



ASX Announcement

15 April 2024

BELFAST MAGNET RECYCLING DEMONSTRATION PLANT OPERATING SCHEDULE FULL FOR NEXT 18 MONTHS; NOW PROGRESSING TOWARDS COMMERCIAL PARTNERSHIPS

Strong Magnet Recycling Demand from Potential Commercial Partners is
Accelerating Capacity Increase Options for Belfast Plant

- **Demonstration Plant production schedule now full through to Q3 2025, with several supply chain participants, OEMs and potential strategic partners visiting Northern Ireland facility to evaluate plant performance and production output first hand;**
- **Ionic Technologies evaluating options for increased capacity at Belfast Magnet Recycling Demonstration Plant to cater for the strong demand from rare earth oxide (REO) supply chain participants and clear monetisation opportunity; and**
- **Multiple discussions now advanced regarding potential commercial partnerships which would utilise Ionic's technology for REO production from recycling.**

Ionic Rare Earths Limited ("IonicRE" or the "Company") (ASX: IXR) is pleased to advise that 100% owned UK subsidiary, Ionic Technologies International Limited ("Ionic Technologies") continues to receive numerous requests from various magnet REO supply chain participants and potential strategic partners to run both end-of-life (EOL) magnet material and swarf and magnet production waste streams trials through our rare earth recycling plant.

Given increasing demand for access to the technology and capacity being developed in Belfast, Northern Ireland, the Company has **now filled demand of the Plant for the next 18 months** to run several campaigns as part of demonstrator programs to progress enquiries towards commercial partnerships.

Due to this unprecedented demand, IonicRE is also now exploring options to increase capacity at the Company's Demonstration Plant, together with potential new capacity with partners in other jurisdictions, amid significant demand for the production of REOs from magnet recycling, which is currently essentially non-existent in the Western World.

The accelerating demand follows Ionic Technologies' successful continuous production of magnet REOs at the facility, with throughput ramping up to nameplate capacity (refer ASX release 25 March 2024). This production achievement also facilitates further collaboration with partners global automaker, Ford Motor Company and Less Common Metals, with the goal of developing a UK magnet REO supply chain.



Discussions to date have looked to access the magnet recycling opportunity now, as a first step to facilitate immediate capacity in building a more robust recycling to magnets supply chain, together with exploring access to the Company's Makuutu Rare Earths Project ("Makuutu") basket of magnet and heavy rare earths as capacity grows over the next few years.

IonicRE continues to build a multinational ex-China supply chain across the UK, Brazil and Uganda, with current heavy rare earth oxide production considered a "massively under-addressed blind spot in the automotive supply chain" (source: Adamas Intelligence, 2022). 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 (based on China's 2022 production), should supply not increase substantially more than currently projected.

In Europe, the European Union's 300 billion euro Critical Raw Materials Act (CRMA) identifies strategic raw materials critical to Europe's green and digital ambitions and for defence and space applications, while addressing future supply risks. By 2030, at least 25% of the EU's annual consumption of such materials must be from recycled sources, with not more than 65% of the Union's annual consumption of each strategic raw material at any relevant stage of processing from a single country.

IonicRE's Managing Mr Tim Harrison stated: ***"It is exciting to report that both the supply chain appetite and progress at our Demonstration Plant in Belfast has been excellent. We now have a wonderful showcase for the industry to see first-hand, how we can provide an immediate option for secure, sustainable, alternative magnet rare earths for a fraction of the capital required for new mine and refinery capacity, let alone a substantially reduced technical and deliverability risk profile."***

"The demand for recycled and high-quality product from the Belfast magnet recycling Demonstration Plant signals that we need to bring more capacity to market, and that the latent demand from the supply chain for both the technology offering from Ionic Technologies, plus our unique positioning in Belfast and access to both EU and UK markets, positions us very well to now convert demand to commercial partnerships for the business."

"We are already fully engaged in discussions with groups now looking at the offering from Ionic Technologies as a viable near-term solution to magnet REO sovereign capacity, and a disruptor to the tight constraints on the existing supply chain."

The substantial progress in Belfast follows the Company's execution of a transformational joint venture for separation, refining and recycling of rare earths in Brazil, as part of a 50:50 joint venture with Viridis Mining and Materials Ltd (ASX: VMM) (refer ASX release 3 April 2024). The JV has cemented IonicRE as a first mover on the path to ex-China REE production and supply, with mining and refining operations now straddling Africa, Europe and South America.

IonicRE's Executive Chairman, Mr Brett Lynch commented: ***"It is no exaggeration to state that IonicRE is leading the field in the race to develop an ex-China supply of REOs critical to developing net-zero carbon technologies."***

"Our Belfast plant is now the first producer of recycled separated magnet REOs in the Western world, a huge achievement for all stakeholders. We are now moving rapidly to commercialise rare earth separation, refining and recycling, with planned commercial-scale production likely within just two years, offering investors direct exposure to heavy rare earths market growth."

ionic rare earths

“The European Union has stipulated the need for increased recycling, and with Europe on our doorstep Ionic Technologies has an enormous opportunity to develop a closed loop system with metal, alloy and magnet manufacturers plus OEMs that provides the necessary security of supply.”

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

Authorised for release by the Board.

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About Ionic

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.

Ionic Technologies International Limited (“Ionic Technologies”), a 100% owned UK subsidiary, 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 and has moved to continuous production in March 2024, providing a first mover advantage in the industrial elemental extraction of REEs from recycling. In September 2023, Ionic Technologies announced collaboration partnerships with Ford Technologies, Less Common Metals (LCM) and the British Geological Survey (BGS) 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.

The Makuutu Rare Earths Project in Uganda, (60% owned; moving to 94% in Q2 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 REO. In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six tenements to progress to a 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. Makuutu is now producing mixed rare earth carbonate (MREC) from a Demonstration Plant on site to advance offtake negotiations.

IonicRE has also executed a transformational 50/50 joint venture refinery and magnet recycling facility in Brazil with Viridis Mining and Minerals Limited (ASX: VMM) to separate high value magnet and heavy rare earths from the Colossus Project’s full spectrum of REOs.

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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.

References to Previous ASX Releases

- IXR and VMM to form REE refining and recycling JV in Brazil – 3 April 2024
- Ionic Technologies starts continuous magnet REO production – 25 March 2024

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters continue to apply and have not materially changed.