



RHI MAGNESITA

Taskforce for Climate Related Financial Disclosure Report 2021





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Reliable, comparable and transparent disclosures about the ways in which our company is affected by climate change and how we manage related risks and opportunities are essential for our stakeholders to make informed decisions.

RHI Magnesita is publishing its first standalone report in respect of the year to 31 December 2021 that is fully aligned to the Taskforce for Climate Related Financial Disclosures (“TCFD”) Recommendations. The Group has reported

according to the TCFD Recommendations since 2019 and has substantially deepened its analysis in 2021.

The TCFD Recommendations are the world’s most commonly accepted standard for disclosing climate-related risks and opportunities. They focus on four key pillars of Governance, Strategy, Risk Management and Metrics and Targets. More information can be found below in Table 1.

Table 1: Outline of the TCFD Recommendations

| Pillar of the TCFD Recommendations | Description |
|------------------------------------|--|
| Governance | The organisation’s governance around climate-related risks and opportunities. |
| Strategy | The actual and potential impacts of climate-related risks and opportunities for the organisation’s businesses strategy and financial planning. |
| Risk management | The processes used by the organization to identify, assess and manage climate-related risks and opportunities. |
| Metrics and targets | The metrics and targets used by the organization to assess and manage climate-related risks and opportunities. |





Board oversight

The Board of RHI Magnesita guides the development of our strategy and appetite towards risk. It also has oversight of other material matters such as regulatory developments or reputational and financial topics. Responsibility for and oversight of climate-related risks and opportunities has been assigned to the Corporate Sustainability Committee ('the Committee'). In this role, there is a standing agenda item during quarterly Committee meetings to review climate related risks, strategy and performance. The Chairman of the Committee, who is responsible for overseeing RHI Magnesita's climate strategy, engages directly with RHI Magnesita managers and employees on climate topics as required between the regular Committee meetings. Certain members of the Executive Management Team regularly attend the Committee meetings. The Committee Chairman reports to the Board on climate-related matters on a regular basis.

In 2021, the Committee was involved in the update of the Group's climate-related risk and opportunity assessment. The Board undertook a TCFD workshop in 2021 as a part of this process.

Management

At operational level, a Sustainability Steering Committee has been established with the Chief Technology Officer (CTO) as Chairman. The CTO reports directly to the CEO and is a member of the Executive Management Team. The CTO has responsibility for development of the Group's CO₂ strategy and its implementation across RHI Magnesita.

The Sustainability Steering Committee is a management level committee that reports directly to the Chairman of the Corporate Sustainability Committee. The Sustainability Steering Committee includes senior managers from areas across the business including Compliance, Environment, Sales, Operations, Risk, Supply Chain, R&D, Investor Relations and Human Resources. The Sustainability Steering Committee reports to the Executive Management Team and the Corporate Sustainability Committee.

For the topic of climate-related risks and opportunities, there is a Climate Working Group within the Sustainability Steering Committee. It is guided by the Vice President of Sustainability who is responsible for the climate risk and opportunity review, as well as the broader implementation of climate strategy. The Climate Working Group reports into the Corporate Sustainability Committee quarterly via the Vice President of Sustainability and the CTO.

Our climate-related governance is outlined in Figure 1.

Figure 1: Organogram of climate governance in RHI Magnesita





As part of our updated climate-related risk and opportunity assessment, 22 risks and 6 opportunities for RHI Magnesita were identified. All risks and opportunities were assessed in a qualitative scenario analysis, and the most material climate-related risks and opportunities (those with an inherent risk or opportunity rating of 'high') underwent quantitative scenario analysis to help better estimate the potential financial impact on the business.

For our analysis, we used two scenarios to understand the potential range of impacts we face:

- **Paris-aligned:** Aligned to the overall goals of the Paris Agreement to limit global warming to below 2 degrees. Uses the Intergovernmental Panel on Climate Change ("IPCC") Shared Socio-economic Pathway (SSP) 1 — 2.6 and the International Energy Agency ("IEA") Sustainable Development Scenario.
- **Hot House World:** Associated with approximately 4 degrees of global warming, based on the IPCC's SSP 5 — 8.5 scenario.

In line with the TCFD recommendations, we have conducted our analyses across three different time horizons. The short-term (2023) sits within our five-year business plan, while the medium (2030) and long-term (2050) time horizons are oriented towards the broader international policy environment, including the Paris Agreement and the EU Green Deal.

Having reviewed the analysis, the Corporate Sustainability Committee believes the Group is well positioned to mitigate the risks and embrace the opportunities associated with the climate-change related developments across both scenarios. These could range from fast-paced Paris-aligned regulatory developments, physical hazards for our operations or new business opportunities. The Group believes that it is already a leader in sustainability within the refractory industry and will continue to work with its customers to provide low carbon product and service offerings. We remain committed to supporting our customers' decarbonisation efforts as well as actively managing our own climate-related risks and opportunities.

Transition-related risks and opportunities

Operating in an emissions intensive industry, it is likely that RHI Magnesita's business model will be affected by the transition to a low-carbon economy. As well as risks, there are a number of significant opportunities that the Group is well positioned to benefit from.

Table 1 below illustrates the material climate-related risks and opportunities selected for quantitative scenario analysis under our Paris Aligned scenario. More information on our climate strategy and broader efforts can be found on pages 60 — 63 in our Annual Report.



Strategy continued

| Risk/Opportunity | Category | Impact | RHI Magnesita response and strategy | Related metrics and targets |
|--|-------------|---|---|--|
| Increase in level or scope of carbon pricing | RISK | Increase in operating costs | <ul style="list-style-type: none"> The Group integrates carbon permit price projections into its financial planning and has a hedging programme in place to fix future exposures We are developing new technologies, such as carbon capture and utilization/storage to reduce our emissions, investing €50 million over the period 2021–25 in research and development of these solutions The Group aims to increase the use of secondary raw materials which will reduce CO₂ emissions compared to the mining or purchase of fresh raw material We will continue to invest in fuel switching, renewable energy and energy efficiency as additional methods to reduce our carbon intensity | <ul style="list-style-type: none"> We have set a 15% emissions intensity reduction target by 2025 on a 2018 baseline of Scope 1, 2 and 3 raw materials emissions. By the end of 2021, our emissions intensity was 3.7% lower than the 2018 baseline By 2025, we target energy efficiency to be 5% higher compared to 2018. By the end of 2021, our energy efficiency gains compared to the 2018 baseline were 2.7% |
| Increased stakeholder scrutiny over emissions intensive industries leading to shareholder pressure and impacting access to capital | RISK | If the Group fails to reduce its CO ₂ emissions, its reputation including investor and lender sentiment could be negatively impacted, potentially increasing the cost and reducing the availability of equity and debt finance | <ul style="list-style-type: none"> The Group is aiming to reduce its CO₂ emissions through recycling, carbon capture, fuel switching and energy efficiency RHI Magnesita maintains close communication with ESG rating agencies, investors and lenders to ensure they are familiar with the Group's CO₂ reduction strategy | <ul style="list-style-type: none"> ESG analyst ratings are a proxy for investor perceptions and are generally positive — MSCI AA; EcoVadis Gold, CDP 'B' Successfully raised or extended over €1 billion of ESG-linked debt financing in 2021 |
| Increased demand for the Group's products arising from the development of or transition to lower-carbon emitting industrial processes by our customers | OPPORTUNITY | New revenue due to increased demand from customers for refractory products that help them reduce their emissions | <ul style="list-style-type: none"> We are already providing our customers with refractory products that support low carbon production processes. This includes our steel and cement customers who account for 80% of our business. For example, we provide products supporting electric arc furnaces for the steel industry, which is an enabling technology for CO₂ emissions reduction RHI Magnesita has a higher market share in lower CO₂ emitting applications (such as EAF) and a lower relative market share in high emitting applications (e.g. BOF, Blast Furnace) We will continue to offer our low energy and carbon services and product offering including process optimization, recycling services, coating technologies and digital solutions | <ul style="list-style-type: none"> Sales of refractory products supporting electric arc furnaces, associated with the lower carbon production of steel, was €421 million in 2021 |
| Increased demand for RHI Magnesita products that are produced in a low carbon manner | OPPORTUNITY | Higher revenue due to increased demand for low-carbon (e.g. recycled) refractory products | <ul style="list-style-type: none"> In the short term, increasing the share of secondary raw material (SRM) in our products will help us to reduce our geogenic emissions from raw materials and create attractive low-carbon products In the longer term, if the Group is successful at developing and operating carbon capture and sequestration or utilization technologies and switching to renewable energy sources, refractory products could be manufactured with low or potentially zero CO₂ emissions This is expected to translate into a pricing and/or market share advantage compared to competitor products with high emissions, particularly as customers focus more on their Scope 3 emissions | <ul style="list-style-type: none"> We have set a target of 10% SRM content in refractory products by 2025. We achieved 6.8% SRM content in 2021 (2020: 5.0%) Our target is to reduce CO₂ intensity by 15% by 2025 |

Physical-related risks and opportunities

This year the Group assessed its major production sites and strategic port locations across a broad range of physical climate hazards. We considered the impacts including asset damage, disruption to operations and impacts on the value chain (upstream and downstream). Riverine flooding was identified to be the most dominant hazard to our portfolio in relation to value at risk of damage across both scenarios and all three time horizons.

The results of the assessment indicated that the overall risk profile for physical risks is low. Our current insurance coverage provides sufficient coverage for asset damage and operational disruption. The assessment did not indicate that there are likely to be any material increases in the cost or coverage of insurance in the future. The results of the assessment will be used to guide resilience building within our operations and value chain. For example, we have identified that two sites have a higher comparative risk profile than others within the portfolio and these will be prioritised for future adaptation and resilience building.



Identifying and assessing climate-related risks and opportunities

This year we deepened our existing climate-related risk and opportunity assessment. This involved identifying risks and opportunities through a detailed literature review of publicly available information and leading practice disclosures for the industrials sector. We also conducted interviews with several key stakeholders within RHI Magnesita across Risk, Energy, Sales, Strategy, Supply Chain, Investor Relations and Legal.

Qualitative scenario analysis assessment of the risks and opportunities was undertaken, using publicly available sources and projections for the relevant time horizons and scenarios. This information was used to assess likelihood and consequence and assign risk ratings/scoring.

Our quantitative scenario analysis was completed over the most material transition climate-related risks and opportunities from the qualitative scenario analysis. We used IEA-sector and scenario-level data to frame the analysis as well as other datasets including regional studies and internally generated data. Existing controls for the risks were identified and included in our risk assessment and financial modelling where relevant.

Our scenario analysis for physical climate-related risks involved a market-leading platform for asset-level physical risk analysis. This involved screening 36 of our production sites and strategic port locations and a deep dive on seven of the most impacted locations. These results were then fed back into our risk assessment to provide risk ratings for all climate-related risks and opportunities.

This overall process, including the integration of financial results into RHI Magnesita's business model was supported by internal collaboration between the strategy, finance, and sustainability teams among others.

Managing risks and opportunities

Having now completed our detailed climate-related risk and opportunity assessment and scenario analysis in 2021, our focus for 2022 will shift towards identifying additional mitigation actions to manage risks and embrace opportunities on top of those that are already underway. Current mitigation actions include:

- comprehensive insurance coverage for physical risks covering both asset damage and operational disruptions
- measures to further reduce our greenhouse gas emissions where technically and economically feasible to do so
- continue to increase recycling content, increase energy efficiency and explore fuel switches to fuels with lower CO₂ emissions
- the development and submission of a Science Based Target in 2022
- engaging with our stakeholders and keeping them informed about the progress of our climate action
- monitoring stakeholders' expectations and regulatory landscape evolution to ensure prompt actions

Specific additional mitigation actions for material climate-related risks and opportunities will be documented within our climate register, along with delegated responsibility for oversight and management of the mitigation action. Our climate risk register will be integrated into the risk assessment for RHI Magnesita's existing 'Sustainability — environmental and climate risks' principal risk.

Integrating risks and opportunities

The climate-related risk and opportunity assessment was undertaken in full alignment with the RHI Magnesita Risk Management Policy. This included the use of the Policy's impact and likelihood rating scales and risk scoring guidance. Opportunities were assessed as a positive inversion of the impact and scoring results from the Policy. This involved using the same financial thresholds as the impact ratings, but for positive impacts to the business (i.e. increase in revenue and/or decrease in expenses).

In line with our Risk Management Policy, we have assessed climate-related risks and opportunities in line with our other corporate risks. An ongoing review and monitoring plan for the management of the climate-related risks and opportunities will be developed and implemented in early 2022.

Metrics and targets



Our environmental impact

We continue to publish our Scope 1, 2 and 3 (raw materials) GHG emissions within our Annual Report. In 2021, the Group's new product carbon footprinting methodology was independently verified and we are in the process of integrating monthly monitoring of CO₂ into our SAP enterprise resource planning tool. Reducing CO₂ emissions was introduced as a remuneration target in 2021 and now accounts for 10% of the annual bonus for all eligible employees.

Our Carbon emissions¹

| | Absolute emissions (thousand tonnes of CO ₂) | | | | |
|--|--|--------------|--------------|--------------|----------------------------|
| | 2018 | 2019 | 2020 | 2021 | |
| Scope 1 | 2.396 | 2.007 | 1.973 | 2.493 | |
| of which geogenic emissions | 1.305 | 1.066 | 1.075 | 1.330 | |
| of which fuel-based emissions | 1.045 | 918 | 873 | 1.129 | |
| of which other emissions | 46 | 24 | 25 | 34 | |
| Scope 2 | 206 | 188 | 143 | 112 | |
| Scope 3 (raw materials) | 2.851 | 2.486 | 2.161 | 2.273 | |
| Total | 5.453 | 4.681 | 4.277 | 4.878 | |
| | | | | | Change vs 2018 (base year) |
| Relative emissions (tCO ₂ /t product) | 1.89 | 1.85 | 1.96 | 1.82 | -3.7% |
| Biogenic Scope 1 emissions | 5 | 8 | 10 | 10 | |

¹ Changes in line with the GHG protocol and more precise data have led to an adjustment to the absolute emissions and KPI for historic periods.

Tracking our progress

We use metrics and targets to track our progress in relation to our material climate-related risks and opportunities. These are included in Table 1 on page O1.

Outlook

We recognise the importance of understanding our risk and opportunity landscape in guiding our climate strategy. In addition to charting our own transition, we want to be a trusted partner to our customers on their journey to net zero. We will further deepen our climate related initiatives in the coming years to help us to continue to be a sustainability leader within the sector.



