



ASX Announcement

13 March 2024

FIRST MIXED RARE EARTH CARBONATE PRODUCED AT MAKUUTU

- **Major milestone of the first production of Mixed Rare Earth Carbonate (MREC) from its newly commissioned Demonstration Plant on site at Makuutu in Uganda;**
- **MREC produced from Makuutu is rich in both magnet and heavy rare earth elements (REEs), and presents a key alternative, strategic future source for supply constrained Dysprosium (Dy) and Terbium (Tb), from which ~98% of global supply comes from China;**
- **Production of MREC advances further supply chain and off-taker engagement, providing sample product for customers and strategic partners to evaluate, and positions Makuutu for targeted Final Investment Decision later in 2024 and planned full commercial production in 2026;**
- **The Demonstration Plant facility at Makuutu continues to advance, with additional MREC production from the Phase 1 activity scheduled for the remainder of H1 2024;**
- **Major Milestone achieved within two months of being awarded its large-scale mining licence and nine months since breaking ground on facility in Uganda; and**
- **MREC production reinforces Makuutu as the most advanced Ionic adsorption clay project in development today, with product not committed to China and will supply new supply chains looking to decouple from existing sources.**

The Board of Ionic Rare Earths Limited (“IonicRE” or “The Company”) (ASX: IXR) is very pleased to announce that Rwenzori Rare Metals Limited (“Rwenzori”), owner of the Makuutu Heavy Rare Earths Project (“Makuutu” or “the Project”), has successfully produced first quantities of Mixed Rare Earth Carbonate (MREC) at its newly commissioned Demonstration Plant facility in Uganda.

IonicRE currently owns 60% of Makuutu and has agreed terms with partners in RRM on increasing its ownership to 94%, which pending approval by shareholders, and is subject to satisfying conditions precedent, is expected to occur in H1 2024.



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The high proportion of heavy rare earths within the Makuutu MREC basket further enhances the Project's market positioning and strengthens its value proposition to global partners and stakeholders.

This major milestone marks a pivotal moment in the Project's trajectory and path to offtake and strategic partner discussions. The Demonstration Plant has displayed rapid progress through achieving this milestone within just nine months of breaking ground in Uganda, and two months after receiving its large-scale mining licence, LML00334, at Makuutu.



Figure 1: First mixed rare earth carbonate (MREC) produced from the Makuutu Demonstration Plant in Uganda.

Commenting on the major milestone, Mr Tim Harrison, Managing Director of Ionic Rare Earths Limited stated;

"We are delighted to announce the successful production of our first mixed rare earth carbonate, on site at Makuutu in Uganda. The progress achieved over the past nine months from what was previously a sugarcane field, to now be a functioning technical facility producing magnet and heavy rare earths is a testament to the focus, dedication and expertise of our RRM and IonicRE team who made this happen."

"Achieving this major milestone, safely within such a short timeframe underscores our commitment to developing Makuutu as a disruptor to existing supply chains, providing an alternative, secure, sustainable and traceable source of heavy rare earths for new supply chains to emerge. This in

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combination with our Ionic Technologies Belfast recycling facility, Makuutu is key to us harnessing our technology to accelerate mining, refining, and recycling of magnets and heavy rare earths that are critical for the energy transition, advanced manufacturing, and defence”.

“Looking ahead, IonicRE remains steadfast in its pursuit of operational excellence, innovation, and sustainable growth. With the successful commencement of MREC production, the Company is well-positioned to capitalise on emerging opportunities and deliver long-term value to its shareholders and stakeholders.”



Figure 2: First MREC produced onsite at the Makuutu Demonstration Plant in Uganda.

The Company will continue to ramp up MREC production in Uganda at Makuutu in order to generate an adequate mass of product to provide samples to a number of groups who have requested samples for further evaluation.

For more information about IonicRE and its operations, please visit www.ionicre.com.

Authorised for release by the Board.

For enquiries, contact:

For Company

Tim Harrison

Ionic Rare Earths Limited

investors@ionicre.com

+61 (3) 9776 3434

For Investor Relations

Peter Taylor

NWR Communications

peter@nwrcommunications.com.au

+61 (0) 412 036 231

ABOUT IONIC RARE EARTHS LTD

Ionic Rare Earths Limited (ASX: IXR or IonicRE) is set to become a miner, refiner and recycler of sustainable and traceable magnet and heavy rare earths needed to develop net-zero carbon technologies.

The Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, moving to 94% ownership in Q1 2024, is well-supported by existing tier-one infrastructure and is on track to become a long-life, low Capex, scalable and sustainable supplier of high-value magnet and heavy rare earths oxides (REO). In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six (6) tenements to progress to mining licence which was awarded in January 2024. The Makuutu Stage 1 DFS defined a 35-year life initial project producing a 71% rich magnet and heavy rare earth carbonate (MREC) product basket and the potential for significant potential and scale up through additional tenements.

Ionic Technologies International Limited (“Ionic Technologies”), a 100% owned UK subsidiary acquired in 2022, has developed processes for the separation and recovery of rare earth elements (REE) from mining ore concentrates and recycled permanent magnets. Ionic Technologies is focusing on the commercialisation of the technology to achieve near complete extraction from end of life / spent magnets and waste (swarf) to high value, separated and traceable magnet rare earth products with grades exceeding 99.9% rare earth oxide (REO). In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant. This technology and operating Demonstration Plant provides first mover advantage in the industrial elemental extraction of REEs from recycling, enabling near term magnet REO production capability to support demand for early-stage alternative supply chains. In September 2023, Ionic Technologies announced with the support of the UK government, collaboration partnerships to build a domestic UK supply chain, from recycled REOs to metals, alloys and magnets and supplying UK based electric vehicles (EV) manufacturing, with potential to replicate across other key markets.

As part of an integrated strategy to create downstream supply chain value, IonicRE is also evaluating the development of its own magnet and heavy rare earth refinery, or hub, to separate the unique and high value magnet and heavy rare earths dominant Makuutu basket into the full spectrum of REOs plus scandium.

This integrated strategy completes the circular economy of sustainable and traceable magnet and heavy rare earth products needed to supply applications critical to EVs, offshore wind turbines, communication, and key defence initiatives.

IonicRE is a Participant of the UN Global Compact and adheres to its principles-based approach to responsible business.

Forward Looking Statements

This announcement has been prepared by Ionic Rare Earths Limited and may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Ionic Rare Earths Limited. Actual values, results or events may be materially different to those expressed or implied in this document. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue of this document. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Ionic Rare Earths Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this document or any changes in events, conditions, or circumstances on which any such forward looking statement is based.