ASX: IXR

Sustainably Sourcing Magnet and Heavy Rare Earths for the New Economy

121 London Mining Investment Conference

Cautionary Statement

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Competent Person Statement

Information in this report that relates to previously reported Exploration Targets and Exploration Results has been crossed-referenced in this report to the date that it was originally reported to ASX. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.

The information in this report that relates to Mineral Resources for the Makuutu Rare Earths deposit was first released to the ASX on 3 May 2022 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

The information in this report that relates to Ore Reserves for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

The information in this report that relates to Production Targets or forecast financial information derived from production the production target for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that all material assumptions and technical parameters underpinning the Production Targets or forecast financial estimates in the announcement continue to apply and have not materially changed.

Securing Critical Elements for the New Economy

HARNESSING OUR TECHNOLOGY TO ACCELERATE MINING, REFINING AND RECYCLING OF MAGNET AND HEAVY RARE EARTHS CRITICAL FOR ENERGY TRANSITION, ADVANCED MANUFACTURING, AND DEFENCE

Mining

Rare Earths

Refining

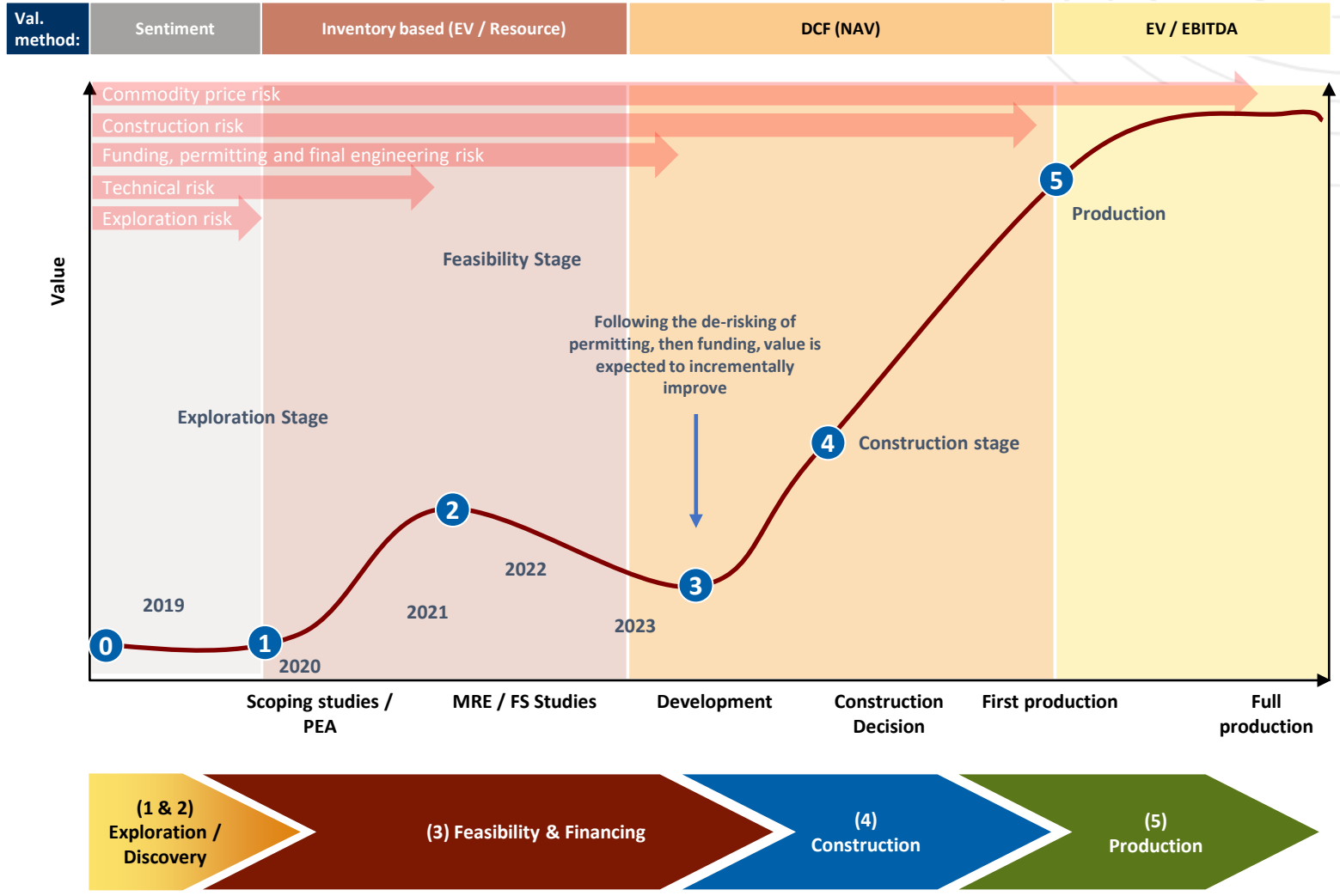
Rare Earths

Recycling

Rare Earths

IonicRE is on the cusp of a re-rate via de-risking Makuutu / IonicTech

CAPITAL STRUCTURE (as @ 17/11/2023)	
Shares Outstanding	3,956,104,920
Total Options Outstanding	140,000,000 (exercisable at 2.15 to 6.4 cents)
Total Outstanding Performance Rights	6,700,000
Share Price	A$0.027
Market Capitalisation	A$107 million
12-month Share Price Range	A$0.016 – A$0.043
12-month Average Daily Volume / Turnover	16m shares (~A$0.44m)
Cash Balance (30/09/2023)	A$5.7 million
IXR MAJOR SHAREHOLDERS	
Major Shareholders (Top 20)	25.5%
Board, Executives, & Key Advisors	8.0%
BOARD AND MANAGEMENT	
Tim Harrison	Managing Director
Max McGarvie	Non-Executive Director
Sufian Ahmad	Non-Executive Director
Nitin Tyagi	Non-Executive Director
Brett Dickson	Company Secretary & CFO
Tommie van der Walt	Chief Operating Officer
Lynden Polonsky	Chief Development Officer



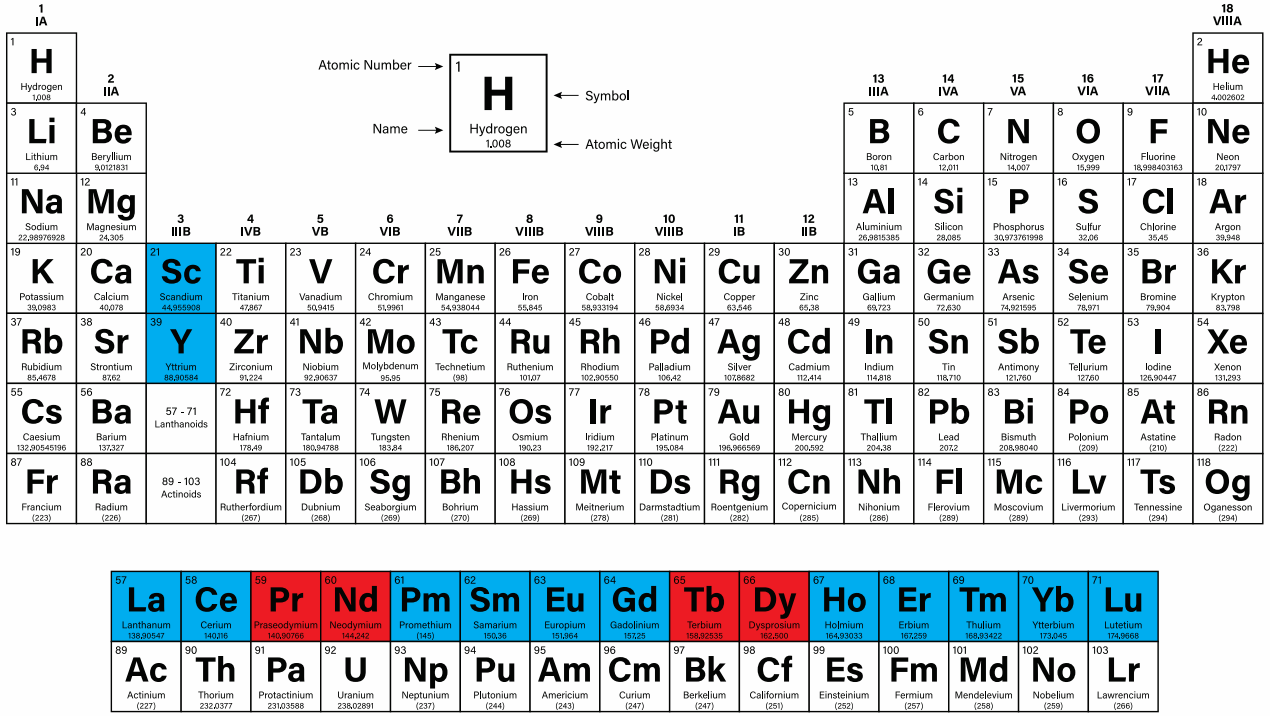
The Importance of Rare Earths

MAGNET REO's DRIVE THE EV REVOLUTION AND THE OFFSHORE WIND ENERGY GENERATION THEMATIC

- Magnet Rare Earths driving demand – **Nd, Pr, Dy and Tb**
  - Nd, Pr are light REEs used in Permanent magnets
  - Dy, Tb are heavy REEs used in Permanent magnets
- Dy, Tb in deficit now, needed to produce high-temperature-performance grades of sintered magnets for use in EVs and offshore wind turbines as these are the most energy efficient magnets known
- Now classified as **Strategic Raw Materials** under EU Critical Raw Materials Act
- Heavy REEs used in various technologies
  - Communications, Lasers, Defence

98% of the world's Dy and Tb come from IACs in southern China and Myanmar

Periodic Table of the Elements



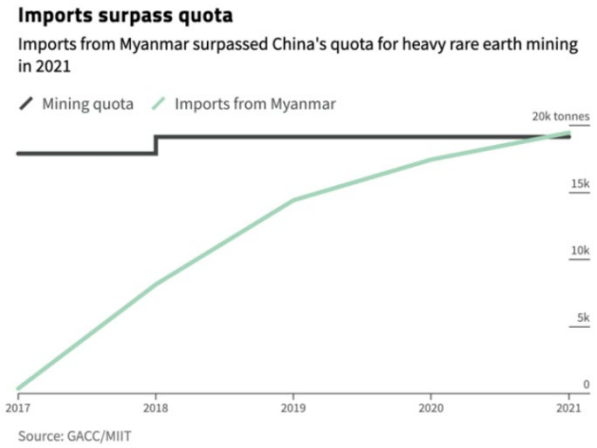
Existing Chinese Supply – LREE quotas ramp up, no new supply of DyTb

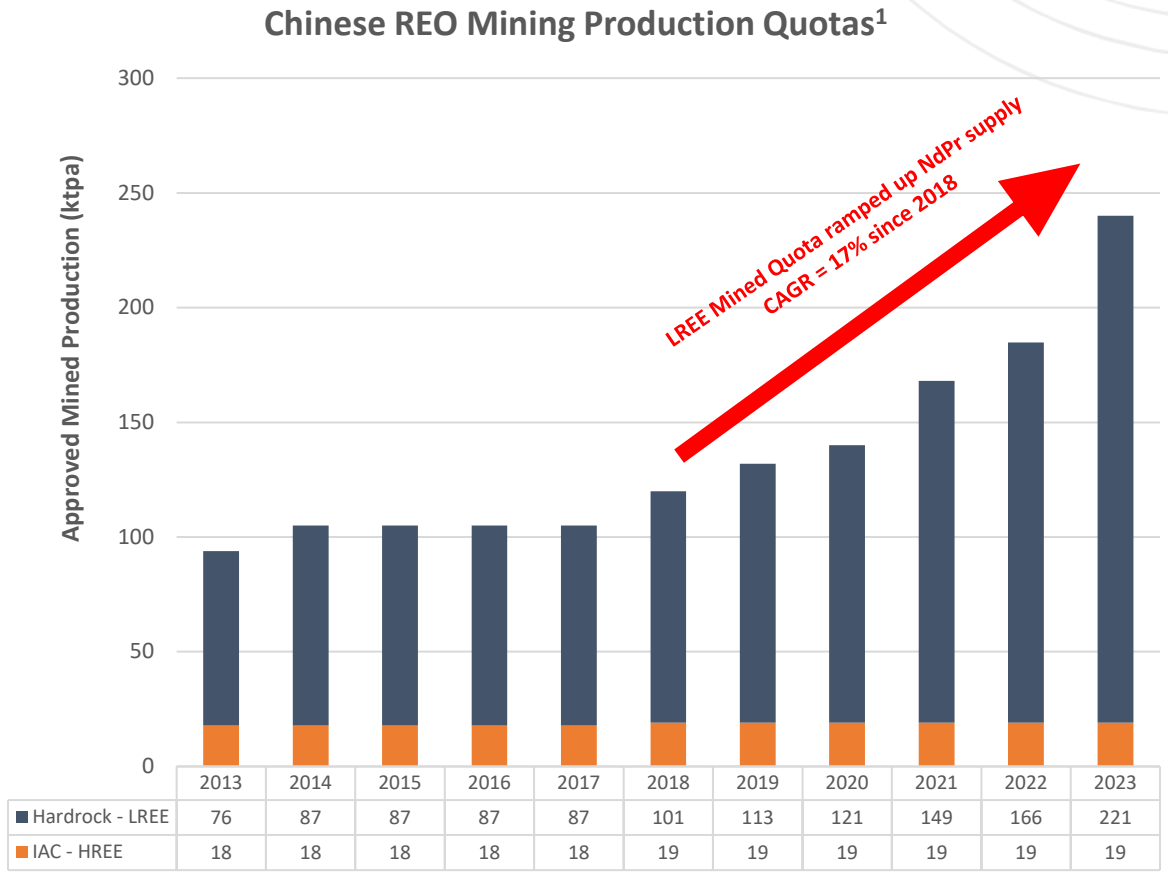
CHINA INCREASING HARDROCK LREE MINED SUPPLY, IAC HREE SUPPLY QUOTA REMAINS STEADY

- Global supply of HREE is dominated by China and Myanmar, albeit China has constrained domestic production to promote longevity of its reserves
- China has maintained IAC HREE mining quotas at the same level since 2018 (19 ktpa) whilst ramping up readily available hardrock LREE production (101 ktpa → 221 ktpa)[1] at CAGR of 17% (2023 mining quotas represents 33% increase to LREE)
- Wind back of pandemic related restrictions on trade flows enabled Myanmar's HREE inventory build-up to be sent to China for processing, though supply is normalizing and supporting magnet rare earth prices
- Moreover, with China's known HREE resources dwindling[3], feedstock supplies from Myanmar into China drying up in September 2023, China could soon face a domestic HREE supply crunch that could severely curtail its refined Dy and Tb exports[4]

"Imports from Myanmar now exceed China's domestic mining quotas, so even if the mines in China were producing at full capacity, Myanmar would remain the country's single largest source of new heavy rare earth supply – and with no other companies in China legally allowed to process this material, there is nowhere else for imports to go."
"With domestic stockpiles dwindling, Chinese enterprises are increasingly dependent on supply from Myanmar."

Global Witness[2]





	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Hardrock - LREE	76	87	87	87	87	101	113	121	149	166	221
IAC - HREE	18	18	18	18	18	19	19	19	19	19	19

[1] Ministry of Industry and Information Technology, China, 2022. [2] Global Witness, Heavy Rare Earths Supply Chain Risk; Illicit minerals from Myanmar are the world's largest source of supply. August 2022. [3] MIIT, Situation and Policies of China's Rare Earth Industry, June 2012. [4] Myanmar rare earth mines still awaiting notice to restart – sources, Reuters, 15 September 2023

European Critical Raw Materials Act (CRMA) – "The Race is On!"

EUROPEAN COMMISSION'S CRITICAL RAW MATERIAL ACT TO UTILISE GLOBAL GATEWAY INSTRUMENT, A €300 BILLION INITIATIVE AIMED AT COUNTERING THE CHINESE BELT AND ROAD INITIATIVE

- The Act identifies a list of **strategic raw materials** crucial to Europe's green and digital ambitions and for defence and space applications – while being subject to potential supply risks in the future.
- The Regulation sets clear benchmarks for domestic capacities along the **strategic raw material supply chain** and to diversify EU supply by 2030:

At least 10% of the EU's annual consumption for extraction

At least 40% of the EU's annual consumption for processing

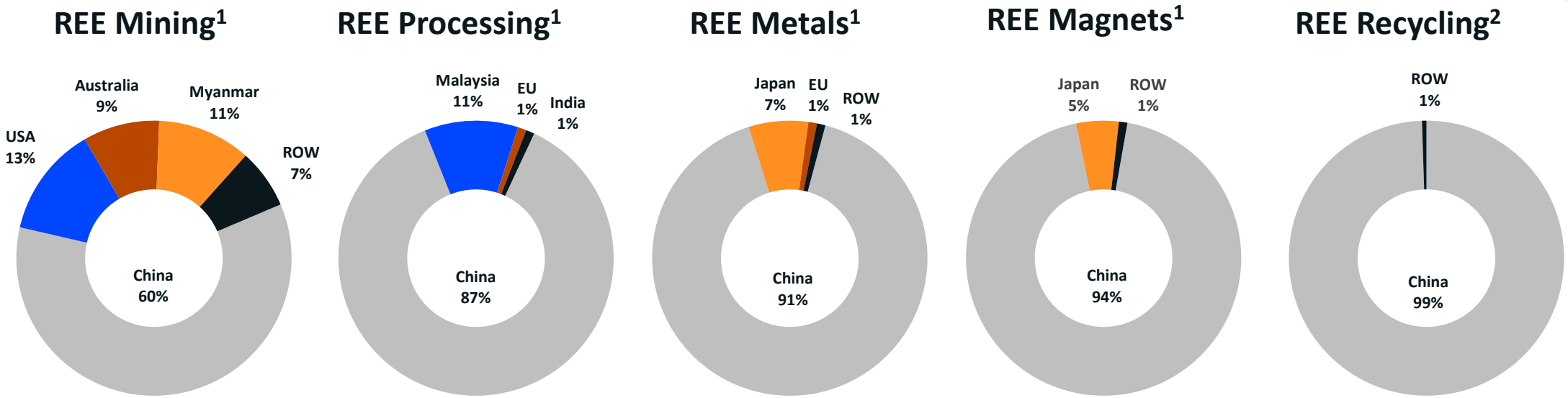
At least 25%[1] of the EU's annual consumption from recycling

Not more than 65% of the Union's annual consumption of each strategic raw material at any relevant stage of processing from a single third country

- On Monday 13 November 2023, the co-legislators reached a political agreement on the EU CRMA and **increased the recycling component from 15% to 25%**

Rare Earth Supply Chain – Alternate Capacity Requires Investment

SUSTAINABLY SOURCING THE MOLECULES WILL REQUIRE DEVELOPING ALTERNATIVE CAPACITY GLOBALLY

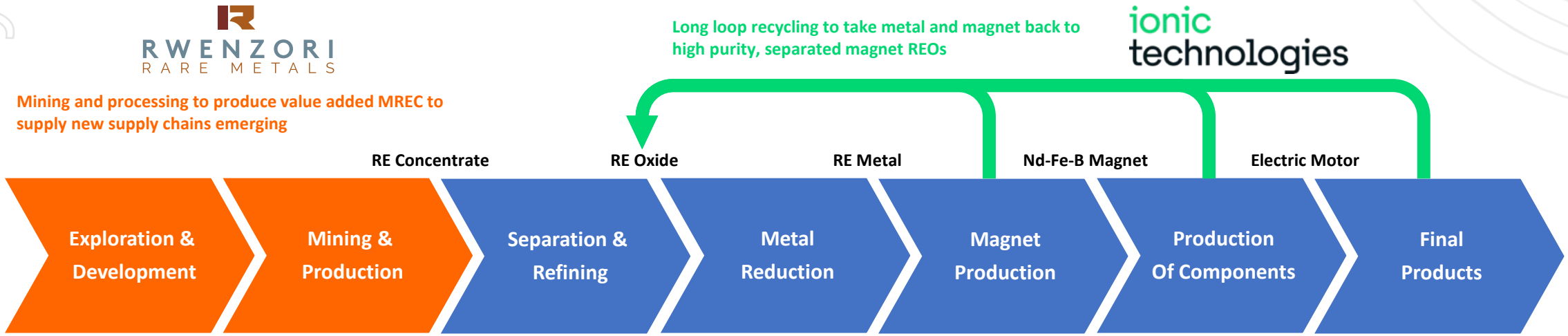


Rare earths are amongst the most resource-critical raw materials: they are of highest economic importance and at the same time feature a high supply risk – supply chain dominated by China

[1] Rare Earth Magnets and Motors: A European Call for Action A report by the Rare Earth Magnets and Motors Cluster of the European Raw Materials Alliances, Oct 2021. Argus Analytics Oct 2021. [2] Wood Mackenzie Global rare earths short-term outlook August 2022.

REE Supply Chain and IonicRE Integration

IONICRE ADDING PRIMARY AND SECONDARY SOURCED CAPACITY TO BECOME INTEGRATED IN FUTURE RARE EARTH SUPPLY CHAINS



Makuutu Rare Earths Project (60% IonicRE)

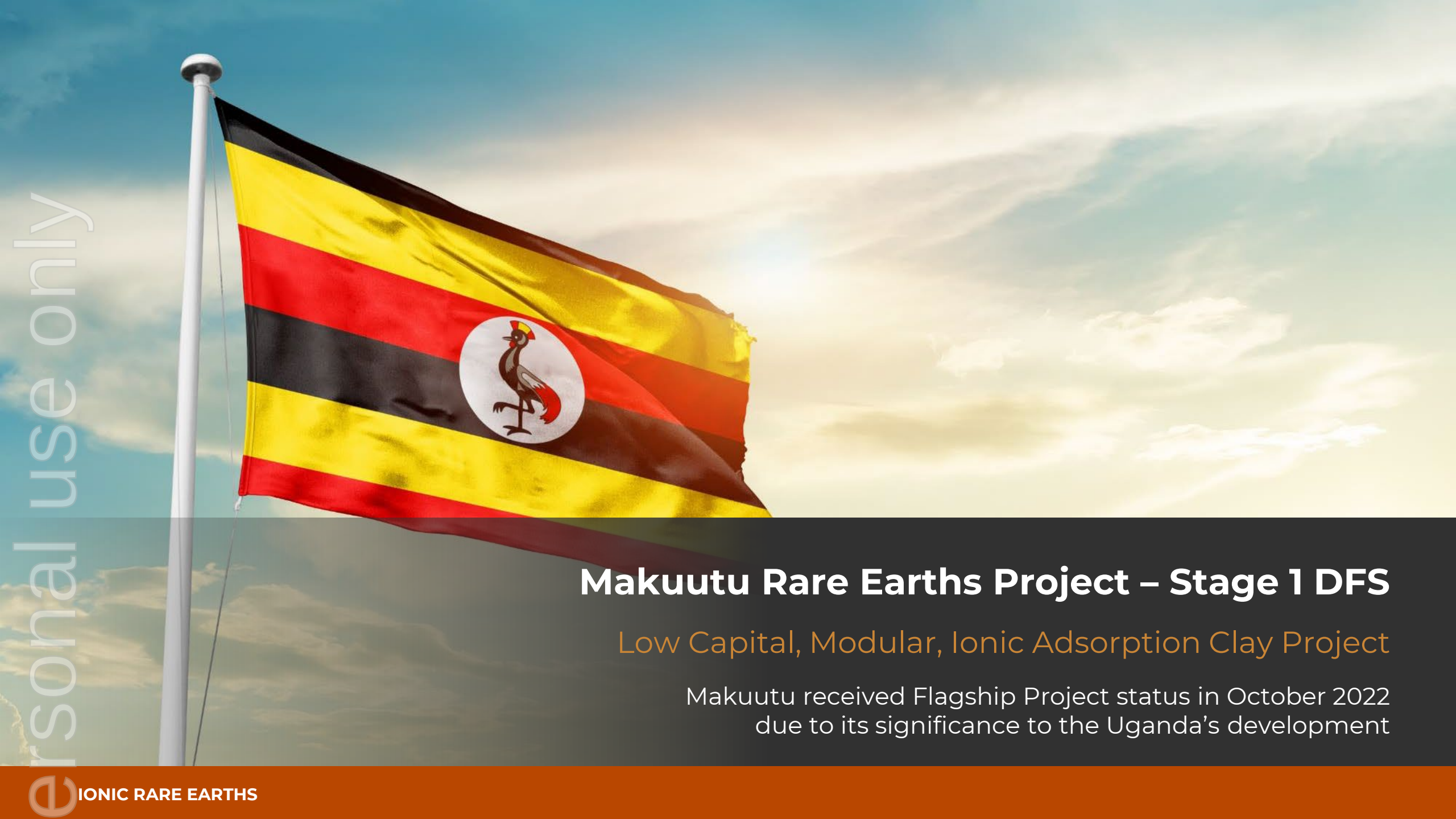
- Low capital, modular development IAC enables IonicRE to bring on highly sought-after, value added MREC basket of magnet and heavy REEs
- MLA for RL1693 submitted
- Demonstration Plant in construction now, with immediate demand for product
- Expandable asset through free cash flow and growing market demand

IonicRE Refinery

- Targeting separation of MREC from Makuutu to produce refined REOs
- Potential to receive MREC feed or HREO products from other producers
- Flowsheet trade-offs dependent upon selected locations – competitive landscape to host refinery to support advanced manufacturing industry

Magnet Recycling (100% IonicRE)

- Low capital development to recycle spent magnets and swarf to produce separated and refined 99.9%+ REOs
- Magnet REO production now (Nd, Pr, Dy and Tb)
- Addressing domestic supply chain / sovereign capability need with global opportunities
- Likely first to revenue, supply independent of permitting



Makuutu Rare Earths Project – Stage 1 DFS

Low Capital, Modular, Ionic Adsorption Clay Project

Makuutu received Flagship Project status in October 2022
due to its significance to the Uganda's development

Rare Earth Deposit Types and Peers

Ionic Adsorption Clay allows for faster development timelines, reduced capex requirements and a higher value product

	Ionic Adsorption Clay	Hard Rock
Location	➢ Southern China and Myanmar dominate supply, with general scarcity elsewhere ➢ Chinese reserves depleted significantly due to illegal mining ➢ China's HREE quotas remaining capped for the past 10 years → only ~8% of Chinese production in 2023	➢ High production volumes from three (3) Chinese mines, represents majority of Chinese mining quotas[1] (91% inH1 2023, 93% in H2 2023) ➢ Abundant globally with substantial amounts on monazite sands byproduct from minerals sands mining
Exploration	➢ Shallow mineralisation, near surface ➢ Fast and inexpensive drilling to define MRE ➢ RAB drilling and augers for scouting, broad spaced drilling due to continuity	➢ Significant deep drilling using diamond drilling to depth, and geochemistry ➢ Longer to define MRE

Mineralisation	➢ Weathered primary mineral with REE chemically bonded to clay
	  ➢ Soft material, negligible (if any) blasting
	  ➢ Elevated HREO/CREO product content (50%+)
		➢ Hard rock, light REE dominant (96-99% of basket):
		  ➢ Bastnaesite and Monazite (LREO dominant);
		  ➢ Xenotime (HREO dominant)

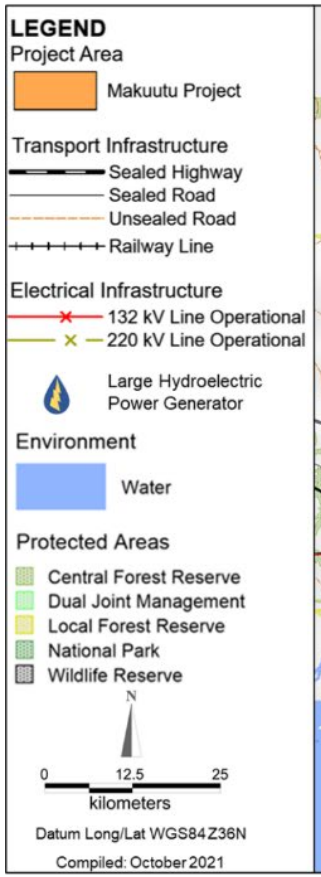
Mining	➢ Low relative operating costs:
	  ➢ Surface mining (0-20m)
	  ➢ Minimal stripping of waste material
	  ➢ Progressive rehabilitation of mined areas
		➢ Capital-intensive open cut and underground operations required
		➢ High relative operating costs:
		  ➢ Blasting required
		  ➢ Could have high strip ratios

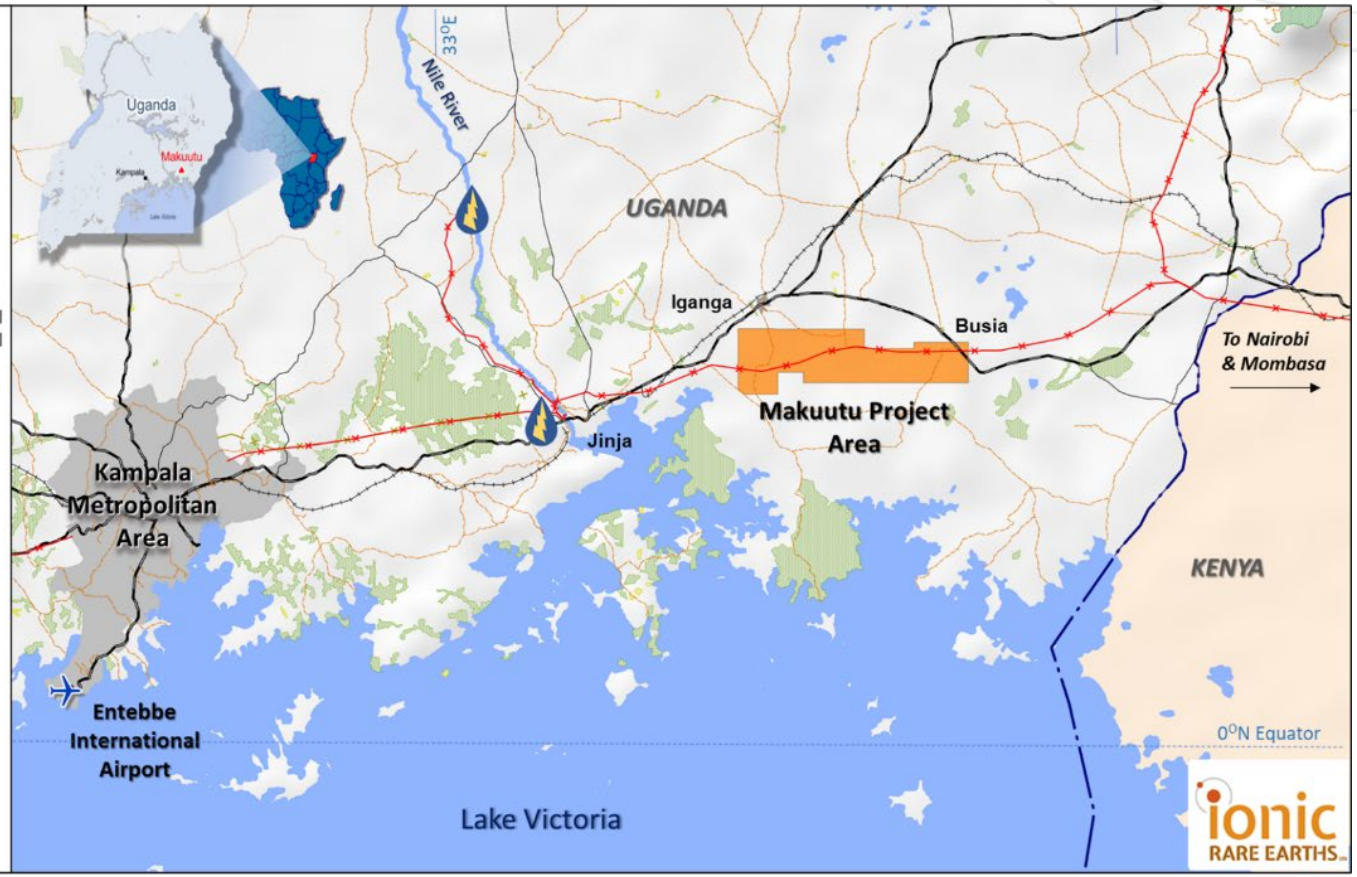
Processing	➢ Simple desorption of REE from clay in ammonium sulphate ➢ No radioactive waste streams	➢ Crushing, Milling, Beneficiation first then Separation (high temperature mineral cracking using strong reagents for REE minerals) ➢ Tailings are often radioactive and are costly to dispose
CAPEX and Scale	➢ Modest capex ($100m-$200m) ➢ Lower initial capex allows for increased scalability ➢ Modular developments enable responsive project development	➢ Complex capital-intensive plant (~$1.5B-$2.0B) required ➢ Requires larger production capacity to cover capital investment ➢ Production constrained
Payability	➢ Contains both light and heavy REEs, typically less than 40% LaCe (worthless) content ➢ 70% payability as Mixed Rare Earth Carbonate (MREC) (+90% TREO grade)	➢ Typically light REEs only, more than 75% LaCe (worthless) content common ➢ 30-35% payability as a mineral concentrate (typically 20-40% TREO grade). ➢ Radionuclide issues follow REE mineral concentrates

[1] MIIT, China, 25 September 2023.

Tier-One Infrastructure already there – supports low CAPEX Development

EXCELLENT LOCAL INFRASTRUCTURE SUPPORTS LOW CAPEX DEVELOPMENT





Makuutu Stage 1 DFS Results

BASE CASE LAYS FOUNDATION, EXTENSION OF LIFE POTENTIAL REMAINS

- The Mining Licence Application (MLA) (**Pending) over Retention Licence 1693 (Application TN03834) focuses on the Stage 1 DFS and provides for a **35-Year mine life**;
- Stage 1 DFS delivers:
  - an EBITDA of A$2.29 billion (**US$1.60 billion**);
  - Post-Tax, Free Cash Flow total ~ A$1.46 billion (**US$1.02 billion**);
  - Net Present Value (NPV8) (Pre-tax) of A$580 million (**US$406 million**); and an
  - Internal Rate of Return (IRR) of **32.7**%;
- Stage 1 production of a value-added mixed rare earth carbonate (MREC) product (including Scandium), via a modular heap desorption processing plant, amounts to a total Capital Expenditure (CAPEX) of **US$121 million**;
- Stage 1 plant capacity is **5.0 million tonnes per annum** (Mtpa) Run of Mine (ROM) throughput;
- Stage 1 TREO production basket of **71% magnet plus heavy REO content**;
- **Maiden Ore Reserve** for the Makuutu Stage 1 over RL 1693 classified as a **Probable 172.9 Mt at 848 ppm TREO, or 584 ppm TREO – CeO_2, and 30 ppm Sc_2O_3**;
- Uniquely positioned to be a long-term sustainable magnet and heavy REO producer, with **first MREC production targeted for 2025**; and
- **Further staged development** at Makuutu with additional tenements.

BASE CASE
RL 1693 only

Stage 1 Life	35 Years
EBITDA	US$1.60 billion
Post-Tax Free Cash Flow	US$1.02 billion
Pre-Tax Net Present Value (8)	US$406 million
IRR (Post-Tax)	32.7%
Pre-Production CAPEX	US$120.8 million
Product Basket (magnet + heavy REE)	71%

[1] Makuutu Stage 1 DFS reported to ASX on 20 March 2023.

Makuutu Mineral Resource Estimate → Stage 1 ML Pending

MAKUUTU MRE CURRENTLY >500 MILLION TONNES, FOCUS FOR MLA ON MAKUUTU CENTRAL ZONE (RL 1693 → Application TN03834)

JORC Makuutu MRE[1] of 532 million tonnes @ 640 ppm Total Rare Earths Oxide (TREO), at a cut-off grade of 200 ppm TREO-CeO_2

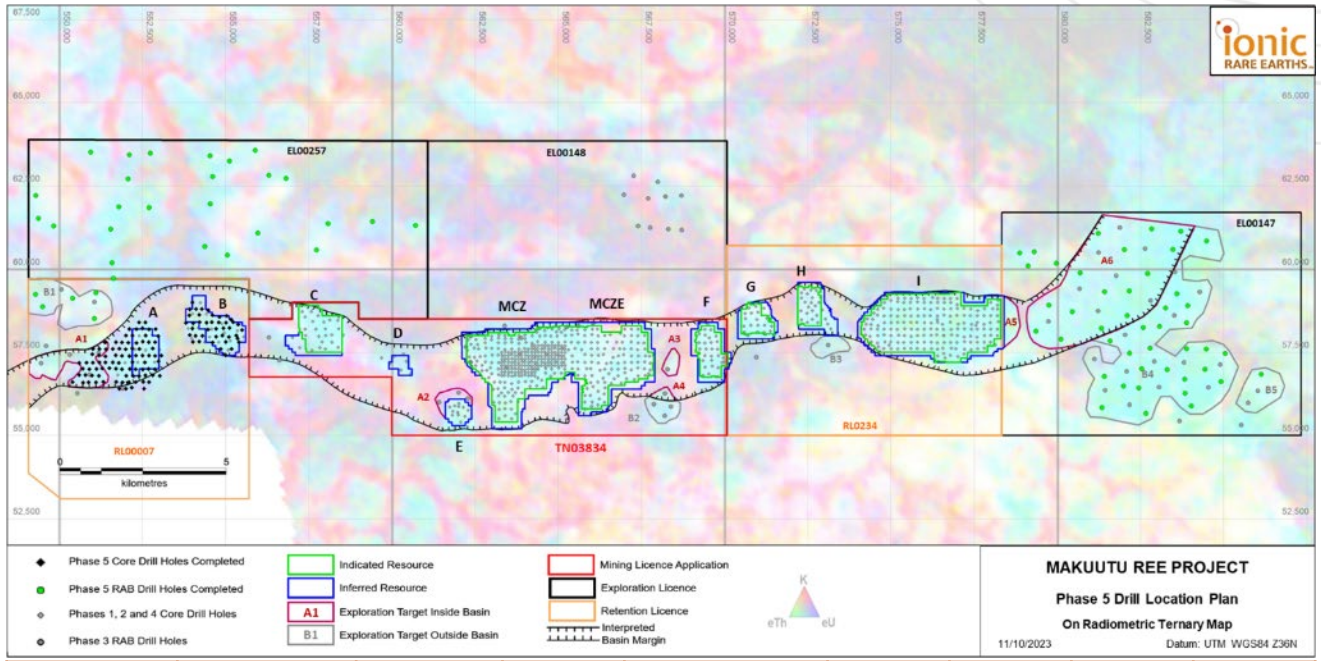
76% of Makuutu MRE now converted to Indicated Resource, at 404 million tonnes at 670 ppm TREO

MRE on RL 1693 contains an **Indicated Resource of 259 million tonnes at 740 ppm TREO**

Makuutu Central Zone (MCZ), provides a continuous resource area over **5.5km long and 3km wide for a combined 234 million tonnes** or 44% of the total resource and 52% of the total Indicated Resource

Shallow, near surface IAC mineralisation, with clay layer averaging 5 to 12m thick under cover approximately 3m deep. Average hole depth ~18m, **maximum clay thickness ~29m**

Low strip ratio ~0.5 identified across RL 1693



Category	Estimation Domain	Tonnes (Mt)	TREO (ppm)	TREO no CeO_2 (ppm)	LREO (ppm)	HREO (ppm)	CREO (ppm)	Sc_2O_3 (ppm)
Indicated	Clay	404	670	450	500	170	230	30
Inferred	Clay	127	540	360	400	140	180	30
Total Resource	**Clay**	**532**	**640**	**430**	**480**	**160**	**220**	**30**

[1] Makuutu Mineral Resource Estimate reported to ASX on 3 May 2022.

Phase 5 Drill Program – Progressing Growth at Makuutu

Phase 5 RAB drilling on EL00147, EL00257 and RL00007 completed. Core drilling on RL00007 completed, assays pending

RAB drilling on EL00147 reported 43 of 45 holes validating 2021 RAB drilling – now 66 of 70 holes on this target reported REE bearing clay mineralisation above MRE cut-off grade

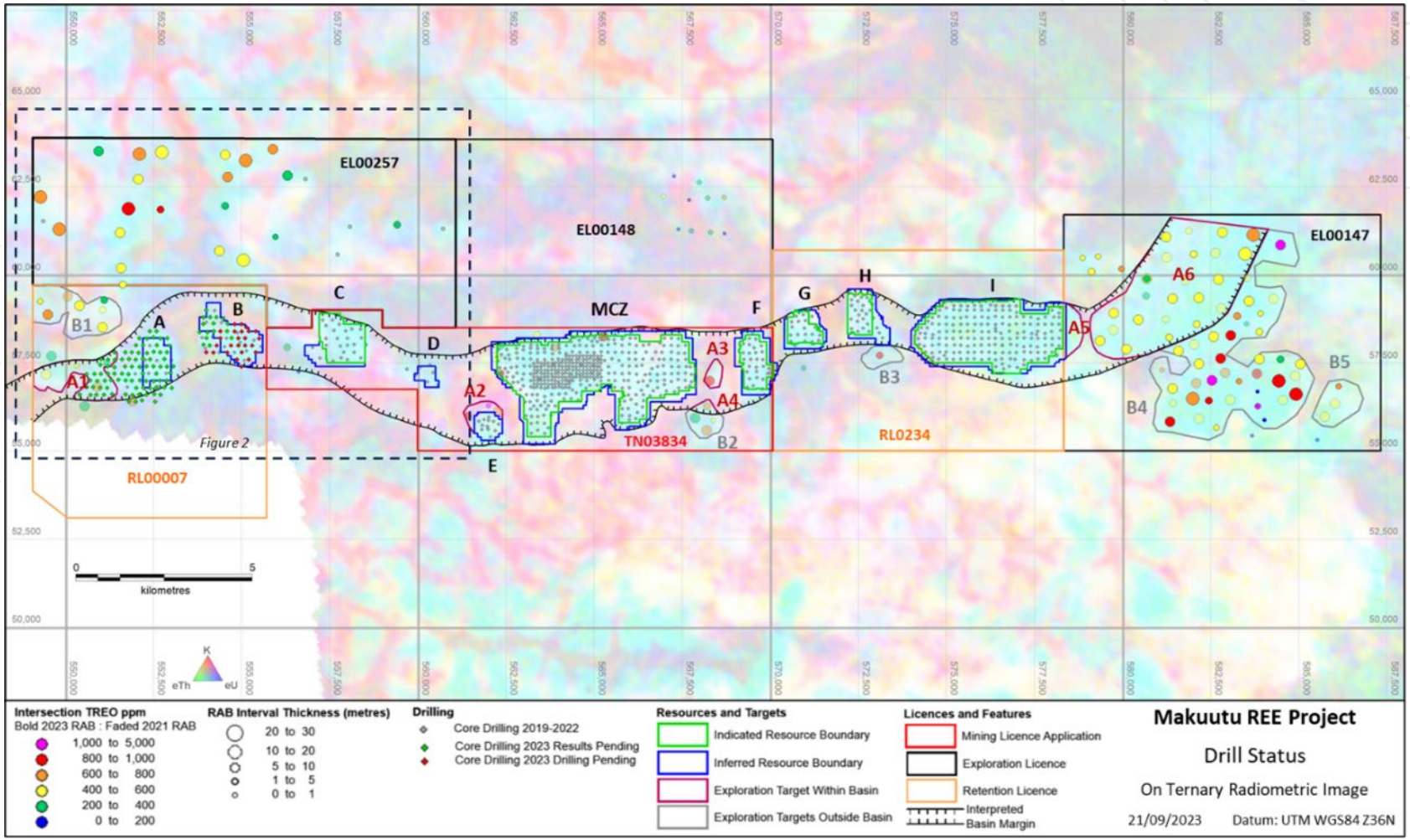
RAB drilling on EL00257 results reported 21 of 26 holes with REE bearing clay mineralisation above MRE cut-off grade representing potential for further Exploration Target growth

Core drilling on RL00007 required to increase MRE confidence on this tenement from Inferred to Indicated and support future MLA

The existing Makuutu Exploration Target[1], which is additional to the current Makuutu MRE, indicated a range for additional potential mineralisation at Makuutu estimated at;

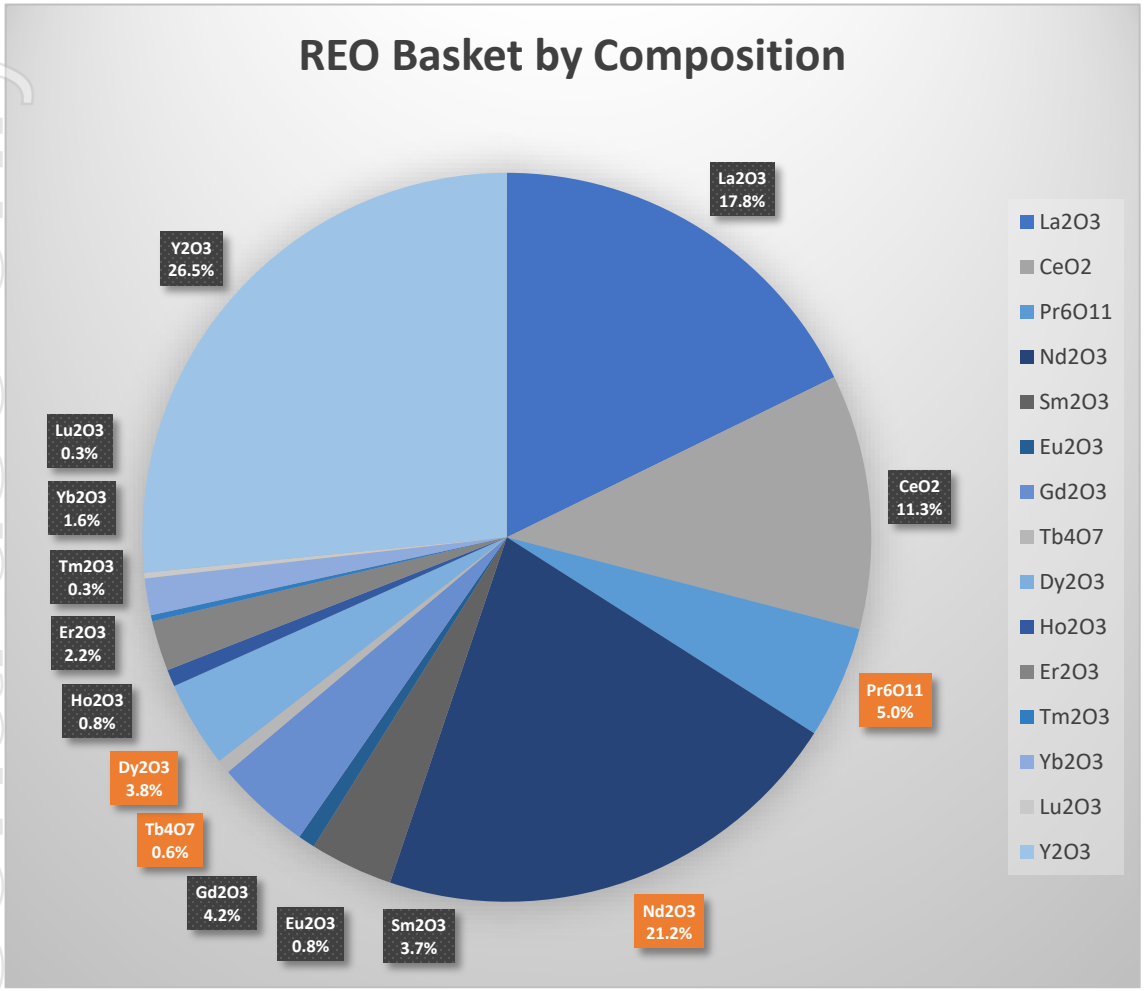
216 – 535 million tonnes grading 400 – 600 ppm TREO*

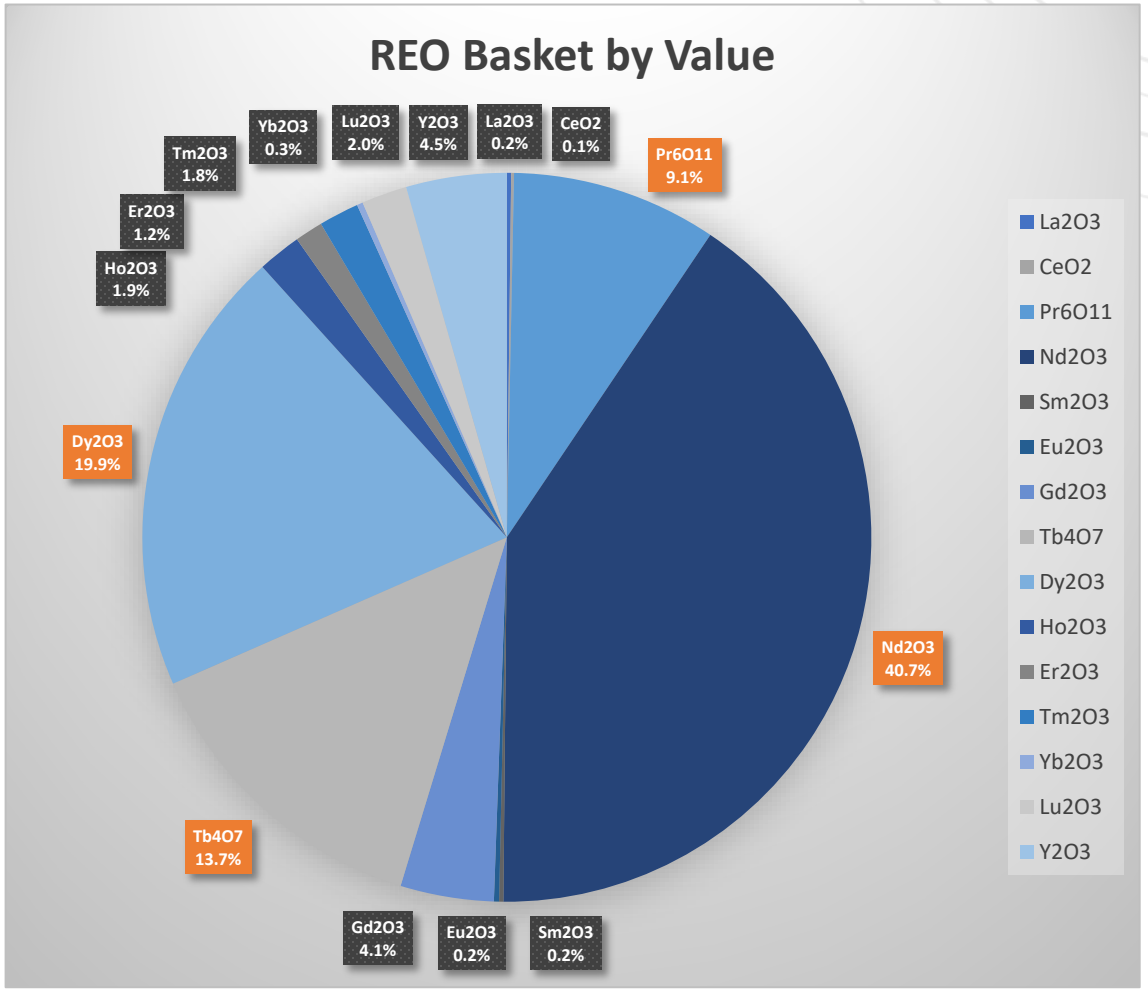
*This Exploration Target is conceptual in nature but is based on reasonable grounds and assumptions. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



[1] Makuutu Exploration Target update reported to ASX on 1 June 2022.

Makuutu Basket – Value Driven by Magnet & Heavy REOs





[1] Makuutu DFS reported to ASX on 20 March 2022.

Makuutu Demonstration Plant Progressing

- Technical facility erection progressing with construction completion expected late November 2023
- Phase 1 equipment in transit now from Perth → ETA November, commissioning Dec
- First MREC, Q1 2024
- Phase 1 to include 6m columns and cribs, expected to start late 2023, prior to Phase 2 (trial heaps) in H1 2024

ESG initiatives advancing at Makuutu

ESG FRAMEWORK TO BUILD LASTING LEGACY, DEFINING PATH TO NET ZERO CARBON RARE EARTH FOOTPRINT

Environmental and Social Impact Assessment (ESIA) approved in October 2022

Focus on carbon footprint reduction using low-cost renewable (hydro) power

Rehabilitation plans to ensure net carbon negative climate legacy

Water treatment for reagent recovery and rehabilitation strategy

Rehabilitation to consider development of longer-term industrial programs for employment

Aligned with Uganda's 3rd National Development Plan (NDPIII)

- Agricultural Programs to increase productivity
- Aquaculture and fish farming
- Agroforestry

Working together to build a future where everyone has a pathway to health, employment opportunities and improved living standards

Establishment of an Advisory Committee to coordinate community development investment priorities

Key focus being community health and education

A member of the UN Global Compact

Community socio-economic baseline surveys across initial project area completed

Expanding our Ugandan team to drive Project activity in country

Community and Stakeholder engagement a significant focus for Ugandan team

Local support for sub-district health clinics during Covid-19

Land access agreements secured for Demonstration plant at Makuutu and 92% of MLA over TN03834

Makuutu – Poised to Supply 'New Economy' Demand

THE MOST ADVANCED IAC PROJECT GLOBALLY, WITH PRODUCT AVAILABLE FOR WESTERN CUSTOMERS

Project (Owner) (Ticker)	Location	Mineral Resource Estimate	Scoping Study	Pre-Feasibility Study	Ore Reserve Estimate	Definitive Feasibility Study	Demonstration Plant	Environmental Permits	Mining Licence	Offtake	Final Investment Decision	Target First Production
Pela Ema Mineração Serra Verde (Private)		✓	-	✓	✓	✓	✓	✓	✓			Q4 2023
Makuutu Ionic Rare Earths Ltd (ASX: IXR)		✓	✓	-	✓	✓	Q4 2023	✓	Q4 2023		2024	2025
Penco Module Aclara Resources Inc (TSX: ARA)		✓	-	✓	✓	-	✓	✗				
Koppamurra Australian Rare Earths Ltd (ASX: AR3)		✓										
Caldeira Meteoric Resources Ltd (ASX: MEI)		✓							✓			
Colossus Viridis Mining & Minerals Ltd (ASX: VMM)												
Bluebush Alvo Minerals Ltd (ASX: ALV)												
Brazilian Rare Earths (Private)		✓										

Source: Company filings

Next Steps & Work Plan for next 12 months at Makuutu

- Mining Licence award for RL 1693
- Update to Exploration Target (~Q4, 2023) and define future growth potential
- Update MRE (Q1 2024) to include upgraded classification on RL 00007 to support next MLA area (Nov 2024)
- Demonstration Plant Program producing first MREC Q1 2024 in Uganda to de-risk Makuutu ahead of expected Final Investment Decision
- Next phase of engineering to support Makuutu execution program (DRA Appointed)
- Ongoing Community and Stakeholder engagement activity, land access agreements and expanding work program on Resettlement Action Plan (RAP)
- Capacity building in Uganda – recruitment and training in Uganda (~ 80 staff in Uganda)
- Makuutu offtake commitment
- Final Investment Decision

A leader in rare earth separation, refining and recycling

Ionic Technologies is our patented magnet recycling technology company based in Belfast UK.

Technology developed within Queens University Belfast (QUB)

Unique recycling technology that can hydrometallurgically extract, separate and refine magnet REOs from spent magnets and swarf to high purity 99.9%+ oxides – Nd_2O_3, Pr_6O_{11}, Dy_2O_3 and Tb_4O_7

Sept 2022 awarded grant of £1.72 million (~ A$2.9 million) from the UK Government's Innovate UK Automotive Transformation Fund Scale up Readiness Validation (SuRV) programme to help secure the UK supply of critical rare earth metals for EV manufacturing

New Belfast Technical Centre now operational, and Magnet Recycling Demonstration Plant in production, to convert 30 tonnes/annum NdFeB magnets →10 tonnes/annum magnet REOs

Provide springboard to accelerated rare earth production capacity, with potential to commence magnet REO production at small scale in 2023 whilst Makuutu is being developed and ramped up and in parallel to the development of the Refinery

Sept 2023 announced two new grants totalling £2 million (~ A$3.8 million) from the UK Government's Innovate UK to progress UK supply chain collaboration / partnership agreements with Ford Technologies, Less Common Metals (LCM), and British Geological Survey (BGS) on UK supply chain from REOs, RE metals, RE alloys and NdFeB magnets

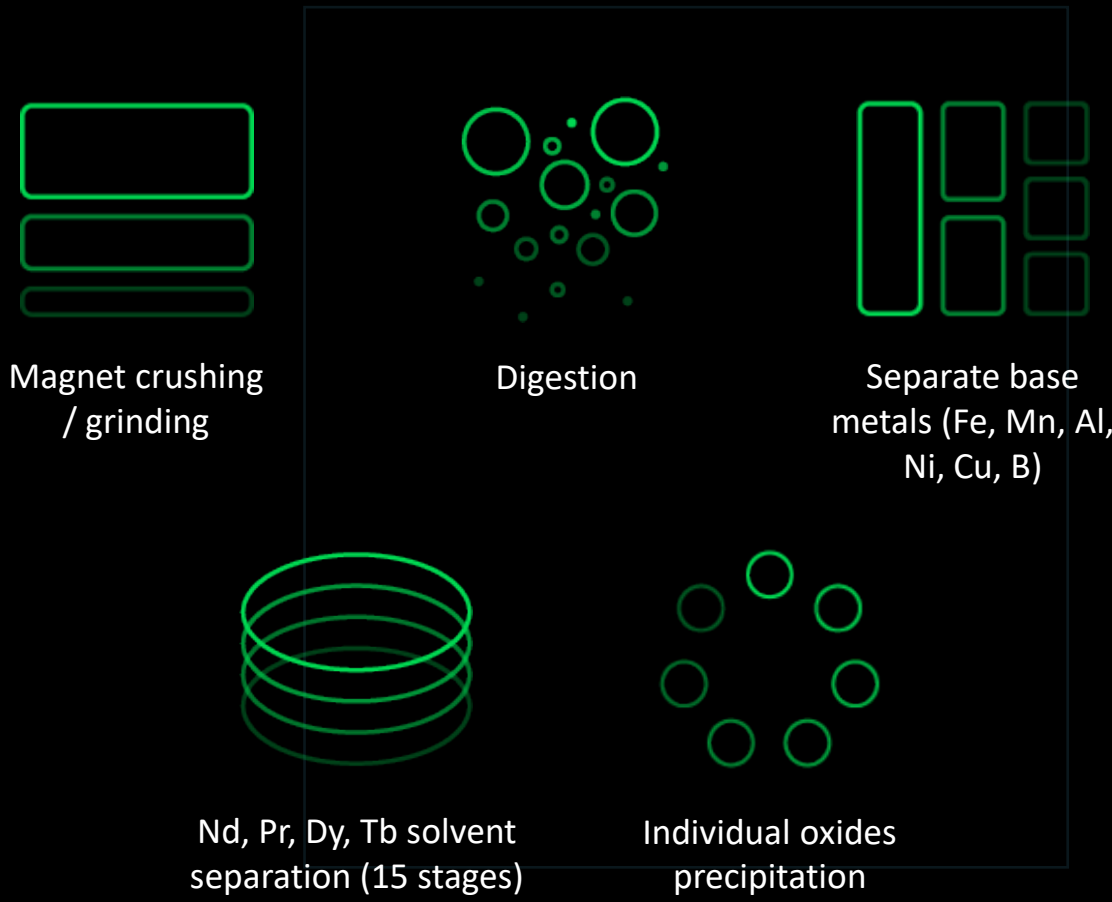
Ionic Technologies' Technology

Ionic Technologies has developed rare earth element separation and refining technology, applying this to the recycling and refining of individual magnet rare earths from spent permanent magnets.

Our process is agnostic on feedstock quality and variability in composition to deliver high purity separated magnet rare earth oxides.

Intake flexibility

Our technology can recycle any form of mixed waste magnets and production swarf regardless of type, age or coatings. We are not reliant on a single feedstock stream.

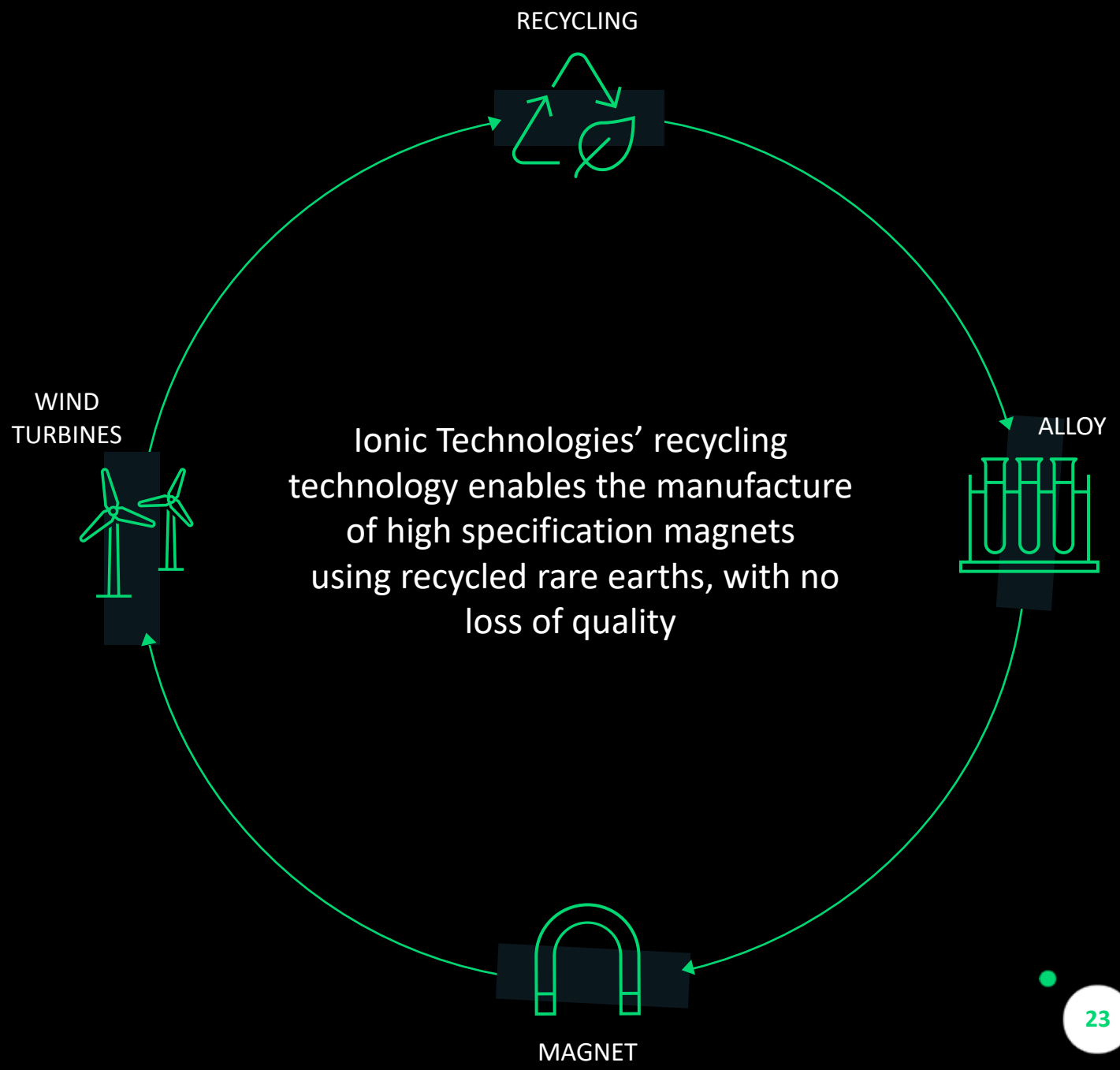


ionic technologies

Rare Earths for Life

Forming collaborative platforms to secure a domestic supply of rare earth metals globally

- Sustainability
- Transparency on quality
- Closed loop domestic strategy
- Stability of price
- Rapidly deployable technology



Ionic Technologies Demonstration Plant

Our Demonstration Plant officially opened September 2023 where 2 new grants and strategic partnerships announced

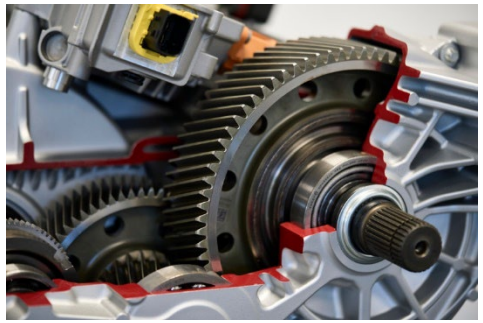
Plan to commence 24/7 operation in January 2024

- Ionic Technologies will process both end of life magnets (waste) and swarf, to recover, separate and refine high-purity magnet Rare-Earth Oxides (REOs) using our sustainable technology
- Current plan is to process 30 tonnes of NdFeB magnet feedstock, producing over 10 tonnes of separated magnet REOs
- Over 50 tonnes of NdFeB magnets secured










Rare Earth Supply Chain

The unlock through Ionic Technologies

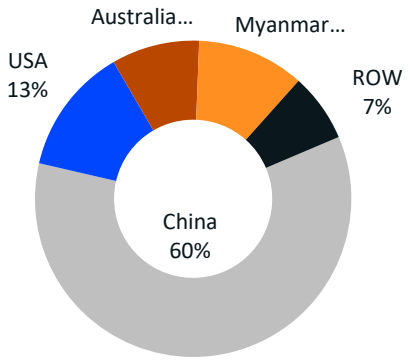
Via Ionic Technologies, IonicRE is engaging now with key supply chain partners[3] on value addition and developing commercial relationships with metal, alloy and magnet manufacturers

Long loop recycling to take metal and magnet back to high purity, separated magnet REOs

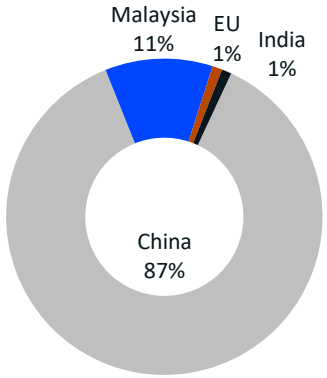
RE Concentrate | RE Oxide | RE Metal | Nd-Fe-B Magnet | Electric Motor

Exploration & Development → Mining & Production → Separation & Refining → Metal Reduction → Magnet Production → Production Of Components → Final Products

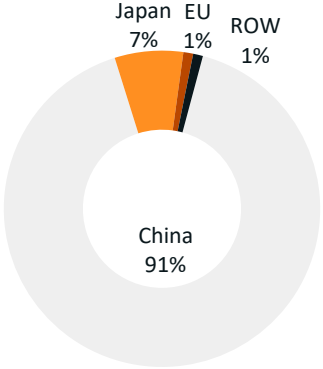
REE Mining[1]



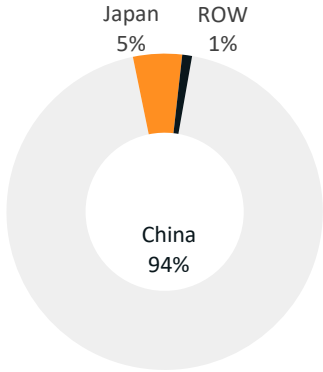
REE Processing[1]



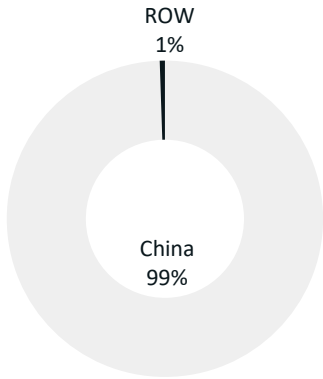
REE Metals[1]



REE Magnets[1]



REE Recycling[2]



[1] Rare Earth Magnets and Motors: A European Call for Action A report by the Rare Earth Magnets and Motors Cluster of the European Raw Materials Alliances, Oct 2021. Argus Analytics Oct 2021.
[2] Wood Mackenzie Global rare earths short-term outlook August 2022. [3] ASX Announcement Ionic, Ford and LCM Execute Landmark Recycling Partnership, 12 September 2023

IonicRE Activity Ramping Up Year-on-Year

VALUE UNLOCKED THROUGH ACCELERATED WORK PROGRAMS AT MAKUUTU & IONIC TECHNOLOGIES

2019

- ✓ IonicRE takes initial 20% interest in Makuutu Rare Earths Project
- ✓ Phase 1 Drill Program (750 metres)

2020

- ✓ Maiden MRE
- ✓ Phase 2 Drill Program Completed (3,000 metres)
- ✓ Phase 1 Metallurgical Variability Program
- ✓ Increased Makuutu ownership to 51%
- ✓ RL 1693 Renewal Approved
- ✓ New ELs Approved

2021

- ✓ 200%+ increase to Makuutu MRE
- ✓ Makuutu Scoping Study
- ✓ Commenced Phase 3 Drill Program on new Exploration Targets (1,200 metres)
- ✓ Phase 4 Drill Program Completed (8,000 metres)
- ✓ New EL Approved
- ✓ Acquisition of Seren Technologies (now Ionic Technologies) in UK

2022

- ✓ Completed Acquisition of Ionic Technologies
- ✓ 70% increase to Makuutu MRE
- ✓ Updated Exploration Target at Makuutu
- ✓ Awarded UK Govt Grant for Ionic Technologies
- ✓ Digbee ESG™ rating
- ✓ Established Ionic Technologies Facility in Belfast
- ✓ Commenced MLA for RL 1693

2023

2023 Catalysts to Unlock Further Value

- ✓ Makuutu DFS Released
- ✓ Moved to 60% ownership of Rwenzori Rare Metals (Makuutu Rare Earth Project)
- ✓ Makuutu Demonstration Plant construction started Q2 2023
- ✓ Ionic Technologies Magnet Recycling Demonstration Plant in Belfast produced magnet REOs in June 2023
- ✓ Additional Exploration at Makuutu (Q3/Q4 2023)
- • ML for RL 1693 **pending award
- • Strategic Partnerships Progressing

LAYING A FOUNDATION TO BUILD SECURE, SUSTAINABLE AND TRACEABLE SUPPLY OF MAGNET AND HEAVY RARE EARTHS

IonicRE Value Proposition

- DIRECT EXPOSURE TO RARE EARTHS MARKET GROWTH
- IONIC TECHNOLOGIES → ENTRY INTO A CIRCULAR ECONOMY FOR MAGNET RARE EARTHS WITH PARTNERSHIPS ANNOUNCED AND MORE TO COME
- MAKUUTU IS A LARGE, DEVELOPMENT READY IONIC ADSORPTION CLAY DEPOSIT
- LOW CAPITAL ACCESS TO MAGNET AND HEAVY RARE EARTHS
- STRATEGIC IMPORTANCE AS ONE OF FEW EX-CHINA SUPPLY OPTIONS
- GEO-POLITICAL TENSIONS DRIVING DEMAND FOR SECURE AND RESILIENT ALTERNATIVE SUPPLY
- DOWNSTREAM REFINING POTENTIAL TO UNLOCK VALUE OF MAKUUTU BASKET

"With current global heavy rare earth oxide production increasing just marginally each year and the outlook for Myanmar (miner of 40% of the world's dysprosium and terbium) uncertain, heavy rare earth elements remain a massively under-addressed blind spot in the automotive supply chain."

"By 2035, Adamas projects the global rare earth market will be short more than one China's worth of NdPr oxide supply, and over five China's worth of Dy and Tb oxide supply, annually (referring to China's 2022 production levels) should supply not increase substantially more than what is currently anticipated."

Adamas Intelligence, 2022

ASX: IXR

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