

26 May 2025



IONICRE INKS MOU WITH EMR TO CREATE GAME-CHANGING CIRCULAR SUPPLY CHAIN FOR RARE EARTH MAGNETS

Collaboration to expand across recycling supply chain from magnet liberation and feedstock for UK recycling plant

- **IonicRE signs non-binding Memorandum of Understanding (MOU) with UK-based global leader in sustainable materials, EMR;**
- **Collaboration on optimising the liberation of magnets from complex end of life assets for commercial supply of magnets to Ionic Technologies for recycling;**
- **EMR will work with IonicRE as part of the UK supply chain development with UK Government engagement; and**
- **IonicRE continuing to cement supply chain agreements across the UK, Europe, and Asia for planned commercial magnet recycling facility in Belfast.**

Ionic Rare Earths Limited (“IonicRE” or the “Company”) (ASX: IXR) is advancing supply chain agreements for its Belfast magnet recycling plant, signing a non-binding Memorandum of Understanding (MOU) with EMR, a global leader in sustainable materials, concerning the supply of end-of-life (EOL) magnets to Ionic Technologies’ facilities, together with collaboration on the liberation of magnets and development of recycling initiatives.

The partnership is an important step towards creating a circular supply chain for rare-earth magnets and will secure much-needed materials to accelerate the green transition.

This MOU is also a significant step forward in the development of the Company’s proposed Belfast-based commercial magnet recycling facility, with supply agreements now extending from the UK to Europe, and Asia.

Under the agreement, the two companies including IonicRE’s wholly owned subsidiary, Ionic Technologies, will collaborate to help build a secure, sustainable and traceable supply of magnet Rare Earth Oxides (REOs) in the UK market. This includes collaboration with the UK government to maximise the UK recycled magnet REO supply chain.

EMR has already established itself as a leading player in this emerging industry, thanks to projects such as REAP (Rare-Earth Extraction from Audio Products), SCREAM (Secure Critical Rare Earth



Magnets for the UK Automotives) and Re-Rewind (Recovering Rare Earth Magnets from Wind Turbines). EMR's innovation projects aim to create a sustainable, circular economy for rare earth magnets. Building on years of experience, EMR will liberate magnets in the safest and most cost-effective way, leveraging its unmatched expertise to overcome the complexities of these materials.

Ionic Technologies' patented 'made in Belfast' technology and robust process, with substantially more flexibility on magnet feed requirements over short loop recycling offerings, provides both parties with a greatly enhanced potential supply chain interface, offering potentially lower costs and an attractive outlet for EOL magnet material.

The partnership between IonicRE and EMR is another leap towards ensuring these vital materials are available for the next generation of UK manufacturers and represents critical progress on the UK's path to net-zero.

A Product Carbon Footprint analysis conducted independently by Minviro on Ionic Technologies' magnet recycling process has shown dramatic emission reductions are possible of up to 61% lower CO₂ emissions compared to the existing REO supply chain sourced from primary (mine) supply (refer ASX announcement 13 March 2025). This highlights the technology's potential to dramatically lower scope 3 emissions for the OEM supply chain.

Welcoming the agreement, IonicRE's Managing Director, Tim Harrison, said it was a significant step forward for the Company's commercial plant development in Belfast, UK, and potential global roll out.

"IonicRE is delighted to work with a global recycler like EMR, a leader in sustainable materials with facilities across the globe and a commitment to advancing the circular economy. We look forward to collaborating with them to secure a significant inbound flow of our feed source, and in doing so maximising the UK opportunity for magnet REO recycling."

"The two organisations have a mutual interest to develop viable capacity for end-of-life magnet REO material and by seeking ways to integrate and promote shared value, and will both benefit from this collaboration."

He added: *"Our robust long-loop recycling process opens up multiple opportunities for recyclers such as EMR, that were previously not available. We can accommodate magnets in most formats, with varying degrees of pre-processing already completed, recovering individually separated, recycled REOs, with purity over 99.5%, perfectly suited for new Western supply chains."*

"As shown by our successful Feasibility Study on commercial REO manufacturing in Belfast, our technology has fantastic commercial potential. EMR are a very significant partner to have engaged with the development and ultimately will likely have a key role in providing feedstock supply to the commercial plant."

Dr Charlotte Stamper, Strategic Partnerships Manager at EMR, commented: *"EMR's goal of delivering a sustainable and cost-effective circular supply chain for rare-earth magnets in the UK is closer than ever thanks to our agreement with IonicRE."*

“The emergence of electric vehicles and wind power in recent years means there will be a greater demand for rare-earth magnets, and it is crucial these materials can be safely liberated and efficiently recycled right here in the UK.

“The signing of this MOU with IonicRE will empower EMR and its customers to capitalise on years of research and development during projects such as SCREAM, REAP and Re-Rewind to create a scaled up new recycling supply chain.”

The UK is competing with numerous countries for access to materials critical to decarbonisation technologies, a situation that could lead to significant global supply bottlenecks, according to a report by the UK Critical Minerals Intelligence Centre ([“A UK foresight study of materials in decarbonisation technologies”](#)).

The report states that REEs represent the largest share of UK demand relative to global demand, ranging from 12.5% in 2030 to 15% in 2050. This substantial share reflects the UK’s rapid decarbonisation objectives, where REEs play a key role in electric motors, wind turbines and heat pumps.

Adamas Intelligence¹ projects that by 2035, around 200,000 tonnes of NdFeB magnets will be entering waste streams globally. Adamas further predicts that less than 25% of the 2035 projection will be recycled annually by 2035, however should the recycling portion increase to 40% to 50%, the contribution from recycling would be equivalent to four-to-five Mountain Pass (MP Materials) or Mt Weld (Lynas) mines.

The new agreement with EMR follows IonicRE’s MOU with South Korea’s DNA Link, concerning collaboration on the recycling of rare-earth permanent magnets and magnet REO supply in the world’s third-largest magnet market (refer ASX release 13 February 2025).

IonicRE Executive Chairman, Brett Lynch commented: *“IonicRE is putting the building blocks in place for our planned commercial magnet recycling plant in Belfast and this agreement is a huge step forward in securing future supply.*

“A company with the stature and global reach of EMR doesn’t take such agreements lightly and this agreement is clearly an enormous vote of confidence in Ionic Technologies. We are delighted to take this initiative and look forward to cementing this partnership as we advance the commercial development of our business in the UK.

“Having already signed an MOU concerning the Asian market and with our tie-up in Brazil, we are rapidly rolling out a global, industrial and scaleable technology business, focused on de-mining and de-risking to deliver value for shareholders.”

Ionic Technologies has developed rare-earth element (REE) separation and refining technology and applied this to the recovery and separation of individual magnet REEs from spent permanent

¹ Adamas Intelligence, <https://www.adamasintel.com/rare-earth-elements-are-critical-to-end-use-markets-valued-in-the-trillions/>

magnets. Magnet rare-earths make up approximately 90% of the value of the rare-earth industry at present.

Ionic Technologies' patented 'made in Belfast' technology, developed at Queens University Belfast (QUB) offers first mover capability for individual magnet rare-earth recycling, separating magnet REOs, specifically Nd, Pr, Dy and Tb, to grades exceeding 99.5% purity.

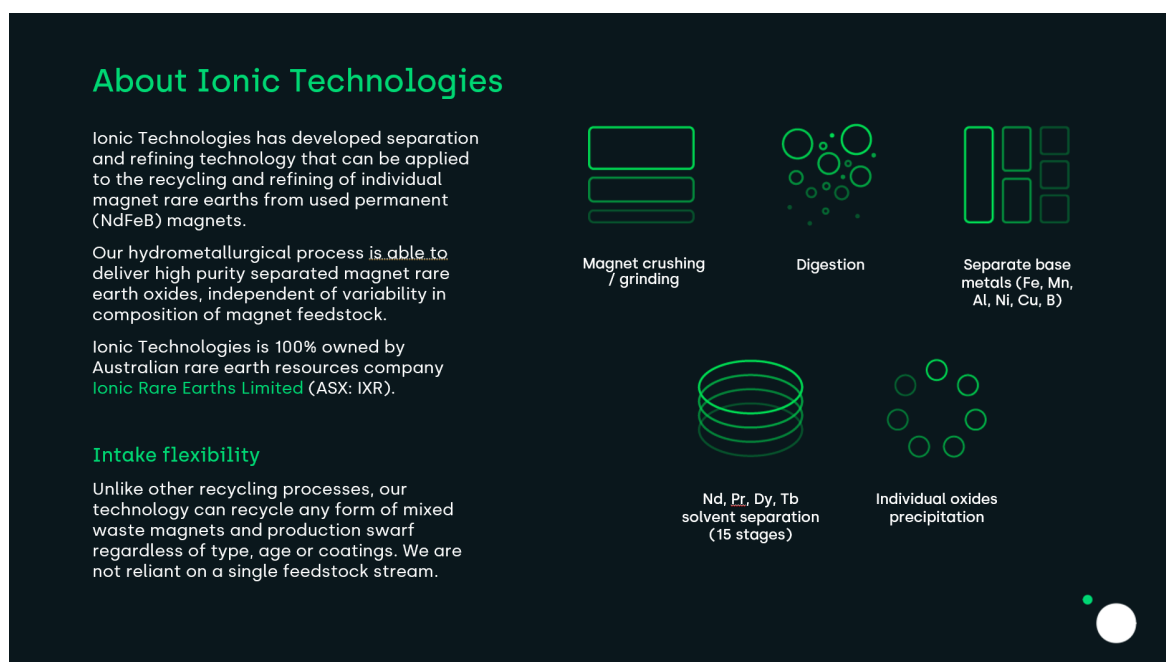


Figure 1: Ionic Technologies technology overview.

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 an emerging 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 99.5% rare earth oxide (REO).

In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant and 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. Ionic Technologies gained further UK Government support in September 2024, via its CLIMATES funding programme to demonstrate a circular supply chain for pre-consumer NdFeB magnet scrap (swarf) in partnership with LCM and Vacuumschmelze. The business also benefited from support from the UK Government to develop magnet demagnetisation and comminution processes in partnership with Materials Processing Institute (MPI) and Swansea University.

In November 2024, IonicRE released a Feasibility Study showing the strong potential for a profitable and unique commercial REO manufacturing facility in Belfast, UK, recycling pre-consumer rare earth magnet scrap and end-of-life magnets, delivering sovereign capability to the UK and supporting regional investment in Northern Ireland.

The Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, moving to 94% ownership) 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. 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.

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.

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

About EMR

EMR is a global leader in sustainable materials with physical operations in the UK, USA, Germany, and the Netherlands. Their purpose is to create a future where the materials we use do not need to be extracted from the planet.

EMR recycles over 10 million tonnes each year - anything from a can to an aircraft carrier. This saves over 19.1 million tonnes of CO₂ from being released into the atmosphere.

They work internationally with industry, government bodies and the general public to turn end-of-life materials, including consumer products, vehicles, and materials from industry, construction, and demolition, into valuable resources – making the circular economy a reality.

To help the world use its precious resources more sustainably, EMR has committed to becoming a fully net-zero business by 2040 and have aligned their climate commitments with science to play their part in the battle against climate change. As part of this, they invest heavily in energy productivity, low-carbon and nature-positive technology and developing innovative new products that help their customers reduce their carbon emissions further.

For more information on EMR, please visit uk.emrgroup.com.

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

- Peer review confirms up to 61% lower CO₂ emissions from Ionic Technologies' magnet recycling process – 13 March 2025
- Magnet recycling life cycle assessment indicates revolutionary 30-50% lower CO₂ footprint compared with existing global primary REO producers – 18 February 2025
- IonicRE signs MOU with Korea's DNA Link to spur international expansion – 13 February 2025
- LCA to show Ionic Technologies CO₂ footprint benefit – 5 February 2025
- Viridion backed to build Brazilian magnet supply chain – 9 December 2024
- UK government grant application lodged for magnet recycling plant – 5 December 2024
- FS demonstrates profitable magnet REO business case – 18 November 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.