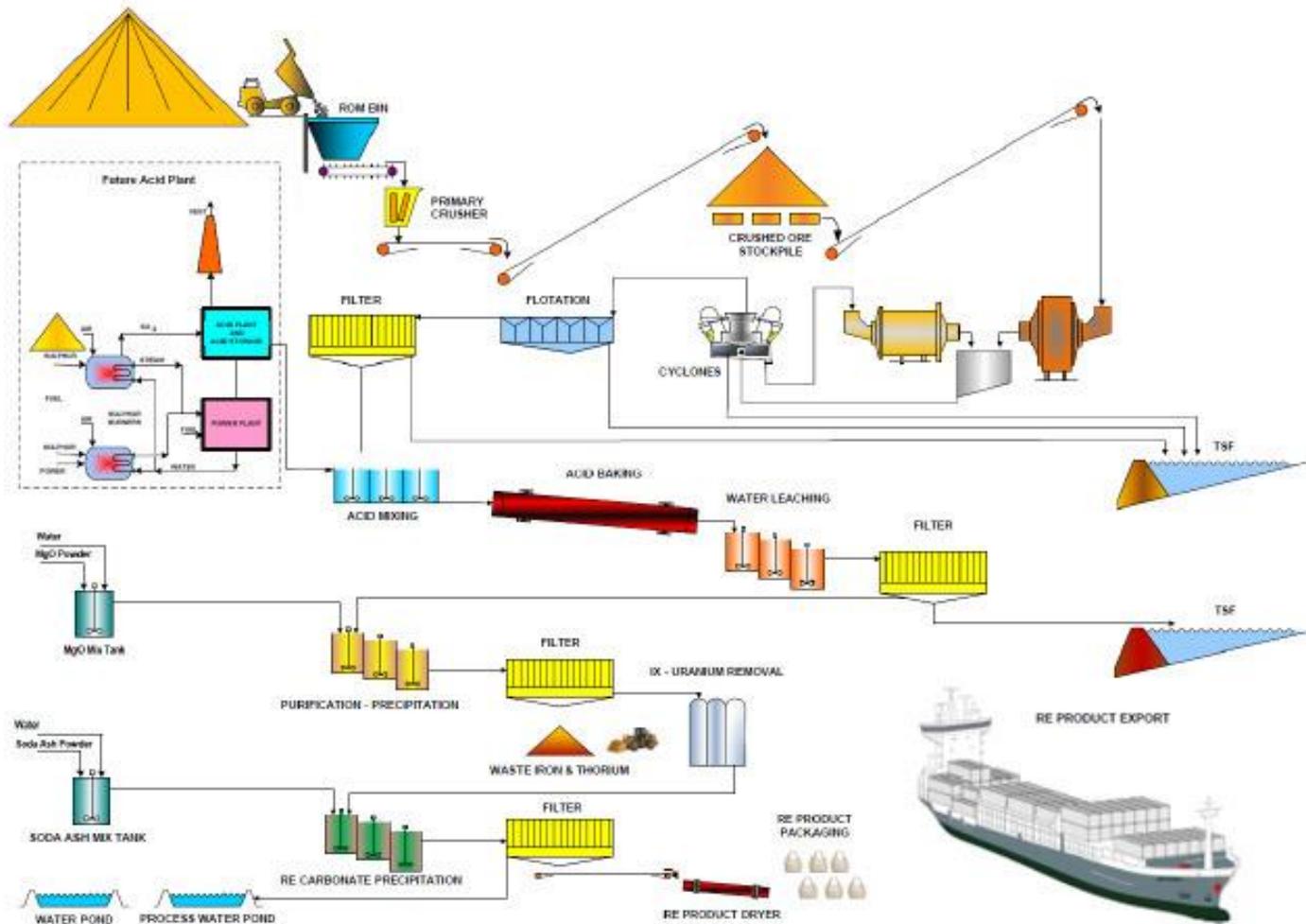
Thick surface blanket of high-grade NdPr mineralization over 1.5 kilometres

JORC Mineral Resource estimate 226 million tonnes
 1.47% REO incl. 0.33% NdPr containing
 3,320,000 tonnes REO incl. 735,000 tonnes NdPr



Source ASX announcement: "First drill results extend NdPr mineralisation at Longonjo" of 31 October 2018 and "Mineral Resource estimate" 19 February 2019

Low capital cost, simple flowsheet and attractive product



To avoid the complexity of downstream processing the high grade, near surface ore body will be processed into a mixed rare earth carbonate.

Longonjo is targeting to produce around 16,000 tonnes per year of high-grade NdPr carbonate for sale to magnet manufacturers.

There are well established markets for these carbonates in Europe, China, Japan and Korea.

Presidential approval, Angolan Sovereign Wealth Fund backing and Chinese EPCF

- President Lourenco granted approval for the Mining Licence in May this year.
- The Angolan Sovereign Wealth Fund has provided US\$6 million in equity funding and is now a major shareholder with 18%.
- Recently announced HOA with major Chinese SOE China Great Wall Industry Corporation to provide EPC and finance for the funding and development of the US\$200 million Longonjo mine.



Heads of Agreement with China Great Wall Industry Corporation (CGWIC)

Engineering, procurement, construction and financing (EPCF) for the development of the Longonjo Project through a single arrangement.

- ✓ Proposed 85% debt finance with a term of 8-10 years from commercial banks in China with credit insurance from SINOSURE.
- ✓ CGWIC has 40 years of international and domestic experience in trade, engineering, construction over a wide range of major projects.
- ✓ CGWIC brings to Longonjo a successful track record in major project development in Angola with funding from China.
- ✓ Angola is an important market for CGWIC where it cooperates with government enterprises in the areas of aerospace, telecommunications and major engineering and construction projects.

Low capital cost, attractive finance, rapid development and *compelling economics



Very Low Capital Cost of circa US\$200 million

To be debt financed through Chinese Commercial Bank with sovereign guarantee from SINOSURE

Attractive terms for long-life, low-cost commercial debt.



EPCF contract with CGWIC for 18-month timeline to first production

*Designed to produce 16,000 tpa of MREC for 20 years

*Operating costs of circa US\$x,000 tonne of NdPr MREC



Sales price (est) US\$x,000 tonne per tonne basis US\$(xx)/kg NdPr 2023 (Roskill Medium Case)

*Xx% EBITDA margin, \$Xx million EBITDA.

*Xxx years payback, xx% IRR and US\$xx million NPV8

****BFS due mid October
to provide economics***

*Highly geared to rising Neodymium prices

US\$ TONNE



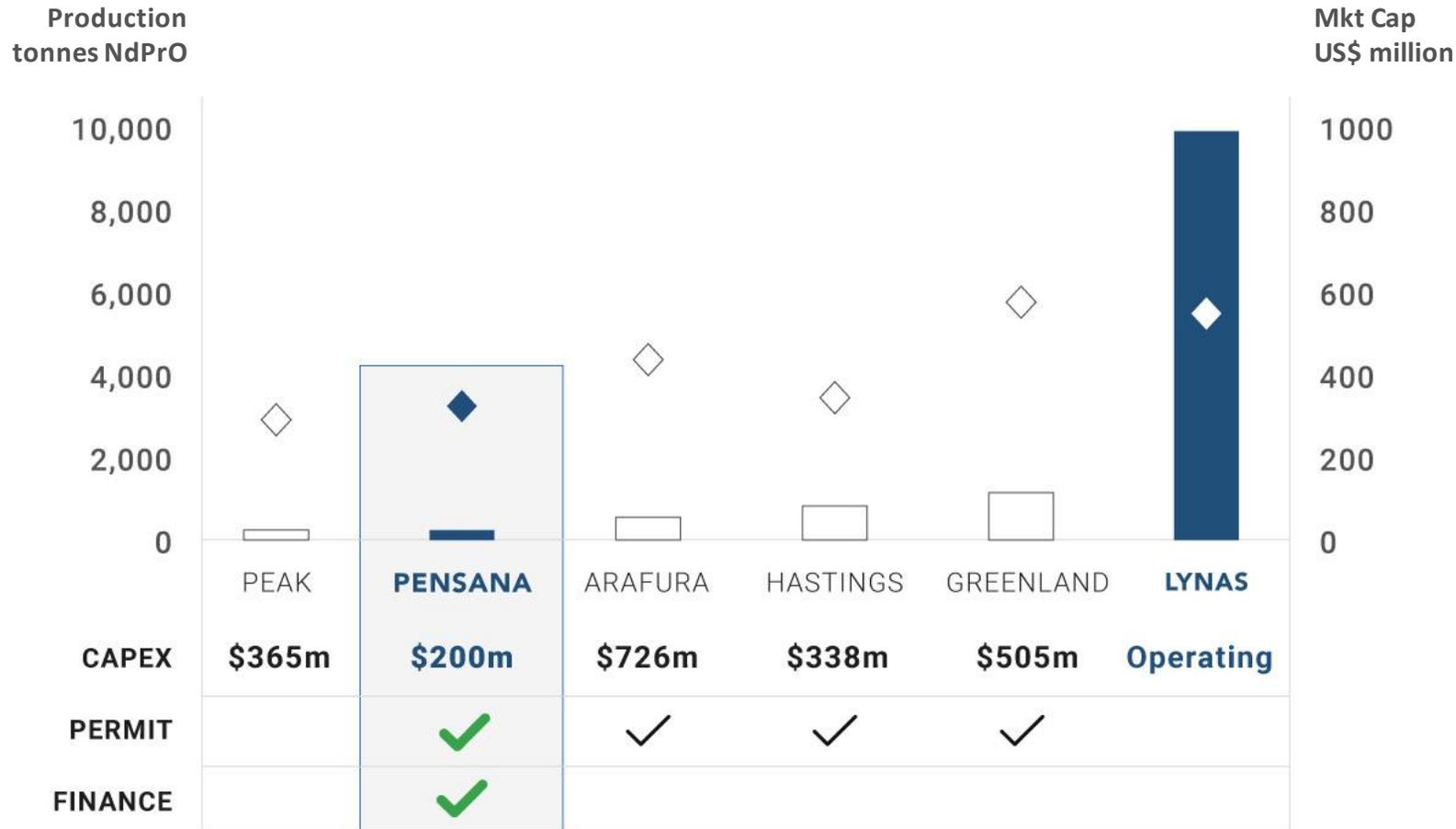
HIGH
NPV US\$ xxxm
IRR xx%

MEDIUM
NPV US\$ xxxm
IRR xx%

LOW
NPV US\$ xxxm
IRR xx%

**BFS due mid October to provide economics*

Offshore Wind to increase 18 times under the European Green Deal Will need at least 5 new Rare Earth mines over the next decade



The last major rare earth mine to come on-line was Lynas's Mt Weld in Australia 12 years ago.

The main constraints are permitting and finance.



LSE listing provides access to
US\$47 trillion ESG funds

- ❑ Burgeoning ESG Funds are competing with generalists for exposure to the rapidly growing EV and Offshore Wind sectors.
- ❑ The new EU taxonomy will require ESG Funds to comply with sustainable investment regulations.
- ❑ Longonjo will be GHG Emissions Scope 1, 2 and Scope 3 compliant.

All Funds now want *very high ESG standards*



Designed to Equator Principles and Scope 1, 2 and 3 emissions under the Green House Gas protocol.



Access to low carbon power from the Luaca hydro-electric dam enabling a very low carbon footprint.



Zero discharge for process and tailings water with full end of life rehabilitation.



Training for over 370 direct jobs and preparing local businesses to become service providers.



A particular focus is on the training of young women for technical and engineering roles.



Strong Board and Management team

Management team has extensive African experience and a strong project delivery track record

Tim George

CEO ex Anglo American

Rob Kaplan

CFO ex Petra Diamonds

Dave Hammond

COO ex Peak Resources

Board has strong track record in mine financing and delivering exceptional returns to shareholders

Paul Atherley Chairman

Tim George CEO

Dave Hammond Exec. Director

Neil MacLachlan NED

NED ex Kalahari and Extract Resources

Mark Hohnen NED

NED currently Bacanora Lithium plc
ex Salt Lake Potash, Kalahari, Extract



Long term shareholders increasing ownership.

188 million shares on issue.

Market cap £38 million.

Angolan Sovereign Wealth Fund, High Net Worth, Institutional investors and Management all continue to increase their holdings in the company.

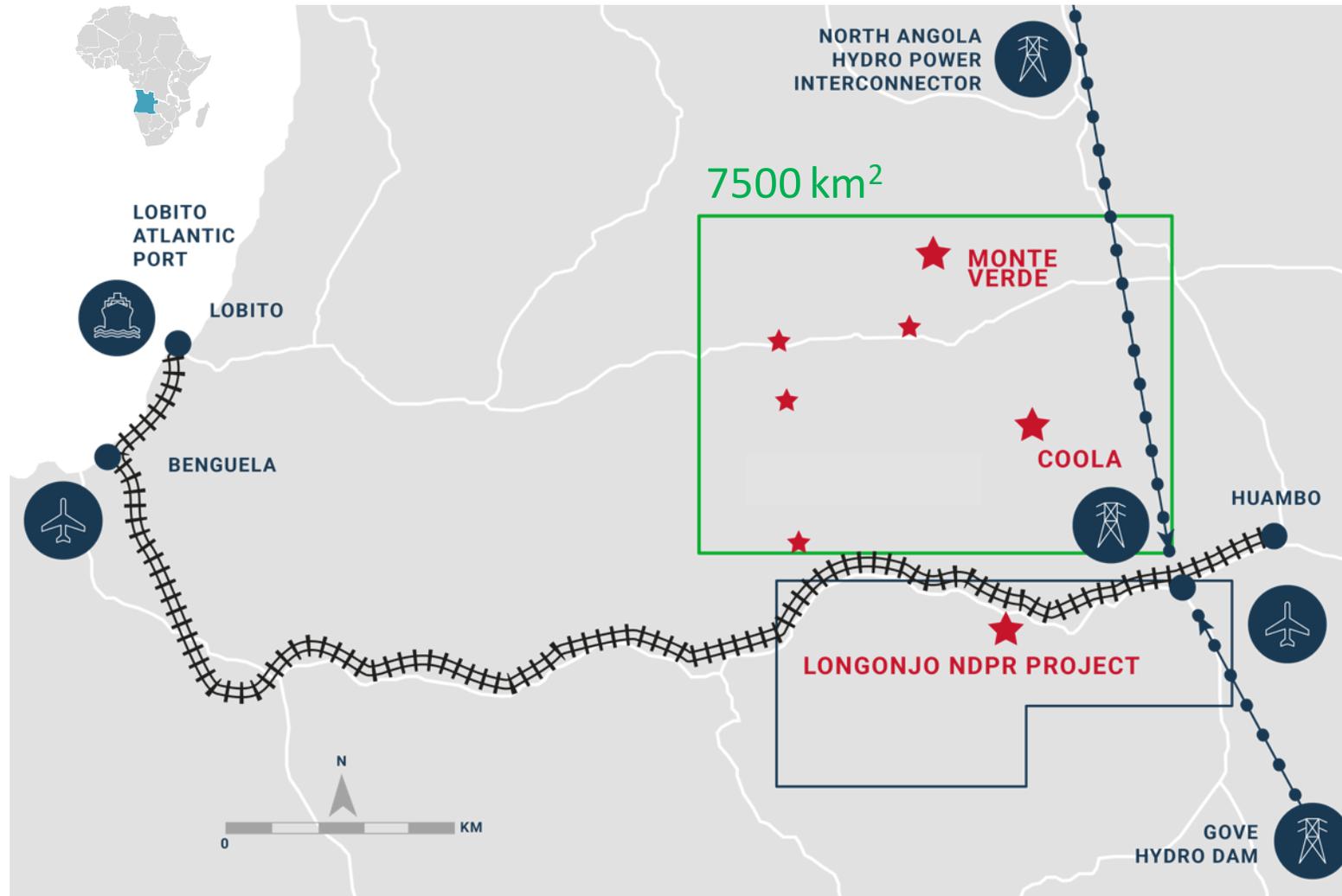
50 holders now own over 78% of the register

ASWF 18% HNW 20% Institutions 12%

Private 17% Board and Management 11%

Recently awarded 7,500 km² Coola Project hosts two NdPr-rich carbonatites and 10 walk-up exploration targets

- The Coola and Monte Verde NdPr-rich carbonatites are the priority drill targets.
- There are at least ten intrusive complexes and strong geophysical anomalies that will be targeted with rock and stream sampling.
- The area has potential to host a range of other commodities including gold, copper and other technology metals.





The US\$16 trillion Green Energy Wave will supercharge the demand for critical magnet metals

With no new mines in construction, NdPr prices are forecast to at least double or treble over the next five years.

With Presidential approval, financial backing from the Angola Sovereign Wealth Fund and an HOA for an EPCF with a major Chinese SOE Pensana is well on track to bring the first rare earth mine online in over a decade to meet the growing demand for these critical metals.

Pensana Rare Earths Plc PRE.L

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The information in this statement that relates to the 2019 Mineral Resource estimates is based on work done by Rodney Brown of SRK Consulting (Australasia) Pty Ltd. Rodney Brown is a member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 edition).

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