FERREXPO

Developing Our Net Zero pathway

Ferrexpo plc Climate Change Report 2023



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This report represents the culmination of extensive work conducted to map out the carbon footprint of Ferrexpo plc and our exposure to climate change risks and opportunities, as we strive to deliver Net Zero emissions production by 2050.

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Climate change reporting covered by this report

At Ferrexpo, we recognise the crucial role we play in advancing the decarbonisation of the steel industry. Our commitment goes beyond our operations – we actively promote sustainability throughout our entire value chain.

Introduction

From sourcing energy responsibly to enabling circular and low-carbon solutions, we ensure that our products contribute to positive change in downstream sectors where they play an essential role.

This second Climate Change Report underscores our unwavering commitment to sustainability. It highlights the challenges and progress on Our Net Zero pathway while enhancing climate reporting. We are aligning with evolving standards and sector-specific guidance, including the International Sustainability Standards Board ("ISSB"), European Sustainability Reporting Standards ("ESRS"), and the Transition Plan Taskforce's ("TPT") Metals & Mining Sector Guidance. Ferrexpo plc Climate Change Report 2023

Since the onset of the full-scale invasion of Ukraine, we have demonstrated significant flexibility and adaptability in navigating a landscape of continuous change. Our ongoing commitment to decarbonisation remains steadfast, and we are confident in our ability to adapt and overcome the challenges that arise. Through persistent efforts and strategic adaptations, we are committed to continuously reviewing our decarbonisation targets, responsibly addressing challenges, and transparently communicating our progress as we drive the industry towards a more sustainable future.



- Targeting Net Zero Scope 1 and 2 emissions by 2050, with a 50% reduction in Scope 3 emissions from the 2019 baseline
- Achieved significant emissions reductions from 2019 to 2023:
- Scope 1 by 58%,
- Scope 2 by 70%, and
- Scope 3 by 67%

3

scenarios modelled to navigate Our Net Zero pathway and the impact of Russia's war in Ukraine.

5

transformative decarbonisation projects targeted to deliver 90% of emissions savings.

95%

reduction in Scope 1 and 2 emissions, and 84% reduction in Scope 3 by 2050, according to future modelling.

30

material climate change risks and opportunities assessed across six key focus areas.

69

environmental and climate-focused policies reviewed.





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Forward-looking statements

This Climate Change Report includes forward-looking statements about our plans, strategies and management objectives. These statements cover potential asset closures or divestments, operational changes and regulatory developments.

Forward-looking statements may be identified by the use of terminology including, but not limited to, "intend", "aim", "project", "anticipate", "estimate", "plan", "believe", "expect", "may", "should", "will", "continue", or similar expressions. While these statements discuss future expectations, they do not guarantee or predict future performance. They are subject to known and unknown risks and uncertainties that could cause results to differ significantly from those projected. We advise readers to be cautious about placing undue reliance on these forward-looking statements.

Actual outcomes may vary substantially due to various factors, including the impact of Russia's invasion of Ukraine, our ability to profitably produce and transport iron ore pellets, fluctuations in foreign currency exchange rates, actions by government authorities in countries where we operate, such as changes in taxes, environmental regulations, and political instability, labour unrest, and other risks outlined in our 2023 Annual Report and Accounts, available online at www.ferrexpo.com [2].

Unless regulations or law require, Ferrexpo does not commit to publicly updating or revising forward-looking statements based on new information or future developments. Past performance should not be used as a benchmark for future results.



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This report marks the second edition of our Climate Change Report. Ferrexpo has demonstrated remarkable flexibility and adaptability in navigating ever-changing circumstances. Ferrexpo remains confident in its ability to continuously adapt and revise its targets, address challenges, and responsibly communicate progress on its journey to achieving decarbonisation goals as part of its ongoing commitment to decarbonisation.

The work presented in this report builds upon this process, offering more detailed insights into material topics for the Group's stakeholders. It is designed to be read alongside the Group's Responsible Business Report.

In conjunction with the 2023 Annual Report climate-related data, work carried out between August and December 2024, in collaboration with our sustainability and environmental consultants Ricardo Plc ("Ricardo"), focused on the following workstreams to revise our climate change decarbonisation strategy and enhance our climate change reporting:

- TPT gap analysis focuses on the Metal and Mining Guidance and framework.
- Climate policy and regulatory analysis a comprehensive review of the current and emerging landscape considering the entire value chain, particularly emphasising the markets into which we sell our products.
- Climate-related risks and opportunities update – a comprehensive review building on the double materiality assessment conducted in 2023.

- Climate scenarios a specific focus on the Ferrexpo business, strategy, financial planning and resilience of the Company's strategy using recognised scientific climate scenarios from the International Energy Agency ("IEA") and Intergovernmental Panel on Climate Change ("IPCC").
- Net Zero road map, strategy update and target review – representing a bespoke decarbonisation trajectory projection analysis to evaluate progress and revise Ferrexpo's pathways as needed.

The Climate Change Report highlights Ferrexpo's commitment to sustainability, which extends beyond its operations to the downstream sectors, where its products play a crucial role in catalysing positive change for low-carbon steel.

Report boundaries

This report covers the Group's operating entities in Ukraine and logistics business in central Europe (First-DDSG Logistics Holding GmbH), collectively forming the basis of the Group's existing carbon emissions footprint reporting in previous public reports. For a description of Ferrexpo's subsidiaries, please see our 2023 Annual Report and Accounts. The Group report is based on 100% ownership of its operating subsidiaries (where a majority stake is held) and does not employ equity accounting of its sustainability data.

Our Net Zero commitment

Climate Change Report 2023

Ferrexpo plc

At Ferrexpo, we are fully committed to achieving Net Zero iron ore pellet production. Despite the war, climate change remains a critical focus for the Company in order to inform our strategic thinking and investment decisions. We are proud of our commitment to reducing Scope 1 and Scope 2 emissions by 50% and Scope 3 emissions by 10% by 2030, with the ultimate goal of achieving Net Zero for Scope 1 and Scope 2 emissions by 2050.

Considerations relating to Russia's war in Ukraine (2024)

The full-scale invasion of Ukraine, which began on 24 February 2022, has had a profound impact on Ferrexpo's workforce and operations, given that all our production is based in Ukraine. This situation has also posed significant challenges to our decarbonisation strategy and targets, making their achievement more difficult. Since our first climate report was issued in 2023, the war has continued, and the road to full recovery is still very uncertain.

The war has introduced unforeseen challenges and risks beyond our control. The most pressing challenges include:

- Infrastructure risks: The ongoing conflict threatens local green energy resources.
- **Export disruptions:** The war has severely impacted Ukraine's Black Sea ports, increasing the risk of higher transport carbon emissions as we seek alternative transport methods.

- Scope 2 increased emissions: Ukrainian law mandates that up to 80% of energy must come from other European countries, creating uncertainty around the procurement of renewable energy, which may lead to higher market-based Scope 2 emissions.
- **Funding**: We face challenges securing international finance, as capital will likely be prioritised for post-war rebuilding efforts.
- **Workforce:** Disruptions may slow our response to climate policies due to employee safety concerns and personnel affected by military assignments.
- Time constraints: There is a risk of insufficient time to achieve our Net Zero carbon targets, as the primary focus will be on reconstruction during and after the war.

Despite these challenges, we remain committed to our targets and will review our transition plan annually, providing transparency regarding our progress. At Ferrexpo, we have the dedicated skills, intention, willingness and commitment to develop and invest in initiatives to reduce carbon emissions. The Company offers various platforms and opportunities to maintain our competitiveness, especially considering the EU's ambitions for decarbonisation.

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Reporting standards

Standard	Description	Ricardo Plc ("Ric
International Sustainability Standards Board ("ISSB")	The TCFD and TPT have been integrated into ISSB's reporting framework, reflecting a significant advancement in sustainability reporting standards. With the release of ISSB standards IFRS S1 and S2, the TCFD principles are now part of the ISSB framework. Additionally, the TPT has transitioned under the ISSB and is anticipated to shape future UK policy.	strategic, enviror solutions that int transport, energ Ricardo has ove
Task Force on Climate- Related Financial Disclosures ("TCFD")	The report is aligned with the TCFD recommendations whilst building on these to incorporate the ISSB IFRS S2 Climate-related Disclosure standard requirements, which aims to provide stakeholders with a comprehensive update on our climate-related financial information. In June 2023, the ISSB published IFRS S1 General Requirements for Disclosures of Sustainability-related Financial Information (IFRS S1) and IFRS 2 for Climate-related Disclosures (IFRS S2), incorporating the TCFD's recommendations. The IFRS Foundation has now taken on the responsibility of monitoring the progress of companies' climate-related disclosures from the TCFD. This report details our governance structure, metrics and targets, risk management processes, and strategies related to climate change. Additionally, we outline our assessment of climate- related risks and opportunities and how these factors impact our financial performance and strategic planning.	experience in in and over 60 year environmental ar consulting servic clients with some strategic and op Ricardo's stated to help organisat sustainability pat based on industr robust, science- Ricardo's team o sustainability stra
Transition Plan Taskforce Metals & Mining Sector Guidance	The report is aligned with the Transition Plan Taskforce Metals & Mining Sector Guidance. It aims to provide stakeholders with a detailed update on our progress in implementing the transition plan. The TPT Framework complements and builds on the broader climate-related disclosure requirements incorporated in the TCFD and the IFRS S1 and S2 standards. It includes an overview of our strategies for managing climate-related risks and opportunities in the metals and mining sector. The report outlines our governance structure, risk management practices, and the steps we are taking to transition towards more sustainable operations.	policies and regr assessments. The deep experience Ricardo to broad climate change i In partnering wit a long-term relat experts in the fie
Greenhouse Gas Protocol	Ferrexpo's methodology for calculating its greenhouse gas ("GHG") emissions footprint utilises, where possible, emissions factors provided by the Greenhouse Gas Protocol, which is in line with reporting requirements under the Global Reporting Initiative's ("GRI") framework and the International Financial Reporting Standards ("IFRS") for reporting sustainability topics. By using carbon factors provided by the Greenhouse Gas Protocol, the Group can provide carbon dioxide-equivalent emissions figures (CO ₂ e) that also account for emissions of both methane (CH ₄) and nitrogen oxide (N ₂ O).	will help Ferrexpo understanding o change and how affect our busine envisaged to be with each new p completed in the
	The "Reporting Criteria" document, part of the limited assurance process described above, provides full details of the Group's methodology. It is available on the Group's website alongside the 2023 Annual Report and Accounts and Limited Assurance Report.	

Sustainability specialists and climate experts

Ricardo Plc ("Ricardo") is a global consultancy nabling a clean energy future by delivering trategic, environmental and engineering olutions that intersect the international ransport, energy and climate agendas. Ricardo has over a century of engineering xperience in improving transport efficiency nd over 60 years of expertise in delivering nvironmental and energy solutions. Its onsulting services and solutions are helping lients with some of the world's most complex trategic and operational challenges.

Ricardo's stated aim is to use its experience to help organisations achieve ambitious sustainability pathways with an approach based on industry-leading expertise and robust, science-based methodologies. Ricardo's team comprises experts in sustainability strategy, global environmental policies and regulations, and life cycle assessments. Their strong reputation and deep experience helped us partner with Ricardo to broaden our understanding of climate change reporting.

In partnering with Ricardo, we aim to build a long-term relationship with independent experts in the field of climate change. This will help Ferrexpo broaden and develop its understanding of how we will affect climate change and how climate change will (in turn) affect our business. This engagement is envisaged to be a multi-phased project, with each new phase building on the work completed in the previous phase.

Independent assurance (Scope 1 & 2)

At Ferrexpo, we understand the importance of trust in our reporting. With stakeholders worldwide increasingly relying on data linked to sustainability topics in decision-making, it is increasingly important that such data is independently assured by a third party, providing trust and confidence.

In 2023, the Group initiated a limited assurance process on selected sustainability data with the Group's independent auditor, MHA, which was completed in line with the requirements of the International Standard on Assurance Engagements ISAE (UK) 3000 (Revised) Assurance Engagements ("ISAE 3000"), as issued by the International Auditing and Assurance Standards Board. This ISAE 3000 process reviewed our Scope 1 and 2 GHG emissions in 2023. The conclusion of this review has served to confirm the relevant information as presented in our 2023 Annual Report and Accounts.

Further details of the Group's external assurance process on its 2023 data are provided on the Group's website alongside the 2023 Annual Report and Accounts.



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Positioning ourselves for a low-carbon

Chair of the HSEC Committee statement

Natalie Polischuk
 Natalie Polischuk, Chair,
 Health, Safety, Environment
 and Community ("HSEC")
 Committee and Board of
 Directors.

future

Feedback

We welcome any feedback or questions you may have about this report. Please contact **comms@ferrexpo.com** C or visit our **website** C for further information.



High grade iron ore pellets enable steelmakers to reduce their emissions, thereby playing a crucial role in advancing the decarbonisation of the global steel industry.

Ferrexpo is making a positive impact on this transition to green steel by executing on our own climate strategy and responding actively to the challenges of climate change.

We recognise that climate change is a material issue that can affect our business through regulations to reduce emissions, carbon pricing mechanisms, acute climatic events or permanent changes to the climate, as well as access to capital. Successfully managing the current and potential effects of climate change is critical to our operations, our communities, our customers and other stakeholders. Given the importance of climate strategy, it is a standing item on the agenda of the Board and HSEC Committee, where we consider the steps needed to address risks and leverage opportunities.



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We continue to use sunflower husks to substitute natural gas in the pelletising process and continue to research other biofuel opportunities to further reduce emissions. We aim to procure as much electricity as possible from the renewable sources, although these efforts may be hindered by energy shortages in Ukraine. Biodiversity projects and water management have been a part of our culture for years, such as looking after the ecological balance of the Dnieper River, phytoremediation or planting trees. The continuation of these projects allows Ferrexpo to engage our employees and local communities into building a sustainable future together.

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The fundamental values of sustainability are core to Ferrexpo, and I would like to thank all our workforce and stakeholders for embracing responsible business. Our teams have progressed and delivered under the most challenging circumstances and continue to think strategically about our future.

Maintaining our environmental commitment to Net Zero

The past year was another year of full-scale war in Ukraine. In the midst of ongoing military hostilities and uncertainty, Ferrexpo continuously adapts its operations, provides resources to safeguard its employees and communities and remains committed to its environmental responsibilities. The social and environmental impacts of the ongoing war are profound, including humanitarian catastrophe, destruction of critical energy infrastructure by continuous missile attacks and environmental damage, such as widespread chemical contamination of air, water and soil.

Under the most challenging circumstances, Ferrexpo consistently adheres to its environmental responsibilities and remains committed to its decarbonisation activities to reach Net Zero. In our Climate Change Report this year we share the results of assessments of the impact of various scenarios of war duration on our pathway to Net Zero. Despite significant uncertainty and unforeseen risks and challenges posed by the war, we remain committed to our mid-term and long-term decarbonisation targets. While large-scale capital investments into electrification of the mining fleet and production facilities upgrades must be postponed until the war ends, we continue to work with our partners and suppliers on research, feasibility and engineering studies and projects, such as 'Green Mine' initiative.





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Our purpose

We are a significant producer and supplier of high-grade iron ore pellets to the global steel industry, enabling steelmakers to reduce their carbon emissions and transition to green steel. Ferrexpo's operational assets are in central Ukraine. Ferrexpo has established operations on a large scale and has supplied the global steel industry with iron ore for over 50 years. We are quoted on the London Stock Exchange and a constituent of the FTSE 250 and FTSE4Good indices. Located in Europe, we are a leading European supplier, facilitating our European customers to achieve their goals in line with EU legislative changes to foster the transition to green steel.

What we do

Extraction

Long-life asset base and a skilled workforce: Our iron ore mines in central Ukraine have over 50 years of mine life remaining based on our current mining rates.

Processing

Premium products and customers: Through significant

investments, we produce some of the highest-quality iron ore products available commercially.

Export

Established logistics infrastructure:

Thanks to our commitment to quality, we successfully supply our products to a network of premium steel mills around the globe.

Our products We produce iron ore products that are enabling the transition to green steel.

Iron ore pellets are engineered, high-grade iron ore agglomerates that serve as a critical raw material for steel production, essential to our everyday lives. Almost everything around us is made of steel or manufactured by steel equipment. However, steelmaking is emissions-intensive, and the complete iron ore-steel value chain must decarbonise.

Our high-grade iron ore pellets are central to the decarbonisation efforts of the steel industry, enabling a cleaner and more sustainable production process while meeting the growing demand for high-quality steel. We produce two types of pellets tailored for the steel industry:

Blast furnace pellets

Blast furnace ("BF") pellets are primarily used in blast furnaces, where coke is the primary fuel and reductant in the ironmaking process. We produce BF pellets using the Sinter–Blast Furnace–Basic Oxygen Furnace ("Sinter-BF-BOF") route.

At Ferrexpo, our blast furnace pellets are vital to reducing carbon emissions in the steelmaking process. By substituting our pellets for sinter ore, we help eliminate the need for sintering – a coal-based, carbonintensive method used to agglomerate lower-grade iron ore fines into sinter, making it suitable for blast furnaces. This substitution reduces carbon emissions by at least 40% for every tonne of sinter ore replaced with pellets.



Blast furnace steelmaking continues to be a dominant method globally; blast furnaces are expected to increase pellet usage by at least 11%¹ in the medium term to meet decarbonisation goals in various regions. The production and sale of BF pellets account for most of our sales portfolio.

Direct reduction pellets

Direct reduction ("DR") pellets are used in the direct reduction ironmaking process, producing direct reduced iron ("DRI"). This iron is then used as an input to electric arc furnaces ("EAF"), where high-current electricity melts recycled scrap and DRI. According to a life cycle analysis conducted by Ferrexpo and Ricardo, the Pellet-DR-EAF steelmaking route can save 37% of carbon emissions compared to the Sinter-BF-BOF route. This reduction is achieved using DR grade pellets as feedstock. Given the highquality standards required for feedstock in the DR-EAF steelmaking process, the relative scarcity of DR-grade pellets – such as those produced by Ferrexpo – highlights suppliers' crucial role in decarbonising steelmaking.

Our journey into the direct reduction steelmaking market began in 2020 with our first commercial sales. Since then, we have established key relationships with DR steelmakers in the Americas and the MENA regions.



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Our people and assets

Our 8,000-strong workforce possesses the varied technical skills to operate a large-scale integrated business operating long-life mines, modern and efficient processing, and beneficiation plants supported by various ancillary services. Our products are exported to premium steel mill customers worldwide using our inland transport and logistics infrastructure, including rail, barges and ports. Even during a war, we have managed to maintain an entire workforce. They continue to demonstrate unified resilience, flexibility and the ability to adapt to operating under changing and challenging circumstances.





A Ukrainian industrial champion

We play an important role in the communities where we operate, including providing health and education facilities and supporting cultural, social and sports activities. Through our Humanitarian Fund, this support extends to initiatives and projects that help during a time of war, including supporting our colleagues serving in the Armed Forces and returning veterans.

Our activities Working with partners to implement decarbonisation technologies

Our "Green Mine" initiative captures a range of decarbonisation initiatives, primarily focused on electrification and renewable energy. We continue to make progress in substituting natural gas with biofuel from sunflower husks, own solar generation, and, when available, purchase clean power. Securing clean energy has become difficult as Ukrainian law requires up to 80% of energy from other European



countries depending on internal supply, raising concerns about renewable sources and potentially increasing our Scope 2 emissions. Long-term climate mitigation will require the collaboration of the private sector, government and the international community.

We partner with other industry leaders, customers, suppliers and infrastructure and equipment manufacturers. Plans under consideration include electrifying the mining fleet and installing trolleyassist technology. Progress is shared through transparent financial and climate reporting, such as this report, for which the Company has been recognised as a leader in the industry and Ukraine.

Beyond emissions reduction, our Ukrainebased operations also focus on climate adaptation, contributing to post-war reconstruction, and supporting long-term resilience for people, ecosystems and livelihoods. Ferrexpo's ability to address immediate war-related needs and long-term climate goals strengthens our role in Ukrainian society and enhances our global standing. Our operations have shown resilience through the war, ensuring continued progress towards sustainability and climate commitments.



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INTEGRATED PREMIUM IRON ORE PELLET PRODUCER AND EXPORTER

Our business model

Premium steel producers worldwide prefer our high-quality iron ore pellets. They are enabling the transition to green steel while supporting the Ukrainian economy through employment, procurement, royalties and taxes.



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Upstrea	am	Our operations			Do	wnstream			
SOURC	CING	MINING	PROCES	SSING	TRANSPO AND LOO	RTATION SISTICS	MARKETIN	G GREEN STEEL PRODUCTI	:ON
		\mathbf{s}					 dudd		
Energy and power	Consumables e.g. chemicals	Green Mine	Electrified processes & machinery	Natural gases	Electrified rail	Shipping	International policies	CBAM Mate circula	erial larity
Supplier wo	rkforce	Our v	vorkforce		Communitie	25	Customers	Communitie	es
Risks Imited alternative energy so Ukraine grid mix uncertainty	Durces	Risks Delays to electrification of Increase energy usage a Limited access to green Offset credibility	of mining and processing Ind GHG emissions finance				Risks1Scope 3 emissions2Geographical variati3European Climate L4Increase in reporting5Demand for low-ene6CBAM	on of policy landscapes aw and policies g regulation (ESG) yrgy intensive steel	
 Opportunities Renewable energy sourcing Transition to a low-carbon energy 	conomy	Opportunities Electrification of mining p Decarbonised logistics of 	processes phannels				Opportunities Government subsid Market demand Gree Customer emission Increase scrap iron in CBAM EU circularity initiative 	es (Europe) en Steel targets ecycling due to circular econo res	omy shift



Developing our strategy

Ferrexpo remains committed to a robust and forward-looking decarbonisation strategy despite its considerable challenges. With a clear ambition to address climate change, the organisation is focused on reducing emissions, enhancing operational resilience, and collaborating with stakeholders to contribute to a sustainable future.

We have worked with our sustainability partner, Ricardo, to develop a science-based roadmap to achieving Net Zero emissions by 2050. The roadmap explores three scenarios as key levers for quickly implementing change. The unique considerations of each pathway are outlined in the following table, and further information can be found in Modelling three geopolitical scenarios \square on page 53.

Assumption	Continued War	Post-war Rapid Adoption	Post-war Slow Adoption		
Conflict end	2035	2027	2027		
Cool-off period	2 years	1 year	3 years		
Growth	0% until 2035 +5% avg YoY until 2045	0% until 2027 +8% avg YoY until 2045	0% until 2027 +8% avg YoY until 2045		
	No mea (except	asures implemented until c t efficiency and monitoring	onflict end projects).		
Grid decarbonisation fluctuation based on scenario.					
Misc	Focus on	implementing Scope 1 me	easures first.		



By modelling these scenarios alongside the currently planned workstreams that will impact energy use, we generated a trajectory for each scenario. This is the emission trajectory that Ferrexpo could expect if we implement no additional measures. This exercise has deepened our understanding of the scale of the decarbonisation challenge required to meet our emissions reduction targets.

In collaboration with Ricardo, we then identified and refined a set of the most effective energy efficiency and decarbonisation measures tailored to each scenario. These agreed-upon measures were then incorporated into the model to establish Our Net Zero pathways, forming the basis of our strategic approach.

Our ambitions and targets

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To comply with limiting global warming to 1.5 degrees, we need to set ambitious targets, which generally involve setting a near-term (2030) and a long-term target (2050) on emissions. Our key targets are outlined in the following table and based on a baseline of 2019 emissions.

Emissions Scope	Near-term	Long-term
Scope 1	50% reduction	Net Zero
Scope 2	50% reduction	Net Zero
Scope 3	10% reduction	50% reduction

Our performance

The conflict in Ukraine has significantly impacted our operations, limiting our ability to invest and operate at levels comparable to 2019. Consequently, on-site activity has decreased, substantially reducing energy consumption and, by extension, emissions. Between 2020 and 2023, targeted infrastructure investments, including installing combined water supply systems, pump upgrades, LED lighting, solid fuel boilers, optimised compressed air use and reduced makeup water consumption in heating networks, have further contributed to emissions reductions.

This combination of reduced operational activity and infrastructure upgrades has led to an overall emissions reduction of 65% from 2019 to 2023, broken down as follows:

- Scope 1 emissions: reduced by 58%
- Scope 2 emissions: reduced by 70%
- Scope 3 emissions: reduced by 67%

Opportunity to exceed emissions targets

These reductions offer an opportunity to reassess our emissions targets. Our projections indicate we are on track to maintain emissions below our target levels through 2050 across all scenarios. When compared to the Science Based Targets initiative ("SBTi") requirements for Net Zero alignment, which are more demanding, the "Continued War" and "Post-war Rapid Adoption" scenarios are projected to stay consistently below the SBTi thresholds. Only the "Post-war Slow Adoption" scenario is anticipated to slightly exceed the SBTi requirements for Net Zero in 2030 and 2050. However, emissions in all other years remain below SBTi targets. Further information on these pathways can be found in Appendix 6 on Climate Related Disclosures I

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Responsible business practice

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Key highlights

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climate change risks identified and analysed.

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climate change opportunities identified and analysed.

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climate change material risks and opportunities assessed across six focus areas.

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business resilience responses.

Four

climate change scenarios modelled.

Our governance framework

Ferrexpo's Board of Directors (the "Board") oversees the Group's strategy and future direction, which includes overall responsibility for sustainability and climate change topics. In addition to discussions at meetings of the Board, the Board also has a sub-committee of the Board – the Health, Safety, Environment and Community ("HSEC") Committee.

Management roles and responsibilities

Independent Non-executive Director Natalie Polischuk chairs the HSEC Committee, which comprises independent Non-executive Directors and executive management team members. The HSEC Committee meets quarterly to discuss sustainability topics and convened five times in 2024 (five times in 2023). As of the publication date of this year's report, the HSEC Committee is comprised of the following members:



Natalie Polischuk Independent Non-executive Director (Chair) Yurii Khimich Ferrexpo Belanovo Mining General Director and Chair of the local CSR Committee



Greg Nortje Chief Human Resources Officer Nataliya Storozh Health and Safety Director, Ferrexpo Poltava Mining Climate change is a standing agenda item for the Board and the HSEC Committee. In addition to the HSEC Committee, our Executive Committee oversees implementing the Group's climate strategy. Chaired by the Group's Executive Chair, Lucio Genovese, this committee is supported by members representing essential business functions.

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Figure 1 details the Group's governance structures and risk management process, including climate change risks. Further details of the Group's governance structures and the Board's role in overseeing its strategy on climate change are provided in the 2023 Annual Report and Accounts.

Figure 1: Ferrexpo governance structures and risk management process



Feedback

We welcome any feedback or questions you may have about this report. Please contact **comms@ferrexpo.com** or visit our **website** for further information. Climate change governance



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Executive remuneration

Our remuneration policy was designed to incentivise our executives by integrating sustainability-linked objectives into the Short-Term Incentive Plan. We set annual targets that are aligned with our medium-term carbon reduction goals for Scope 1 and Scope 2 emissions, aiming for significant progress by 2030. Additionally, we emphasised enhancing the production of higher-grade DR pellets, which is vital in reducing our Group's Scope 3 emissions. Metrics related to our carbon reduction progress are incorporated into our remuneration policies.

This strategic approach was set out to ensure that our leadership actively contributes to our sustainability commitments while driving organisational performance. However, due to the war it was subsequently agreed that in the current environment, executives are not able to influence this and these targets have been suspended.

Policies and procedures

Ferrexpo's decarbonisation strategy is underpinned by a comprehensive policy framework that aligns our operational excellence with our environmental and social commitments. Our policies support our immediate operational needs and long-term sustainability goals.

Our policies are brought to life through a robust implementation framework that includes:

- clear governance structures with defined accountabilities;
- regular performance monitoring against established metrics;
- comprehensive reporting and disclosure practices in line with the latest international and sector ESG and climate standards; and
- strategic resource allocation aligned with transition goals.

We expect our policy framework to continue evolving to support our transition journey. Despite the challenges posed by the ongoing conflict, our short-term initiatives focus on immediate energy efficiency improvements and emissions reduction. In the medium term, we are targeting a transition to renewable energy and the electrification of our mining activities. Over the long term, our policies are designed to support our ambition for Net Zero operations and to establish leadership in sustainable iron ore mining practices.

Targets accountability

The Board's particular area of focus is the managed phase-out of GHG-intensive activities and processes. Emissions reporting is a standard agenda item for the Board, HSEC and Executive Committee.

In our inaugural climate report of December 2022, we raised our 2030 Scope 1 and 2 decarbonisation target from 30% to 50% and set a new 10% reduction target for Scope 3 emissions by 2030.

These targets were set without accounting for the extended conflict in Ukraine. While our targets remain unchanged, this report includes a range of scenarios based on the war's continuation and resolution. This approach allows us to evaluate how varying outcomes may impact our decarbonisation goals.

Foundation of our transition strategy

At Ferrexpo Plc, we recognise that our transition to sustainable mining must be inclusive and equitable, built on robust human rights protections and zero tolerance for modern slavery.

Our Business Code of Conduct, Human Rights Policy and Modern Slavery Act Statement (<u>here</u> [2]) ensure we support our workforce, local communities and broader stakeholders throughout our decarbonisation journey. Given our role as a large business and a significant regional employer, these commitments are essential.

By ensuring that our shift towards sustainable operations benefits all stakeholders, we are building resilience for our business while supporting our workforce and communities. Our commitment to regularly reviewing and adapting these policies ensures they remain practical and relevant, promoting an equitable and low-carbon future.

Biodiversity and environmental stewardship

Situated close to the Dnipro River in Ukraine, Ferrexpo's operations span over 5,000 hectares. Understanding the biodiversity surrounding our operations is crucial. Early initiatives have included the development of a Zoo-biota interactive map identifying species of animals in the vicinity of our operations, including 58 species from the Red Book of Ukraine out of more than 500 listed.

Our operations are situated within the Psel River valley near Horishni Plavni. While not a protected area, this region is classified as an "Important Bird Area" by Birdlife International, with certain species considered to be of concern.

We aim to improve a broader understanding of the natural environment by engaging with local communities and implementing measures to enhance environmental stewardship beyond our directly controlled activities. This includes monitoring the quality of the water passing through our bioengineering facilities, which is the final point before water is transferred away from our operations. We study the bacteria in the water, monitoring any potential negative impacts on aquatic vegetation and the overall stability of the water column. This data, and additional environmental information, are published in our annual Responsible Business Report.

Feedback

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3. Integrity

Representing high ethical standards and

delivering on commitments. This authentic

approach is supported through extensive

our local communities.

4. Diversity within one team

5. Continuous innovation

future.

training and a robust corporate governance

framework. This includes our interaction with

Through embracing diversity within one team,

the Group aims to promote acceptance and

harnessing of differences of opinions and

Essential for improvement and adaptation.

These values and the resulting behaviours

objectives, including our climate goals.

across the business, I have

never met resistance when

ambitions. I believe this is a

within our broader business

culture to achieve them."

testament to how, over time, we

have integrated these ambitions

objectives and are aligning our

discussing our climate

serve as the engine that drives our collective

approach to achieving our common business

"When I speak with colleagues

Through embracing change, the Group aims

to create a culture of collaboration for a bright

backgrounds to drive our performance.

A climate transition plan must be an integral part of the broader business strategy, not an afterthought. To ensure its success, we must have an organisational culture with an aligned workforce that supports our climate goals as part of our broader business strategies. Ultimately, the success of our climate goals will be driven by the efforts and commitment of our people.

Our culture, talent and skills

We understood that achieving this would require a shift in our organisational culture. In 2017, we embarked on a cultural transformation initiative called "One Ferrexpo". This initiative, along with restructuring some of our subsidiaries, aimed to transition our culture from separate businesses operating independently to a more cohesive business operating interdependently.

As the catalyst for the transformation, we initially focused on aligning leaders around the business strategy and developing new values in collaboration with employees. We view these values as our expectations of each other and how we work together.

1. Responsibility

Promoting responsibility within the workforce, with individuals focused on a safety-first approach, environmental responsibility and accountability to local communities.

2. "Make it happen"

A collective effort to deliver superior business results, which are achieved through engagement and training.

> Greg Nortje Group Chief Human Resources Officer

While "One Ferrexpo" and its values provide guidance, we recognised that achieving a meaningful cultural shift required a top-down approach as a company's culture is created by its leaders.

This is why we began aligning the leadership team around Ferrexpo's purpose and strategies, followed by training sessions to empower our leaders to effectively demonstrate the required behaviours, communicate our business strategy and our commitment to sustainability to employees, and cascade this information throughout the organisation, which will remain an ongoing focus as part of a long-term transformation journey.

At a senior level, the cultural shift has been raised at the bottom line, with the introduction of short- and long-term incentives and climate and sustainability measures designed to drive behaviour, motivate and sustain action.

The result of our efforts to incorporate climate action into our corporate culture can be seen across the business today. Our "Green Mine" project to decarbonise our production is our leading platform driving modernisation and growth. It is led by a dynamic team that analyses the equipment and technologies we will implement as part of our climate transition plan. This team hosts workshops across the business, visits equipment manufacturers and mine operations around the world, and engages with our customers to understand how we can co-develop decarbonised supply chains. Diverse teams like this require collective intelligence, making our talent management and workforce planning processes critical. While work is ongoing, we still face challenges that we continue to work on. We can observe a skills gap where climate change requires new skills and people capable of delivering exceptional results. We recognise the need for more climate specialists and are actively looking to recruit additional talent in this field to join our team.

Significant progress has been achieved since we integrated our climate ambitions into our business strategy, supported by a congruent organisational culture. We acknowledge that there is still more work to be done and are aware of the existing gaps. While responding to the challenges of operating during a war can often seem like the primary focus, our engagement with employees and other stakeholders shows that advancing our climate agenda remains a priority. Therefore, we will continue to move forward. Supporting our people and nurturing our culture during this challenging time is more crucial than ever.



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Risk management

Our Group maintains an internal risk register to evaluate emerging and principal risks related to our business, which includes climaterelated risks. This determines their relative significance regarding monetary impact, probability, maximum foreseeable loss, trend and mitigating actions. The risk register is updated monthly and discussed by executive management at the Group's Finance, Risk Management and Compliance Committee ("FRMCC"). Here, the completeness of the risk register is also considered, and any new identifiable risks are added. The risk register is also discussed and reviewed by the Audit Committee at least quarterly per year.

The FRMCC ultimately reports to the Board for further review and approval of the risk register. In considering climate-related risks, the FRMCC closely monitors existing and proposed regulatory requirements to assess how they may pose risks to our business and impact our future strategy. To effectively manage climate-related risks, the Board continuously oversees our risk management and internal control systems, with support from the Audit Committee, Executive Committee and HSEC Committee, as detailed previously.

Our approach to identifying and assessing climate-related impact risks and opportunities

Climate change poses multifaceted risks to the mining and steel sector and is a principal risk for Ferrexpo. As such, we recognise the importance of regularly updating our climate scenario analysis to ensure we provide relevant, accurate and insightful information about climate-related risks and opportunities. This commitment helps us enhance our sustainability efforts and aligns with our long-term goals.

In 2021, we conducted our first TCFD climate scenario analysis, with the results published in 2022. In 2024, as part of our two-year review cycle, we updated this analysis, focusing on our progress since 2021 and identifying new risks, opportunities and key areas for future action. This updated process resulted in a refined shortlist of 35 key risks and 28 opportunities identified for Ferrexpo, encompassing transition risks linked to the shift towards a low-carbon economy and physical risks arising from acute weather events and chronic changes to the climate. Of the 63 risks and opportunities that were analysed, 15 opportunities and 15 risks were deemed material. Additional factors, such as the war in Ukraine and evolving legislative landscapes, were also incorporated into the assessment.

With support from Ricardo, we conducted a climate scenario analysis refresh across four wide-ranging scenarios to examine impacts over our selected time horizons. These scenarios, from the IEA and the IPCC, were developed by reputable independent climate change authorities and reflect varying degrees of legislative ambition expected from governments in the years ahead. The climate scenarios were selected based on their ability to capture a broad spectrum of potential outcomes related to the rate and severity of environmental change.

The four scenarios included in Ferrexpo's 2024 TCFD update are as follows:

- IEA Net Zero Emissions by 2050 ("NZE"): This scenario aims to limit the global average temperature increase beyond the Paris Agreement objective of 1.5°C. We use this scenario to assess transitional risks and opportunities.
- IEA Stated Policy Scenario ("STEPS"): This represents a worst-case, "business as usual" scenario, serving as a conservative benchmark. It examines the actual measures in place to achieve energyrelated objectives and is also used to assess transitional risks and opportunities.
 IPCC SSP1 – RCP 2.6 "Sustainability –
- IPCC SSP1 RCP 2.6 "Sustainability Taking the Green Road": This scenario highlights an improvement in the management of global resources, with a focus on human wellbeing and Sustainable Development Goals. It limits the global average temperature increase to 1.8°C and is used to assess physical risks.

 IPCC SSP4 – RCP 3.4 "Inequality": This scenario portrays a world where social, economic and technological trends are not distributed evenly, with global temperature increases reaching 2.5°C. It is also used to assess physical risks.

In addition to the previous scenarios, we considered the potential impacts of Russia's war in Ukraine across multiple scenarios, recognising the added challenges these circumstances could present to our resilience strategies at Ferrexpo.

Climate-related risks and opportunities were evaluated across short-term (now to 2030), medium-term (2030 to 2040), and long-term (2040 to 2050) horizons. These timeframes align with Ferrexpo's strategic business planning and medium-term climate targets for 2030, reflecting the evolving nature of climate risks and opportunities.

Feedback

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As shown in Figure 2, climate impacts on operations may include market and technology

and legal frameworks, and physical effects.

transition risks, where businesses fail to adapt to changing environments or stakeholder

shifts, reputational factors, changes (or insufficient change) in government policy

Risks and opportunities can emerge as

expectations. In contrast, physical risks

encompass direct effects, such as flooding near operations, and indirect effects, like rising

influence factors such as operating costs,

continuity and timing of critical events.

revenue generation, supply chains, business

sea levels affecting trade routes and customer access. Climate risks and opportunities

Scenario analysis and process

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Figure 2: Process of climate scenario analysis and evaluation of business impacts

Businesses will need to have an answer to the key question: "What strategy is in place to transition business models to ones that remain valuable once ambitious climate policies are in place?"



Source: Ricardo Plc.

CLIMATE RISKS AND OPPORTUNITIES: SPECIFIC TO SECTOR, GEOGRAPHY AND TIME

│ Market and □□□ technology shifts	Policy and legal	Reputation	Physical risks
 Reduced market demand for emissions- intensive products. Increased demand for low-carbon products and services. Disruptive business models. 	 Ambitious targets to decarbonise sectors, such as the energy and transport sectors. Increased cost of production and taxes. Liability risks. 	 Loss of trust and brand value if risks and impacts are not addressed. Opportunity to enhance reputation through responsible purpose. Access to finance. 	 Chronic changes to weather resulting in fundamental shifts. More frequent acute weather events, such as fires, storms and flooding. Supply chain disruption.



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We welcome any feedback or questions you may have about this report. Please contact **comms@ferrexpo.com** or visit our **website** for further information. Climate Scenario Analysis ("CSA") is a strategic tool used to explore potential climate futures by examining a range of "what-if" scenarios, from rapid decarbonisation under a Net Zero scenario to business-as-usual. This process stress-tests current strategies to identify those that are resilient across different climate outcomes, challenging assumptions, fostering innovation and building resilience. CSA links long-term climate change considerations with short-term planning by assessing impacts on operations, supply chains, and markets, supporting informed decision-making for a sustainable future.

In 2021, Ferrexpo conducted its first climate scenario analysis, with the results published in the 2022 Climate Change Report. In 2024, as part of the two-year review cycle, Ferrexpo has refreshed this analysis, focusing on updating progress since 2021. This update involved re-evaluating existing climate-related risks and opportunities ("R&Os"), identifying new R&Os, and incorporating insights from our ongoing sustainability initiatives since the initial analysis, such as our Double Materiality Assessment results in 2023.

Scenario analysis selection

For our 2024 TCFD assessment, we worked with Ricardo to model four climate change scenarios selected to capture different legislative ambitions and potential environmental outcomes. Scenarios were sourced from reputable authorities, including the IEA and and (IPCC), covering covering transition and physical climate risks. This modelling provides insights into our resilience under varying climaterelated risks and opportunities.

In 2021, three scenarios were modelled: IEA Sustainable Development Scenario ("SDS"), IEA Stated Policy Scenario ("STEPS"), and IPCC SSP4-RCP 3.4. As part of the 2024 TCFD refresh, Ricardo updated the scenarios used to align with the latest data from the IEA and modelled an additional IPCC scenario to provide further granularity to the analysis of physical risks. Please refer to Table 1 for further detail on the scenarios used. Given the IEA's focus on energy systems and shorterto medium-term projections. IEA scenarios primarily assessed transition-related risks, while the IPCC's broader scope, extending projections to 2100, helped evaluate physical impacts. Additionally, we considered the ongoing effects of the war in Ukraine, acknowledging the potential challenges these events may pose for Ferrexpo's resilience.

The CSA was conducted across short-(2024-2030), medium- (2030-2040), and long-term (2040-2050) timeframes, consistent with our 2021 analysis and aligned with Ferrexpo's Net Zero targets. The short-term analysis (2024-2030) reflects our five-year strategic planning cycle.



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Table 1: Summary of climate scenarios used ^{2,3}

-	IEA Net Zero Emissions by 2050 (NZE)	IEA Stated Policy Scenario (STEPS):	IPCC SSP1 – RCP 2.6	IPCC SSP4 – RCP 3.4
-	Description: A "well below" 2°C scenario is achieved through policies that adhere to the Paris Agreement.	Description: a worst-case, "business as usual" scenario (one of two modelled here). A more conservative benchmark whereby governments are assumed not to reach all announced goals.	Description: A "best-case" scenario (one of two modelled here). Global development follows a sustainable path and envisions robust international cooperation, rapid technological advancements, and significant progress in reducing inequality and environmental degradation.	Description: a worst-case, "business as usual" scenario (one of two modelled here). Divided approach to climate change continues to widen through unequal investments in human capital.
-	Average global temperature increase (°C) by 2050: 1.5 Average global temperature increase (°C) by 2100: 1.4	Average global temperature increase (°C) by 2050: 1.9 Average global temperature increase (°C) by 2100: 2.4	Average global temperature increase (°C) by 2040 – 2060: 1.7 Average global temperature increase (°C) by 2080 – 2100: 1.8	Average global temperature increase (°C) by 2040 – 2060: 2.2 Average global temperature increase (°C) by 2080 – 2100: 3.7
-	Summary: A feasible path for the global energy sector to reach Net Zero CO_2 emissions by 2050, with advanced economies achieving this earlier. It also aligns with the UN's Sustainable Development Goals, aiming for universal energy access by 2030.	Summary: Does not take it for granted that governments will reach all announced goals. Instead, it takes a more granular, sector-by-sector look at what has been put in place to reach these and other energy-related objectives, considering existing policies and measures and those under development.	Summary: Sustainability (Taking the Green Road). The world prioritises low-carbon technologies, sustainable development and strong efforts to mitigate climate change, resulting in lower greenhouse gas emissions and fewer ecosystem risks.	Summary: Inequality (A Road Divided). Highly unequal investments in human capital, combined with increasing disparities in economic opportunity and political power, lead to increasing inequalities and stratification across and within countries.
-	 Characteristics: Consistent with limiting the global temperature rise to 1.5°C without a temperature overshoot (with a 50% probability). Emphasises an orderly transition with strong, coordinated policies that enhance energy security, reduce market volatility and prevent stranded assets. Stresses fair global cooperation, with advanced economies leading emissions reductions, achieving universal access to electricity and clean cooking by 2030, and scaling clean technology through collaborative cost reductions and financial support to developing economies. 	 Characteristics: Sector-by-sector look at what has been implemented to reach goals and other energy-related objectives. Considers existing policies and measures and those under development. Includes "Fit for 55" measures announced by the European Commission in July 2021 (55% reduction in emissions by 2030 compared with 1990 baseline). 	 Characteristics Management of global resources slowly improves, educational and health investments accelerate the demographic transition, and the emphasis on economic growth shifts towards a broader focus on human wellbeing. Driven by an increasing commitment to achieving development goals, inequality is reduced across and within countries. Consumption is oriented toward low material growth and lower resource and energy intensity. Physical climate-related impacts increase from the present but are consistent with avoiding catastrophic and irreversible impacts. 	 Characteristics: A gap widens between an internationally connected society contributing to knowledge and capital-intensive sectors of the global economy and a fragmented collection of lower-income, poorly educated societies working in a labour-intensive, low-tech economy. Social cohesion degrades, and conflict and unrest become increasingly common. Technology development is high in the high-tech economy and sectors. The globally connected energy sector diversifies with investments in intensive fuels like coal, unconventional oil and low-carbon sources.

2 Secure and people-centred energy transitions – World Energy Outlook 2023 – Analysis – IEA 3 IPCC 2021: <u>Summary for Policymakers</u>

Feedback

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Climate-related risks and opportunities Table 2: Focus areas and associated climate-material risks and opportunities in order of materiality priority.

R&O type

Focus area

Description

In 2022, we identified 63 potential risks and opportunities ("R&Os") through interviews with a range of our stakeholders in both Ukraine and the UK. For the 2024 TCFD refresh, in addition to the R&Os deemed as material in our 2022 TCFD disclosure, we incorporated additional insights from our 2024 policy review and 2023 double materiality assessment. This process allows us to identify R&Os and evaluate the business relevancy of previous R&Os, considering the business implications resulting from the war and the current legislative landscape. As a result, 63 potential R&Os were identified, including 34 new R&Os.

A financial materiality assessment was conducted to evaluate which of the 63 R&Os were financially material to Ferrexpo. For 2024, the materiality scoring method was updated to align with Ferrexpo's risk management process. R&Os were assessed based on their potential financial magnitude, likelihood of occurrence and potential business impact. The material R&Os were clustered into six priority focus areas for climate scenario analysis. Table 2 provides details on the risks and opportunities identified and deemed material clustered under these focus areas.

Transition	Energy & Emissions ("EE")	Considers the significant energy consumption and associated emissions relating to Ferrexpo's operations. It also considers the impact of different production processes, energy sources and the balance between energy efficiency and sustainability. Key themes include the management of Scope 1, 2 and 3 emissions, the shift towards renewable energy, energy costs, and global and regional climate and Emission reduction targets.	Risks: 1. Energy usage & GHG emissions 2. Scope 3 emissions 3. Limited alternative energy sources 4. Electrification of mining processes 5. Ukraine grid mix uncertainty Opportunities: 1. Renewable energy sourcing 2. Alternative fuels 3. Electrification of mining processes
Transition	Climate-related Policy & Legislation ("CP")	Considers the complex landscape of climate-related policies and regulations impacting the mining & steel industry. Key themes include EU climate policies, carbon pricing mechanisms, evolving emissions reporting and sustainability standards, and variation across global policies.	Risks: 1. Increase in reporting regulation (ESG) 2. Policy landscape – geographical variation 3. European Climate Law and policies 4. Access to green finance 5. Carbon border adjustment mechanism (risk) Opportunities: 1. Carbon border adjustment mechanism (opportunity) 2. Government subsidies (Europe)
Transition	Market Demand – Green Steel ("GS")	Considers market trends, demand for low-carbon steel, and the industry's shift towards decarbonisation, including technological advancements and market implications.	Risks: 1. Demand for low energy-intensive steel 2. Ferrexpo product strategy Opportunities: 1. Iron ore pellet sustainability price premiums 2. Alternative methods of agglomerating iron ore at low temperatures 3. Ferrexpo premium product 4. DR pellet market readiness 5. Customer emission reduction requirements 6. Promote DR pellets
Physical	Physical Climate Risks ("PCR")	Considers the impact of physical climate risks such as extreme weather events and long-term climate changes on Ferrexpo's direct operations, downstream operations (shipping) and infrastructure.	Risk: 1. Increase in heatwaves

Feedback

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Climate-material risks and opportunities

FERREXPO

Climate change scenarios continued

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R&O type	Focus area	Description	Climate-material risks and opportunities
Transition	Stakeholder Climate Consciousness ("SCC")	Considers the growing expectations from consumer investors, and stakeholders for environmentally responsible and transparent business practices. It encompasses managing reputational risks associate with the negative perceptions of mining, aligning operations with climate-conscious goals, and ensuring product sustainability and traceability.	s, Risk: 1. Offset credibility d Opportunities: 1. Transition to a low-carbon economy 2. Ferrexpo market & product position
Transition	Circular Economy Principles ("CEP")	Considers the enhancement of resource efficiency through sustainable product design and practices th aim to minimise waste and maximise resource reuse across Ferrexpo's product market and offerings.	Risk: 1. Increased recycling rates for scrap iron due to a economy shift (risk) Opportunities: 1. Increased recycling rates for scrap iron due to a economy shift (opportunity) 0. Filter is the structure in the str
Figure 3: P	rioritisation of mate	rial risks and opportunities by focus area, bas	sed on financial materiality scoring.
Figure 3: P Bubble siz	rioritisation of mate e represents the qua	rial risks and opportunities by focus area, bas alitative financial impact on Ferrexpo.	sed on financial materiality scoring.
Figure 3: P Bubble siz	CLUS Area. rioritisation of mate e represents the qua CEP	rial risks and opportunities by focus area, bas alitative financial impact on Ferrexpo.	sed on financial materiality scoring. EE = Energy & Emissions CP = Climate-related Policy & Legislation GS = Market Demand – Green Steel PCR = Physical Climate Risks SCC = Stakeholder Climate Consciousness CEP = Circular Economy Principles
Figure 3: P Bubble siz	rioritisation of mate e represents the qua	rial risks and opportunities by focus area, bas alitative financial impact on Ferrexpo.	sed on financial materiality scoring. EE = Energy & Emissions CP = Climate-related Policy & Legislation GS = Market Demand – Green Steel PCR = Physical Climate Risks SCC = Stakeholder Climate Consciousness CEP = Circular Economy Principles
Figure 3: P Bubble siz 5.5 4.5 4.5 2.5	rioritisation of mate e represents the qua	rial risks and opportunities by focus area, bas alitative financial impact on Ferrexpo.	EE = Energy & Emissions CP = Climate-related Policy & Legislation GS = Market Demand – Green Steel PCR = Physical Climate Risks SCC = Stakeholder Climate Consciousness CEP = Circular Economy Principles
Figure 3: P Bubble siz 5.5 4.5 4.5 2.5 1.5	rioritisation of mate e represents the qua	rial risks and opportunities by focus area, bas alitative financial impact on Ferrexpo.	Sed on financial materiality scoring.

The figures on the following pages detail the climate change material priority focus areas, scenario data analysed, metrics to monitor, and the identified potential business impacts.



Climate change scenarios continued

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ENERGY & EMISSIONS | 💥 REPUTATION 01. DESCRIPTION 02. SUGGESTED KPIS TO MONITOR THE RISKS/OPPORTUNITIES 03. SCENARIO DATA INPUT & ANALYSIS (SCENARIO REFRESH) STEPS Considers the significant energy consumption and associated Carbon pricing emissions in relation to Ferrexpo's operations. It considers the - Energy consumption in iron & steel sector by fuel type, Energy - Global energy supply mix impact of different production processes, energy sources, and the supply sources (global), CO₂ emissions from iron & steel sector, - Renewable energy costs balance between energy efficiency and sustainability. Key themes UN 2023 Policy Forecast. - Ukraine grid mix include the management of Scope 1, 2 and 3 emissions, the shift STEPS offers moderate regulatory pressure with a slower towards renewable energy, energy costs, and global and regional renewable uptake. climate and Emission reduction targets. NZE - Energy supply sources (global), CO₂ emissions from iron & steel sector, UN 2023 Policy Forecast. Rapid growth in low-emissions electricity, increasing decarbonisation pressure and carbon prices, driving increased GEOGRAPHIC FOCUS POTENTIAL IMPACTS ON THE FOLLOWING AREAS electrification opportunities and access to green capital. - Ukraine

Carbon pricing is high across both scenarios for EU.

– EU

			TIMEF	RAMES		
	2024	-2030	2030	-2040	2040	-2050
SCENARIOS	Risk	Орр	Risk	Орр	Risk	Орр
IEA STEPS						
IEA NZE						
OVERALL IMPACT THE BUSINESS (R	ON ISK):		OVERAI THE BU	LL IMPACT SINESS (O	ON PP):	

05. IDENTIFIED BUSINESS IMPACTS

 High CapEx for low-carbon technologies may increase initial investment costs but has potential to reduce long-term operational expenses. Slower uptake of renewable energy adoption in STEPS, so greater impact under NZE scenario.

ssets and liabili

- Potential increase in fines and competitive disadvantage if Ferrexpo lags behind peers in decarbonisation efforts.
- Accelerated decarbonisation progress compared to global competitors could allow Ferrexpo to gain competitive advantages, enhanced reputation, and increased access to capital through meeting investor interests.
- Increased operational costs if carbon pricing is implemented or strengthened. Potential competitive advantage if Ferrexpo reduces emissions faster than Ukraine competitors.

Source: Ricardo Plc.

06. IMPACT OF THE WAR

Capital and financing

 \checkmark

- The ongoing conflict threatens local green energy infrastructure, potentially limiting opportunities to increase the proportion of renewable energy use in Ferrexpo's operational processes.
- Ukrainian law mandates up to 80% of energy to be imported from Europe and 20% from domestic sources. This may affect Ferrexpo's Scope 2 emissions if imported energy does not come from renewable sources.
- Challenges securing capital to invest in low-carbon technology
 capital likely to be prioritised for post-war rebuilding efforts.

Figure 4: Energy & Emissions focus area – Business impact summary



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Figure 5: Climate-Related Policy & Legislation focus area – Business impact summary

01. DESCRIPTION	02. SUGGESTED KPIS TO MONITOR THE RISKS/OPPORTUNITIES	03. SCENARIO DATA INPUT & ANALYSIS (SCENARIO
Considers the complex landscape of climate-related policies and regulations impacting the mining & steel industry. Key themes include EU climate policies, carbon pricing mechanisms, the evolving standards for emissions reporting and sustainability, and the variation across global policies.	 Development of policy & carbon pricing mechanisms Carbon prices (EU market) Internal carbon price, shadow carbon price, by geography Revenues from products and services which support transition to a low-carbon economy 	 STEPS Current implemented & planned policies NDCs, carbon pricing mechanisms and Results in short-term timeframe posing great planned legislation, with continuation of the primary risk in the medium and long term. Carbon pricing (2026): 90.10 (\$/tonne).
		– Carbon pricing
GEOGRAPHIC FOCUS	POTENTIAL IMPACTS ON THE FOLLOWING AREAS	High risk across all timeframes and geogra pricing immediately implemented across all
Ukraine (direct and corporate operations) UK and Switzerland (corporate offices)	Revenues Expenditures Assets and liabilities Capital and financing	Carbon pricing (2050): 200, advanced ecor

- EU downstream customer market
- Non-EU downstream customer market

04. SCENARIO RISK/OPPORTUNITY RATING

	TIMEFRAMES					
	2024	-2030	2030	-2040	2040	-2050
SCENARIOS	Risk	Орр	Risk	Орр	Risk	Орр
IEA STEPS						
IEA NZE						
OVERALL IMPACT C THE BUSINESS (RIS	DN SK):		OVERAI THE BU	LL IMPACT SINESS (O	ON PP):	



05. IDENTIFIED BUSINESS IMPACTS

Carbon Border Adjustment Mechanism ("CBAM")

- Exports to the EU may be subject to higher prices if Ukraine implements aggressive carbon pricing mechanisms in response to CBAM.
- EU steelmakers may experience increased competitiveness in the EU steel market, due to higher costs than non-EU imports; the reverse for non-EU steelmakers.

Reporting obligations

- Failure to comply with reporting obligations could result in financial penalties and reputational damage.
- Potential for increased compliance costs.

Product standards/regulations

- Ferrexpo's products will be in demand as steelmakers can demonstrate Scope 1 emissions reductions through the reduced need for coking coal via the use of iron ore pellets.

REFRESH)

including country the steel industry

atest risk due to current/ se policies posing

ohies, with carbon global jurisdictions.

nomies \$250 (\$/tonne).

Source: Ricardo Plc.

06. IMPACT OF THE WAR

- Ukrainian law mandates that up to 80% of energy be imported depending on internal availability from Europe and 20% from domestic sources. Ongoing conflict threatens local green energy resources to combat this.
- Challenges securing international funding and finance capital could be prioritised for post-war rebuilding efforts.
- Disruptions may slow response to climate policies due to employee safety concerns and military conscription.

Feedback

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Figure 6: Stakeholder Climate Consciousness focus area – Business impact summary

Introduction					
I. Responsible business practice					
2. Climate change regulatory analysis	Considers market trends and demand for low-carbon steel and the industry's shift towards decarbonisation, including technological advancements and market implications.	 02. SUGGESTED KPIS TO MONITOR THE RISKS/OPPORTUNITIES Development of policy & carbon pricing mechanisms Carbon prices (EU market) Internal carbon price, shadow carbon price, by geography Bevenues from products and services which support transition to 	 03. SCENARIO DATA INPUT & ANALYSIS (SCENARIO REFRESH) STEPS Count of supply agreements for green steel, carbon pricing forecasts. Several major agreements for green steel across sectors, primarily 		
4. Implementation strategy		a low-carbon economy	 growing in the automotive and transport sectors, indicating growing consumer awareness and demand for sustainability. NZE Carbon pricing forecasts. 		
6. Appendix	GEOGRAPHIC FOCUS - Ukraine (direct operations) - EU downstream customer market - Non-EU downstream customer market	POTENTIAL IMPACTS ON THE FOLLOWING AREAS Revenues Expenditures Assets and liabilities Capital and financing Image: I	Rapid increasing stakeholder and consumer awareness and demand, as indicated by higher carbon pricing in NZE scenario, indicative of increasing emphasis and pressure on products with lower environmental impact.		
	04. SCENARIO RISK/OPPORTUNITY RATING TIMEFRAMES 2024-2030 2030-2040 2040-2050 SCENARIOS Risk Opp Risk Opp Risk Opp	 DENTIFIED BUSINESS IMPACTS Ferrexpo's product plays a crucial role in the green steel transition, enabling the sector to decarbonise and become a leader in sustainability. GHG-reduction initiatives and green technologies are integral to long-term strategy and securing capital, enhancing Engregation sustainability. 	Source: Ricardo Plc. 06. IMPACT OF THE WAR - Whilst we have maintained our Net Zero targets and ambitions, it is clear that the ongoing war may affect how they are achieved in the future. - In 2023 we continued our sustainability efforts, completing our		
IEA STEPS		 Ferrexpo's reputation. Ferrexpo is well positioned to capitalise on evolving market trends 	first double materiality assessment, which we published in our 2023 Annual Report and Accounts.		

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IEA NZE OVERALL IMPACT ON THE BUSINESS (RISK): OVERALL IMPACT ON THE BUSINESS (OPP):

Low Medium High Low Medium High

- and growing demand for low-carbon products. This could lead to premium pricing for its DR pellet production and provide flexibility in the transition to a decarbonised future.
- 100% green steel will require carbon offsetting, a practice often criticised for greenwashing. It is essential that any offsets purchased by Ferrexpo are from a credible source as this could impact access to capital and reputation.

FERREXPO

Contents

Climate change scenarios continued

Low Medium High Low Medium High

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Figure 7: Market Demand – Green Steel focus area – Business impact summary

ntroduction	MADY		
1. Responsible business practice			Y SHIFTS
		O2. SUGGESTED KPIS TO MONITOR THE RISKS/OPPORTUNITIES	03. SCENARIO DATA INPUT & ANALYSIS (SCENARIO REFRESH)
regulatory analysis	Considers market trends and demand for low-carbon steel and the industry's shift towards decarbonisation, including technological advancements and market implications.	 Electricity and coal consumption Carbon prices Global energy mix 	 STEPS Cost of producing steel conventional vs. 100% electrolytic hydrogen.
. Engagement strategy		 Hydrogen demand Carbon intensity of steel 	A gradual and more steady transition to green steel under STEPS means that risks and opportunities unfold over a more extended
. Implementation strategy			timeline. NZE
. Metrics and targets			 Cost of producing steel conventional vs. 100% electrolytic hydrogen, global crude steel production by process route.
. Appendix	GEOGRAPHIC FOCUS	POTENTIAL IMPACTS ON THE FOLLOWING AREAS	Global primary steel production increasing (peaking by 2030), with rising EAF and new EU steel projects supporting demand for DR pellets Larger opportunity as the cost-gap across the NZE
	 Ukraine EU 	Revenues Expenditures Assets and liabilities Capital and financing	scenario decreases between conventional vs. green methods, leading to increased market demand.
	 Non-EU downstream customer market 		
			Source: Ricardo Plc.
	04. SCENARIO RISK/OPPORTUNITY RATING	05. IDENTIFIED BUSINESS IMPACTS	06. IMPACT OF THE WAR
	TIMEFRAMES 2024-2030 2030-2040 2040-2050	 Ferrexpo can benefit from increasing the value of green steel by defining the extent of its role in reducing emissions. The cost gap between green steel production and traditional 	 Infrastructure risks including the ongoing war threatening local green energy resources. Export disruptions of supplying the market: in 2023, the war
	SCENARIOS Risk Opp Risk Opp Risk Opp	- production narrows under the Net Zero scenario.	severely affected Ukraine's Black Sea ports. While ports were
		 Renewable electricity costs decreasing as they begin to take up a larger portion of the global energy mix. Ferrexpo is positioned to support market decarbonisation through means such as direct reduction, cold-bonded pellets and electric are furgace production. 	still present. Ferrexpo's ability to export by rail and river barge provides some flexibility.
edback e welcome any feedback or questions	OVERALL IMPACT ON THE BUSINESS (RISK): OVERALL IMPACT ON THE BUSINESS (OPP):	 The market for green steel products will continue to evolve, potentially becoming saturated with competitors – important for Ferrexpo to maintain a proactive and adaptable stance to position 	

itself as a leader in the evolving landscape.

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Climate change scenarios continued

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Figure 8: Circular Economy Principles focus area – Business impact summary

ntroduction	стрен			
1. Responsible business practice				
2. Climate change regulatory analysis	Considers the enhancement of resource efficiency through sustainable product design and practices that aim to minimise	 Global scrap steel recycling rates Volumes of scrap 	STEPS Global crude steel production by process route.	
3. Engagement strategy	waste and maximise resource reuse across Ferrexpo's product market and offerings.	 Steel outputs Electric arc furnace steel production Circular economy policy developments in key markets 	Reduced demand for scrap steel use comparative to NZE scenario with less policy driver and demand. In the long term, scrap-based EAF will dominate steel production – high-grade DR pellets remain for compliance with eco-design standards	
 Implementation strategy Metrics and targets 			 NZE Global crude steel production by process route, steel industry milestones. 	
6. Appendix	GEOGRAPHIC FOCUS - Ukraine - EU downstream customer market	POTENTIAL IMPACTS ON THE FOLLOWING AREAS Revenues Expenditures Assets and liabilities Capital and financing Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Colspan="2">Capital and financing	Scrap use in steelmaking will increase, but significant retrofits and new builds will shift production to scrap-EAF and direct reduced iron, increasing competition and potentially reducing demand for virgin iron ore. Material efficiency measures limit the increase of scrap availability over time, with greater efficiency improvements assumed under NZE. In the long term, scrap-based EAF will dominate steel production.	
	04. SCENARIO RISK/OPPORTUNITY RATING	05. IDENTIFIED BUSINESS IMPACTS	Source: Ricardo Plc.	

	TIMEFRAMES					
	2024-	2030	2030-	-2040	2040	-2050
SCENARIOS	Risk	Орр	Risk	Орр	Risk	Орр
IEA STEPS						
IEA NZE						
OVERALL IMPACT THE BUSINESS (R	ON ISK):		OVERAL THE BU	L IMPACT	ON PP):	
Low	/ledium	High	Lo	w N	ledium	High

- Reduced demand for virgin iron ore, due to increased use of scrap could lower revenue from traditional product lines. However, increased demand for virgin iron ore as a necessary mix with recycled steel offsets some losses.
- Expansion into scrap collection and recycling could increase revenue and enhance Ferrexpo's market position in the EU. However, new capital investment may be required to adapt operations, increasing expenditures.
- Ferrexpo's DR pellets could align well with EU circular economy initiatives and eco-design standards, increasing revenue and positioning Ferrexpo as a preferred supplier for steel producers seeking to comply with these standards.
- Strengthened brand reputation as a sustainable supplier could attract environmentally conscious customers, potentially increasing revenues.

Current challenges in securing international finance, with capital likely being prioritised for post-war rebuilding efforts, which may limit ability to expand business model to include supplying scrap steel recycling value chains.

Feedback

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GEOGRAPHIC FOCUS

01. DESCRIPTION

infrastructure.

- Ukraine (direct operations)
- EU downstream customer market

Climate change scenarios continued

Considers the impact of physical climate risks such as extreme

operations, downstream operations (namely shipping) and

weather events and long-term climate changes on Ferrexpo's direct

Figure 9: Physical Climate Risks focus area – Business impact summary



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PHYSICAL CLIMATE RISKS | A PHYSICAL RISKS

02. SUGGESTED KPIS TO MONITOR THE RISKS/OPPORTUNITIES

03. SCENARIO DATA INPUT & ANALYSIS (SCENARIO REFRESH)

SSP1-RCP2.6 – CMIP6 models

- Ukraine days (average and maximum) with maximum temperature above 35°C (July – 1850-1900 baseline ("pre-industrial" proxy).
- Ukraine days (average and maximum) with maximum temperature above 40°C (July – 1850-1900 baseline ("pre-industrial" proxy).

SSP4-RCP3.4 – CMIP6 models

- Ukraine days (average and maximum) with maximum temperature above 35°C (July – 1850-1900 baseline ("pre-industrial" proxy).
- Ukraine days (average and maximum) with maximum temperature above 40°C (July – 1850-1900 baseline ("pre-industrial" proxy).

04. SCENARIO RISK/OPPORTUNITY RATING

	TIMEFRAMES			
-	2024-2030	2030-2040	2040-2050	
SCENARIOS	Risk	Risk	Risk	
SSP1-RCP2.6				
SSP4-RCP3.4				

OVERALL IMPACT ON THE BUSINESS (RISK):

Low Medium High

05. IDENTIFIED BUSINESS IMPACTS

Direct operations

- Increased operational costs to ensure facilities are sufficiently cooled and can remain operational (e.g. via increased air conditioning or purchasing additional cooling equipment).
- Reduced employee output and productivity due to physical constraints (may also require additional breaks and cause delays in operations).
- Potential additional costs and legal requirements due to employee welfare and workplace safety.

06. IMPACT OF THE WAR

- Ongoing war threatens disruption of response to climate resilience measures being put in place due to priority of safety concerns and personnel being impacted by military assignments.

Source: Ricardo Plc.

- Mean temperature in Central and Eastern Europe - Extreme heat days (can be defined as consecutive days with temperatures over 30-35 degrees Celsius)

POTENTIAL IMPACTS ON THE FOLLOWING AREAS

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Business resiliency responses

Table 3 summarises the business resiliency responses identified by Ferrexpo. This includes resiliency and adaptive capability measures from the 2022 Climate Change Report, which have been revised and updated to show progress status.

Table 3 key:

Regular text = previous strategic action & resiliency response identified & qualitative progress rating.

Bold text = new strategic action & resiliency response identified.

Qualitative progress rating for previously identified responses:

Progressed

- Neutral
- No progress

Table 3. Identified business resiliency responses

ENERGY & EMISSIONS	
STRATEGIC ACTIONS & RESILIENCY RESPONSES IDENTIFIED	
CURRENT ACTIONS UNDERWAY	
1 Electrification of mining processes	

- Attending events to gain insights into the decarbonisation of mining operations.
- Electrification of trolley assist and mining vehicles to reduce Scope 1 GHG emissions.
- 2. Energy usage & GHG emissions
 - Continue to review decarbonisation levers through a refresh with Ricardo to achieve our emissions reduction targets aligned to achieve Net Zero by 2050 and manage any indirect impacts of other risks/opportunities that could impact progress towards this target (e.g. energy purchasing, CBAM).
 - Implement efficient energy consumption processes and upgrade to more efficient equipment.
 - Continue implementing robust systems for measuring and tracking emissions and lead with emissions reduction targets in line with Net Zero targets and strategies.
- 3. Selective electricity procurement

Transition towards purchasing clean electricity sources, such as nuclear and hydro, including developing a domestic and out-of-country strategy to manage current requirements. However, the war has affected this, with up to 80% now required to be purchased outside of Ukraine depending on internal availability.

Þ Continue to invest in research and implement new technologies expected to lower Ferrexpo's organisational Scope 1 and 2 emissions footprints. Following a successful trial, the Group can now build its own solar power plant and meet its minimum power requirements.

- 4. Focus on DR pellet sales
 - Increase the proportion of DR pellets sold to steelmakers to facilitate lower-emission steelmaking processes and mitigate Scope 3 emissions.

POTENTIAL NEAR-TERM ACTIONS (2024-2030)

- 1. Renewable energy sourcing
 - Lock in long-term Power Purchase Agreements ("PPAs") for renewable energy supply.
 - Install on-site solar generation.
 - Assess the cost/benefit of investing in private renewable energy supplies independent of the Ukraine grid.
- 2. Carbon pricing
 - Understand the capacity for technology and equipment required to transition Ferrexpo to a Net Zero business by 2050 through conducting a feasibility study.
- 3. Hydrogen adoption
 - Invest in R&D for green hydrogen usage in iron ore processing.
 - Pilot projects for hydrogen-based direct reduction of iron ore.

LONGER-TERM ACTIONS (2030+)

- 1. Carbon Capture and Storage ("CCS") exploration
 - Investigate the feasibility of CCS technologies for emissions-intensive processes.
- Collaborate with other industries for infrastructure development related to CCS.

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Table 3: Identified business resiliencyresponses continued

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- No progress

CLIMATE-RELATED POLICY & LEGISLATION

STRATEGIC ACTIONS & RESILIENCY RESPONSES IDENTIFIED

CURRENT ACTIONS UNDERWAY

- 1. Carbon pricing
 - Our Net Zero roadmap and continuous monitoring of global carbon prices, integrated into Ferrexpo's business strategy, enable decisions on diversification and the development of carbon reduction technology/processes to be directly influenced.
 - Continuous and regular monitoring of emission reduction performance against our targets enables assessment of exposure and vulnerability to risk.
- 2. Communication
 - Continue to collaborate with local and national governments on climate policies.

POTENTIAL NEAR-TERM ACTIONS (2024-2030)

- 1. <u>Government subsidies (Europe)</u>
 - Opportunity to gain funding and support through European government subsidies and funded projects.
- 2. Carbon pricing
 - Understand the technology, equipment, and offsetting capacity required to transition Ferrexpo to a Net Zero business by 2050 and develop an internal carbon price to consider short- and long-term impacts regarding (for example) ETS schemes/joining the EU.

LONGER-TERM ACTIONS (2030+)

- 1. Targets and regulations associated with shipping carbon emissions.
 - Promote technology required for shipping partners to meet any shipping targets and regulations. This depends on the scale and boundary of policies introduced, when and where they are introduced, and the technology available.

2. Carbon pricing

- Monitor Ferrexpo's product carbon intensity and carbon footprint compared to other market competitors to ensure Ferrexpo can stay ahead of market leaders and increase revenue.
- Evaluate the impact of Ukraine's accession to the EU and the implications of Ferrexpo's Ukraine operations being included in the Emissions Trading Scheme versus CBAM pricing impacts outside the EU.

Carbon tax boundaries and scope should be monitored as this will determine if Ferrexpo products can support the market in reducing the carbon tax burden.

We welcome any feedback or questions you may have about this report. Please contact **comms@ferrexpo.com** ^[2] or visit our **website** ^[2] for further information.



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Table 3: Identified business resiliency responses continued

Table 3 key:

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- Neutral
- No progress

MARKET DEMAND – GREEN STEEL

CURRENT ACTIONS UNDERWAY

- 1. <u>Alternative methods of agglomerating iron ore at low temperatures</u>
 - Developing cold bonded pellets as an alternative green product for customers looking to reduce Scope 3 GHG emissions.
- 2. Market product position

- Improving the quality of the DR pellet to address the market supply and demand, positioning it as a strong supplier to facilitate sector decarbonisation.
- 3. Demand for low carbon emissions steelmaking
 - Continuously monitoring global steel carbon emissions intensity requirements and incorporating findings into the Ferrexpo business strategy to influence decisions on diversification and development of low energy-intensive steel.
- 4. DR pellet market readiness
 - Producing DR pellets as an easy-access technology for customers, focusing on the fast-growing DR EAF market, where Ferrexpo is readily available to
 provide direct support.

POTENTIAL NEAR-TERM ACTIONS (2024-2030)

- 1. Iron ore pellet sustainability price premiums
 - Define a price premium that should be attributed to a mining company as a green iron ore producer, aiming to incentivise other iron miners to facilitate the green transition and realise the CAPEX payoff.
- 2. Addressing potential market saturation
 - Develop strategies to address potential short-term market saturation for DR pellets and other green products.
- 3. Demand for low carbon emissions steelmaking
 - Establish manufacturing capability for technology and equipment required to integrate into a market shift towards green steel.
 - Accelerate the integration of technologies that aid the reduction of carbon emissions, such as using green hydrogen in the pelletising process, to gain a competitive advantage in the market.

LONGER-TERM ACTIONS (2030+)

- 1. Demand for low carbon emissions steelmaking
 - Monitor Ferrexpo product carbon emissions intensity compared to other market competitors to ensure Ferrexpo can stay ahead as market leaders in this transition, ensuring increased premium and revenue.
- 2. DR to HBI shift
 - Potential for Ferrexpo to explore this and even build this technology in Ukraine in the future.

Feedback

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Table 3: Identified business resiliency responses continued

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- Neutral
- No progress

STAKEHOLDER CLIMATE CONSCIOUSNESS

STRATEGIC ACTIONS & RESILIENCY RESPONSES IDENTIFIED

CURRENT ACTIONS UNDERWAY

- 1. <u>Ferrexpo market & product position</u>
 - Ferrexpo has developed the flexibility to move into DR pellets to meet expected demand growth.
 - Improving our DR pellet quality to better service the market and gain a competitive advantage.
- 2. Geographic advantage
 - Ferrexpo has a geographic advantage for delivering growth markets for DR pellets in Europe and the MENA region due to its closer proximity to both markets than its peers.
- 3. Transparency
 - Continue transparent reporting and communication through Ferrexpo's regulatory and sustainability reporting suite.

POTENTIAL NEAR-TERM ACTIONS (2024-2030)

- 1. Communication & outreach
 - Benchmarking exercise of Ferrexpo sustainability and climate action achievements, as well as communication and reputation performance against competitors. A particularly beneficial aspect of this will be understanding both consumer and investor opinions of Ferrexpo, including its recent roadmap to Net Zero.
 - Provide climate literacy awareness and training for all employees.

LONGER-TERM ACTIONS (2030+)

- 2. Communication & outreach
 - Consideration should be given to communicating any climate and sustainability action. As we move closer to carbon budgets and Net Zero targets, we will focus on those who can achieve sustainability and demonstrate and communicate it effectively. Consumers and investors are likely to become more scrutinous of greenwashing.
 - Being recognised as a leader, reporting fully against the Transition Plan Taskforce ("TPT") and taking clear, measurable action.

CIRCULAR ECONOMY PRINCIPLES

STRATEGIC ACTIONS & RESILIENCY RESPONSES IDENTIFIED

CURRENT ACTIONS UNDERWAY

- 1. EU circularity initiatives
 - Ferrexpo's DR pellets have the potential to be well-aligned with initiatives such as the Circular Economy Action Plan and ESPR.
- 2. Market readiness
 - Ferrexpo's DR product already supports the scrap steel market due to the requirement of virgin feedstock for recycled iron. Customers already fall
 into the category of using scrap steel, which is something Ferrexpo monitors.
 - Subscriber and partner to CRU to obtain commodity research regarding the steel sector and value chain to ensure Ferrexpo keeps abreast of the changing commodity market.

POTENTIAL NEAR-TERM ACTIONS (2024-2030)

- 1. Movement toward circular economy principles
 - Ferrexpo's business strategy incorporates continuous monitoring of global scrap steel recycling rates, including identifying the leading countries where a shift to a circular economy is increasing. Therefore, decisions on investment, diversification and the development of new products can be influenced.

Feedback

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Table 3: Identified business resiliency responses continued

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- Neutral
- No progress

PHYSICAL CLIMATE RISK

STRATEGIC ACTIONS & RESILIENCY RESPONSES IDENTIFIED

CURRENT ACTIONS UNDERWAY

1. Ongoing conflict

- Current on-the-ground resiliency and adaptation measures are focused on prioritising employees' safety concerns due to the ongoing conflict.

POTENTIAL NEAR-TERM ACTIONS

- 1. Physical risks conflict
 - Assess climate-induced conflict and political instability by likelihood, Ferrexpo operating and trading locations and Ferrexpo business plan timeframes.
 Implement water conservation & recycling programmes.
- 2. Physical risks
 - Assess the quantitative risk of sea-level rise and storms to Ferrexpo's supply chain and shipping operations, including the most vulnerable shipping routes, ports, customers and employees. Incorporate this risk into decision-making.

LONGER-TERM ACTIONS

- 1. Physical risks
 - Research mitigation and adaptation options for areas of Ferrexpo operations, supply chain and workforce identified as at risk from sea-level rise and storms. If those identified are outside Ferrexpo's direct operations, consider engaging with those third parties to increase resilience to sea-level rise.

Following the refresh of the TCFD project and disclosure in the 2022 Climate Change Report, and to align with TCFD and IFRS S2 best practices, we will renew our scenario analysis at least every three years to provide up-to-date and relevant information. Should any significant changes occur, we will also look to refresh our analysis more frequently to provide the most accurate report and status or if any external environmental changes occur, which warrant a quicker update. Each update will not only consider a review of the long list of risks and opportunities and climate scenario analysis but a focus on the current and future (near- and longer-term) resiliency measures to maximise the opportunities and minimise the climate-related risks, as well as consideration to the progress of each previous resiliency measure identified.

Feedback

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Climate change regulatory analysis

2.1 Policy review: Our operations

2.2 Policy review: Our markets

2.3 Quantifying market impacts

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Climate change regulatory analysis

69

environmental and climate-focused policies reviewed.

12

geographical locations reviewed, including 11 countries and the European Union.

1.9TC0₂e

Key highlights

Current estimations: $1.9TCO_2e$ (BF/BOF)> $0.815TCO_2e$ (EAF).

Five

CBAM implementation scenarios analysed.

Regulatory context

Global markets are increasingly taking steps to address climate change. Businesses today must navigate the legal and regulatory frameworks of the jurisdictions in which they operate. Given our diverse global network of existing and potential priority markets, we must understand the evolving landscape of climate change-related policies that impact our direct operations in Ukraine and indirect key markets globally.

We have reviewed 69 environmental and climate-focused policies across 12 geographical locations, including 11 countries and the European Union, focusing on our operations and strategic markets. This review encompassed Nationally Determined Contributions ("NDCs"), long-term strategies, national energy and climate change plans, and climate change laws. Additionally, we examined policies specific to iron ore production and steel manufacturing, carbon taxes and pricing mechanisms like the European Union CBAM and ETS, as well as corporate climate-related reporting obligations.

We recognise that countries and regions adopt climate change legislation at different rates and levels of ambition. This dynamic environment presents both risks and opportunities for us. We must understand the driving forces behind these changes and continuously update our strategy. The following regulations have been considered in this review:

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- Carbon regulations for direct operations in Ukraine.
- Regulations affecting the economics of Ferrexpo product sales, such as the EU CBAM.
- Reporting obligations in jurisdictions where Ferrexpo has a direct economic footprint.
- Regulations influencing Ferrexpo's markets, including the EU CBAM and carbon pricing in selected countries.

Key findings

- Commitments and policies are evolving, with the most significant economic impacts in advanced economies with established carbon pricing.
- EU policy is a priority for Ferrexpo, as it leads global climate regulation and the EU accounted for 72% of total sales in 2023.
- The EU CBAM is being implemented. The EU carbon policies will level carbon costs to supply EU markets and move towards parity, potentially favouring Electric Arc Furnaces (EAF) over Blast Furnace-Basic Oxygen Furnaces (BF/BOF) processes.
- Carbon pricing is expanding in Ferrexpo's key markets outside Europe, but it will take time before it has a major effect on the steel sector.

Countries covered

The climate change regulatory analysis covers countries where we operate, including Ukraine, the United Kingdom and Switzerland, as well as key markets like the EU (Austria, Germany), Serbia, Türkiye, Egypt, the United Arab Emirates, China and Japan.

Feedback

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Climate change country-specific targets

We recognise the diverse national targets for GHG reductions, with most countries where we operate and our country markets committed to significant cuts by 2030 and aiming for Net Zero by 2050 as governments increasingly pass laws to reduce emissions.

Table 4: Example, Government climate change goals and GHG targets.

Group	Country	Example, Government climate goals and GHG targets		
Our operations	Ukraine	 Reduce economy-wide absolute GHG emissions by 65% by 2030 (compared to 1990 levels). 		
	UK	 Reduce economy-wide GHG emissions by at least 68% by 2030 (compared with 1990 levels). 		
		 Reach Net Zero by 2050. 		
	Switzerland	 Reduce GHG emissions by at least 50% by 2030 (compared with 1990 levels). 		
		 Reach Net Zero by 2050. 		
Our markets	EU	 "Minimum" 55% reduction against 1990 emissions levels by 2030. 		
	Germany	 Reduce GHG emissions by 65% (compared with 1990 levels) by 2030. 		
		 Reach Net Zero by 2050. 		
	Austria	 Reduce GHG emissions by 48% by 2030 (compared with 2005 levels). 		
		 Achieve climate neutrality by 2040. 		
	Slovakia	 Reduce GHG emissions by at least 20% compared to 2005 levels. 		
	UAE	 Achieve Net Zero by 2050. 		
	Japan	 Reduce GHG emissions by 46% by 2030 (compared with 2013 levels). 		

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As Ferrexpo's mining and processing activities and assets to produce iron ore pellets are in Ukraine, we adhere to national climate change legislation and policies, ensuring we meet all relevant reporting obligations. Additionally, with corporate offices in the UK and Switzerland, we are committed to fulfilling our reporting requirements in both jurisdictions. This section has been primarily prepared from the perspective of the baseline or Continued War scenario. This scenario assumes that climate policy measures in Ukraine will develop as currently envisaged, and Ferrexpo, therefore, will have the potential to invest in decarbonisation similar to its current situation. External policies, including the EU CBAM, do not provide special treatment for Ukraine.

Two other scenarios are highlighted with either more negative or more positive outlooks concerning the progression of the war, for which the climate policy implications for Ferrexpo could be significantly different from the baseline. Table 5 presents these two alternative scenarios for worst- and best-case scenarios and some potential implications for upcoming carbon-related policy in Ukraine.

Scenario				
Continued War	 Ferrexpo (and other companies) find decarbonisation increasingly challenging compared to the current regulatory environment. 			
	 The Ukrainian government may face difficulties financing and mobilising international fund support for decarbonisation, which could weaken or delay the ambition for a domestic Ukrainian ETS. 			
	 The short-term regulatory impact for Ferrexpo could be lessened, although it would be difficult for such a weakening policy to extend beyond 2030 due to EU accession ambitions. 			
Post-war rapid adoption	 Ukraine will see significant investment in reconstruction, from which Ferrexpo may benefit directly or indirectly (through increased access to low-carbon energy and electricity). 			
	 No weakening of policy ambitions. 			
	 Ferrexpo may have opportunities to meet the targets at a lower cost or with more support measures in place. 			

Physical assets and mining operations: Ukraine

In 2021, Ukraine updated its Nationally Determined Contribution ("NDC"), aiming for a 65% reduction in economy-wide GHG emissions by 2030 compared to 1990 levels. Ukraine has been actively working on aligning its environmental and climate policies with EU standards as part of its European integration process. However, the ongoing war makes progress towards this target unclear.

To meet its 65% NDC target by 2030, stricter regulations may be enforced, putting pressure on our operations to decarbonise using fuel-switching technologies and renewable energy and report progress. The main regulatory frameworks in Ukraine focused on advancing decarbonisation efforts are:

- The National Pollutant Release and Transfer Register, where Ferrexpo could be required to share additional emissions data and other environmental KPIs publicly for the benefit of our stakeholders. In response, we have embraced a proactive approach, leading the way by transparently sharing our emissions data (Scope 1, 2 and 3) and environmental KPIs through our Annual Report and Accounts 2023 and Responsible Business Report.
- The Ukraine National Mine Action Strategy and Operational Plan addresses the critical issue of landmines and remnants of war contamination. While crucial for safety and land restoration, this strategy may introduce operational constraints and procedural requirements impacting mining operations.

- The Ukraine National Carbon Tax, established in 2011 as one of the first carbon taxes in Eastern Europe, is set at \$0.77 per tonne of carbon, making it one of the lowest carbon prices in Europe. Given the nature of our operations and the resulting Scope 1 and 2 emissions, this tax can be financially significant if emissions are not reduced via decarbonisation initiatives.
- The Ukrainian government is developing an Emissions Trading Scheme (ETS), expected to launch in pilot mode in 2025 and will mirror the higher EU ETS pricing over time. This responds to the CBAM, with nations aiming for exemption by showing their schemes.
 However, the ongoing war may impact its speed and outcome. To mitigate the ETS and CBAM impacts, we are continuously exploring the potential to decrease the embodied carbon in our products.

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Potential impacts of EU CBAM and carbon pricing mechanisms

As part of the EU's decarbonisation efforts, the CBAM is designed to prevent carbon leakage and promote fair competition between EU and non-EU producers. It will impose a levy on carbon-intensive goods imported into the EU from countries without an equivalent Emissions Trading Scheme (ETS) or carbon pricing mechanism. Since CBAM will apply to our European products, we have carefully assessed its impact to ensure our operations are fully prepared for a full-scale implementation.

To estimate the potential impact of carbon pricing on our products, the Scopes 1⁴ and 2⁵ emissions intensities of iron ore pellets have been calculated using 2023 data to provide a total kgCO₂e/tonne of iron ore pellets produced.

Table 6: Emissions intensity associated with the production of Ferrexpo's iron ore pellets 2023

Taking a proactive approach, we have analysed the associated carbon price (\$/ tonne) across various scenarios. The limitations of our analysis are detailed in the Appendix. We have considered five implementation scenarios for EU CBAM.

Table 7: Estimating the impact of different carbon pricing mechanisms in different scenarios based on the emissions intensity of Ferrexpo's iron ore pellets⁶

Scenario	Associated price of carbon (\$/tonne)	Carbon cost (\$/tonne of product produced) based on emissions intensity
Current	1 ⁷	0.04
EU CBAM implemented	008	4 7
(average)	90-	4.7
EU CBAM implemented (low)	84 ⁹	4.4
EU CBAM implemented (high)	113 ¹⁰	5.9
IEA NZE 2050	20011	10.5

- The current scenario is based on Ukraine's National Carbon Tax, which, at \$0.77 per tonne, is one of the lowest carbon prices in Europe and, therefore, shows the smallest additional carbon cost.
- The EU CBAM implemented scenario uses a price on carbon equivalent to rates currently implemented via the EU ETS to estimate what the impacts of EU CBAM could look like when CBAM enters its full implementation in 2034 (full charges applied).
- The IEA NZE 2050 scenario assumes that carbon pricing mechanisms are implemented rapidly across all global jurisdictions, with significant prices on carbon in place by 2050.

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- 4 The Scope 1 emissions from production consider the use of fuel stocks, such as natural gas bentonite, and coal. an unpredictable future regarding the 5 The Scope 2 emissions associated with production use a market-based approach, where emissions factors associated
- with electricity generation are based on the contractual instruments implemented by Ferrexpo. Therefore, this takes into the account the generation mixes of electricity suppliers and accounts for renewably sourced electricity.
- 6 Emissions intensity of Ferrexpo's iron ore pellets calculated by Ferrexpo.
- 7 Based on the current carbon pricing values implemented via the Ukraine National Carbon Tax.
- 8 Based on the 2023 average EU ETS carbon pricing value to mimic the magnitude of CBAM pricing levels post implementation of EU CBAM.
- 9 Based on the lowest 2023 EU ETS carbon pricing value to mimic the magnitude of EU CBAM pricing levels post implementation of FU CBAM.
- 10 Based on the highest 2023 EU ETS carbon pricing value to mimic the magnitude of EU CBAM pricing levels post implementation of FU CBAM.
- 11 Based on the IEA NZE 2050 scenario projecting that carbon
- pricing will be circa \$200 per tonne of carbon in major economies

in 2050 (estimating a possible scenario in 2050).

Table 8: Potential impacts of EU CBAM on Ukraine under future scenarios

Implications for EU CBAM
 The financial constraints of the EU CBAM, combined with the infrastructure, social, and economic damage inflicted on Ukraine, would severely impact Ukrainian industries and businesses.
 The lack of support and subsidies from authorities balancing climate goals with supporting Ukraine's recovery, may hinder Ferrexpo's ability to decarbonise operational emissions, resulting in higher emissions and increased charges under the EU CBAM.
 Potential for temporary exemptions or assistance from the EU for Ukrainian exporters.
 With the resolution of conflict compounded by investment in reconstruction, technological innovation, and government subsidies, Ferrexpo could experience improved access to decarbonisation initiatives.
 Accelerated alignment possible as part of EU accession process with increased technical and financial support from the EU, including the possibility for special provisions for Ukraine's transition period.
 This enhanced ability to decarbonise operational emissions and product emissions intensity could lessen the financial impact of the EU CBAM.

The uncertainty of the war in Ukraine creates

worst- and best-case scenarios, which have

application of EU CBAM to Ukraine for

been considered as part of this analysis.



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Reporting obligations

Increasing legislation and mandating climaterelated reporting will require Ferrexpo to adhere to stricter reporting requirements and produce compliance reports. Examples include Streamlined Energy and Carbon Reporting ("SECR") and Energy Savings Opportunity Scheme ("ESOS") in the UK, and Task Force on Climate-Related Financial Disclosures (TCFD) and Corporate Sustainability Reporting Directive (CSRD) as a non-EU parent. The EU Taxonomy is another emerging regulation of importance to the iron and steel industry. The EU Taxonomy is a classification system that helps companies and investors identify environmentally sustainable economic activities to support sustainable investment choices. Although Ferrexpo will not be directly affected, iron and steel manufacturing is covered under the EU Taxonomy.

We anticipate that emerging regulations like the Taskforce on Nature-Related Financial Disclosures ("TNFD") will extend our reporting to include nature-based issues. Implementing ISSB standards under the UK Sustainability Disclosure Standards will require us to report on IFRS S1 general sustainability and S2 climate standards in our Annual Report filed in the UK as a London Stock Exchangelisted company. In line with these regulations, if deemed material, we must report on our Scope 1, 2 and 3 emissions. While we have already disclosed our Scope 1, 2 and 3 emissions, Scope 3 also requires assurance. Ferrexpo must provide evidence and disclose the benefits of manufacturing and selling iron ore pellets from emissions and a complete value chain perspective. For example, our Category 10 Scope 3 emissions are lower than those of other iron ore suppliers because our products require less coking coal in steel manufacturing. Additionally, our pellets support electric arc furnace technology, an inherently lower-carbon process that further reduces downstream emissions.

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In addition to our direct operations, we acknowledge the importance of climate change policies affecting our downstream customers. This section examines key policy drivers at the EU level, particularly Germany,

Austria, and non-EU jurisdictions where Ferrexpo has current and emerging markets, including Egypt, Türkiye, the UAE, China, Japan and Serbia.

Key policy drivers: EU

The EU is Ukraine's closest primary market for steel production, consuming substantial quantities of iron ore pellets. Ferrexpo has historically sold a significant portion of its output to EU customers, accounting for 72% of our sales in 2023. EU policy plays a pivotal role in shaping global climate change regulations through two key carbon pricing mechanisms: the EU Emissions Trading System (ETS) and the EU CBAM.

The EU ETS, which has been in operation since 2005, is a cap-and-trade system that sets a price on carbon emissions within the EU. Meanwhile, the EU CBAM will be gradually implemented between 2026 and 2036 to prevent carbon leakage by imposing charges on businesses that import goods into the EU. These initiatives seek to level the cost of supply to EU markets, eliminating any carbon advantages held by non-EU producers.

The following policies are expected to support low-emissions steel production in both the short and long term, with the phased introduction of the EU CBAM and the gradual phase-out of free allowances under the EU ETS. Key EU policies and initiatives include:

European Green Deal (2019) and "Fit For 55" (2021)

 Overarching policy framework aimed at making the EU climate-neutral by 2050. Includes strategies for industrial sectors, including steel.

European Union's Emissions Trading Scheme ("ETS") (Phase 4)

- Cap and trade incentivising emissions reduction.

EU CBAM, to be gradually applied from 2026

 Aims to prevent carbon leakage by providing a level playing field, equalising carbon costs between domestic and imported products.

Energy Efficiency Directive ("EED")

 Sets targets for improving energy efficiency in industrial processes.

Eco-design for Sustainable Products Regulation ("ESPR")

EU strategy on hydrogen and the European Clean Hydrogen Alliance

 Promotes the use of clean hydrogen, including steel production.

EU Transitions Pathways for Metals

 Provides a framework for the transition of energy-intensive industries towards climate neutrality.

EU Industrial Strategy

- Focuses on supporting the transition of energy-intensive industries towards climate-neutrality.
- Circular Economy Action Plan: Promotes resource efficiency and recycling in the steel industry.

Key policy drivers: Austria

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Austria is a key market for Ferrexpo, known for its high-quality steel production and representing a significant portion of our revenue. The country is committed to reducing GHG emissions by 48% by 2030 and achieving carbon neutrality by 2040. Austria's "Long-Term Strategy 2050" outlines a vision for climate neutrality, focusing on transitioning steel production from traditional methods to electricity and hydrogen-based processes. Renewable hydrogen is expected to be crucial in decarbonising the steel industry. In 2022, Austria also introduced a national ETS for fossil fuels not covered by the EU ETS, with a phased implementation through 2026.

Key policy drivers: Germany

Germany is a major EU steel producer and contributed significantly to our revenue in 2023. The German Federal Cabinet has committed to reducing GHG emissions by 55% by 2030 under the Climate Action Programme 2030 and the new Climate Action Act. Germany's ETS, adopted in 2021, focuses on heating and transport fuels, so it will not directly affect the steel and iron sectors. To support the steel industry, the government introduced the "Steel Action Concept", aimed at fostering a competitive and climate-neutral steel sector. Additionally, Germany's "Hydrogen Strategy", with a €9 billion investment, seeks to position the country as a leader in hydrogen technology, crucial for decarbonising steel production in the EU.

Key policy drivers: Non-EU countries

Carbon pricing mechanisms and emissions trading schemes in non-EU countries are developing rapidly to avoid increased taxes on emissions-intensive exports to the EU. Businesses in non-EU jurisdictions face increased pressure from reporting obligations, as seen with the establishment of the EU's CSRD. Some of our customers in these regions may fall within the scope of the CSRD, further highlighting the importance of adapting to these shifting policy landscapes.

Table 9 provides a summary of the main policy drivers identified across our key non-EU countries, focusing on carbon pricing and the steel industry landscape.

Policy review: Our markets

Policy review: Our markets continued

Contents Table 9: Overview of policy drivers for key non-EU countries Country Carbon pricing Steel industry landscape Introduction Egypt The Egyptian Exchange and Environment Ministry are in the The Ministry of Trade and Industry supports steelmakers in process of establishing a local carbon credit exchange. It implementing cleaner production methods. Egypt is exploring remains unclear which industries would be covered by the innovative solutions, including EAFs and clean hydrogen, in 1. Responsible business practice scheme and whether participation would be compulsory. cooperation with leading companies, research centres and technoloav providers. 4 2. Climate change Türkiye Türkiye aims to establish a national ETS as part of its proposed Türkiye's steel industry is facing challenges, with consecutive regulatory analysis Climate Law. The 12th Development Plan (2024-2028) states that decreases in production in 2022 and 2023. Since 71.5% of the the system will be implemented with the necessary legislation country's steel is produced via EAFs, rising electricity prices are and infrastructure. The Medium-Term Programme (2024-2026) a significant negative factor for the industry. 3. Engagement strategy also prioritises completing the ETS legislative framework. UAE The UAE is exploring the possibility of a carbon tax, with the The UAE.'s steel production has grown sixfold since 2000, driven 4. Implementation strategy Ministry of Climate Change and Environment conducting a by demand from construction, infrastructure, and oil and gas feasibility study and gathering stakeholder feedback. sectors. To meet rising demand, the UAE. plans to increase steel production capacity by over 60%, reaching around 15 million 5. Metrics and targets tonnes annually by 2030, supported by new mills and direct reduced iron (DRI) processes. 6. Appendix China China's national emissions trading scheme, launched in 2021, The central government has mandated steel production cuts for 2024, with provinces showing high growth facing the most covers only the power sector, excluding steel. Some local jurisdictions had earlier pilot carbon markets covering additional pressure. Due to their high carbon intensity, steel mills using BF-BOFs will be most affected, while EAFs will be prioritised to sectors, and as the national system expands, these regional entities are expected to be integrated. maintain production. In 2008, Japan launched COURSE50, a project supported by the Japan Japan's carbon pricing mechanism, the Tax for Climate Change Mitigation, was introduced in 2012, placing a price of around \$1.3 New Energy and Industrial Technology Development per tonne of CO₂ on all fossil fuels. In 2023, Japan launched its Organisation, aimed at reducing carbon emissions by 30% from Basic Policy on Green Transformation (GX), which includes a 2013 levels by 2030. The initiative combines CO₂ separation and voluntary ETS starting in 2023/24, with full operation expected by recovery technologies with hydrogen technology for blast 2026/27 and a carbon levy by 2028/29. However, this levy is furnaces, with verification experiments set to begin in 2026. currently aimed at fossil fuel operators, refiners, and utilities, with no guarantee of steel industry inclusion. Serbia Serbia currently has no plans for an emissions trading scheme. Steel production in Serbia fell by 34.5% from January to The government has stated that implementing a carbon pricing November 2023 compared to the same period in 2022. In mechanism aligned with EU rates by 2030 is not feasible due to mid-2023, HBIS Serbia idled one of its blast furnaces due to severe financial implications and complexity. Serbia is evaluating weak demand and low prices, and is planning to reopen it when options to introduce a CO₂ emissions tax to identify the most the market improves. viable solution.

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Significance of quantitative analysis

Carbon pricing mechanisms are increasingly driving high-emission sectors to reduce their carbon footprints, with failure to do so resulting in potentially significant cost increases. Our iron ore pellets are vital to steel manufacturers across EU and non-EU markets. As these mechanisms raise production costs, our customers' competitiveness in a rapidly evolving global market may be at risk, underscoring the critical importance of proactive adaptation in this challenge.

Since the publication of the 2022 Climate Change Report, the CBAM entered its transitional phase in 2023, with the full regime and financial impacts scheduled for implementation in 2026. As global steel production costs are expected to shift in response to CBAM, forecasting these changes will be critical in assessing how the competitiveness of Ferrexpo's key customers, particularly steel manufacturers, may evolve in the future.

Current estimates of steel manufacturing prices

Understanding the impact of carbon pricing on our customers is crucial as we navigate the evolving regulatory landscape. To evaluate the current impact of carbon pricing in regions where our customers operate, data regarding current steel production costs was obtained from the 2020 JRC Technical Report, covering both BF/BOF and EAF processes. BF/BOFs refer to furnaces where coke is used as the primary fuel and reductant in the steel production process, while EAFs use highcurrent electricity to melt scrap and DRI.

To further analyse emissions intensity across jurisdictions, we referenced the 2023 JRC Technical Report and the Global Efficiency Intelligence report, focusing on hot rolled coil. We also consulted the 2024 World Bank Carbon Pricing Dashboard for information on global emissions trading schemes and carbon pricing mechanisms.

Figures 10 and 11 illustrate the anticipated impacts of carbon pricing costs per tonne of product in Ferrexpo's priority markets. They estimate additional carbon costs for BF/BOF and EAF processes based on emissions intensity and carbon prices.





- Figure 10 shows that Germany faces significantly higher production costs due to the EU ETS carbon price.
- Even without carbon pricing, production costs in the EU are higher than in other regions. This is mainly due to rising energy and raw material prices caused by the Russia-Ukraine conflict.
- Additionally, demand affects steel pricing and margins, not production costs.
- Non-EU jurisdictions analysed are currently not subject to carbon pricing or ETS mechanisms, resulting in lower production costs, as many are still developing their schemes or excluding the steel sector from regulation.
- The EU CBAM is expected to create a more level playing field for EU steel producers by addressing the disadvantage of cheaper imports.

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Figure 11: Current estimations of steel production costs in selected regions for both BF/BOF and EAF



- Figure 11 shows that producing steel through EAF processes is generally more expensive than traditional BF/BOF methods, primarily due to raw material costs; coal constitutes about 50% of BF/BOF production costs, while scrap makes up approximately 75% of EAF costs. This highlights Japan, where scrap prices are notably higher than in other regions.
- When the EU's ETS carbon price is applied to both the BF/BOF production costs and EAF production costs, the emissions intensity associated with traditional BF/BOF processes results in the production costs being more than the EAF process, which has a lower emissions intensity. The emissions intensity of BF/BOF-produced steel is 1.9 tCO₂e per tonne of steel produced, compared to 0.815 tCO₂e per tonne of steel produced for EAF-produced steel.
- For non-EU jurisdictions where carbon pricing mechanisms/ETS are not currently implemented, steel production costs of EAF steel remain higher than BF/BOF steel.





Future estimates of steel manufacturing prices

To estimate the potential impact of future carbon pricing in jurisdictions where our customers operate, it was assumed that non-EU countries would implement a carbon price that matches that of the EU, thereby mitigating the effects of the EU CBAM.

Figures 12 and 13 project steel production costs for BF/BOF and EAF processes, assuming that non-EU countries implement a carbon price equivalent to the EU rates established through the EU ETS. The future estimations project a scenario in 2036 when full CBAM pricing is expected to come into play. The price implemented uses the average 2023 EU ETS price.

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Figure 13: Future estimations of steel production costs in selected regions for both BF/BOF and EAF



- Figure 13 illustrates that when countries outside the EU start using carbon pricing or emissions trading systems similar to the EU's, the advantage that EU steel imports have in the market will decrease.
- Higher production costs will raise the market price of steel imported into the EU, reducing the disadvantage for EU steel manufacturers as price gaps narrow and making them more competitive.
- The introduction of carbon pricing/ETS mechanisms in non-EU jurisdictions is expected to raise production costs for traditional BOF/BF processes compared to EAF processes.
- Japan is the exception, where even with a carbon pricing mechanism, EAF production costs are likely to remain higher than those of traditional BF/BOF processes. This is due to the significantly higher initial production costs of EAF in Japan, which creates a price gap that carbon pricing cannot close.
- As a result, a gradual global shift toward EAF-produced steel is anticipated, as carbon pricing will render BF/BOF processes less favourable due to increased production costs.

Figure 14: Future estimations of steel production costs in selected regions for BF/BOF and EAF using 2050 carbon prices assumed by the IEA NZE scenario.



Future estimates of steel manufacturing prices using IEA NZE 2050 scenario assumptions

The long-term outlook suggests that as carbon prices increase globally and electricity systems decarbonise, EAF technology will surpass BOF as the most cost-effective option. In the IEA 2050 NZE scenario, which envisions a robust policy framework to limit warming to 1.5°C, carbon prices in advanced economies are projected to be around \$250 per tonne.

Figure 14 shows that traditional BF/BOF technology may face significant challenges due to its high emissions intensity. In the IEA NZE scenario, BF/BOFs are expected to become obsolete in favour of EAF processes, which offer lower costs from reduced emissions intensity. However, the impact of carbon pricing on EAF processes is likely to be less severe than indicated, as substantial grid decarbonisation across jurisdictions will further lower emissions intensity and associated costs for EAF processes.



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Key highlights

The Green Mine initiative:

a 10-year plan to electrify Ferrexpo's operations.

Engagement with our value chain

MoUs

signed with Salzgitter Flachstahl GmbH to supply low-carbon steel, advancing sustainability efforts.

100%

of suppliers are ecologically certified, meeting ISO 9001 standards.

At Ferrexpo, we recognise the importance of tackling climate change across our value chain – from mining to distribution. By collaborating with our partners, suppliers, and customers, we are working to reduce emissions, improve resource efficiency, and advance sustainable practices.

Engagement with customers

Engagement with customers on climaterelated topics has increased since the inaugural climate report, especially around an interest in developing secure and decarbonised common value chains.

The transition to greener steel production takes different paths in the regions where Ferrexpo sells its products. Therefore, the Group must constantly talk with its customers to understand and co-develop the different iron ore feedstocks they need. This includes ensuring a stable supply of highgrade products individually or as a portfolio package, such as DR pellets, high-grade blast furnace pellets, and concentrates.

Steel producers in the MENA region have been leaders in the DRI-EAF steelmaking route since the 1970s, mainly due to an abundant supply of low-cost natural gas, which is a lower-carbon reducing agent used in the DRI-EAF route compared to the BF-BOF method, which utilises coal. Legislative change is driving the transition in Europe, and several new DRI-EAF projects are expected to be operational by 2030. This has led market commentators to suggest that there will be a shortfall in the supply of DR-grade pellets. Conversely, China has announced slower decarbonisation targets than other regions. Currently, 85 to 90% of steel production is via the traditional BF-BOF route, with the balancing 10 to 15% via the pig-iron/ scrap-EAF route. Only a handful of the larger Chinese steelmakers have started trial

production of hydrogen DRI-EAF steelmaking. Due to the high cost, most projects are still in the trial stage and collectively account for a tiny portion of domestic steel output. Similarly, for Japanese, Korean and Taiwanese steel-makers, the direction of how to decarbonise has vet to be decided.

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In May 2024, Ferrexpo announced an MoU with Salzgitter Flachstahl GmbH - a subsidiary of Salzgitter AG, cementing a long-standing cooperation between the companies. The MoU centres on two objectives: for the supply of Ferrexpo's high-quality direct reduction iron ore (DR) pellets in SALCOS®, Salzgitter's operational decarbonisation programme, for low-carbon steel production; and the joint development of raw material feed strategies and green supply chains.

Engagement with suppliers

The war has imposed many constraints on our procurement channels. Due to the high cost the war places on our activities, the focus at present is to ensure a continued supply of critical consumables with an eye on quality at the best prices possible.

Before the full-scale invasion, developed procurement strategies were in place for most goods and services based on long-term contracts with formula pricing. Markets were predictable and stable, with a broad base of reliable suppliers. Logistics were not a problem with the availability of deliveries through ports, rail and road.





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With the onset of the war, many suppliers lost their businesses due to occupation and the destruction of their operations. Logistics paths were interrupted and ports closed. Some foreign and Ukrainian enterprises fell under sanctions. Initially, many suppliers refused to deliver products due to the dangers and a refusal to cooperate on formula pricing.

Ferrexpo was forced to adapt and work on monthly contracts, significantly increasing the administrative burden. However, despite all the challenges, the procurement functions have continued to supply the business's needs promptly.

Due to the smaller marketplace and constrained logistics capacity, conversations with our suppliers about our climate goals have been limited. Indeed, in many instances, only one supplier may be available to us for a particular consumable or service. At the minimum, all our suppliers are ecologically certified as part of our ISO 9001 certification requirement, the globally recognised standard for quality management systems. In addition, certain suppliers have informed us of their decarbonisation plans and, in some instances, their voluntary compliance with various guidelines, for example, in one case, conflict minerals in relation to the US Dodd-Frank Act. When procurement opportunities open postwar, the Group intends to initiate engagement with suppliers about our climate goals.

Engagement with freight and logistics providers

Since the full-scale invasion of Ukraine, the logistics routes available to Ferrexpo have been constrained. As the Ukrainian Black Sea ports closed, exports shifted to rail, barge and alternative Black Sea ports. This situation eased at the end of 2023 when access to Ukrainian Black Sea ports was restored, and seaborne exports were restarted.

Relationships and conversations with logistics providers, including rail, ship owners and ports, have focused on securing safe access and capacity.

For example, the inherently higher-risk nature of shipping via Ukrainian ports has severely restricted the pool of available dry bulk vessels serving Ferrexpo's primary export route. Shipowners who own newer and more efficient vessels have also restricted their vessels from calling at Ukrainian ports. The volatile situation in the Middle East has also seen further restrictions on ships' transit through the Red Sea, resulting in a dislocation of vessels and tightened supply.

As a result, vessels serving this export route have typically been older, considering the lower insurance costs required as a percentage of the vessel's asset value, which is less for older vessels (having their asset value depreciated across the vessel's lifetime). These vessels are typically less fuelefficient than the more modern and newer bulk carriers. Despite these constraints, Ferrexpo continues to target fixing vessels under the IACS class and not more than 20 years of age for its export voyages. Once the war ends and more shipowners return to serving export routes out of Ukraine, Ferrexpo can re-engage with larger shipowners with whom we worked before the full-scale invasion to reduce Scope 3 carbon emissions actively.

The rail routes that Ferrexpo uses to export its products to Ukrainian ports and the western border use electric locomotives. Ukrzaliznytsia, the Ukrainian state-owned railway infrastructure and transport provider, primarily uses electricity from the national grid to power its electric locomotives. This grid is supplied by a mix of energy sources, including nuclear, coal, natural gas, hydroelectric and renewable energy sources. Following attacks on energy infrastructure, Ukrzaliznytsia is working on expanding its energy infrastructure by constructing gas power plants with a total capacity of up to 250 MW. This move aims to enhance the reliability and efficiency of its energy supply to reduce risk on the national grid. This is a further example of how securing the safe and continuous operation of the system is considered more important at this time than common climate goals.

Engagement with infrastructure, equipment and technology providers on climate

Later chapters in this report demonstrate that electrifying the mining and haulage fleet is one of the most significant opportunities to reduce emissions. This is also a financial opportunity because the transition to electric haulage, for example, is estimated to lower production costs. Efforts to electrify and automate the mining and haulage fleet are consolidated in the Company's "Green Mine" initiative, introduced in the previous section on culture. The Green Mine initiative was formalised in 2023 with the appointment of MEC Mining, a leading global technical research and consulting firm dedicated to servicing the mining industry based in Australia. A broad research study was undertaken, based on a ten-year mine plan, to identify opportunities for electrification of Ferrexpo's mining operations and make recommendations. Researched solutions included:

- Development of haulage profiles for all three mines over the ten years.
- Excavators and dump trucks of various sizes, using different technologies, from a range of OEMs.
- The potential installation of trolley-assist technology by which heavy trucks are equipped with pantographs, which allow them to connect to overhead electric power lines. This connection supplements the trucks' diesel engines with additional electric power, facilitating more efficient journeys due to fuel efficiency, enhanced productivity as trucks ascend at higher speeds, extended engine life as the strain on the diesel engine is eased, and lower emissions.
- Calculation of potential savings on CAPEX and OPEX and the overall reduction of carbon emissions over the modelled ten-year period.



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We welcome any feedback or questions you may have about this report. Please contact **comms@ferrexpo.com** or visit our **website** for further information. The team leading the Green Mine initiative established a joint working group that includes internal specialists across various disciplines, including mining, mining equipment and repairs, power and energy, finance and IT. The group has visited mines, OEM facilities and industry events in Japan, North America and Australia to see the different options in action.

The initial study's outcomes favoured 300-tonne capacity diesel-electric trucks from select leading global providers, powered where possible by trolley-assist. This option is preferred based on the topography and scale of Ferrexpo's mining operations and considering the equipment's performance, emissions, costs and availability.

In the second phase, a pilot area was identified to commence a conceptual design. This stage also accounts for considerations for adoption and localisation in Ukraine, i.e. the actual and practical considerations such as securing and supplying power, positioning power stations, maintenance and the provision of parts.

ABB, a leader in the power equipment industry, was appointed to assist with conceptualising the pilot's power infrastructure and catenary net. The pilot study determined the optimal sites of the mine pit ramp and haulage road on the dump at FYM.

Work is ongoing tol determine the optimal fleet size, staffing needs, tyres, spare parts, maintenance space and time and auxiliary equipment requirements. In turn, this has provided a thorough understanding of the project capital costs and operating cost savings that it can achieve. Another part of the research involves replacing the existing diesel and diesel-electric locomotive fleet with battery locomotives and traction performance technologies (converting power into motion). Progress Rail (a Caterpillar Company) is working with the Ferrexpo team on different modelling and simulation scenarios. It is expected that the transition to battery technology on locomotives will positively impact the development of CAPEX and OPEX.

Whilst there is still more to do before investment decisions can be made, an early start has been made on funding options, whether the war ends or continues.

The Ferrexpo sales and marketing team frequently present the technological and environmental enhancements of the Group's various iron ore products to industry and market counterparts. Since the last climate report, leading industry events and conferences have been held in Europe, Asia and the MENA region. These trips also provide the opportunity to meet with customers. However, customer site visits to Ukraine have been suspended due to the war. The team and other Board and Executive Committee members also frequently visit customers at their sites around the world for in-depth discussions about current and future cooperation.

Engagement with and of subsidiaries

First-DDSG, the Company's Danube barging subsidiary, is exploring alternative fuels for inland shipping, including gasto-liquid ("GTL"), hydrogen, methanol, ethanol, fatty acid methyl esters ("FAME") and hydrotreated vegetable oil ("HVO").

HVO is currently considered to be the best in the short to medium term, as highlighted at the Danube Commission event on 8 October 2024, titled "Roadmap and Actions towards Zero-Emission Danube Fleet", where leading experts from the EU, national maritime authorities, the business sector, and representatives from the shipping industry all agreed that HVO will be the fuel of choice for inland shipping. HVO is the preferred alternative because of its availability, the relatively lower costs of retrofitting vessels, and a similar energy density and performance in energy output (calorific value) and consumption compared to gasoil.

To this end, First-DDSG, through Ferrexpo Port Services, is exploring the first steps with the joint "ECO Marine Gas Oil" project in cooperation with OMV (the largest Austrian multinational integrated oil, gas and petrochemical company). This is an early opportunity to substitute gas oil with up to 20% HVO. The system is subject to strict transparency requirements and regular external audits.

Engagement with authorities and associations

Ferrexpo engages with national and international government agencies, regulators, and industry associations as a multi-jurisdictional business. Interactions on climate may be specific to Ferrexpo or it may work with peers as a collective.

Examples of working with associations include the European Business Association, a forum where members can discuss and find solutions to common problems affecting business in Ukraine, and Ukrmetallurgprom, an association of the 15 leading Ukrainian metallurgical enterprises in the iron oresteel chain industry. These organisations provide insights on climate developments and, at times, represent the Group's climate interests at a national and international level.

In 2023, Ferrexpo participated with Breakthrough Energy, Systemiq, McKinsey and other iron ore and steel peers at the Ukraine Green Industry Recovery Platform. This initiative was launched to analyse and validate potential investment opportunities to develop a new green iron and steel value chain.

Through Ferrexpo's climate reporting, in reports such as this and its regulatory reporting suite, the Group provides the analysis and statistics required by multiple regulators. Indeed, Ferrexpo is recognised as a climate reporting leader in Ukraine and even internationally. For example, in 2023, the Financial Times and Statista recognised the Group as one of Europe's Climate Leaders.



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4.1 Our Net Zero pathway

4.2 Key components of

Net Zero pathway

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Our Net Zero pathway

Strategic focus

on emissions reduction based on a

Major emissions sources identified:

mining, beneficiation, pelletising

transition scenarios modelled to

transformative decarbonisation

projects targeted to deliver 90%

amid the Ukraine conflict.

of emissions savings.

explore emission reduction pathways

Key highlights

2019 baseline.

and freight.

Three

Five

Our roadmap to Net Zero by 2050

Ferrexpo's climate change strategy is designed to keep us resilient and relevant as a business in a transitioning, low-carbon global economy. Since first publishing our Net Zero strategy in our 2022 Climate Change Report, the conflict in Ukraine has impacted our investment plans and how we approach our goals. As the situation remains uncertain, we recognise the need for a flexible, adaptive strategy to respond to these changing conditions. This latest strategy builds upon our 2022 commitments, exploring how our approach may need to evolve amid the ongoing conflict.

This section outlines our roadmap for achieving Net Zero emissions by 2050, in alignment with the Paris Agreement. Although we have not set formal sciencebased targets due to the conflict, Ferrexpo remains fully committed to ambitious decarbonisation, focusing on reducing emissions across our operations.

Our updated strategy for Net Zero focuses on three potential scenarios: "Continued War", "Post-war Rapid Adoption", and "Post-war Slow Adoption". These scenarios provide pathways for absolute emissions reduction and guide us in understanding the measures required for each scenario. They also allow for comparative analysis of emissions intensity across different pathways, as shown in Figure 15 and Figure 16.

Figure 15: Scenario emissions by year. Location-based absolute emissions

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Figure 16: Emissions intensity of pellet production. Total emissions (tCO $_2$ e) per tonne of iron pellets produced



Feedback



In this section, we examine how Ferrexpo's

scenario, prioritising minimising impacts on

production and growth. We acknowledge

certain areas, such as biofuel use in pellet

(Scope 3), where decarbonisation solutions

that residual emissions may persist in

production and emissions from freight

may not be entirely feasible by 2050. To

address these, we anticipate achieving

Net Zero by offsetting residual emissions

that capture remaining carbon by 2050.

Crucially, the "Continued War" (93%

through natural or engineered carbon sinks

absolute emission reduction) and "Post-war

Rapid Adoption" (91% absolute emission

SBTi requirements and Ferrexpo targets.

whilst the "Post-war Slow Adoption" (89%

target in 2050 but outperforms our target.

avoidable emissions as far as possible and

then achieving zero emissions by balancing

and processes that generate GHGs with

the Paris Agreement to achieve Net Zero.

the unavoidable use of fuels, energy, transport

projects that offset the equivalent amount. All

emissions reductions should be aligned with

Achieving Net Zero is about reducing

What is Net Zero?

absolute emission reduction) misses the SBTi

reduction) scenarios are set to outperform

path to Net Zero would differ under each

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Understanding Scope 1, 2 and 3 emissions

Net Zero commitments and targets should cover Scope 1, 2 and 3 carbon emissions. In principle, absolute zero should be targeted for Scope 1 and Scope 2 emissions (exceptions can be made for unavoidable emissions such as explosives used in mining) and Net Zero (utilising offsets) when including Scope 3 emissions. The following definitions of Scopes 1, 2 and 3 emissions are provided for reference:

- Scope 1 emissions are direct GHG emissions arising from sources owned or controlled by the Company. The emissions result from activities that the Company can directly influence through its actions. For example, our Scope 1 emissions include heating fuel use, transport and machinery fuel use, explosives for mining operations, and refrigerant gas use (from leaks during maintenance or malfunction).
- Scope 2 emissions are associated with using electricity imported from the grid or a third-party energy supplier as heat or electricity. These indirect GHG emissions are due to upstream emissions from the production and delivery of fuel to power stations. Organisations can influence the amount of electricity they use; however, they have little control over electricity generation, and these emissions are, therefore, classified as Scope 2. At Ferrexpo, we only purchase electricity to include within this scope.

Scope 3 emissions are an indirect consequence of the Company's use of goods or services. Organisations do have some influence over Scope 3 emissions. but the activities are not under its control. Our footprint includes waste disposal, water (supply and treatment), employee commuting, freighting goods, fuel and energy-related activities and certain high-volume purchased goods.

Global context for Net Zero

The Intergovernmental Panel on Climate Change ("IPCC") has emphasised the urgency of limiting the global temperature increase to a maximum of 1.5°C above pre-industrial levels. The clock is running out to achieve this goal, and reaching Net Zero emissions by 2050 is essential for safeguarding future generations and protecting the planet. In response, the 2015 Paris Agreement was signed by over 190 countries, establishing a global framework to prevent severe and irreversible climate change. The agreement sets ambitious targets to keep temperature rise "well below 2°C" and strive towards a 1.5°C limit above pre-industrial levels.

In 2022, the IPCC published its latest reports, concluding that to avoid the impacts of warming above 1.5°C, the global community would have to cut greenhouse gas emissions by 43% by 2030 (relating to a 2019 baseline) and 84% (Net Zero) by 2050.

Net Zero process to date

Our baseline year remains 2019, marking the last year before we began actively reducing our emissions footprint. In 2020, we implemented a power purchasing strategy to integrate green energy into our energy mix. Recognising that this would only take us part of the way, in 2021–2022, we partnered with Ricardo to establish a roadmap for achieving Net Zero emissions by 2050, using 2019 as our baseline.

Since then, we have conducted feasibility studies, built financial cases for large-scale projects identified in this roadmap, and implemented smaller-scale energy efficiency initiatives. More recently, due to the conflict in Ukraine and its impact on our investment capacity, we engaged with Ricardo again to analyse how our path to Net Zero may need to adapt under different conflict-related scenarios. This study, outlined in this report, provides a positive outlook on our ability to achieve our targets despite our challenges.

Emissions excluded from our pathway

As part of the global steel value chain, Ferrexpo acknowledges its responsibility to contribute to an emissions-intensive industry by supplying iron pellets that are eventually transformed into steel at mills. However, when assessing our carbon footprint, a significant portion (85% in our baseline year of 2019) originates from the downstream use of our products in steelmaking (Scope 3 emissions). This concentration on Scope 3 emissions highlights the comparatively smaller impact that can be achieved through our operational emissions reduction projects. Known strategies for mitigating these emissions include increasing the production of direct reduction (DR) pellets and collaborating with customers to adopt DRI ironmaking processes wherever feasible. Due to the



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scale of steelmaking emissions and the transformative actions needed to lower them, these emissions currently fall outside the scope of our roadmap to Net Zero.

We are actively developing our expertise in producing DR pellets and expanding our presence in markets prioritising these products. However, we must wait to commit to a specific timeline for transitioning our production focus to this particular product.

Emissions from land use and land use changes have yet to be included, as the GHG Protocol recently introduced best practice guidance for quantifying these emissions. Ferrexpo plans to establish a baseline and set targets for land-userelated emissions in future reporting.

Baseline emissions

Figure 17 shows the composition of the Group's baseline emissions as of 2019, showing that four key areas contribute most of the emissions reviewed as part of this report: (1) mining, (2) beneficiation (concentrator, "CBP"), (3) the Group's pelletiser and (4) freight (principally ocean-going freight and rail). As shown in the final bar, Ferrexpo's 2019 baseline emissions distribution is mostly evenly split across the three emissions scopes, with no single scope accounting for more than 40% of overall emissions. Scope 3 (value chain) emissions are the largest category of emissions, with 39% of the total, followed by Scope 2 (indirect) emissions (33%), then Scope 1 (direct) emissions (28%). With a relatively even split in emissions sources, the Group can advance several decarbonisation projects in parallel to each other and, therefore, can target emissions reductions across its operations simultaneously.



Modelling three geopolitical scenarios

We recognise the importance of flexibility in our Net Zero roadmap to account for external events that affect our ability to operate and invest effectively. To incorporate this adaptability, we collaborated with our sustainability partner, Ricardo, to assess Ferrexpo's pathway to Net Zero under three potential scenarios:

- 1. **Continued War scenario:** Ferrexpo will face considerable challenges in reaching its climate goals if the ongoing conflict continues. This scenario thoroughly analyses how prolonged conflict impacts emissions reduction efforts and identifies strategies to mitigate these challenges.
- 2. **Post-war Rapid Adoption scenario:** Upon the return of peace, Ferrexpo aims to quickly accelerate its actions toward achieving climate targets. This scenario outlines the necessary actions, investments, and innovations required to compensate for time and progress lost due to the conflict.
- 3. **Post-war Slow Adoption scenario:** Ferrexpo examines how best to meet climate targets under standard operational conditions in a post-conflict setting with normalised operations.

Each scenario provides insight into the strategies required for Ferrexpo to adapt and succeed in reaching our climate commitments, regardless of external challenges.

Each scenario relies on several key assumptions, detailed in Table 10. The end date of the conflict is uncertain, so each scenario is based on an estimated timeframe. The "Continued War" scenario assumes a prolonged period of conflict, while the other scenarios are based on an earlier resolution.

Following the conflict end date, a cool-off period has been modelled. The cool-off period aims to provide separation between the conflict resolution and when Ferrexpo is likely to begin implementing new measures and preparing for growth and investment. This cool-off period allows Ferrexpo to recover from the impact of conflict and start mobilising for decarbonisation activities. In the "Post-War Rapid Adoption" scenario, it is assumed that Ferrexpo would be ready to enact change within a year of conflict resolution. In contrast, the "Post-war Slow Adoption" scenario assumes several years are needed for Ferrexpo to accumulate capital and for industry partners to reach a stable, ready state before significant sustainability initiatives can begin. In the "Continued War" scenario. it is assumed that after an extended period of conflict, business-as-usual operations will gradually normalise, enabling an earlier level of readiness to invest and grow.

Growth rates were developed for each business unit based on our operational knowledge and strategic targets (see <u>Appendix 6.4 Growth rates</u>), with details on timings and growth levels assumed under each scenario shown in Table 10.



Our Net Zero pathway continued

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The modelling uses a location-based approach that incorporates the anticipated decarbonisation of the energy grid in each scenario. With Ukraine expected to join the EU by 2030, it would align with EU decarbonisation targets, requiring its electrical grid emissions intensity to reduce to 6% of baseline levels by 2050. As of 2024, Ukraine sources 80% of its energy from Slovakia and Hungary, which is assumed to continue until the conflict is resolved. Following the end of the conflict, this dependency would reduce gradually, with Ukraine's grid returning to full national generation by the end of the cool-off period. Each scenario thus includes a unique pathway for decarbonising electricity use based on these factors.

Table 10: The key assumptions behind each measure

Assumption	Continued War	Post-war Rapid Adoption	Post-war Slow Adoption
Conflict end	2035	2027	2027
Cool-off period	2 years	1 year	3 years
Growth	0% until 2035 +5% avg YoY until 2045	0% until 2027 +8% avg YoY until 2045	0% until 2027 +8% avg YoY until 2045
Misc	No measures implemented until conflict end (except efficiency and monitoring projects).		
Grid decarbonisation fluctuation based on scenario.			
	Focus on	implementing Scope 1 me	easures first.

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Figure 18: The implementation timeline of each measure

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Net Zero pathway targets

Development of our initial Net Zero pathway throughout 2021 and 2022 included setting carbon emissions reduction targets. These reduction targets are against the 2019 baseline and remain the same as outlined in our Climate Change Report 2022.

Action plan

Figure 18 provides an indicative timeline for implementing measures identified in the Net Zero pathways. This shows that substantial engagement will be needed starting around 2031. Consequently, the years leading up to this date are critical for essential preparatory activities, including in-depth feasibility studies, early supplier engagement and establishing partnerships across the supply chain. These activities will lay the groundwork for effective implementation, allowing Ferrexpo to transition smoothly and efficiently once larger-scale actions begin.



Our task now is to develop our implementation plan, which will involve strengthening internal skills and knowledge in the key measures identified, emissions tracking and other critical Net Zero technologies. We must establish a comprehensive financial plan to support long-term Net Zero initiatives. This includes identifying funding sources, structuring investments to balance risk and reward, and evaluating opportunities for green financing, government incentives or partnership funding.

By focusing on these preparatory activities now, we aim to establish a robust foundation for our Net Zero efforts. This early groundwork will position the Company to scale and implement high-impact initiatives, ensuring a unified and coordinated approach toward achieving our Net Zero goals.

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Key projects to achieve our goals A complete list of modelled measures and their contribution to achieving Net Zero is outlined in Appendix 6.5 Net Zero measures. While all measures will be investigated for implementation, a select group of key projects will play a central role in driving most of our emissions reductions. These are outlined in Table 11. The top five initiatives alone account for 90% of our potential emissions savings, with the top three measures contributing 82%. These projects represent the cornerstone of our Net Zero strategy and provide a clear

Table 11: The top five emission-saving measures to implement for achieving Net Zero

Rank Moasuro

focus for our efforts.

Rank	Measure	Savings
	Biofuel fired pelletiser	28%
2	Phase out fossil fuels	28%
3	Electric mining vehicles	26%
ļ	Electrify mining equipment	5%
5	Lower carbon fueled barges	3%

Transitioning to biofuel in our pelletising process offers the most significant opportunity for emissions savings. This shift will require coordinated investment in biofuel sourcing, supply chain adjustments, and integration of biofuel systems into our operations. However, implementing this will be logistically challenging.

Electrifying mining vehicles has been identified as the guickest win measure with the lowest barriers to adoption. We have initiated planning for this transition, recognising the importance of this investment in reducing our Scope 1 emissions. Successfully implementing this measure will involve collaboration with suppliers to source electric vehicle technologies suited to the mining environment and establishing supporting infrastructure, such as charging stations.

Eliminating fossil fuels from our energy mix is a significant priority, with planning for this transition already underway. This project is foundational to achieving Net Zero and aligns directly with our commitment to decarbonise core operations.

Electrifying mining equipment and hydrogenpowered barges may each contribute smaller potential savings, but they remain essential in achieving our cumulative goals. Both reduce our reliance on fossil fuels (provided we can source green hydrogen, which is the key barrier for the latter measure) and, therefore, play a significant role in the strategy to eliminate Scope 1 emissions.

Together, these five measures define our core implementation strategy and will drive the most emissions reductions needed to reach our Net Zero target. By prioritising these areas, we can maximise our impact on emissions in the short and long term. Ongoing feasibility assessments and technological advancements in these areas will enable us to refine our approach, ensuring we achieve meaningful progress towards a sustainable, zero-emissions future,

Financial planning

The costs to Ferrexpo of implementing a Net Zero pathway comprise a combination of capital investment costs for purchasing and installing the new technology required to reduce emissions and the expected additional operating costs for using low-emissions technologies. The indicative, high-level costs outlined here are continuously revised estimates, as prices may change annually.

Previous estimates published in the inaugural Climate Change Report in December 2022 stated that, at that time, the total CAPEX to deliver the Net Zero pathway to 2050 would cost approximately US£3.3 billion, with renewable power generation and storage representing approximately two thirds of the total CAPEX. Whilst this level of investment may appear high, it means the total capital cost over several decades for implementing significant change and modernisation at the Group's mining. processing and logistics operations, which will create a business that is capable of producing Net Zero emissions iron ore pellets for the future of the global steel industry.

Residual emissions after 2050

Residual emissions refer to the emissions that remain after implementing all feasible reduction measures. Figure 12 shows that across all scenarios, the largest source of residual emissions by 2050 will come from biofuels, followed closely by electricity.

To address biofuel emissions, electrifying certain fossil fuel-dependent activities may present the most viable reduction strategy. However, this approach would require significant capital investment and increase demand for our existing power supplies. Green hydrogen is a potential alternative fuel source, but its use in smaller applications remains limited due to current technological and infrastructural constraints.

Our primary objective for electricity-related emissions is to return to procuring areen electricity. This aligns with our pre-conflict commitment to sustainable sourcing and will be essential for neutralising electricity-based emissions as the national situation stabilises.

Freight and waste disposal emissions are anticipated in all scenarios and are expected to be challenging to eliminate entirely.

In the "Continued War" scenario, residual emissions from liquid fuels and passenger vehicles are expected to remain significantly higher than in other scenarios. This is due to anticipated delays in adopting electric vehicles, with national infrastructure potentially unable to support a fully electric fleet across our operations until after 2050.

In the "Post-war Rapid Adoption" and "Post-war Slow Adoption" scenarios, all liquid fuel-related emissions are expected to be eliminated, as fuel-switching activities will have fully transitioned these operations to zero emissions.

Figure 19 provides a breakdown of projected emissions by scope in 2050 across scenarios. In both the "Post-war Rapid Adoption" and "Post-war Slow Adoption" scenarios, minimal Scope 1 emissions are expected, while in the "Continued War" scenario, Scope 1 emissions are projected to be higher than Scope 2. In all scenarios, Scope 3 emissions – primarily freight and fuel-related activities - will continue to represent the majority of residual emissions.



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Figure 20: Residual emissions in 2050 by scenario and emission scope



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Emission reduction targets

Key highlights

Targeting Net Zero Scope 1 and 2 emissions by 2050, with a 50% reduction in Scope 3 emissions from the 2019 baseline.

65%

emission reduction achieved between 2019 and 2023.

95%

reduction in Scope 1 and 2 emissions, and 84% reduction in Scope 3 by 2050, according to future modelling.

On track

to achieve the targets set in 2019.

SBTi target

Modelling demonstrates that an SBTi target could be achievable.

Our initial carbon reduction targets were set as part of the decarbonisation pathways developed throughout 2021 and 2022 and were outlined in our Climate Change Report 2022. Our targets remain that we must achieve Net Zero emissions by 2050 across Scope 1 and 2 emissions whilst achieving a 50% reduction in Scope 3 emissions against a 2019 baseline.

However, our latest pathway analysis has assessed the potential to achieve ~90% emissions reductions across all scopes. This includes a potential ~85% reduction in Scope 3 emissions by 2050 across all scenarios. This level of emission reduction has the potential to align Ferrexpo with the Paris Agreement 1.5-degree target, with all scenarios also set to achieve a greater than 50% reduction in emissions in 2030. These positive steps towards achieving Net Zero allow us to consider pledging to the SBTi again as the situation in Ukraine stabilises.

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Progress against targets

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Table 12 shows our progress against our targets to date. Overall, we have achieved a 65% reduction in baseline emissions. This is primarily due to the rundown of operations, but efficiency programmes have contributed.

Table 12: Ferrexpo 2023 emissions in kilotonnes (kt) CO_2 e and change from the baseline year

	2019 ktCO ₂ e (baseline)	2023 ktCO ₂ e	% change from baseline
Scope 1 emissions	594	250	-58%
Scope 2 emissions	717	213	-70%
Subtotal (Scope 1+2) emissions	1,312	463	-65%
Scope 3 emissions	823	273	-67%
Total emissions	2,135	736	-65%

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Projected future performance

Our operational footprint Scope 1 and 2

Scope 1 and 2 emissions significantly decline from the baseline (2019) to 2025. In the post-war scenarios, these emissions steadily grow to 2035 as operations grow and demand more energy. However, after this time, fuel-switching activities begin to ramp up, leading to a rapid decline in emissions. In all scenarios, the residual emissions in 2050 contain ~5% of the original emission amount compared to the baseline. Most is electricity, which could be negated by purchasing green electricity, and the remaining Scope 1 emissions are primarily related to fugitive emission losses and explosives (except in the Continued War scenario, which still has some fuel used in 2050).

Figure 21: Scope 1 and 2 emissions projections within each scenario



Scope 3

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Scope 3 emissions follow a similar trend as those of Scopes 1 and 2. This is partly influenced by the associated Scope 1 and 2 emissions, such as well-to-tank ("WTT") and transmission and distribution ("T&D"). By 2050, the average emissions reduction across the scenarios will be 84% from 2019 levels. The remaining Scope 3 emissions in 2050 are related to freighting goods, primarily over rail.

Figure 22: Scope 3 emissions projections within each scenario



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Our Net Zero targets: performance and trends

Figure 23 shows that in comparison to the targets we set ourselves in 2019, we are on track to out-perform them for every year and within every scenario. The Continued War scenario, which does not complete all measures by 2050 and assumes the conflict will continue until the late 2030s, appears to be the strongest performing pathway. However, this is only due to a comparative lack of growth in this time, maintaining limited operations and, therefore, limited emissions.

Figure 23: Net Zero scenario emissions by year compared to Ferrexpo targets



SBTi targets

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SBTi necessitates a 4.2% annual reduction in emissions from 2019 to 2030 and emissions to be at a maximum of 10% of baseline year emissions. Figure 24 shows that, in comparison to these SBTi requirements, we are on track to out-perform SBTi by a considerable margin until 2040 across the "Post-war Rapid Adoption" and "Continued War" pathways. At this point the pathways begin to align with SBTi, but ultimately still deliver SBTi-aligned emission reductions. The "Post-war Slow Adoption" pathway outperforms the SBTi targets until 2035, after which aligns with the trajectory of SBTi. This is viewed positively because it allows us to seriously assess making a pledge to SBTi once we have clarity on the national conflict situation.

Figure 24: Net Zero scenario emissions by year compared to SBTi targets



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Next steps

In the face of immense challenges posed by the ongoing war in Ukraine, Ferrexpo remains steadfast in its commitment to decarbonisation and sustainability. Despite the hardships impacting our operations and workforce, we are determined to build a resilient and adaptable action plan, leveraging the Ricardo analysis to guide investment decisions and prioritising measures with the greatest potential impact.

The measures identified in the Net Zero pathways have been developed through high-level assessment. As such, technical and financial feasibility studies must be carried out to determine a detailed analysis of compatibility with our operations and KPIs. We will look to carry out these feasibility studies holistically, considering how initiatives, such as the introduction of hydrogen on-site, can deliver broader efficiencies and economies of scale.

Reaching Net Zero across Scope 1 and 2 emissions will also depend on emerging technologies that are still in development. As pioneers in this journey, we will actively trial and pilot these innovations to determine their compatibility with our operations. Demonstrator projects will help us forge a realistic and impactful implementation plan.

Feedback

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It is more difficult to influence Scope 3 emissions than Scopes 1 and 2; therefore, it is extremely important that we engage early with all stakeholders, particularly logistics providers, to overcome this challenge.

Finally, we recognise that while the measures identified under Our Net Zero pathway significantly reduce absolute emissions, some residual emissions will remain by 2050. Addressing these will require carefully considered offsetting and insetting strategies. Wherever possible, we will prioritise credible, locally sourced projects that directly draw down emissions, ensuring our contributions make a tangible difference.

As we continue this path during an extraordinarily difficult time, our resolve remains unshaken. Ferrexpo's vision for a sustainable future is a testament to our resilience and our belief in the brighter days ahead. Together, we will rise to the challenge and pave the way for meaningful change, serving as enablers of a sustainable future for our workforce, communities and the industry.



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Key metrics

Percentage of energy used that is zero-carbon (terajoules)

Energy consumption	2023	Percentage	2022	Percentage
Non-renewable energy (TJ)	7,271,109,067	93%	10,122,367,809	92%
Renewable energy (TJ)	515,316,591	7%	868,246,727	8%

Amount of self-generation of renewables and the proportion used for own energy use		
Energy consumption	2023	2022
Self-generation of renewable energy (kWh)	6,204,090	5,451,021
Proportion used by Ferrexpo	100%	100%
Water use intensity and/or efficiency (megalitres)		

Water consumption	2023	2022
Water withdrawal (m/l)	34,518	33,043
Water usage (m/l)	340,547	419,005
Water return (m/l)	26,279	23,641
Water use tonne production	79/t production 68/t production	

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Proportion of products (by volume or revenue) considered to contribute to low-GHG emissions

Production (000't unless otherwise stated)	2023	2022	Low GHG emission attributes
Direct reduction pellets	0	353	DR pellets used as feedstock in the DR-EAF steelmaking process produce steel with lower carbon emissions than the BF-BOF route.
Blast furnace pellets	3,845	5,700	The replacement of sinter feed with blast furnace pellets reduces carbon emissions by eliminating the need for the carbon-intensive sintering process.
Commercial concentrate production	307	124	High-grade pellet feed concentrates products increase productivity at the blast furnace as an additive to sinter.

Feedback

Standards

Principles

Foundations

Transition Plan Taskforce Metals & Mining Sector Guidance

Sub element

An entity shall disclose the Strategic

comprise the entity's objectives and

climate-resilient economy and set out

whether and how the entity is pursuing these objectives and priorities in a manner

Ambition of its transition plan. This shall

priorities for responding and contributing to the transition towards low-GHG emissions,

that captures opportunities, avoids adverse impacts for stakeholders and society, and safeguards the natural environment.

An entity shall disclose a description of the

entity's Strategic Ambition on its business

An entity shall disclose key assumptions it

has made and external factors on which it

depends to achieve the Strategic Ambition

model and value current and anticipated implications of the

model and value chain.

of its transition plan.

Disclosure

Ambition

1.1 Strategic

1.2 Business

assumptions

and external

chain

1.3 Key

factors

element

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	Principles	Disclosure element	Sub element	Report section
Report section Our strategic ambition on climate change	Implementation Strategy	2.1 Business operations	An entity shall disclose information about the short-, medium-, and long-term actions it is taking or plans to take in its business operations in order to achieve the Strategic Ambition of its transition plan.	Key components of Net Zero pathway
		2.2 Products and services	An entity shall disclose information about short-, medium-, and long-term actions it is taking or plans to take to change its portfolio of products and services in order to achieve the Strategic Ambition of its transition plan.	Our products
Our business model		2.3 Policies and conditions	An entity shall disclose information about any policies and conditions it uses or plans to use to achieve the Strategic Ambition of its transition plan.	Policies and procedures
Our value chain Considerations relating to Russia's war in Ukraine Limitations Growth rates		2.4 Financial planning	An entity shall, to the extent the financial effects of its transition plan are separately identifiable, disclose information about the impact of its transition plan on its financial position, financial performance and cash flows over the short-, medium-, and long-term, including information about how it is resourcing or plans to resource its activities to achieve the Strategic Ambition of its transition plan	Financial planning

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Credits

how it uses or plans to use carbon credits to achieve the Strategic Ambition of its transition plan and report on using carbon

credits annually.

Contents	Principles	Disclosure element	Sub element	Report section	Principles	Disclosure element	Sub element	Report section
Introduction	Engagement Strategy	3.1 Engagement with the value	An entity shall disclose information about any engagement activities with other	Engagement strategy	Metrics & Targets	4.1 Governance, engagement,	An entity shall disclose information about the governance, engagement, business and operational motrice and targets that it uses	Our governance framework
1. Responsible business practice		Chain	undertaking or plans to undertake to achieve the Strategic Ambition of its			operational metrics and	to drive and monitor progress towards the Strategic Ambition of its transition plan and	Metrics and targets
2. Climate change		3.2 Engagement	An entity shall disclose information about	Engagement	-	targets	annually.	Key metrics
regulatory analysis		with industry	any engagement and collaborative activities	with authorities		4.2 Financial	An entity shall disclose information about	Financial
3. Engagement strategy			relevant initiatives or entities) that it is	associations		targets	its business, sector, and strategy to drive	plaining
4. Implementation strategy			achieve the Strategic Ambition of its transition plan.				Ambition of its transition plan and report against these metrics and targets annually.	Key metrics
5. Metrics and targets		3.3 Engagement with	An entity shall disclose information about any direct and indirect engagement	Engagement strategy	_	4.3 GHG metrics and targets	An entity shall disclose information about the GHG emissions and removal metrics	Metrics and targets
		government, public sector,	activities with the government, regulators, public sector organisations, communities,				and targets that it uses to drive and monitor progress towards the Strategic Ambition of	
6. Appendix		communities and civil society	and civil society that it is undertaking or plans to undertake to achieve the Strategic				its transition plan and report against these metrics and targets annually.	
			Ambition of its transition plan.		_	4.4 Carbon	An entity shall disclose information about	Not applicable

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Governance

Disclosure

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reporting

5.2

roles.

and

and

oversight and

Management

responsibilities

accountability

5.3 Culture

5.4 Incentives

remuneration

competencies

and training

5.5 Skills.

Sub element

element

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Report section

Table 13: Task Force on Climate-Related Financial Disclosures (TCFD) Requirements

Sub element	Report section	Section	TCFD Requirements	Report Section
An entity shall disclose information about the governance body(s) (which can include a board, committee, or equivalent body	Our governance framework	Governance	a) Describe the board's oversight of climate-related risks and opportunities.	Our governance framework
charged with governance) or individual(s) responsible for overseeing the transition plan.			b) Describe management's role in assessing and managing climate-related risks and opportunities.	Management roles and responsibilities
An entity shall disclose information about management's role in the governance processes, controls and procedures used	Management role and responsibilities	nent Strategy bilities	a) Describe the climate-related risks and opportunities the company has identified over the short, medium and long term.	Our approach to identifying and assessing climate-related impact risks and opportunities
to monitor, manage, and oversee the transition plan and how it is embedded within its wider control, review, and			b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy and financial planning.	Climate risks and opportunities Financial planning
An entity shall disclose information about how it aligns or plans to align its culture with the Strategic Ambition of its transition plan.	Our culture, talent and skills		c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Business resiliency responses
An entity shall disclose information about how it aligns or plans to align its incentive and remuneration structures with the	Executive remuneration	Risk Management	 a) Describe the company's processes for identifying and assessing climate-related risks. 	Risk management
Strategic Ambition of its transition plan.	Autor structures with the nbition of its transition plan. all disclose information about Our culture, or plans to assess, maintain, and talent and skills propriate skills, competencies, dge across the organisation to Strategic Ambition of its an. Metrics and Targets		b) Describe the company's processes for managing climate-related risks.	Risk management
An entity shall disclose information about its actions or plans to assess, maintain, and build the appropriate skills, competencies, and knowledge across the organisation to achieve the Strategic Ambition of its		c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management.	Our approach to identifying and assessing climate-related impact risks and opportunities	
transition plan.		Metrics and Targets	a) Disclose the metrics used by the company to assess climate-related risks and opportunities in line with its strategy and risk management process.	Climate-related projected performance
			b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Our operational footprint Scope 1 and 2 Scope 3
			c) Describe the targets the company uses to manage climate-related risks and opportunities and performance against targets.	Metrics and targets

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 (a) A description of the company's governance arrangements in relation to assessing and managing climate-related risks and opportunities. (b) A description of how the company identifies, assesses, and manages climate-related risks and opportunities. (c) A description of how processes for identifying assessing and managements in the company identifies. 	Climate change governance Our approach to identifying and assessing climate-related impact risks and opportunities
(b) A description of how the company identifies, assesses, and manages climate-related risks and opportunities.	Our approach to identifying and assessing climate-related impact risks and opportunities
(c) A description of how processes for identifying assessing and	
managing climate-related risks are integrated into the company's overall risk management process.	Climate change risk and opportunity management
 (d) A description of— (i) the principal climate-related risks and opportunities arising in connection with the company's operations; and (ii) the time periods by reference to which those risks and opportunities are assessed. 	Our approach to identifying and assessing climate-related impact risks and opportunities
e) A description of the actual and potential impacts of the principal climate-related risks and opportunities on the company's business model and strategy.	Climate risks and opportunities
(f) An analysis of the resilience of the company's business model and strategy, taking into consideration different climate-related scenarios.	Business resiliency responses
(g) A description of the targets used by the company to manage I climate-related risks and to realise climate-related opportunities and of performance against those targets.	Metrics and targets

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IFRS S2 Climate Standard

ction 6(a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. Specifically, the entity shall identify that body(s) or individual(s) and disclose information about: (i) how responsibilities for climate-related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s); (ii) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities; Our governance overnance (iii) how and how often the body(s) or individual(s) is informed framework about climate-related risks and opportunities; (iv) how the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities; and (v) how the body(s) or individual(s) oversees the setting of targets related to climate-related risks and opportunities, and monitors progress towards those targets (see paragraphs 33-36), including whether and how related performance metrics are included in remuneration policies (see paragraph 29(g)). (b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about: (i) is the role delegated to a specific management-level Management role position or management-level committee, and how is overnance and responsibilities oversight exercised over that position or committee? (ii) whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.

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concentrated (for example, geographical areas, facilities and

types of assets).

Section			Section		
9(a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10-12). 9(b) the current and anticipated effects of those climate-related risks and opportunities on the entity's business model and value chain (see paragraph 13). 9(c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its climate-related transition plan (see paragraph 14). Our approach to identifying and assessing climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning (see paragraph 15-21). Business resiliency responses 9(e) the climate resilience of the entity's identified risks and opportunities (see paragraph 15-21). Strategy and business model to climate-related changes, developments and uncertainties, considering the entity's identified risks and opportunities (see paragraph 22). Strategy and business model to climate-related changes, developments and uncertainties, considering the entity's identified risks and opportunities (see paragraph 22).	9(a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10-12).			14(a) information about how the entity has responded to and plans to respond to climate-related risks and opportunities in its strategy and decision-making, including how it intends to achieve any climate-related targets it has set and any targets it must meet by law or regulation. Specifically, the entity shall disclose information about:	Our strategic ambition on climate change
	9(b) the current and anticipated effects of those climate- related risks and opportunities on the entity's business model and value chain (see paragraph 13).				Climate change
		(i) current and anticipated changes to the entity's business model, including its resource allocation, to address climate- related risks and opportunities (for example, these changes could include plans to manage or decommission carbon-,	scenarios Business resiliency		
	9(d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate- related risks and opportunities have been factored into the entity's financial planning (see paragraphs 15-21).	related impact risks and opportunities	Strategy (Strategy and decision- making)	 energy- or water-intensive operations; resource allocations resulting from demand or supply-chain changes; resource allocations arising from business development through capital expenditure or additional expenditure on research and development; and acquisitions or divestments). (ii) current and anticipated direct mitigation and adaptation efforts (for example, through changes in production processes or equipment, relocation of facilities, workforce adjustments and changes in product specifications). (iii) current and anticipated indirect mitigation and adaptation efforts (for example, through working with customers and supply chains). (iv) any climate-related transition plans the entity has, including information about key assumptions used in 	responses
		Business resiliency responses			Climate change regulatory analysis
		_			Key components of
	9(e) the climate resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, considering the entity's identified risks and opportunities (see paragraph 22).				Considerations
	10(a) describe climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects.				war in Ukraine
	10(b) explain, for each climate-related risk the entity has identified, whether the entity considers the risk a climate-			developing its transition plan and dependencies on which the entity's transition plan relies.	Limitations
Strategy (Climate risks and	10(c) specify, for each climate-related risk and opportunity the entity has identified, over which time horizons—short,	Climate-related risks and opportunities		(v) how the entity plans to achieve any climate-related targets, including any greenhouse gas emissions targets, described in paragraphs 33-36.	Growth rates
opportunities)	medium or long term—the effects of each climate-related risk and opportunity could reasonably be expected to occur.	-		14(b) information about how the entity is resourcing and plans to resource the activities disclosed in paragraph 14(a).	
	10(d) explain how the entity defines 'short term', 'medium term' and long term' and how these definitions are linked to the planning horizons used for strategic decision-making.			14(c) quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in paragraph 14(a).	Financial planning
Strategy	13(a) a description of the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain.	Our purpose and business model			
(Business – model and 1: value obsin) a	13(b) a description of where in the entity's business model and value chain climate-related risks and opportunities are	Our value chain			

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to the entity at the reporting date without undue cost or

effort.

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Section			Section				
	15(a) the effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects).		18(b) use an approach commensurate with the skills, capabilities and resources available to the entity for preparing those disclosures.				
	15(b) the anticipated effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning	-		19 An entity need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity if the entity determines that: 19(a) those effects are not separately identifiable.			
	(anticipated financial effects). 16(a) How have climate-related risks and opportunities affected its financial position, performance and cash flow for	Ferrexpo acknowledges this requirement under IFRS S2 and is actively working towards providing this information in future disclosures		19(b) the level of measurement uncertainty involved in estimating those effects is so high that the resulting quantitative information would not be useful.			
	the reporting period			20 An entity need not to provide quantitative information	Ferrexpo acknowledges this requirement under IFRS S2 and is actively working towards providing this information in		
Strategy	16(b) the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements.		about t or oppo capabil informa	about the anticipated financial effect of a climate-related risk or opportunity if the entity does not have the skills, capabilities or resources to provide that quantitative information.			
(Financial position and	16(c) how the entity expects its financial position to change						
cash flows)	over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration:			21(a) explain why it has yet to provide quantitative information.	Ferrexpo acknowledges this requirement unde IFRS S2 and is actively working towards providing this information in future disclosures		
	(i) its investment and disposal plans (for example, plans for capital expenditure, major acquisitions and divestments, joint ventures, business transformation, innovation, new business areas and asset retirements), including plans the entity is not contractually committed to.		21(b) provide qualitative information about those financia				
	(ii) its planned sources of funding to implement its strategy.			21(b) provide qualitative information about those financial	Climate change scenarios or		
	16(d) how the entity expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities (for example, increased revenue from products			effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that climate-related risk or opportunity.			
	and services aligned with a lower-carbon economy; costs arising from physical damage to assets from climate events; and expenses associated with climate adaptation or mitigation).			21(c) provide quantitative information about the combined financial effects of that climate-related risk or opportunity with other climate-related risks or opportunities and other factors if the entity determines that quantitative information	Climate change scenarios		
	17 In providing quantitative information an entity may disclose a single amount or a range.			about the combined financial impact would not be useful.			
	18(a) use all reasonable and supportable information available	ortable information available					

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Section

Strategy (Climate

resilience)

		Section			
22(a) the entity's assessment of its climate resilience as of the reporting date, which shall enable users of general-purpose			22(b) How and when the climate-related scenario analysis was carried out, including:		
			(i) information about the inputs the entity used, including:		
(i) the implications, if any, of the entity's assessment for its strategy and business model, including how the entity would need to respond to the effects identified in the climate-related	Business resiliency responses		 which climate-related scenarios the entity used for the analysis and the sources of those scenarios; 	e ate-	
scenario analysis.			(2) whether the analysis included a diverse range of climate- related scenarios;		
entity's assessment of its climate resilience.			(3) whether the climate-related scenarios used for the analysis are associated with climate-related transition or physical risks;		
(iii) the entity's capacity to adjust or adapt its strategy and business model to climate change over the short, medium,					
and long term, including: (1) the availability of, and flexibility in, the entity's existing financial resources to respond to the effects identified in the			(4) whether the entity used, among its scenarios, a climate- related scenario aligned with the latest international agreement on climate change;	Scenario analysis process	
climate-related scenario analysis, including to address climate-related risks and to take advantage of climate-related opportunities.		Strategy	(5) why the entity decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties;		
(2) the entity's ability to redeploy, repurpose, upgrade or		(Climate resilience)	(6) the time horizons the entity used in the analysis; and	Scenario analysis	
decommission existing assets.(3) the effect of the entity's current and planned investments in climate-related mitigation, adaptation and opportunities for		continued	(7) what scope of operations the entity used in the analysis (for example, the operating locations and business units used in the analysis).	selection	
climate resilience.			(ii) the key assumptions the entity made in the analysis, including assumptions about:		
			(1) climate-related policies in the jurisdictions in which the entity operates.		
			(2) macroeconomic trends.		
			(3) national- or regional-level variables (for example, local weather patterns, demographics, land use, infrastructure and availability of natural resources).		
			(4) energy usage and mix.		
			(5) developments in technology.		
			(iii) the reporting period in which the climate-related scenario analysis was carried out (see paragraph B18).		

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		(i) the inputs and parameters the entity uses (for example, information about data sources and the scope of operations			tonnes of CO_2 equivalent classified as:	
2. Climate change regulatory analysis		covered in the processes). (ii) whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks.			 (2) Scope 2 greenhouse gas emissions; and (3) Scope 3 greenhouse gas emissions. 	
3. Engagement strategy		(iii) how the entity assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the entity considers qualitative factors, quantitative			(ii) measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional	
4. Implementation strategy	Piek	thresholds or other criteria).	Our approach to identifying and		authority or an exchange on which the entity is listed to use a different method for measuring its greenhouse gas emissions.	
5. Metrics and targets	Management	(iv) whether and how the entity prioritises climate-related risks relative to other types of risk.	assessing climate- related impact risks		(iii) disclose the approach it uses to measure its greenhouse	
0 6. Appendix		 (v) how the entity monitors climate-related risks. (vi) whether and how the entity has changed its processes compared with the previous reporting period. 	and opportunities		(1) the measurement approach, inputs and assumptions the entity uses to measure its greenhouse gas emissions;	
Feedback We welcome any feedback or questions you may have about this report. Please contact comms@ferrexpo.com [2] or visit our website [2] for further	or questions bort. Please .com [2] rther	25(b) the processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate- related scenario analysis to inform its identification of climate-related opportunities	-	Climate-related metrics	 (2) the reason why the entity has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and (3) any changes the entity made to the measurement 	Metrics and targets Reporting standards Report boundaries
		25(c) the extent to which and how the processes for identifying, assessing, prioritising and monitoring climate- related risks and opportunities are integrated into and inform the entity's overall risk management process.			approach, inputs and assumptions during the reporting period and the reasons for those changes. (iv) for Scope 1 and Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(1)–(2), disagregate emissions between:	
		 28(a) information relevant to the cross-industry metric categories. 28(b) industry-based metrics that are associated with particular business models, activities or other common features that characterise participation in an industry. 28(c) Targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets. 	Implementation strategy Metrics and targets		 (1) the consolidated accounting group (for example, for an entity applying IFRS Accounting Standards, this group would comprise the parent and its consolidated subsidiaries); and (2) other investees excluded from paragraph 29(a)(iv)(1) (for example, for an entity applying IFRS Accounting Standards, these investees would include associates, joint ventures and unconsolidated subsidiaries). v) for Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(2), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to inform users' understanding of the entity's Scope 2 greenhouse gas emissions (see paragraphs B30–B31); and 	

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Contents	Section			Section		
Introduction		(vi) for Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(3), and with reference to paragraphs B32–B57, disclose:			29(e) capital deployment—the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities.	Ferrexpo acknowledges this requirement under
1. Responsible business practice		(1) the categories included within the entity's measure of Scope 3 greenhouse gas emissions, in accordance with the	Metrics and targets			IFRS S2 and is actively working
2. Climate change	Climate-related metrics continued	Scope 3 categories described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011); and	Reporting standards Report boundaries			this information in future disclosures
		(2) additional information about the entity's Category 15			29(f) internal carbon prices—the entity shall disclose:	
3. Engagement strategy		greenhouse gas emissions or those associated with its investments (financed emissions), if the entity's activities			(i) an explanation of whether and how the entity applies a carbon price in decision-making (for example, investment	Business resiliency
4. Implementation strategy		include asset management, commercial banking or insurance (see paragraphs B58–B63).		(ii) the price for eac	(ii) the price for each metric tonne of greenhouse gas	responses
5. Metrics and targets		29(b) climate-related transition risks—the amount and percentage of assets or business activities vulnerable to	Ferrexpo acknowledges this		emissions used to assess the costs of its greenhouse gas emissions.	
 6. Appendix 		climate-related transition risks.	requirement under IFRS S2 and is actively working towards providing this information in		29(g) remuneration—the entity shall disclose: (i) a description of whether and how climate-related considerations are factored into executive remuneration (see also paragraph 6(a) (v)); and (ii) the percentage of executive management remuneration recognised in the current period that is linked to	Executive remuneration
		29(c) climate-related physical risks—the amount and percentage of assets or business activities vulnerable to climate-related physical risks.	Ferrexpo acknowledges this requirement under IFRS S2 and is actively working towards providing this information in future disclosures		climate-related considerations.	
		29(d) climate-related opportunities—the amount and percentage of assets or business activities aligned with climate-related opportunities.	Ferrexpo acknowledges this requirement under IFRS S2 and is actively working towards providing this information in future disclosures			
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Section			Section
33(a) metri 33(b) the c adaptation 33(c) the p example, v or only a p specific ge 33(d) the p	33(a) metric used to set the target.	_	
	33(b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives).		
	33(c) the part of the entity to which the target applies (for example, whether the target applies to the entity in its entirety or only a part of the entity, such as a specific business unit or specific geographical region).	-	Climat relatec continu
	33(d) the period over which the target applies.	-	
	33(e) the base period from which progress is measured.	-	
	33(f) any milestones and interim targets.		
33(f) any milestones and interim targets. 33(g) if the target is quantitative, whether it is an absolute target or an intensity target. 33(h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target. 34(a) whether the target and the methodology for setting the target has been validated by a third party.	-		
	-		
	34(a) whether the target and the methodology for setting the target has been validated by a third party.	Metrics and targets Key components of Net Zero pathway	
related targets	34(b) the entity's processes for reviewing the target.		
	34(c) the metrics used to monitor progress towards reaching the target.		
	34(d) any revisions to the target and an explanation for those revisions.		
	35 An entity shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the entity's performance.		
	36(a) which greenhouse gases are covered by the target.		
	36(a) which greenhouse gases are covered by the target. 36(b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target.	-	
	36(c) whether the target is a gross greenhouse gas emissions target or net greenhouse gas emissions target. If the entity discloses a net greenhouse gas emissions target, the entity is also required to separately disclose its associated gross greenhouse gas emissions target.	-	
	36(d) whether the target was derived using a sectoral decarbonisation approach.		

Section			
	36(e) the entity's planned use of carbon credits to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target. In explaining its planned use of carbon credits, the entity shall disclose information including:		
	 (i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits; 		
Climate- related targets	(ii) which third-party scheme(s) will verify or certify the carbon credits:	Metrics and targets	
continued	(iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and	Net Zero pathway	
	(iv) any other factors necessary for users of general-purpose financial reports to understand the credibility and integrity of the carbon credits the entity plans to use (for example, assumptions regarding the permanence of the carbon offset).		
	37 In identifying and disclosing the metrics used to set and monitor progress towards reaching a target described in paragraphs 33–34, an entity shall refer to and consider the applicability of cross-industry metrics (see paragraph 29) and industry-based metrics (see paragraph 32), including those described in an applicable IFRS Sustainability Disclosure Standard, or metrics that otherwise satisfy the requirements in IFRS S1.		

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DR	DR name	Report section
E1. GOV-3	Integration of sustainability-related performance in incentive schemes	Executive remuneration
E1. IRO-1	Description of processes to identify and assess material climate-related impacts, risks and opportunities	Climate change risk and opportunity management
E1. SBM-3	Material impacts, risks and opportunities and their interaction with strategy and business model	Climate-related risks and opportunities
E1-1	Transition plan for climate change mitigation	Implementation strategy
E1-2	Policies related to climate change mitigation and adaptation	Policies and procedures
E1-3	Actions and resources in relation to climate change policies	Implementation strategy
E1-4	Targets related to climate change mitigation and adaptation	Metrics and targets
E1-5	Energy consumption and mix	Metrics and targets Key metrics
E1-6	Gross Scope 1,2,3 Total GHG emissions	Metrics and targets
E1-7	GHG removals & GHG mitigation projects finances though carbon credits	Residual emissions after 2050
E1-8	Internal carbon pricing	Not applicable
E1-9	Anticipated financial effects from material physical and transition risks and potential climate-related opportunities	Ferrexpo acknowledges this requirement and is actively working towards providing this information in future disclosures

Glossary of terms				
Abbreviation	Definitions			
BF	Blast Furnace Pellets			
BF-BOF	Blast Furnace-Basic Oxygen Furnace			
CBAM	Carbon Border Adjustment Mechanism			
CAPEX	Capital Expenditures			
CSA	Climate Scenario Analysis			
DRI	Direct Reduced Iron			
EAF	Electric Arc Furnaces			
EED	Energy Efficiency Directive			
ESG	Environmental Social Governance			
ESOS	Energy Savings Opportunity Scheme			
ESPR	Eco-design for Sustainable Products Regulation			
ESRS	European Sustainability Reporting Standards			
ETS	Emissions Trading Scheme			
FRMC	Finance, Risk Management, and Compliance			
GRI	Global Reporting Initiative			
GTL	Gas to Liquid			
HSEC	Health, Safety, Environment and Community			
IEA	International Energy Agency			
IFRS	International Reporting Financial Standards			
IPCC	Intergovernmental Panel on Climate Change			
ISSB	International Sustainability Standards Board			
NDC	Nationally Determined Contributions			
NZE	Net Zero Emissions			
OEM	Original Equipment Manufacturer			
OPEX	Operating Expenditure			
SBTi	Science Based Targets initiative			
SECR	Streamlined Energy and Carbon Reporting			
STEPS	Stated Policies Scenario			
TCFD	Task Force on Climate-related Financial Disclosures			
TNFD	Taskforce on Nature-related Financial Disclosures			
ТРТ	Transition Plan Taskforce			

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Limitations

Summary of limitations

Limitation	Rationale
Steel production costs	For BF/BOF and EAF processes, the manufacturing costs for different jurisdictions are taken from the 2020 JRC publication based on 2019 data.
EAF emissions intensity values	For EAF processes, the emissions intensity values of steel production in different jurisdictions are derived from 2016 publications (Global Efficiency Intelligence). These values would likely be lower in 2024 due to grid decarbonisation and technology improvements.
Static grid factors	For future scenarios, grid decarbonisation has yet to be factored into the emissions intensity of EAF steel production. The costs for EAFs shown in these scenarios would likely be lower than depicted, as the emissions intensity of EAF steel would fall as electricity grids decarbonise.
Static production costs	Potential changes to both BF/BOF and EAF production costs have yet to be factored into the analysis for future scenarios. It is likely that through funding, subsidies, and upscaling of technologies to market (or vice versa), the steel production costs would be higher/lower in future scenarios and not remain the same as present-day costs.
Omission of free emissions allowances	Under the current EU ETS, steel manufacturers are granted free allowances to cover a certain proportion of their emissions and would, therefore, not be subject to a price on carbon. It is likely that the current carbon prices shown for EU jurisdictions would have a slightly reduced impact, as a portion of these emissions would not require a carbon price to be paid.

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Growth (%/vear)

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		, jour,
Business unit	Continued growth	Post-war scenarios
Mining Operations	9%	14%
Crushing & Beneficiation	10%	15%
Pellet Plant	9%	14%
Railways	9%	14%
Road Vehicles	9%	14%
Foundry & Mechanical	9%	14%
Other Workshops	9%	14%
Ancillary Site Buildings	9%	14%
First-DDSG	0%	0%
Other Freight	9%	14%
Purchased Goods	9%	14%
Waste	3%	5%
Employee Commuting	-3%	-5%
Iron Destiny	9%	14%

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Rank	Measure	Savings
1	Biofuel fired pelletiser	28%
2	Phase out fossil fuels	28%
3	Electric mining vehicles	26%
4	Electrify mining equipment	5%
5	Lower carbon fuelled barges	3%
6	Heat recovery of pelletiser	3%
7	Divert waste from landfill	3%
8	Electrify owned rail	1%
9	Pelletiser efficiency	1%
10	Rail freight optimisation	1%
11	Vehicle electrification	1%
12	Personal vehicle commuting reduction	0%
13	Solar installation	0%
14	Water reduction	0%
15	Press filtration system	0%

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