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ASX Announcement

18 November 2024

POSITIVE FEASIBILITY STUDY DEMONSTRATES PROFITABLE MAGNET RECYCLING BUSINESS IN UK

Landmark Belfast facility backed by UK Government shows strong returns and supply chain engagement

- **Feasibility Study shows strong potential for profitable and unique commercial Rare Earth Oxide (REO) manufacturing facility in Belfast, UK, recycling pre-consumer rare earth magnet scrap and end-of-life (EOL) magnets and delivering sovereign capability to the UK;**
- **Key study outcomes:**
  - **$NPV_{7.5}$ (post tax) of US$502m (A$776m, A$ = US$0.65);**
  - **IRR (post tax) of 43.6%;**
  - **Net revenue US$2.12b (A$3.26b);**
  - **EDITDA US$1.78b (A$2.76b);**
  - **Capital payback of 2.4 years, based on throughput of 1,200 tonnes per annum (tpa) of feed with production capacity of 400 tpa of separated magnet rare earth oxides (REO) over 20-year life of operation;**
- **IonicRE is progressing site permitting, with construction planned to be completed late 2026, delivering sovereign magnet REO for Western customers from early 2027; and**
- **Ionic Technologies set to submit application for a significant capital grant from the UK Government via the Automotive Transformation Fund (ATF), administered by the Advanced Propulsion Centre (APC), for automotive manufacturing and sovereign rare earth supply chain.**

Ionic Rare Earths Limited ("IonicRE" or the "Company") (ASX: IXR) wholly owned subsidiary Ionic Technologies is on track for the development of a unique commercial REO manufacturing facility in Belfast, UK, following the successful completion of a Feasibility Study that demonstrates both strong

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financial returns and environmental sustainability. The study positions Ionic Technologies as the 'first mover' in the development of a sustainable, traceable and sovereign UK/Europe supply chain, meeting the demands of the net-zero transition, advanced manufacturing and defence.

Commenting on the study, IonicRE's Managing Director, Tim Harrison said: *"The completion of this Feasibility Study is a major milestone in our Company's development of a Western rare earths supply chain, initially centred on Belfast, UK. I congratulate our team at Ionic Technologies and all our partners for these outstanding results.*

"The study confirms that the commercial case for magnet recycling is compelling, complementing the clear environmental and sustainability benefits, as well as the imminent need for REE production outside of China. Financially, this represents a low capital risk pathway to sovereign magnet REO production compared to alternative sources, offering strong financial returns based on a 'circular economy' model of sustainable production, backed by the UK Government and our project partners.

"Even at today's REO spot prices, this study indicates a viable, positive NPV business due to our unique low cost, patented recycling process for separating magnet rare earths without requiring mining. Now that we have successfully delivered on this UK-Government supported study, we anticipate significant strategic and investor interest owing to the potential for the development to underpin UK and European net-zero ambitions, create supply certainty, reduce exposure to cost fluctuations and promote regional growth within the UK.

"The Company also intends to utilise this study to progress further opportunities in target markets – the US, Europe, Brazil and Asia – where we expect further improvement on the economics.

"We are now moving to secure feedstock and offtake agreements, enabling Ionic Technologies to capitalise on its leading market position and technical capability to deliver benefits for all stakeholders. With more than 50% of the global production of NdFeB magnets consumed for decades in the West, a sizeable inventory of material is available to recycle back into new supply chains now."

Table 1 below highlights the Belfast facility's positive projected financial returns.

Table 1: Summary of financial metrics

Metric	Units	Belfast Plant US$	Belfast Plant A$
Discount Rate (real)	%	**7.5%**	**7.5%**
NPV (pre-tax)	$m	**673**	**1,040**
NPV (post-tax)	$m	**502**	**776**
IRR (pre-tax)	%	**52.2%**	**52.2%**
IRR (post tax)	%	**43.6%**	**43.6%**
Capex	$m	**108.7**	**168.1**
Payback Period	Years	**2.4**	**2.4**
Net Revenue	$m	**2,116**	**3,274**
EBITDA	$m	**1,782**	**2,756**
OPEX (ex-magnets)	$/kg REO	**27.68**	**42.82**

Exchange Rates used, 1 GBP = 1.28 US$, 1 A$ = 0.65 US$.

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Designed for a brownfield site located in Belfast Harbour, the planned commercial-scale plant would represent a 40-fold increase in production capacity (400 tpa) from the Demonstration Plant (10 tpa). The process design is modular, with the plant comprising of two 200 tpa production lines, allowing for scale-up flexibility and parallel REO separation activity.

The completion of the Feasibility Study, and ongoing completion of the FEED Study allows prioritisation of commercial offtake agreements for high purity, separated magnet REO products – didymium oxide ($(NdPr)_2O_3$), dysprosium oxide (Dy_2O_3) and terbium oxide (Tb_4O_7). Additionally, functionality for separated neodymium oxide (Nd_2O_3) and praseodymium oxide (Pr_6O_{11}) is also under further investigation driven by appetite in several industries beyond the magnet supply chain.

Given the nature of the design, and the potential to quickly replicate capacity in other target markets, a bare module cost has been developed independent of additional site-specific costs in Belfast. The study reflects a 20-year operational life for the Belfast magnet recycling facility.

Project Funding

Ionic Technologies has previously benefitted from UK Government grant funding, with up to £5m of funding and commitments received to date. These include two recent grants with a combined value of £1.27m GBP (A$2.46m), including direct funding totalling £470k, to foster REE supply chain partnerships (refer ASX announcement 1 October 2024).

Ionic Technologies will shortly submit an application for a significant capital grant from the UK Government via the Automotive Transformation Fund (ATF), administered by the Advanced Propulsion Centre (APC), for automotive manufacturing and supply chains. The APC is dedicated to supporting the UK's global leadership position in scientific research, automotive engineering and net zero.

The Company is also exploring additional government backed financing which targets projects that have the potential to facilitate the UK's energy transition and drive regional growth, supporting investment in Northern Ireland. This combination has the potential to significantly reduce the equity component required to finance the commercial facility. The Company will update the market on the outcome of this application.

Ionic Technologies has received a high level of off-taker inquiries and investor support, as highlighted by its successful analyst and strategics day hosted at the Belfast facility in July 2024. This adds to the commercial partnerships established with UK-based metal and alloys manufacturer Less Common Metals (LCM) and Germany-based magnet manufacturer Vacuumschmelze (VAC) to produce magnets containing 100% recycled HREEs and LREEs.

IonicRE will further explore these avenues of potential funding for the development of a commercial-scale REO facility, focused on protecting shareholder capital while maximising returns for investors.

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Next Steps

IonicRE will now appraise commercial options to progress to Front End Engineering Design (FEED) with an appropriate Engineering, Procurement and Construction Management (EPCM) partner and continue to engage with local stakeholders to expedite delivery of its landmark Belfast facility.

The Feasibility Study will facilitate further engagement with the UK Government, project partners and investors, with IonicRE targeting a Final Investment Decision in H1 2025 and first production in late 2026, based on regulatory approvals and project funding.

As stated earlier, the Company will also be applying for additional UK Government funding via the Automotive Transformation Fund (ATF), administered by the Advanced Propulsion Centre (APC), with this potential cornerstone capital grant set to provide the UK with sovereign magnet REO capability for the first time.

Additionally, the Company is in discussions with both strategic investors and debt financiers to secure the total investment required to progress towards FID.

The Company is also progressing approvals for the commercial site located on Queens Island in Belfast Harbour and expects to finalise permitting in early 2025.

IonicRE Executive Chairman, Brett Lynch commented: *"This Feasibility Study demonstrates that IonicRE is leading the field in the race to develop an ex-China supply of REOs using net-zero carbon technologies. Our Belfast plant is 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 recycling, with planned commercial-scale production within just two years, offering investors direct exposure to the growth of a Western supply chain.*

"Through the study we have also identified further strategic locations for potential future sites in other key markets including the USA, Brazil and Asia. These provide substantially enhanced economics through a lower opex and capex cost base and direct local access to even larger Western key markets. With this first study for production in the UK now complete, we can accelerate negotiations to establish multiple commercial operating sites across the globe."

He added: *"At IonicRE we are building a new business model – a first for the rare earths industry – an industrial business model based on our patented magnet recycling technology. The model's competitive advantage to traditional primary mining and refining models is that it requires only relatively low capex and opex. It also has inherently low permitting risk and can be located in many stable and developed markets with low sovereign risk and strong Government support for green industries. This will deliver higher returns and faster payback with less risk for our investors.*

"Having demonstrated the potential for our first site in the UK, the Feasibility Study now opens the door for us to hyperscale this model globally."

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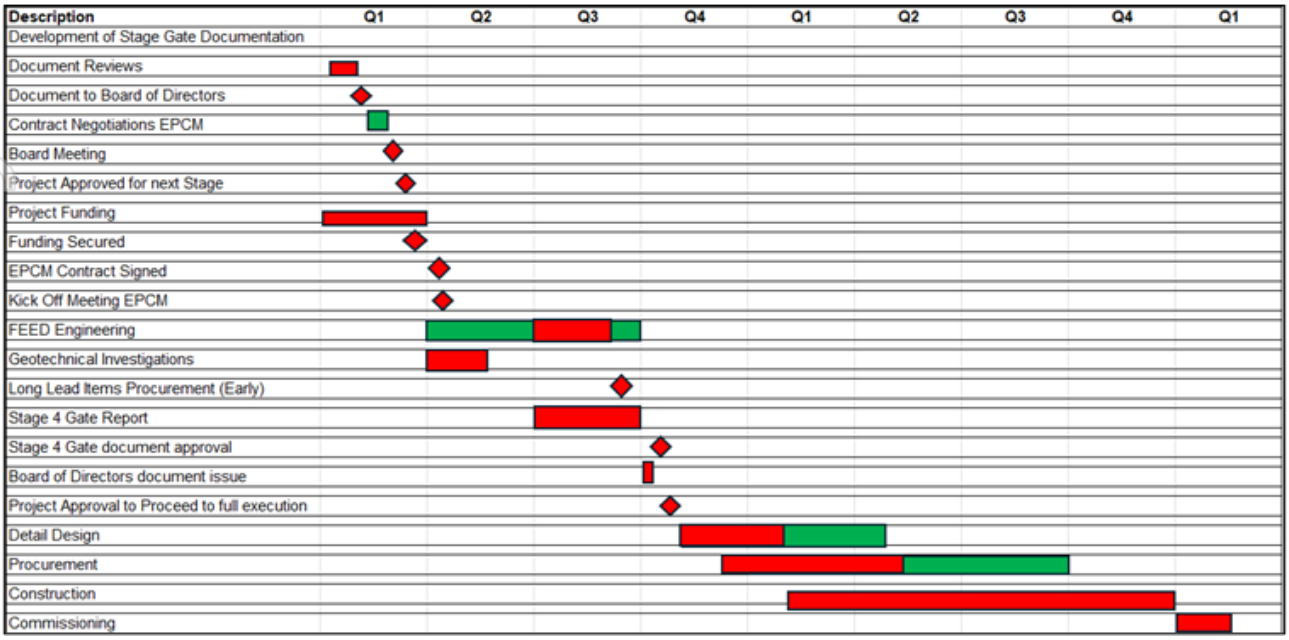

Figure 1: Belfast magnet recycling facility Level 1 project schedule.

FEASIBILITY STUDY – TECHNICAL REPORT

Process Flowsheet

The Feasibility Study was conducted in collaboration with Ionic Technologies' technical partner, WSP and in partnership with the British Geological Survey and the UK Government (Innovate UK). The study has been informed by consistent operation, optimisation and process trials at the Belfast Demonstration Plant, which is operating utilising a representative process flow sheet.

A two-train design has been selected, to enable enhanced feedstock flexibility, operational redundancy, efficiency and product mix. The capital cost estimate provides for all process, electrical, mechanical and control deliverables, as well as the civil engineering implications of a site on Queen's Island within Titanic Quarter, Belfast Harbour. The design and site allow for future expansion, as per demand requirements.

A process flow schematic is shown in Figure 2.

The study assumes a feed composition of end-of-life (EOL) magnet and swarf composition that reflected a mid-point of samples tested by the Company over the past three years, with nominal composition of 21% Nd, 7% Pr, 3% Dy and 1% Tb. Average metallurgical recovery for the process, reflecting results achieved in laboratory, piloting and demonstration plant trials, and modelled using SysCAD software for the study, was estimated at 89% Nd, 90% Pr, 90% Dy and 90% Tb.

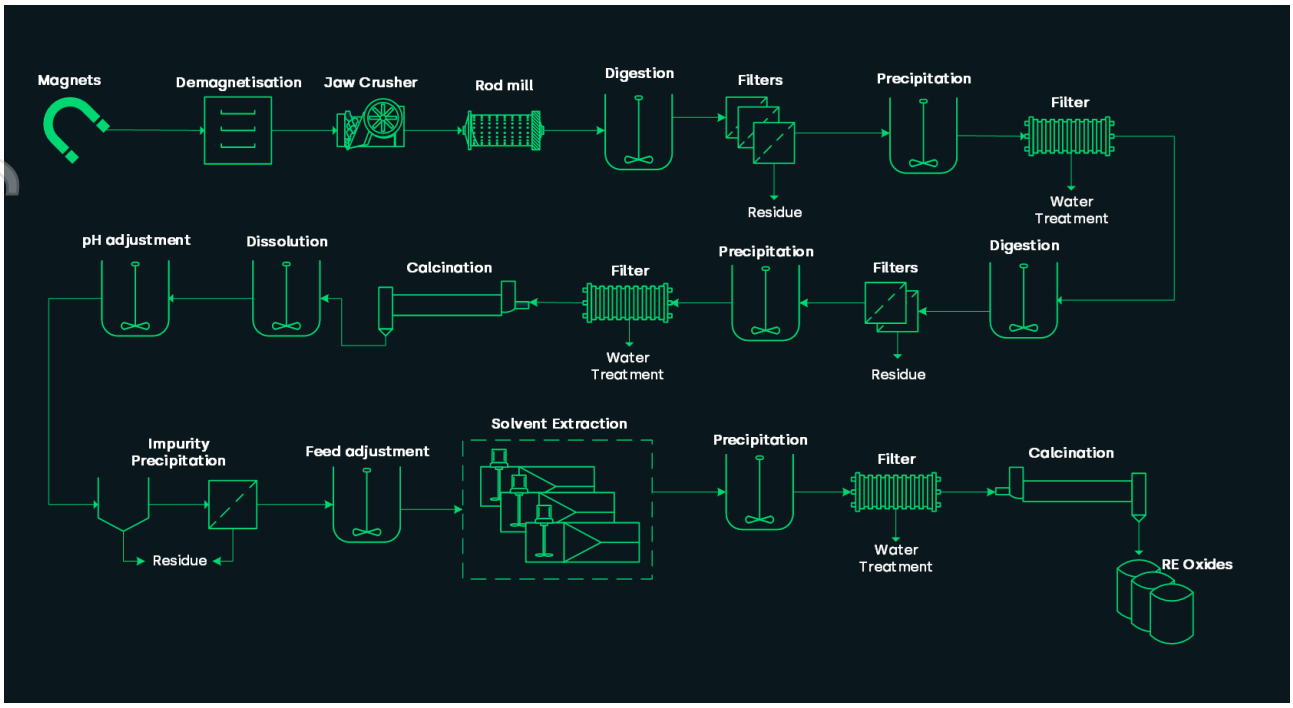

Figure 2: Ionic Technologies' Process Flow Schematic Diagram.

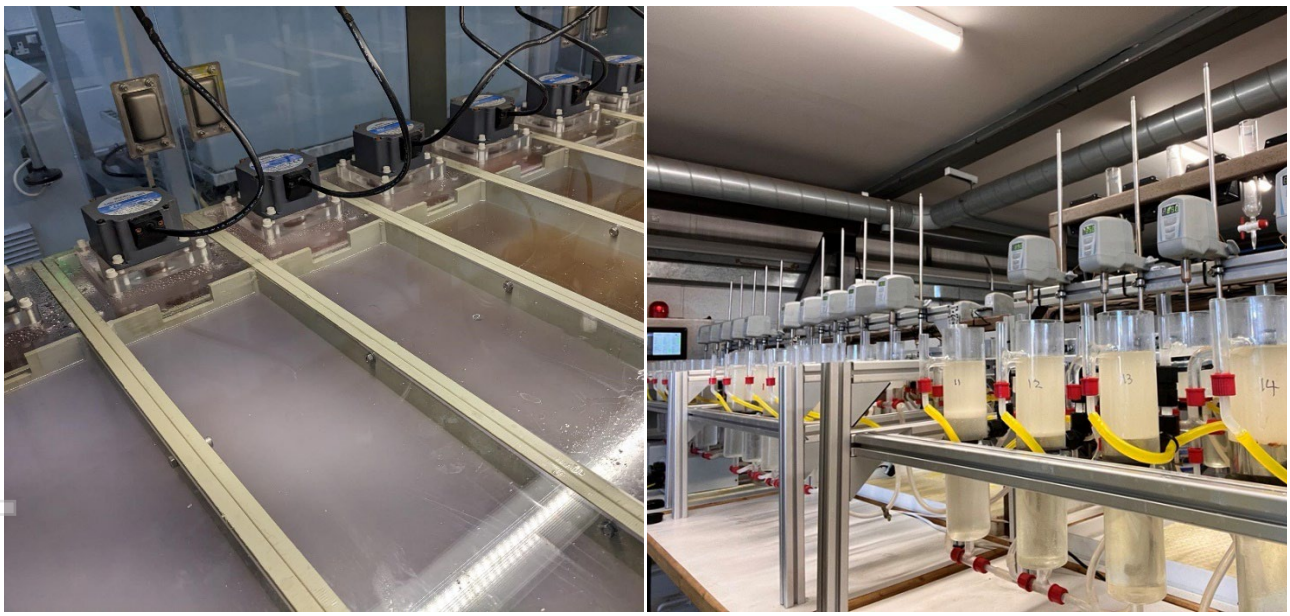

Figure 3: Ionic Technologies' demonstration scale solvent extraction (SX) circuit (left), and Ionic Technologies' Heavy REE SX circuit (right).

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CAPEX and OPEX

The cost estimate was developed based on a Class 3 Estimate as defined by AACE with an accuracy range of -15%/+20% developed by WSP. During the FEED the level of information developed, and information obtained from vendors/contractors will enable the estimators to develop a hybrid of Class 1 and Class 2 estimates.

The total estimated cost to complete the facility in the Belfast Harbour is US$108.7m (£84.96m), based on 1 GBP = 1.28 USD. This includes allowances for the known ground conditions (reclaimed land) for the selected development site located on Queens Island, and all civil, electrical, mechanical and process engineering work. It also includes a 13.8% contingency. Escalation rates were calculated at 1.8% of the project cost, based on six months of awarding all major contracts.

Table 2: Commercial Plant Capital Cost Estimates.

Description	GBP Value (£m)	US$ Value ($m)
Direct Cost / Plant & Equipment	£58.8	$75.3
Indirect Cost / FEED & Detail Design, Management	£6.0	$7.7
Risk Adjusted Cost / Escalation & Contingency	£10.9	$13.9
Belfast Specific Cost / Substructure	£9.3	$11.9
Total	**£85.0**	**$108.7**

Exchange Rates used, 1 GBP = 1.28 US$.

Figure 4: Site location (red outline) progressing through permitting approvals at Belfast Harbour.

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Figure 5: Ionic Technologies Commercial Plant Architect's Impression (Belfast, UK).

Figure 6: Ionic Technologies Commercial Plant Technical Render (Belfast, UK).

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Furthermore, given the potential to replicate the facility in other locations, specifically target markets in the United States, Europe, Brazil and Asia, a bare module cost including contingency and escalation was developed, indicating the potential to replicate the facility on another site costing US$96.9m (£75.7m). The Company has already identified several areas for capital reduction in replicated facilities which will undergo further evaluation during FEED. A breakdown is provided in Table 3.

Table 3: Summary of financial metrics

Metric	Units	Bare Module US$	Belfast Plant US$
Discount Rate (real)	%	7.5%	7.5%
NPV (pre-tax)	US$m	683	673
NPV (post-tax)	US$m	510	502
IRR (pre-tax)	%	57.0%	52.2%
IRR (post tax)	%	47.4%	43.6%
Capex	US$m	96.9	108.7
Payback Period	Years	2.2	2.4
Net Revenue	US$m	2,116	2,116
EBITDA	US$m	1,782	1,782
OPEX	US$/kg REO	27.68	27.68

Exchange Rates used, 1 GBP = 1.28 USD, 1 AUD = 0.65 USD.

Operational costs are based on a 1,200 tpa feedstock capacity, comprised of EOL permanent magnets and magnet manufacturing waste (including swarf), enabling production of around 400 tpa separated magnet REO. Operating costs consider local energy, chemical, labour, waste, maintenance, general and administrative costs.

Table 4: Commercial Plant Key Operational Assumptions and Outputs

Item	Key Assumption/Output
Annual Throughput – Magnets/Swarf (Feed)	1,200 tpa
Annual Output – REOs (Product)	400 tpa
Target Products	262 tpa Neodymium oxide (Nd_2O_3) 89 tpa Praseodymium oxide (Pr_6O_{11}) 350 tpa Didymium oxide (NdPr oxide) 37 tpa Dysprosium oxide (Dy_2O_3) 13 tpa Terbium oxide (Tb_4O_7)
Operating Cost Estimate per kg REO Product	$27.68/kg

Table 5: Operating Cost Breakdown

OPEX Summary	Costs, US$/kg REO
Magnet Costs	$14.99
Processing	
Reagents	$11.13
Labour	$6.64
Energy	$5.36
Maintenance	$2.11
Other Direct	$0.12
G&A	$2.32
Total Opex	**$42.67**
Total Opex (excluding magnet costs)	**$27.68**

The magnet procurement basis reflects existing payability basis pending REO content developed by the Company to date, which will also have scope for a tolling arrangement with partners.

Based upon the operating cost model, the Company will now use this information on the potential to scale the recycling capability into target markets. These have the potential for significantly reduced operating costs through co-location of recycling facilities on brownfield sites with access to low-cost reagent supplies, cheap power, and existing infrastructure including support labour.

The facility is expected to ramp up to nameplate production capacity over two years (year 1 65% nameplate, year 2 95% nameplate) after which production will reach 400 tpa of magnet REOs. The production profile is illustrated in Figure 7.

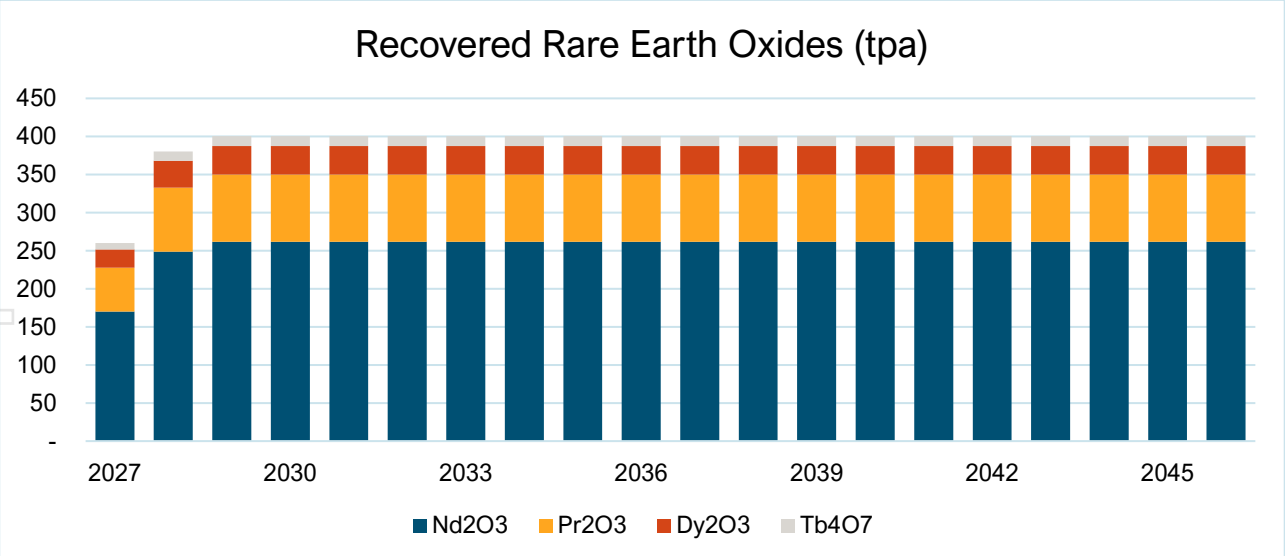

Figure 7: Magnet REO production profile for the Belfast magnet recycling facility over the life of operation.

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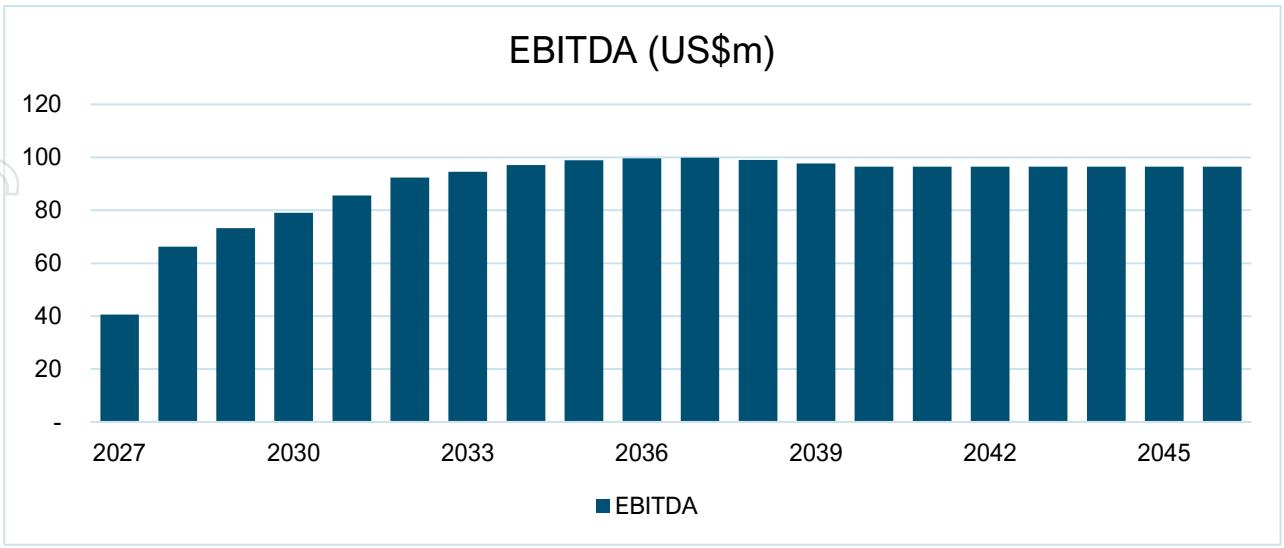

Figure 8: EBITDA profile for the Belfast magnet recycling facility over the life of operation.

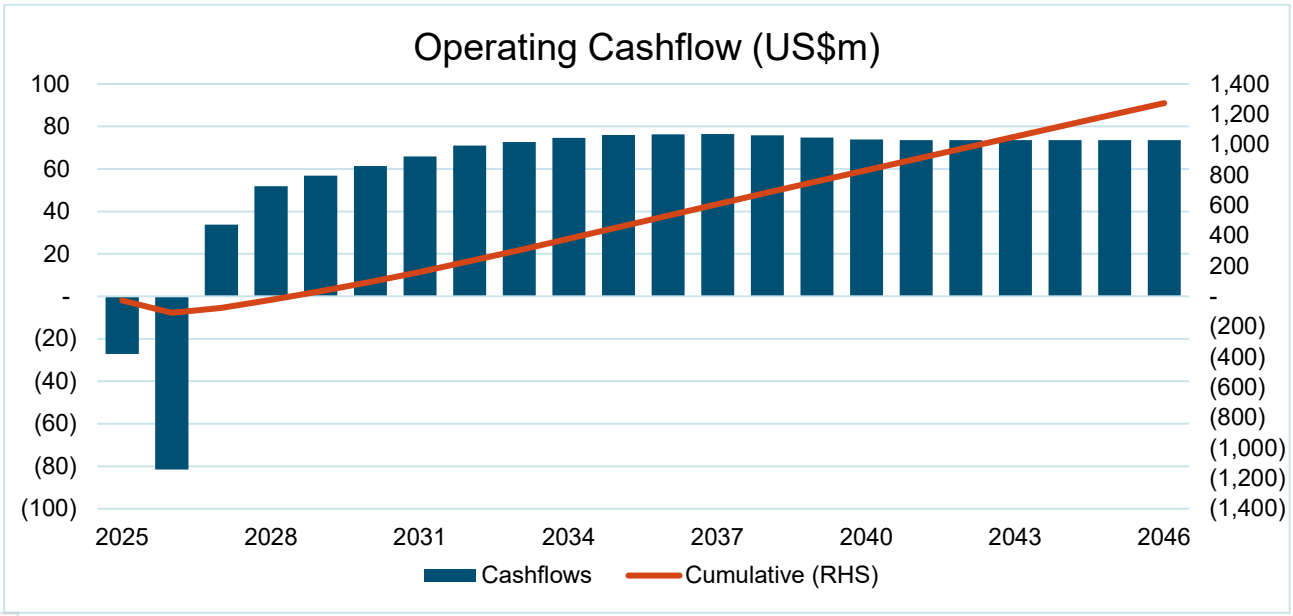

Figure 9: Operating cashflow for the Belfast magnet recycling facility over the life of operation.

Rare earth pricing (nominal) forecast data from Adamas Intelligence and Argus was used for the study, providing an estimate of forecast magnet REO pricing out to 2046 across the estimated 20-year operational life. A neodymium (Nd) and praseodymium (Pr) pricing forecast for oxides is displayed in Figure 10, whilst dysprosium (Dy) and terbium (Tb) pricing basis for oxides is provided in Figure 11.

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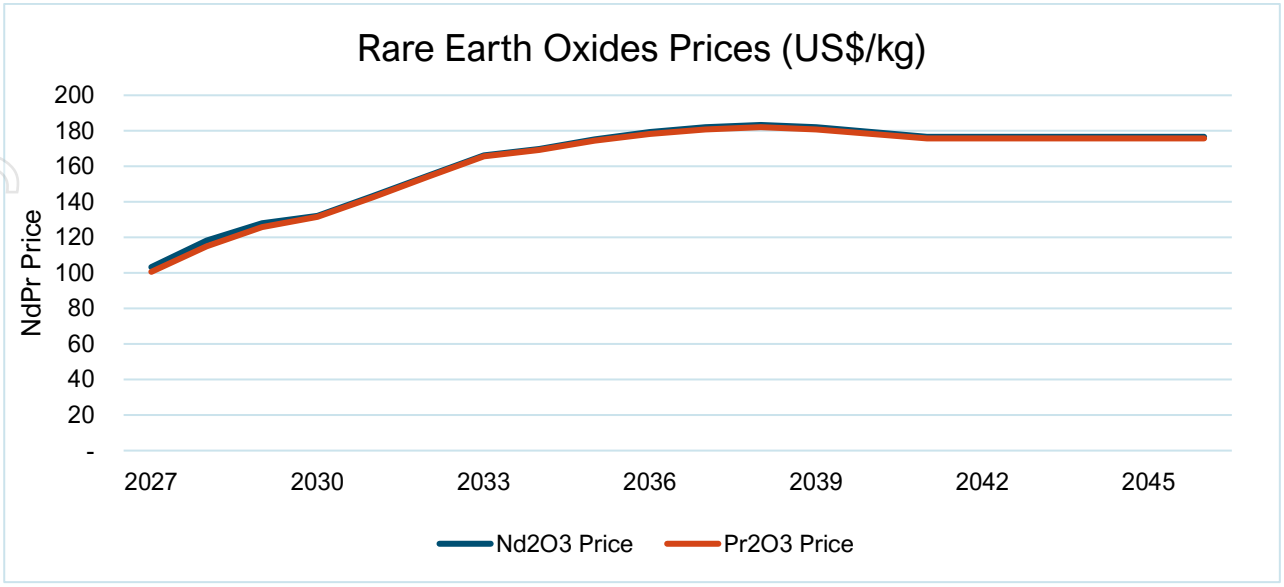

Figure 10: Nd_2O_3 and Pr_6O_{11} pricing basis (nominal) used for the Belfast magnet recycling facility study.

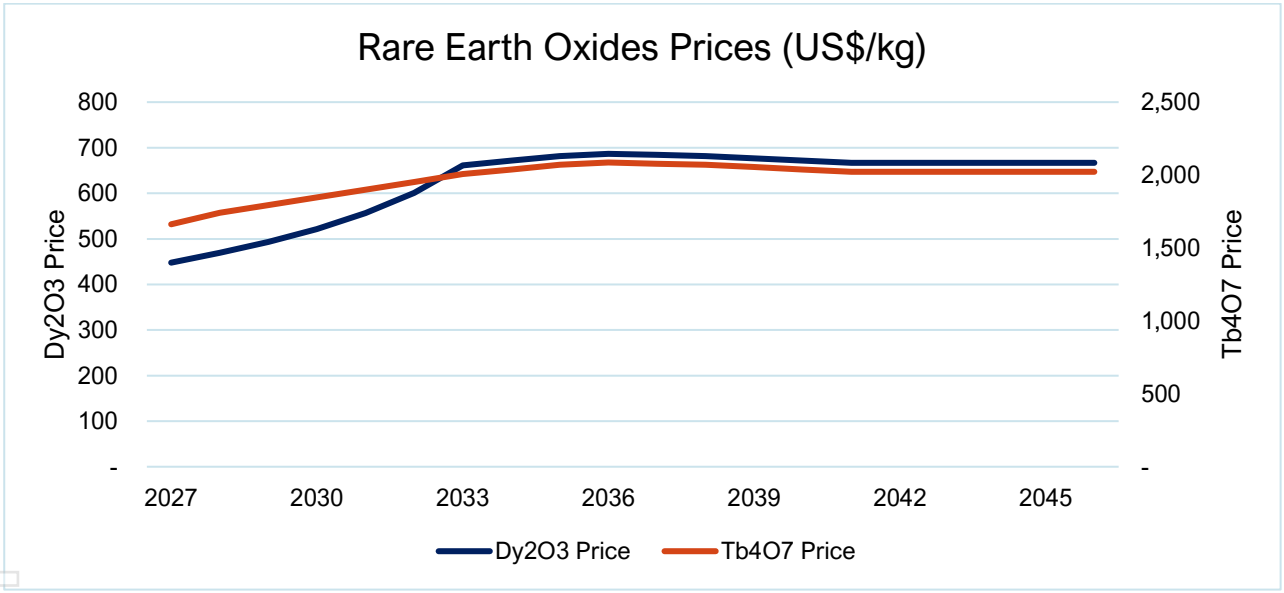

Figure 11: Dy_2O_3 and Tb_4O_7 pricing basis (nominal) used for the Belfast magnet recycling facility study.

Sensitivity Analysis

The Project is most sensitive to REO prices, with minimal impact on both capex and opex given the facility's high margin potential. The response of sensitivities tested is illustrated in Figure 12.

Further to this, several REO pricing scenarios have been run based upon spot, broker, and reported REO pricing forecast (nominal). The net impact on Project NPV is illustrated in Figure 13, and pricing scenarios and resultant NPV provided in Table 6, including a consensus scenario used for this study (scenario 5).

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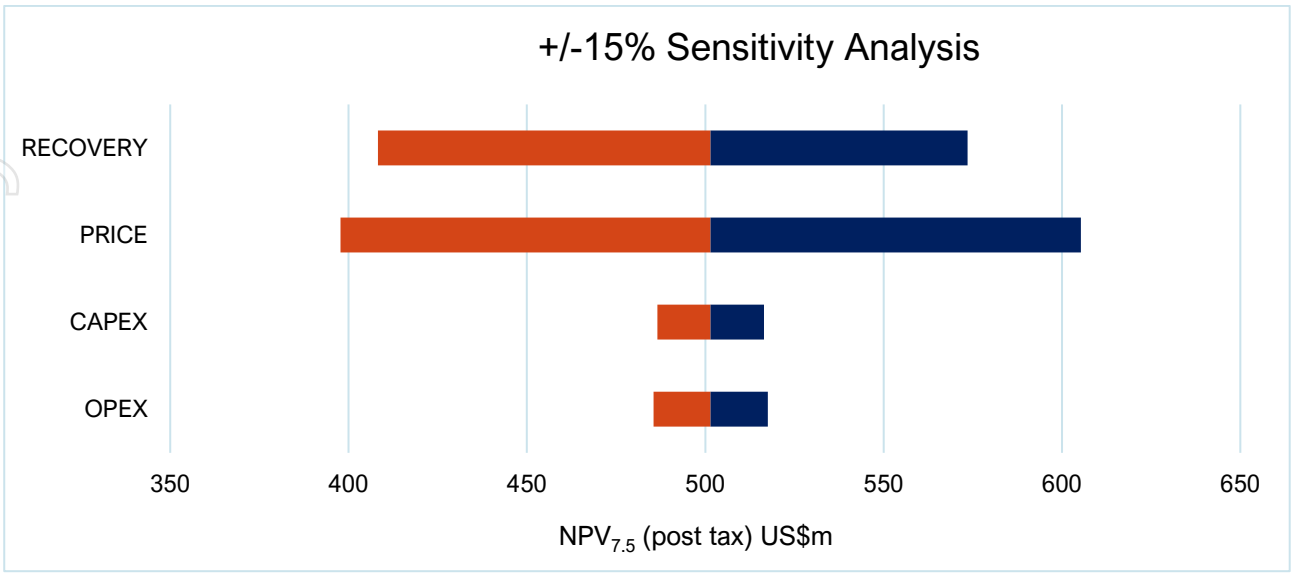

Figure 12: Belfast magnet recycling facility feasibility study sensitivity plot.

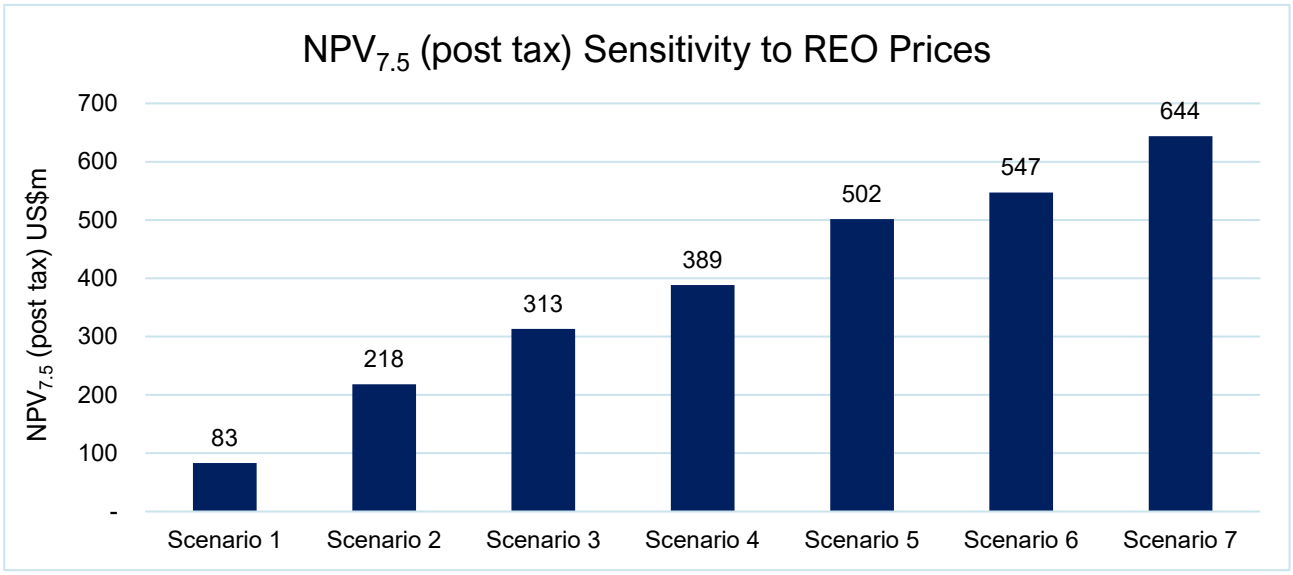

Figure 13: Project NPV sensitivity to REO pricing scenarios, including current spot pricing (scenario 1).

Table 6: REO pricing inputs used for several scenarios showing the impact on Project NPV.

REO Pricing Scenario	$NPV_{7.5}$ (post tax) US$m	Average Project Life REO Prices (US$ / kg)			
		Nd_2O_3	Pr_6O_{11}	Dy_2O_3	Tb_4O_7
Scenario 1	83	61	61	248	842
Scenario 2	218	90	90	400	1,200
Scenario 3	313	120	120	400	1,500
Scenario 4	389	133	131	492	1,758
Scenario 5	502	160	159	618	1,958
Scenario 6	547	181	172	549	1,745
Scenario 7	644	212	201	615	1,955

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Positive Demand Outlook

The demand outlook for magnet REOs remains extremely positive, based on the need for the development of sustainable, traceable and sovereign Western supply chains, meeting the demands of the energy transition, advanced manufacturing and defence.

The demand for recycled magnet REOs is likely to be a considerable contributor to supply in Western markets, driven by the delays in new primary supply development which have stalled due to the magnitude of capital investment required across the sector, developing not only new mines, but separation and refining capacity, plus metallisation and Neodymium-Iron-Boron (NdFeB) magnet capacity.

Recycling has a key role in establishing new supply through several drivers:

1) substantially lower capital investment required;
2) no mine permitting complexities;
3) no radionuclide issues to mitigate on products and downstream processing;
4) customers willing to embrace sustainable REO products via the circular economy; and
5) the ability to integrate into existing metal, alloy and magnet manufacturing capacity to swiftly facilitate the flow of REO feed into existing capacity, which is being underutilised.

Presently, China controls more than 94% of global NdFeB magnet manufacturing, 91% of metallisation and 87% of separation and refining of REOs, as illustrated in Figure 14. These compounds and products however have a key role in the development of a multitude of industries with trillion-dollar markets which rely upon access to this material.

In 2023, the global automotive industry was valued at $3.5 trillion, the defence industry $2.2 trillion, the renewables industry $1.3 trillion and consumer electronics and appliances combined for $1.6 trillion[1]. Additionally, the use of NdFeB in the rapidly growing robotics industry and advanced air mobility sector represents substantial growth areas, with both markets potentially approaching the trillion-dollar mark in the 2040s, if not sooner. Adamas Intelligence predicts the total value of global NdFeB magnet REO consumption, and similarly the value-added metals, alloys and magnets, to increase more than five-fold from 2024 through 2040.

The reliance of such high value industries on rare earths amplifies the strategic and economic criticality of sovereign, sustainable, and continuous access to uninterrupted supplies of rare earths. In the case of China, it reinforces why the nation may be willing to forgo upstream profitability for larger net economic gains downstream.

Adamas Intelligence projects that by 2035, around 200,000 tonnes of NdFeB magnets will be entering waste streams globally, with the split of sources outlined in Figure 15. Adamas further predicts that less than 25% of the 2035 projection will be recycled annually by 2035, however should the recycling

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

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.

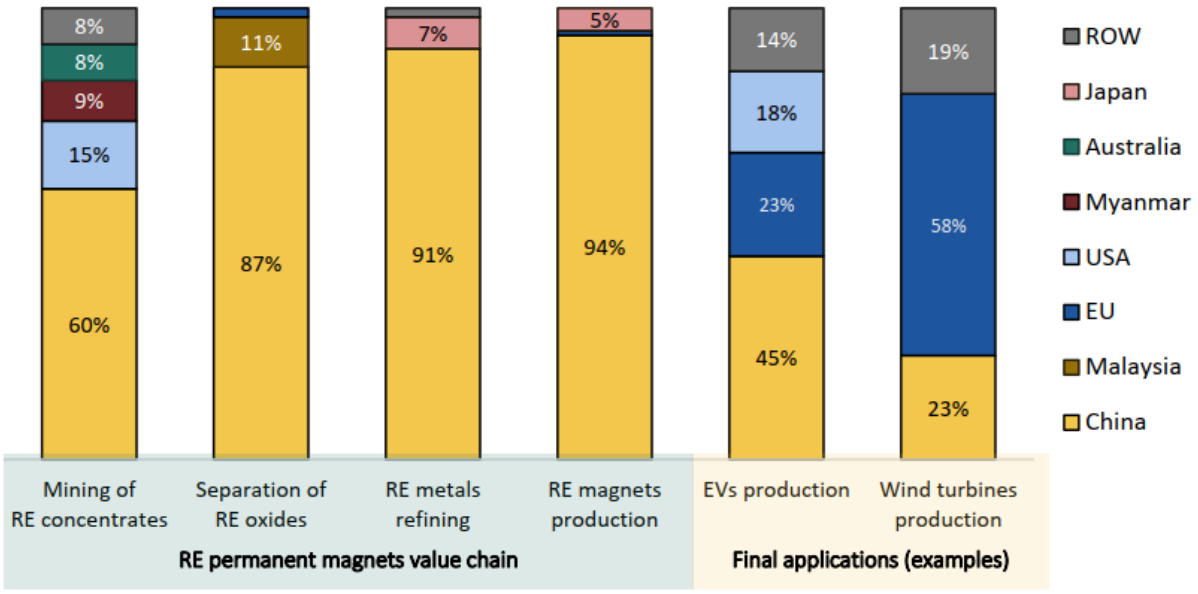

Figure 14: Rare earths permanent magnets value chain[2].

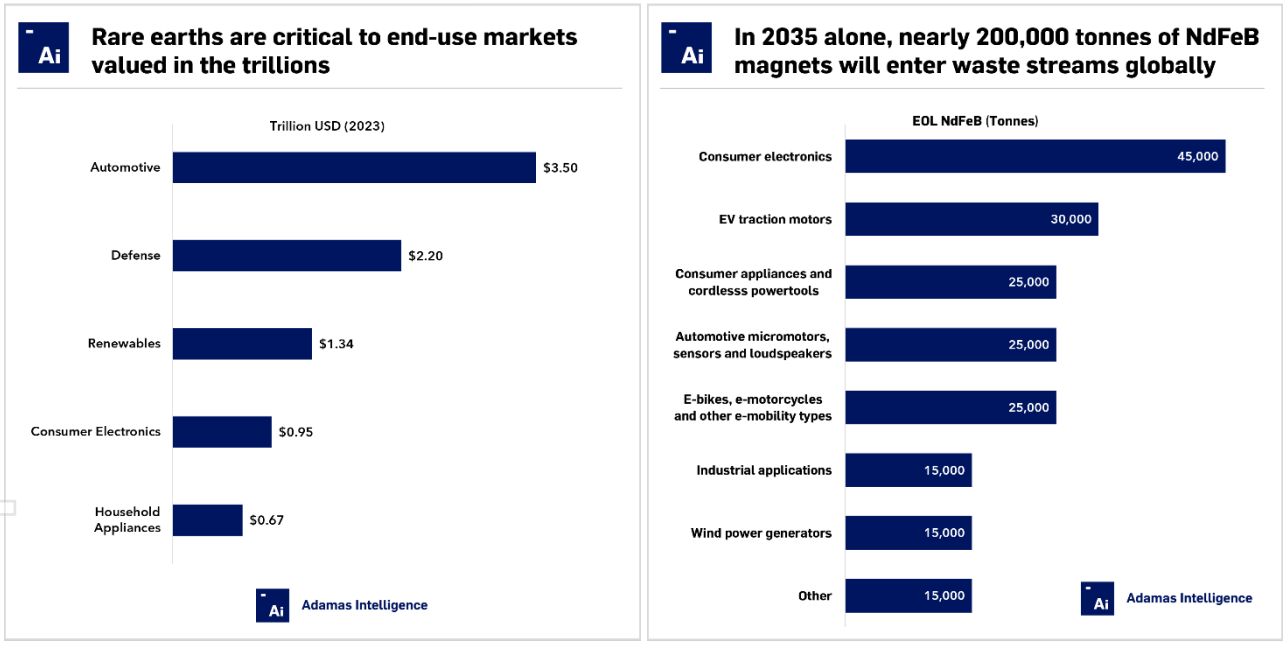

Figure 15: Left, impact of rare earths critical to end use markets, and right, Adamas Intelligence projections on waste NdFeB magnet flow by 2035 globally. By 2035, around 200,000 tonnes of NdFeB magnets will be entering waste streams globally[3].

[2] INSPIRES KIC-Raw Material Project, co-funded by the EU (2022).
[3] 2024, Adamas Intelligence, Rare Earth Magnet Market Outlook to 2040 report.

Alternative Supply Chains and Geopolitical Drivers

Ionic Technologies is currently collaborating with UK-based metals and alloy manufacturer, Less Common Metals and Ford Technologies with the aim of developing a UK supply chain for recycled magnets, backed by UK Government support. Under the agreement, magnets produced from recycled REOs will be delivered to Ford's EV drive train production facility in Halewood, supporting the US automaker's European EV drive.

Together with this commercial drive, regulatory moves are also supporting IonicRE's growth plans, with the Belfast plant strategically located to access both UK and European markets for rare earths.

In the UK, the Critical Minerals Strategy and Critical Minerals Refresh included a focus on "making the UK's rare earth element supply chains more resilient and boost the circular economy."

The recently elected Labour government has also announced plans to "work with the private sector to double onshore wind, triple solar power, and quadruple offshore wind by 2030" as well as announcing in July 2024 the establishment of publicly owned company, Great British Energy, which will partner with private companies to deliver "clean power."

In Europe, the European Critical Raw Materials Act (CRMA), a 300 billion euro initiative, sets clear benchmarks for domestic capacities in strategic raw materials, of which magnet REOs are classified as strategic, including requiring at least 25 per cent of annual consumption from recycling and 40 per cent supplied from processing within the EU by 2030.

With only around 1 per cent of EU magnet waste currently recycled with the EU, Ionic Technologies' planned facility in Belfast, Northern Ireland, under the Windsor Framework, could make a significant contribution towards achieving both the 25 per cent recycled target and 40% EU processing target.

In the United States, the 2023 Atlantic Declaration includes collaborating with the UK on critical minerals to enhance "sustainable, secure, high-standard critical mineral and battery supply chains." The United States has also stated plans to develop its own domestic rare earths supply chain for defence requirements by 2027.

The need for an ex-China supply chain has been highlighted by Beijing's moves to restrict exports of key critical raw materials, including antimony, having declared that all rare earths are the property of the state.

Significantly, Ionic Technologies' Belfast plant is currently the first producer of recycled separated magnet REOs in the Western world, with the Company moving rapidly to commercialise rare earth separation, refining and recycling.

About the production of REOs at Ionic Technologies

Owned 100% by IonicRE, Ionic Technologies has developed rare earth element (REE) separation and refining technology and applied this to the recycling of spent permanent NdFeB magnets. The process uses a hydrometallurgical process to extract the REEs, then separate the individual magnet REEs within –Nd, Pr, Dy and Tb – and finally refine to high purity individual magnet REO.

In September 2022, IonicTech was awarded a grant of £1.72 million (approximately A$2.9 million) from the UK Government's Innovate UK Automotive Transformation Fund Scale-up Readiness Validation (SuRV) program to construct a Demonstration Plant.

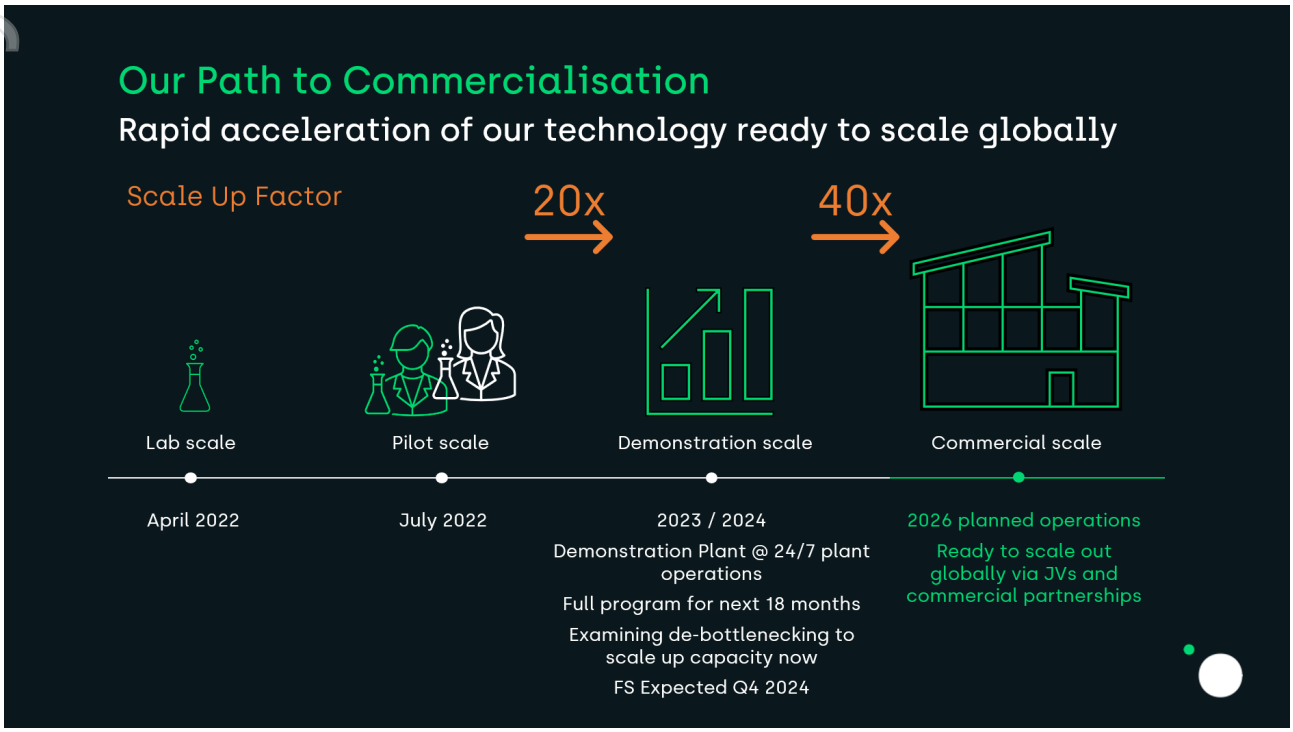

Figure 16: Ionic Technologies' path to production and scale up from laboratory towards commercial operations.

In September 2023, Ionic Technologies announced it had successfully secured additional funding via two Innovate UK CLIMATES grants totalling £2 million (A$3.90 million). The successful grant funding submissions centred on two CLIMATES projects:

1. in partnership with Less Common Metals (LCM) and Ford Technologies, Ionic Technologies will develop a traceable, circular supply chain of rare earths for application in EV motors within the UK; and
2. in partnership with the British Geological Survey, Ionic Technologies has commenced a feasibility study for a commercial magnet recycling plant in Belfast, UK.

In September 2024, Ionic Technologies announced it had successfully secured additional funding for two Innovate UK CLIMATES grants totalling £1.265m (A$2.46m). The successful grant funding submissions centred on two CLIMATES projects:

1. in partnership with Less Common Metals (LCM) and Vacuumschmelze, Ionic Technologies will demonstrate a circular supply chain for pre-consumer NdFeB magnet scrap (swarf);
2. in partnership with the Materials Processing Institute (MPI) and Swansea University, Ionic Technologies are developing techniques for front end demagnetisation and comminution of magnets.

The Ionic Technologies magnet recycling process is agnostic on magnet quality, can process oxidised magnets, and can also manage coatings and films, to produce individually separated and refined high purity REOs.

Technology Overview

Since its founding in 2015, as a spinout from Queens University Belfast (QUB), Ionic Technologies has developed processes for the separation and recovery of REEs from mining ore concentrates and waste permanent magnets. The technology developed is a step up in efficient, non-hazardous, and economically viable processing with minimal environmental footprint.

Ionic Technologies has demonstrated capability for REEs to achieve near complete extraction of REO's from lower quality spent magnets and waste (swarf) to a recovery of high value magnet REO product quality exceeding 99.9% REO.

Ionic Technologies now has first mover advantage in the industrial elemental extraction of separated REOs from spent magnets and waste, enabling near term magnet REO production capability to satisfy growing demand from the energy transition, advanced manufacturing, and defence.

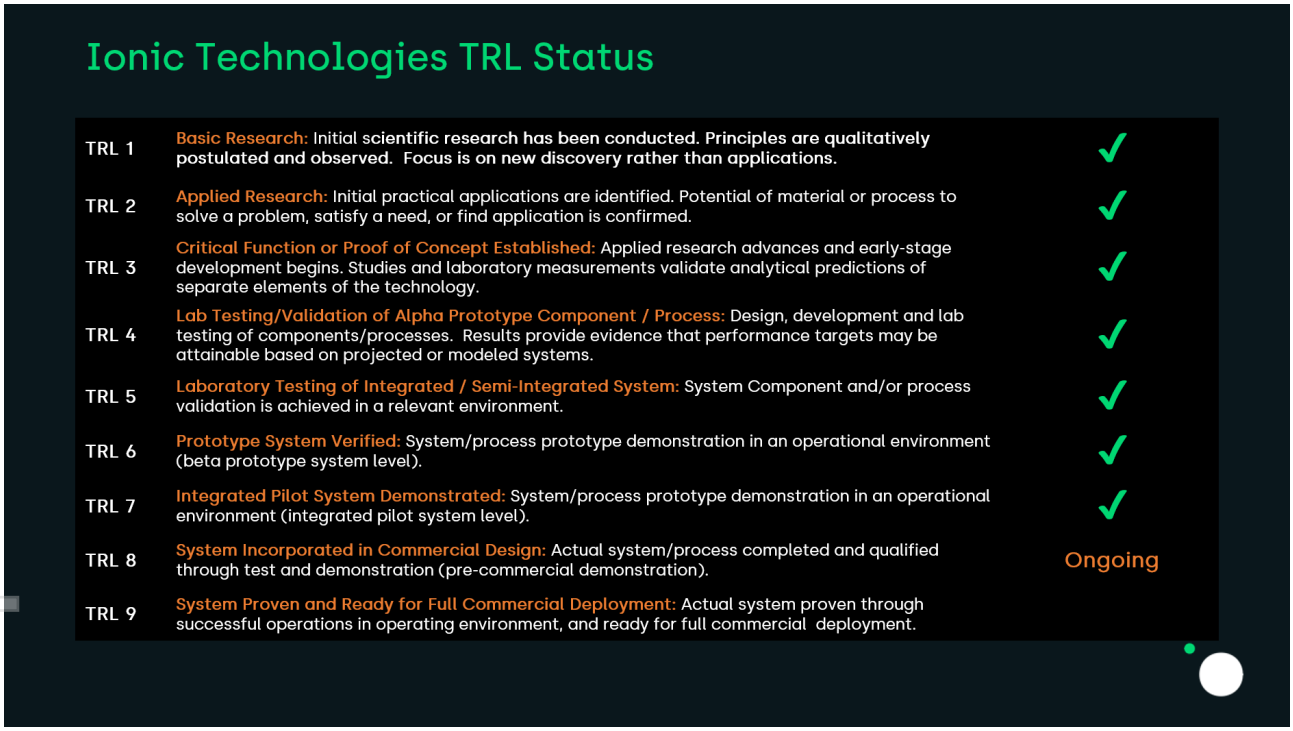

Figure 17: Ionic Technologies' progress through Technology Readiness Levels (TRLs) towards commercialisation.

Ionic Technologies' proprietary technology provides a universal method for the recovery of high purity REEs from lower quality and variable grade magnets, to be used in the manufacture of modern, high-performance and high specification REPMs required to support substantial growth in both electric vehicle (EV) and wind turbine deployment.

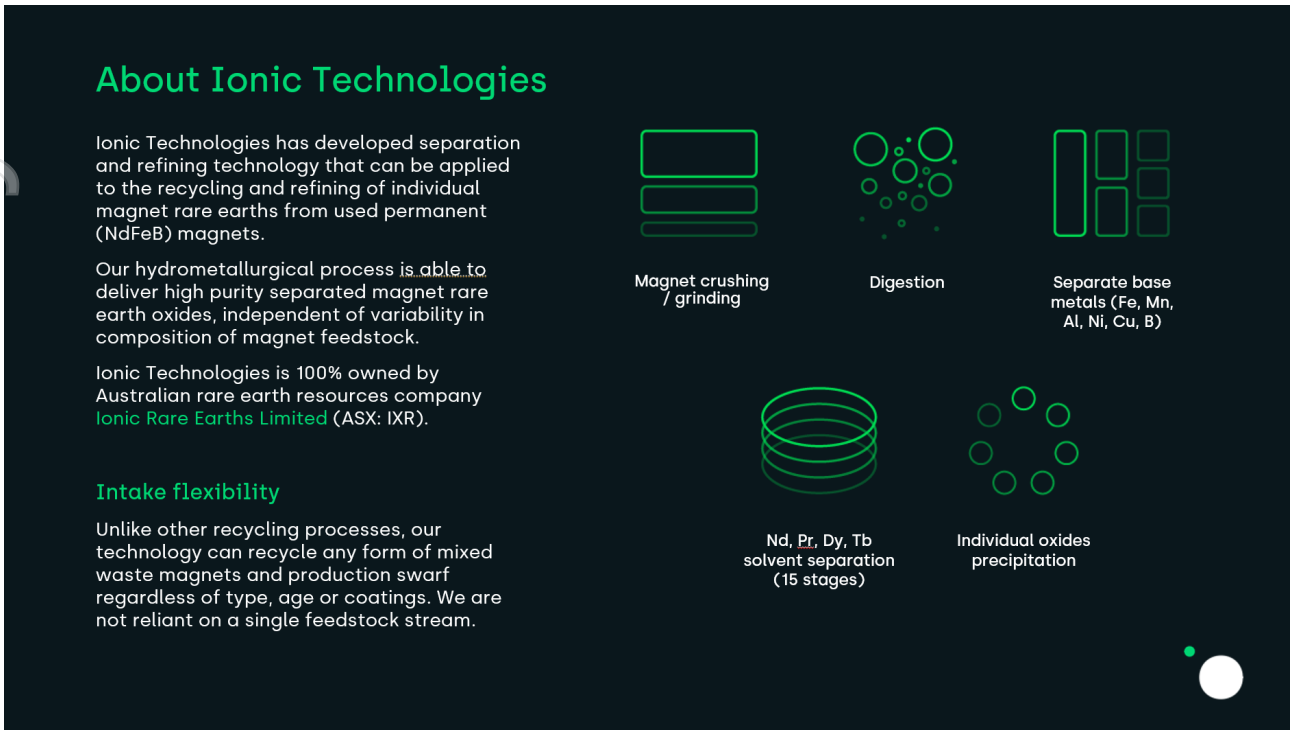

Figure 18: Ionic Technologies technology overview.

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

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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 99.9% rare earth oxide (REO).

In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant and 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.

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.

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

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

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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

- *Quarterly Activities Report – 31 October 2024*
- *Ionic Technologies secures UK funding for recycled rare earth permanent magnets partnership – 1 October 2024*
- *Company Update – 16 September 2024*
- *IXR and LCM advance rare earth supply chain collaboration – 27 May 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.

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