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3keel

Corporate Climate Benchmark Study

Assessing the emissions reduction and net zero progress of 12 major suppliers of building materials

Contents

Report Information

Disclaimer

The Corporate Climate Benchmark Study, the first of a series of construction sector reports from 3Keel, assesses the performance of 12 key companies within the construction materials sector, evaluating their progress and future plans to reduce greenhouse gas emissions across their value chains. The report evaluates the progress of the sector's climate action, scrutinises companies' individual environmental claims, and highlights best practices that can be replicated across the sector to accelerate decarbonisation efforts.

3Keel LLP have prepared this report using publicly available data on each of the companies assessed. Companies have been given a chance to respond and provide further information on their activities, which has been taken into account where relevant. 3Keel have exercised due and customary care in preparing the report but have not, unless explicitly stated, verified the input data included in this report beyond what has been publicly stated.

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1.0. Executive Summary

Globally, buildings are responsible for 37% of energy-related carbon emissions.[1] Until now action to reduce these emissions has focussed on reducing operational emissions, for example by making buildings more energy efficient.

However, over a quarter of emissions in this sector are released before the building or infrastructure begins to be used.[2] Most of these emissions are embodied in building materials, with a smaller amount from the process of construction.

To achieve net zero by mid-century, buildings need to become zero emissions in both construction and operation. The World Green Building Council has proposed a goal for all new buildings to have net zero embodied carbon by 2050.[3]

Achieving zero emissions building construction will require major changes in the way building materials are manufactured. Currently common building components such as steel, cement, glazing, flooring, aluminium and insulation all have high embodied emissions.

This report assesses the climate plans and performance of 12 major companies involved in supplying building materials. These companies emit millions of tonnes of GHG emissions each year, but have the potential to lead the decarbonisation of the sector.

Collectively these companies' targets fall short of what is required to meet the Paris Climate agreement.

All 12 companies have plans to reduce emissions and most have climate targets certified by the Science Based Targets initiative. However this report scrutinises companies' climate plans in more detail, assessing performance across five categories: (1) Measurement & disclosure, (2) Target setting, (3) Emissions reduction plans, (4) Offset policies, and (5) Climate action. Scores were awarded for 15 criteria and weighted to give a score out of 100.

No company included in this assessment scored well across all criteria. The top ranked company, Interface, received only 71/100, and 6 of the 12 companies scored 50 or less. While we identified good elements in most companies' strategies, most lacked detail and rigour in several categories.

Only one company, Velux, has interim 1.5°C aligned targets covering all emissions scopes and categories, as defined by the GHG protocol. Interface and Kingspan have also set commendable targets, though they exclude certain Scope 3 categories. Our analysis found that the other nine companies have short or long-term targets with insufficient coverage or ambition. For example, some companies exclude Scope 3 from their interim targets entirely. Some companies have committed to carbon neutrality in the long term, without making clear that they will achieve this largely through emissions reductions rather than offsets.

In general these companies can point to many excellent examples of emissions reduction measures and investment in commercialising innovative low-carbon technology. However none of the companies has published a complete coherent plan to reduce emissions in line with the levels required to keep global temperature rises to <1.5°C above pre-industrial levels. There is a common failure to specify reduction measures and quantify their contribution to achieving 100% of emissions reduction targets. Companies should publish and regularly update quantified roadmaps to allow external assessment of whether their targets are achievable.

Companies are likely to require carbon offsets to reach net zero, as some hard-to-abate emissions will persist. Unfortunately no company has published a credible plan for offsetting residual emissions, or shown convincingly that they will not need such offsets. However a few companies have been awarded points for investing in credits supporting the avoidance or nature-based sequestration of emissions outside their value chain.

Climate change can only be addressed if companies actually achieve their emissions reduction targets. Unfortunately, over the last 5 years, only three of the companies (Interface, ThyssenKrupp and Owens Corning) have demonstrated sustained emissions reductions across all scopes in line with their targets. Furthermore, our scenario analysis (Section 4.2) shows that collectively these companies' targets fall far short of what is required to meet the Paris Climate agreement. Much of the shortfall is due to growth in Tata Steel, the biggest emitter in this report. However, even when we exclude Tata Steel, the remaining company targets are insufficient to limit global warming to well below two degrees.

Finally, most companies have set up reasonable climate governance structures such as board-level accountability. Performance on lobbying is mixed. while most companies publicly support increased ambition on climate in their messaging and public communications, several employ lobbyists or are members of organisations that lobby against climate action.

Figure 1.1

Summary of company rankings in the overall assessment, and scores across each of the categories

Rank	Company	Measurements & Disclosure (/20)	Targets (/30)	Reduction Plan (/30)	Offsets & Neutralisation (/5)	Action (/15)	Total (/100)
	Interface	15.0	24.0	16.0	1.8	14.0	71
	Owens Corning	15.2	16.0	18.0	1.2	15.0	65
	Kingspan	14.2	18.0	18.0	0.6	10.0	61
	Velux	15.8	24.0	6.0	1.8	10.0	58
	ThyssenKrupp	15.2	22.0	16.0	0.6	8.0	55
	Saint Gobain	14.8	16.0	16.0	0.6	8.0	55
	Heidelberg	12.0	11.0	19.0	0.6	7.5	50
	Tarkett	13.6	14.0	8.0	0.8	11.0	47
	Rockwool	11.4	12.0	12.0	0.0	9.0	44
	CRH	14.2	10.0	10.0	0.0	8.0	42
	Tata	10.2	8.0	10.0	0.0	6.0	34
	AWI	4.8	4.0	4.0	0.0	5.0	18

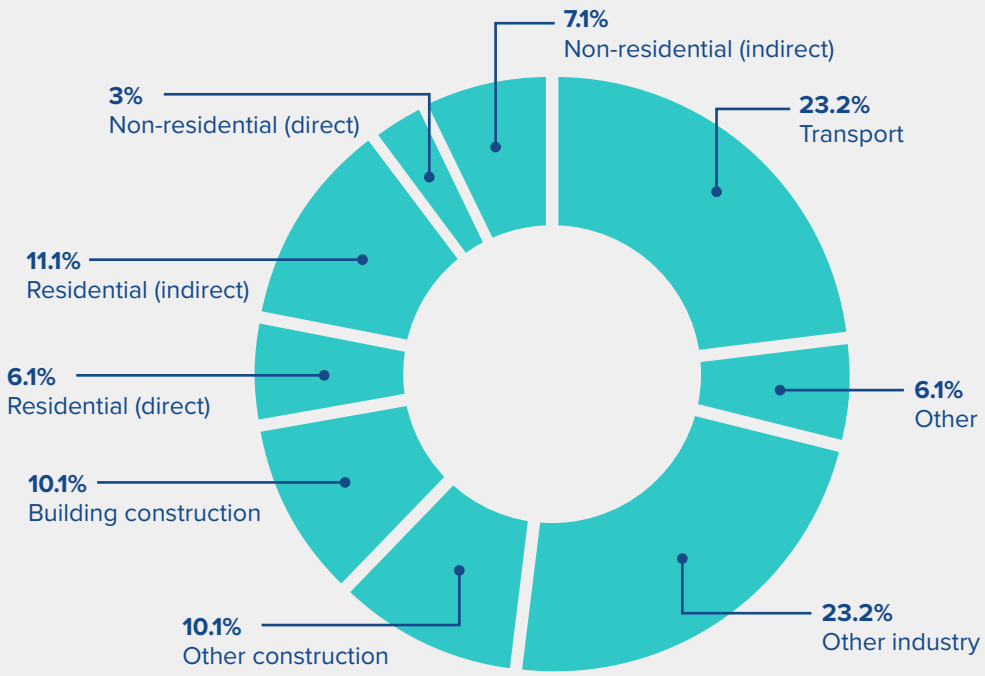
2.0. The Global Picture

2.1. Emissions in the Global Built Environment

Globally, buildings are responsible for 37% of energy-related carbon emissions: 27% from operational emissions - the emissions from heating, cooling and powering, and 10% from embodied emissions - the emissions related to building materials and construction activities (Figure 2.1).[4]

To date, the construction industry's efforts to reduce emissions have concentrated on making new buildings more energy efficient. As new buildings begin to meet higher efficiency standards, the proportional contribution of operational emissions will fall. This will increase the focus on embodied emissions. The World Green Building Council estimates that embodied emissions will account for up to 50% of the total carbon emissions related to buildings built between 2019 and 2050.[5]

Figure 2.1
Buildings and construction's share of global energy-related CO2 emissions in 2020 (UNEP, 2021)



2.2 Global embodied emissions

Embodied emissions arise from the construction, maintenance and end-of-life treatment of buildings.[6] Of these stages, the production of building materials represents the predominant source of emissions.[7] Table 2.1 shows the contribution to global emissions and carbon intensities of some key building materials.

Table 2.1
Emissions contribution and intensity of key building materials

Building Material	Iron and Steel	Cement	Aluminium	Glass	Bricks	Insulation
Contribution to total global emissions	8%[8]	8%[9]	3%[10]	0.2%[11]	-[12]	-[13]
Direct emissions intensity (tCO_2 per ton) (2020)	1.4[14]	0.59[15]	13.1[16]	1.44[17]	0.21[18]	1.86[19]

United Nations Environment Programme, 2021

Two highly significant construction materials - steel and cement - are responsible for roughly 16% of global GHG emissions.[20] As the building sector consumes around half the world's steel and cement production, these two materials are responsible for more than 50% of global embodied emissions in buildings.[21]

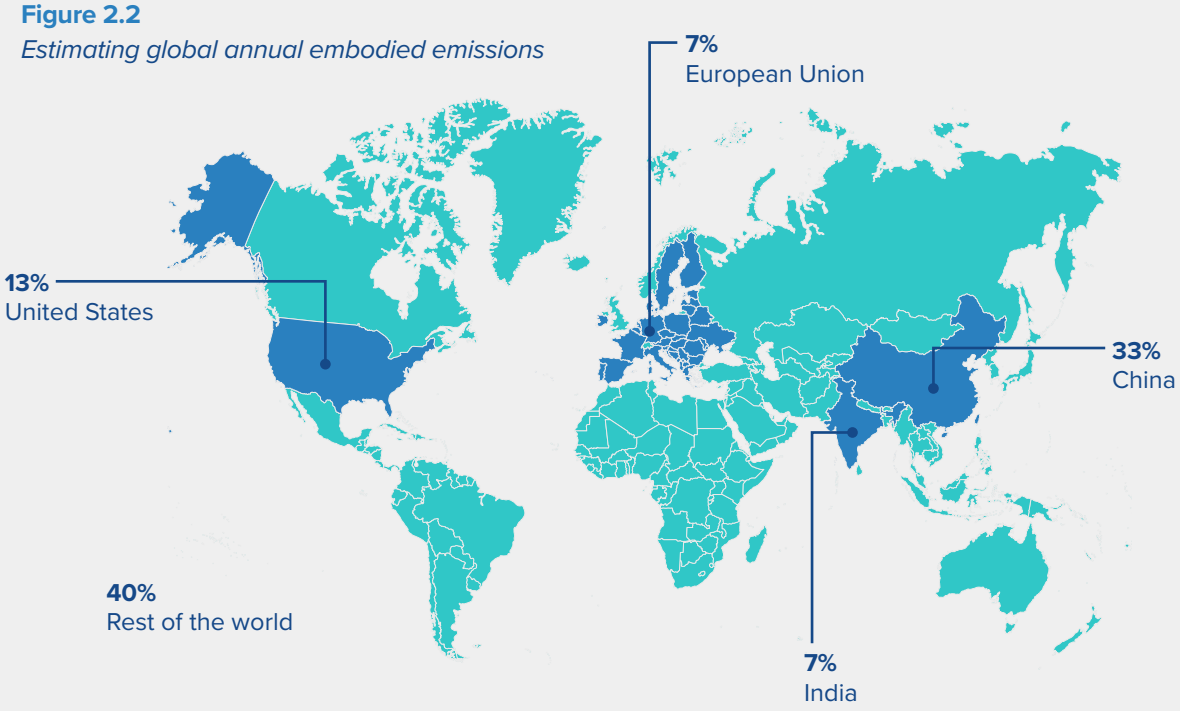
Every tonne of crude steel produced results in the emission of 1.4 tCO2, a figure which has been fairly stable in recent years.[22] Emissions reductions achieved thus far have largely relied on energy efficiency improvements in the production process.[23] However, there is little technological scope for further such gains.[24] To align with net zero, the steel sector will need to reduce its emissions intensity by 4% annually between 2020 and 2030.[25] This will rely on the adoption of new technologies and new methods of steel production. Developments in China will be particularly important as it is responsible for approximately half of global steel production.[26]

The cement sector is equivalent to the steel sector in its production of GHG emissions.[27] Cement has a lower carbon emissions intensity, but is produced in far larger quantities.[28] The carbon intensity of cement production has been trending in the wrong direction - increasing by 1.8% every year between 2015 and 2020.[29] Significant reductions will therefore be required to align cement production with net zero by 2050. This equates to 3% annual reductions in intensity up to 2030.[30] Achieving this reduction rate will be complicated by growing global demand for cement and therefore, technological innovation will be all the more important.

Other important materials in building envelopes with high embodied emissions include aluminium, bricks, glass and insulation. Aluminium is particularly carbon intensive, with 8.24 tCO2 is emitted for every tonne produced.[31] Glass also represents a higher intensity source of emissions with 1.44 tCO2 produced for every tonne.[32] Much of the emissions reductions achieved historically in the production of glass have relied on efficiency savings and the trend in emissions intensity for aluminium has been largely flat in recent years.[33] Brick production also represents a problem area. While the process has a relatively low emissions intensity, it has been associated with highly concerning black carbon emissions.[34] Technological innovation in the production of these materials will therefore be key in delivering emissions reductions as the construction sector looks to align with net zero.

Global embodied emissions from building materials are not distributed equally. Figure 2.2 shows a breakdown by major markets in 2020. China is alone responsible for 33% of emissions, and the United States is the second largest emitter at 13%.[35] Both India and the European Union are also responsible for 7% of global embodied emissions respectively.[36] This group of countries was therefore responsible for 60% of global embodied emissions in 2020. Action in these markets will thus be key in determining global progress and success on embodied emissions, and some of the largest building materials companies in the world, included in this report, are all based in these markets.

Figure 2.2
Estimating global annual embodied emissions



2.3. Progress to net zero

It is clear that achieving net zero buildings depends on the decarbonisation of the production of building materials. The World Green Building Council has proposed a goal for all new buildings to have net zero embodied carbon by 2050.[37] The Global Alliance for Buildings and Construction, part of the UNFCCC's Marrakech Partnership for Global Climate Action, has set two key targets for the sector to meet and align with the Paris Agreement[38]:

- By 2030, emissions from the built environment must be halved with 100% of new buildings net-zero in their operations, retrofitting rates must reach at least 3% per annum globally and a 40% reduction in embodied carbon emissions must be achieved.
- By 2050, all new and existing buildings must be net zero across their entire lifecycle (this includes both operational and embodied emissions).

The sector is currently not on track to meet these targets and achieve net zero by 2050.[39] Progress on carbon emissions has been very limited with decarbonisation in the power generation sector, not the built environment, responsible for some reductions.[40]

It is clear that embodied emissions in buildings must rise up the agenda. Reducing them, in line with the Paris climate agreement, will represent a significant challenge with the IEA estimating that by 2050 global floor space will double (Figure 2.3).[41]

To meet this global demand, it is clear that there will need to be careful evaluation of any new construction to ensure it is necessary. The retrofitting of existing building assets will also have an important role to play in delivering more efficient use, without increasing embodied carbon further.

Nevertheless, as Figure 2.3 shows, a significant scale of construction will be required up to, and likely beyond, 2050. This must therefore be delivered with a significantly reduced embodied carbon footprint for the sector to achieve net zero by 2050.

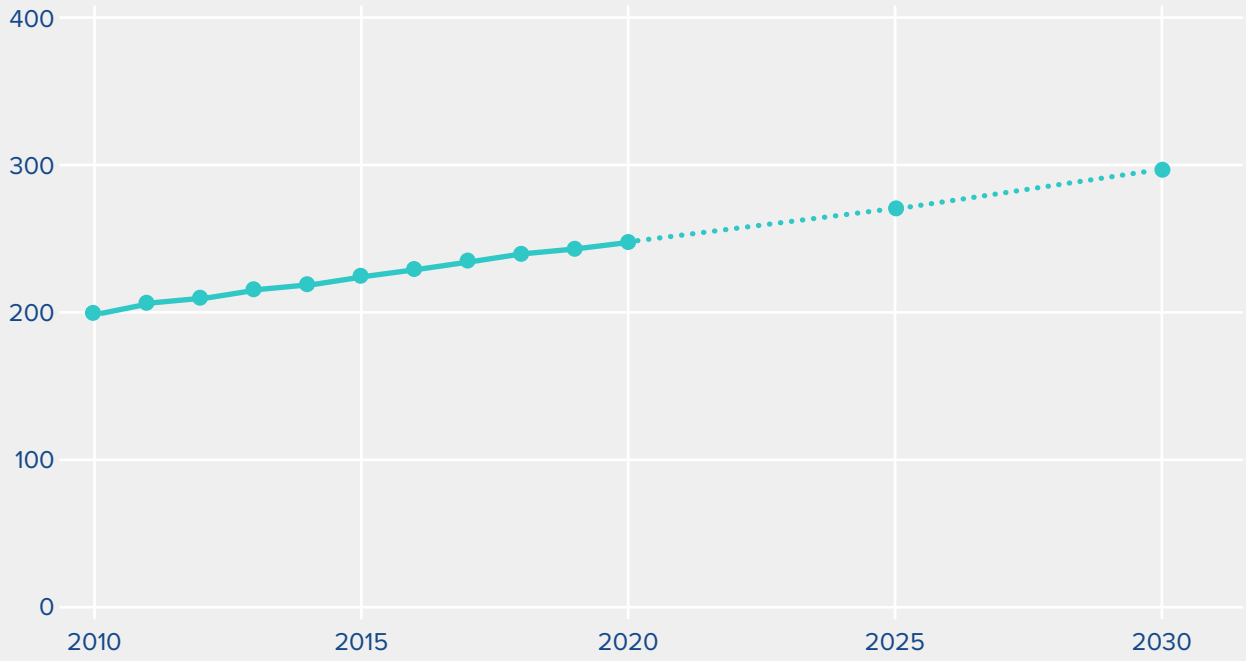
There will be 2 routes through which this is primarily achieved:

(1) Innovative and efficient design, and

(2) Innovative and efficient construction and materials.

Of these two routes, reducing the carbon emissions from building material production is paramount given their relative contribution. Developing and implementing low carbon construction technologies and materials is therefore a priority for the sector and, as outlined, particularly for materials such as steel, cement, aluminium and glass.

Figure 2.3
Global building floor area growth in the net zero Scenario 2010 - 2030 (IEA, 2021a)



IEA, 2021a

3.0. Assessment Methodology

3.0. Purpose of the Corporate Scorecard

Given the importance of embodied emissions within the construction sector, it is clear that construction material producers have a large part to play in reducing their value chain emissions to support global decarbonisation efforts. With many construction materials producers spanning hard-to-abate sectors such as steel, cement and plastic, it is vital that these emissions sources are identified and targeted early in order to scale and implement the necessary solutions.

The Corporate Scorecard has been developed in order to assess the performance of key actors within the construction materials sector, evaluating their progress, and future plans to reduce greenhouse gas emissions across their value chains. The aim of this assessment is to 1) evaluate the progress of the sector's climate action, 2) benchmark and scrutinise companies' individual environmental claims, and 3) highlight best practices that can be replicated across the sector to accelerate decarbonisation efforts.

3.1. Company selection methodology

The 12 companies in this report have been selected to be a representative sample of construction materials producers worldwide, including producers of steel, cement, insulation and other key prefabricated construction materials. Criteria that were taken into account in selecting companies included size, global coverage, revenue, sub-sector involvement, and brand recognition. Companies have been assessed at group level to minimise regional anomalies and ensure important global brands are represented in the sector. This selection process is intended to provide an initial picture of both individual and general corporate performance. Based on these criteria, the companies selected are: Armstrong World Industries (AWI), CRH, HeidelbergCement, Interface, Kingspan, Owens Corning, Rockwool, Saint Gobain, Tarkett, Tata, ThyssenKrupp and Velux.

Note: this assessment covers privately owned companies only - state-owned companies have been excluded as their commitments are often covered in government policies.

3.2. Principles of the Corporate Scorecard

The scorecard assessment criteria have been developed based on a review of best practice for corporate climate disclosures, existing alternative corporate scorecards, and disclosure practices in the construction sector. It aims to assess companies based on their performance relative to others in the sector, and also to assess the sector's ambition levels relative to the action needed to limit global mean temperature rises to <1.5°C above pre-industrial levels. Importantly, the scorecard recognises the unique difficulties faced by the construction sector, with significant parts of companies' footprints arising from hard-to-abate emissions sources.

The initial assessment for all 12 companies was conducted solely using information released by companies into the public domain, including websites, public reports, press statements, and public disclosures through reporting mechanisms, such as the Climate Disclosure Programme. We sent this initial assessment to all companies, offering them the opportunity to provide additional information. Our final scorecard assessments take into account any information provided directly by the companies.

3.3. Summary of assessment criteria

The corporate climate scorecard has been designed to capture the key principles and elements of corporate climate action, and disclosure, that should be embedded in the sector. The scoring framework builds on existing frameworks and best practice guidance including the New Climate Institute's Corporate Climate Responsibility Monitor, the WEF's Climate Governance Principles, NASA's Technology Readiness Level scale, and 3Keel's internal experience in producing and assessing corporate climate roadmaps.[42] Accordingly, the scorecard has been structured with 5 key categories of criteria to reflect this intention: (1) Measurement & Disclosure, (2) Targets, (3) Reduction Plans, (4) Offsets & Neutralisation, and (5) Action.

These 5 categories each contain 2-4 key criteria against which companies are scored, with 15 criteria developed in total. For each criterion, a score out of 10 has been awarded based on performance relative to corporate best practice. Scores across these criteria are weighted and converted to an overall score for a company's performance. This weighting of scores reflects the relative importance of each of the different categories and measures to an overall climate strategy. For example, Targets and Reduction Plans collectively represent 60% of the overall score, while Offsets & Neutralisation make up only 5%. This reflects the importance of prioritising emissions reductions over carbon removals and offsets.

A full list of criteria, their weighting (as % of total score), and corporate best practice for each criteria are listed in Table 3.1 on the next page. Appendix A provides further detail on each scoring criteria.

Acknowledgement to companies included in this report

We would like to express our gratitude to the companies that responded to our request for a response to our initial assessment and engaged with us to provide additional information. We have endeavoured to fairly evaluate all information provided in light of our criteria and methodology, and appreciate companies committing the resource and time to provide a response. We hope that companies find that our assessment is reflective of their current performance and can draw useful insights from this work to inform their future climate work.

Table 3.1

Overview of the assessment categories, weightings and best practice for each criteria (Appendix A provides more detail on best practice for each criterion)

Category	Criteria	Best Practice Summary	TOTAL 100
Measurement & Disclosure	Comprehensiveness of target disclosure	Company discloses long term and interim targets, with scope and boundaries clearly defined.	6
	Comprehensiveness of reduction disclosure	Company discloses detailed (quantifiable) emissions reduction actions and KPIs, for all sources of emissions.	6
	Comprehensiveness of offset disclosure	Company either plans to reduce emissions to zero without offsets, or discloses full details on their offset strategy and projects.	2
	Comprehensiveness of attainment disclosure	Company discloses a verified annual breakdown of Scope 1, 2 and 3 emissions.	6
Targets	Target coverage	Company has emissions reduction targets covering all Scope 1, 2 and 3 sources.	10
	Target ambition: headline	Company has net zero target of 2040 or earlier covering all Scope 1, 2 and 3 sources.	10
	Target ambition: interim	Company has interim reduction target of ≤5 years aligned with a 1.5°C trajectory.	10
Reduction Plans	Reduction measures	Company specifies and quantifies emissions reduction measures to reach 100% of their climate target.	10
	Reduction readiness level	All emissions reductions measures rely on mature technologies or on technologies the company is playing a role in commercialising.	10
	Reduction KPIs	Company explains in detail how it will fund and deliver its planned emissions reductions measures.	10
Offsets & Neutralisation	Neutralisation	Company commits to procuring only high-quality carbon credits up to a maximum of 10% of emissions.	3
	Offsets	Company funds significant climate mitigation activities beyond the value chain, which it doesn't claim as offsets.	2
Action	Reduction delivery	Company has achieved sustained emissions reductions in the last 5 years, and is on track to meet its targets.	5
	Governance	Company has set up appropriate internal governance structures to deliver reduction targets.	5
	Lobbying	Company's lobbies and advocates for faster action on climate change.	5

4.0 Corporate Scorecards

This section presents the analysis for the assessed companies, including scorecards, listed by ranking, for the 12 companies assessed. The scorecards are prefaced by a brief summary assessment examining the performance of the 12 companies as a whole, and a scenario analysis demonstrating the gap between current plans and the level of action required in the context of achieving a 1.5°C future.

Each scorecard represents a summary of the analysis carried out to determine a company's performance, as of September 2022. As set out in the methodology, each company is scored out of 100 and ranked amongst peers that have also been assessed.

The scorecards provide a summary of a company's overall performance, including any notable initiatives, alongside summaries for the performance of a company in each of the five categories: (1) Measurement & Disclosure, (2) Target Setting, (3) Reduction Plans, (4) Neutralisation & Offset Policies, and (5) Action. A further breakdown of the score received by a company across the 15 criteria is also provided, as well as an emission graph showing each company's historic emissions, current trend, and target ambition relative to 1.5°C-aligned reductions.

Table 4.1. shows the companies ranked by total score from highest to lowest. The total score for each category is also shown, with more details contained in the full scorecards. The full underlying analysis for each company, including sources of information, is included in the appendices of this report.

The scorecards summarise detailed and referenced spreadsheet analysis, which we have issued separately in an online appendix.

Figure 4.1

Summary of company rankings in the overall assessment, and scores across each of the key categories

Rank	Company	Measurements & Disclosure (/20)	Targets (/30)	Reduction Plan (/30)	Offsets & Neutralisation (/5)	Action (/15)	Total (/100)
	Interface	15.0	24.0	16.0	1.8	14.0	71
	Owens Corning	15.2	16.0	18.0	1.2	15.0	65
	Kingspan	14.2	18.0	18.0	0.6	10.0	61
	Velux	15.8	24.0	6.0	1.8	10.0	56
	ThyssenKrupp	15.2	22.0	8.0	0.0	11.0	56
	Saint Gobain	14.8	16.0	16.0	0.6	8.0	55
	Heidelberg	12.0	11.0	19.0	0.6	7.5	50
	Tarkett	13.6	14.0	8.0	0.8	11.0	47
	Rockwool	11.4	12.0	12.0	0.0	9.0	44
	CRH	14.2	10.0	10.0	0.0	8.0	42
	Tata	10.2	8.0	10.0	0.0	6.0	34
	AWI	4.8	4.0	4.0	0.0	5.0	18

4.1. Assessment Summary

No company in this assessment scored well across all of the criteria. The top ranked company (Interface) received only 71/100, and 5 of the 12 companies scored less than 50. While there were good elements to some companies' strategies, most were missing significant levels of detail and rigour.

Only one company - Velux - had interim 1.5°C aligned targets covering all emissions scopes and categories. Commendable targets have also been set by Interface and Kingspan. However, these targets exclude certain Scope 3 categories. All other companies had one or more target with insufficient coverage or ambition, while some companies (AWI, HeidelbergCement and CRH) excluded Scope 3 from their interim targets entirely. Longer term net-zero targets were similarly partial in coverage, with many committing to carbon neutrality without significant commitment to reduce rather than offset their emissions.

No company assessed in this report has published a full, detailed plan to meet their targets, with quantified reduction actions aimed at reducing emissions across each of their key hotspots. Most companies have identified key emissions hotspots and described high level measures to address them. However, little attempt has been made to assess the scale of action needed, or the impact that each of these actions will have on emissions trajectories. Similarly, many company roadmaps rely on technologies that are not yet commercially available. To an extent, this is understandable given the complexities of the sector. However, very few companies have indicated sufficient plans to support the development and deployment of new technologies to address this issue. As such, it appears that many companies are relying significantly on the development of future technologies without providing a plan to develop them.

Three companies - Interface, ThyssenKrupp and Owens Corning - have demonstrated consistent emissions reductions across all scopes over the last 5 years. Most companies have also set up appropriate governance structures in terms of cross-functional working groups, board-level climate accountability, formalised reporting mechanisms, and training and incentive programmes for employees. However, performance on lobbying is mixed - while most companies publicly support increased climate ambition, a significant number employ lobbyists, or are members of organisations, that actively lobby against climate legislation in their operating markets. Some companies may argue that they have little individual control over the actions of large trade bodies. Yet, these 12 companies collectively represent many of the largest construction material companies worldwide, and many hold senior positions in these organisations. The collective membership and power of these companies within these trade bodies suggests that their actions are inconsistent with their public messaging on climate.

No company presented a credible plan to neutralise residual emissions as part of their net zero strategies. Some have companies invested in credits supporting the avoidance or nature-based sequestration of greenhouse gases outside of their value chain. However, no company disclosed projects that were verified, synchronous, transparent, measurable, leakage-minimised and permanent in their removal and storage of greenhouse gases.

Overall, while some specific actions and initiatives can be commended, **no company presented a complete and coherent plan to reduce emissions in line with the levels required to minimise the impacts of climate breakdown** and keep global temperature rises to <1.5°C above pre-industrial levels.

Both individual companies, and the sector as a whole, must significantly increase their levels of ambition and speed of action if this is to be achieved.

Interpreting the score received

We have given each company an overall score out of 100. This table explains how to interpret these scores.

Sufficient

We consider a score above 80 to reflect a **sufficient** plan for emissions reductions in line with the goals outlined by the Paris Agreement. By this, we refer to a company having a complete and coherent plan to reduce emissions in line with the levels required to minimise the impacts of climate breakdown and limit global temperature rises to 1.5°C above pre-industrial levels. Scores below this should be considered inadequate to deliver climate change action at the scale and rate required.

Almost Sufficient

We consider a score between 60 and 80 to be an **almost sufficient** performance, but nevertheless inadequate for meeting 1.5°C-aligned levels of reductions. While a company in this band is likely to show some positive emissions reduction actions and initiatives, including ambitious target setting, governance mechanisms and reporting structures, its performance falls short of delivering climate action in line with a 1.5°C scenario.

Insufficient

We consider a score between 40 and 60 to be an **insufficient** performance for meeting 1.5°C-aligned levels of reductions. A company in this band will have demonstrated limited ambition towards net zero, and implemented some foundational measures such as governance mechanisms. Climate action will fall significantly short of what is required in a 1.5°C scenario as a result.

Highly Insufficient

We consider a score between 20 and 40 to be a **highly insufficient** performance for meeting 1.5°C-aligned levels of reductions. A company in this band will have demonstrated minimal ambition towards net zero, disclosing very little information, if at all, on emissions targets and reduction plans, and implemented few, if any, actions.

Critically Insufficient

We consider a score between 0 and 20 to be a **critically insufficient** performance for meeting 1.5°C-aligned levels of reductions. A company in this band will not have demonstrated any real ambition towards reducing emissions and its efforts are likely to be based only on required reporting to shareholders around governance and emissions.

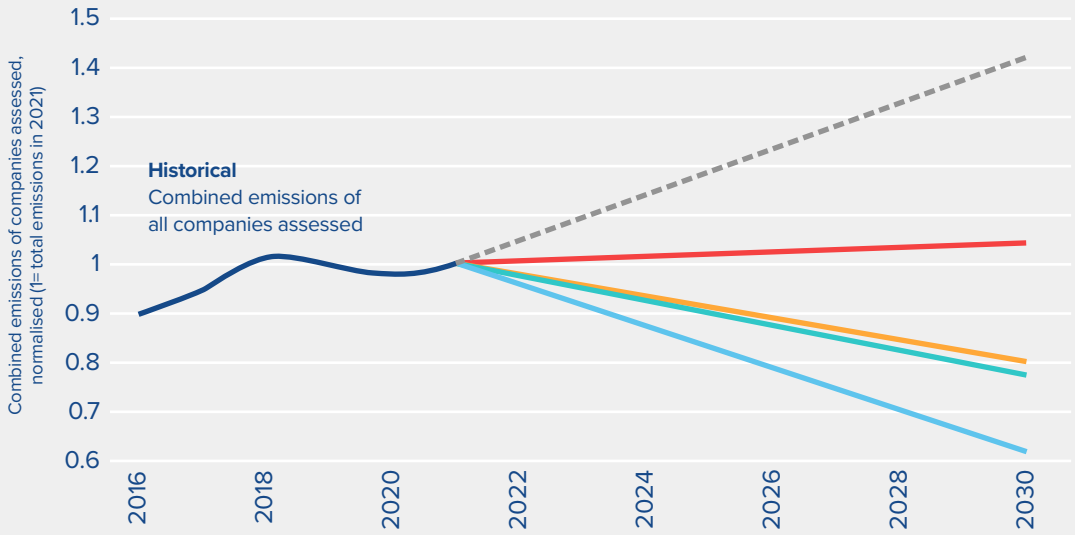
4.2. Scenario Analysis

Target Analysis

As outlined in *Section 4.1 Assessment Summary*, only one of the corporate targets assessed covers all scope 1, 2 and 3 emissions sources, and is in line with a 1.5°C decarbonisation scenario as defined by the Science-Based Targets initiative. Figure 4.2 shows the gap between the aggregated targets of all 12 companies, and the required emissions trajectories for Well Below 2°C and 1.5°C scenarios.

Figure 4.2

Gap between corporate climate targets and levels of action required to align with global climate ambitions



Business As Usual - Global construction output is forecast to grow by 42% from 2020 to 2030, with an associated increase in building materials required.[43] The BAU scenario shows the estimated growth associated with a 42% increase in building materials produced, assuming no reductions in material use or material intensity are achieved.

Company Targets - This scenario shows the projected emissions trajectory if all companies meet their published interim reduction targets. This has been calculated using base and target year emissions for each company, and assuming a linear annual reduction trajectory from their most recent year to their target year.

Company Targets (excl. Tata) - Company targets as explained above, but excluding Tata Steel. Reasons for displaying this are discussed further on the following page.

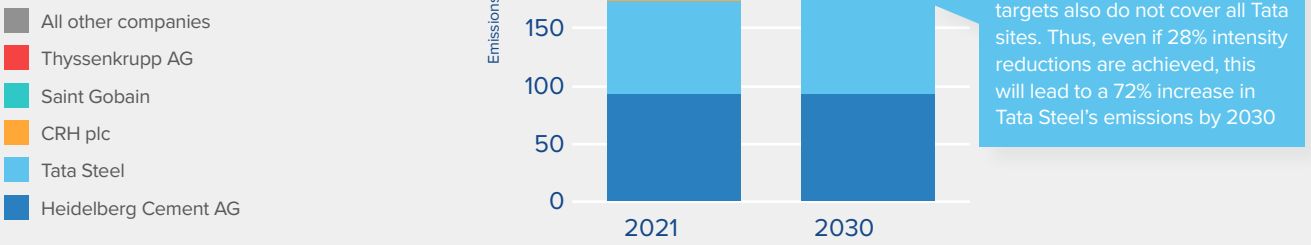
Well Below 2°C - This scenario shows the projected emissions trajectory if all companies reduce emissions at the linear annual rate (2.5%) specified by the Science Based Targets initiative as consistent with a Well Below 2°C scenario, across all emissions scopes.[44]

1.5°C - This scenario shows the projected emissions trajectory if all companies reduce emissions at the linear annual rate (4.2%) specified by the Science Based Targets initiative as consistent with a 1.5°C scenario, across all emissions scopes.[45]

It should be noted that one outlier, Tata Steel, is responsible for a large proportion of the gap between aggregate company target trajectories and WB2°C/1.5°C trajectories - due to its large growth projections and lack of absolute reduction targets (see Figure 4.3). Other companies' targets do not lead to absolute emissions increases, although they are generally still incompatible with a 1.5°C future.

Figure 4.3

Total emissions in 2021 and 2030, based on published reports and company targets, broken down by company for largest 5 companies



Modelling Reduction Plans

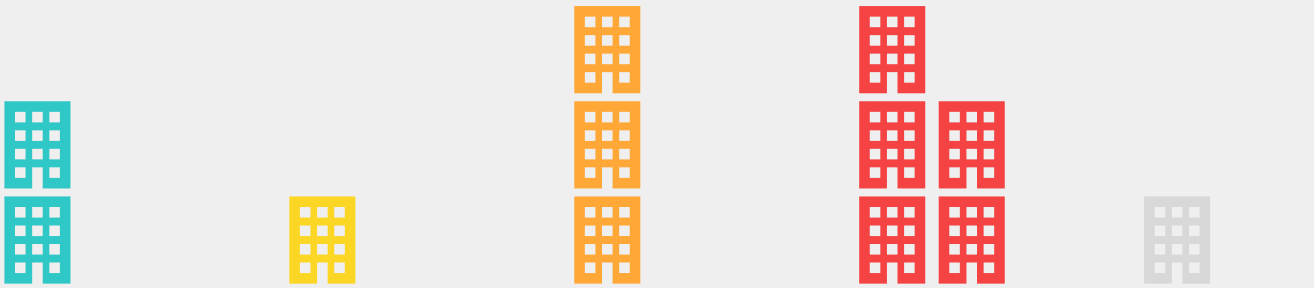
It was not possible to model the total impacts of implementing companies' reduction plans, as insufficient levels of quantifiable information have been published. However, it has been possible to establish that no company has published a plan sufficient to meet its interim reduction targets at this stage.

Recent Emissions Trends

Figure 4.4 shows the emissions trends of companies since their base year. As can be seen, only two companies has reduced emissions at a 1.5°C aligned rate, while half of all companies assessed have increased their emissions. One company (AWI) is yet to publish a Scope 3 emissions inventory.

Figure 4.4

Assessment of historic emissions trends for all companies assessed, from base year to most recent reporting year

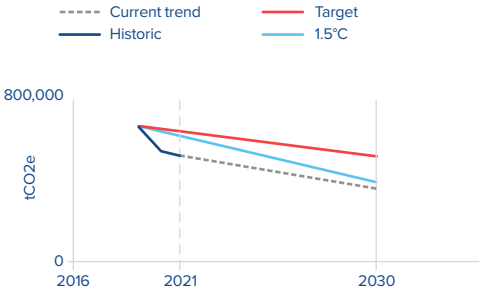


Interface
(flooring)

RANKING **1**

SCORE **71**

Interface has made good progress in terms of reductions, and is vocal about the need for global change and its own contribution. It has also set up good governance and reporting structures. Areas for improvement include: updating interim targets to include all scope 3 emissions, more clearly defining where progress is planned in terms of reductions, rather than offsets, and publishing a detailed reduction roadmap that sets out quantified measures and their contribution to achieving emissions reduction targets.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	1.2	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	6	10
Target ambition: headline	10	10
Target ambition: interim	8	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	4	10
Reduction KPIs	8	10
OFFSETS & NEUTRALISATION		
Neutralisation	0.6	3
Offsets	1.2	2
ACTION		
Reduction delivery	5	5
Governance	4	5
Lobbying	5	5
TOTAL	70.8	100

TARGETS & DISCLOSURE 4 out of 5

Interface has set long and (verified) short-term climate goals, although ambition and coverage could be higher. Through the Climate Pledge scheme Interface has pledged to become net zero by 2040, but the role of offsets in this target is unclear. Reporting is strong, with an annual sustainability report verified by a third party.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 3 out of 5

Interface specifies emissions reduction measures covering key emissions hotspots, but does not quantify their contribution to emissions reduction targets or specify the market readiness of its planned reductions. The company does commit significant funding for delivering emissions reductions. Interface provides some detail on neutralisation, but could be more clear about its offset policy.

ACTION 5 out of 5

Interface is one of only 3 assessed companies to have delivered significant emissions reductions, and has strong governance mechanisms. Interface seems to have no information publicly on negative industry associations, and is a member of UN Global Compact, suggesting Interface strongly supports climate action.

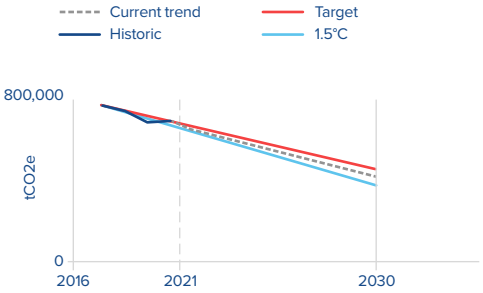
Owens Corning

(insulation, roofing)

RANKING **2**

SCORE **65**

Owens Corning has made good progress on its climate journey, including calculating a scope 1-3 baseline footprint inventory, committing to 1.5°C aligned interim carbon reduction targets via the SBTi, and setting up comprehensive governance, annual reporting systems and reduction pathways for its climate work. Areas for improvement include: quantifying projected reductions for each of the reduction measures specified; fully aligning scope 3 targets to 1.5°C pathway; and, clearly defining a longer-term net-zero target and offset strategy.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	3.6	6
Comprehensiveness of reduction disclosure	3.6	6
Comprehensiveness of offset disclosure	2	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	8	10
Target ambition: headline	0	10
Target ambition: interim	8	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	6	10
Reduction KPIs	8	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	1.2	2
ACTION		
Reduction delivery	5	5
Governance	5	5
Lobbying	5	5
TOTAL	65.4	100

TARGETS & DISCLOSURE 3 out of 5

Owens Corning reports emissions each year and clearly discloses as outside of scopes offsets where they have been purchased. Owens Corning has an ambitious short-term emissions reduction target, but has not explicitly stated a long-term net zero target.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 3 out of 5

Owens Corning has not published a quantified emissions reduction strategy, making reductions actions challenging to evaluate. They do disclose some reduction plans for scope 1 and 2 emissions, through technologically feasible means, and support emerging low-carbon technologies with investment. The company has not published a policy on responsible removal of residual emissions, but does correctly display offsets as separate to reductions where applicable.

ACTION 5 out of 5

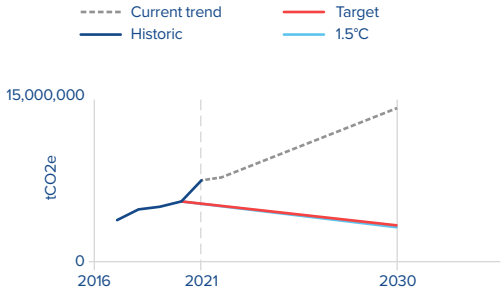
Owens Corning is one of only three assessed companies to have delivered significant emissions reductions. It has set up climate governance infrastructure and fully discloses its lobbying activities, which demonstrate positive stances on climate action.

Kingspan
(insulation)

RANKING **3**

SCORE **61**

Kingspan has made good progress in measuring and disclosing scope 1, 2 and 3 emissions, and setting an ambitious near-term carbon reduction target, verified by the SBTi in line with a 1.5°C pathway. It has also established strong governance and reporting mechanisms. Key areas for improvement include: publishing a quantified emissions reduction strategy; increasing the ambition of its net zero commitment; including all of its Scope 3 emissions in its targets; and, disclosing a policy for responsibly neutralising residual emissions.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0.4	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	6	10
Target ambition: headline	6	10
Target ambition: interim	6	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	6	10
Reduction KPIs	8	10
OFFSETS & NEUTRALISATION		
Neutralisation	0.6	3
Offsets	0	2
ACTION		
Reduction delivery	1	5
Governance	5	5
Lobbying	4	5
TOTAL	60.8	100

TARGETS & DISCLOSURE 3 out of 5

Kingspan discloses all scope 1, 2 and 3 emissions through the CDP. It has set both long and short-term climate goals, although both could be more ambitious and include greater scope 3 coverage. Kingspan does not disclose a quantified emissions reductions plan, or offset policy.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 3 out of 5

Kingspan discloses some of the technologies that it will rely on to reach its targets, including investment and involvement in H2 Green Steel. Kingspan does not publish a quantified emissions reduction plan or assessment of the market readiness of its proposed reduction technologies. Kingspan also does not indicate whether it plans to responsibly neutralise any residual emissions.

ACTION 3 out of 5

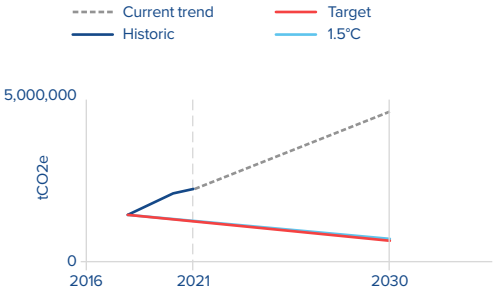
Kingspan has strong climate governance mechanisms in place, campaigns publicly for climate action, and has not been linked to lobbying detrimental to climate policy. However, the company has not delivered sustained emissions reductions across all scopes yet with progress limited to scope 1 and 2 emissions reductions - scope 3 emissions have increased in absolute terms.

Velux
(windows)

RANKING **4**

SCORE **58**

Velux has made some good progress on its climate journey, including calculating a scope 1-3 baseline footprint, committing to 1.5°C-aligned interim carbon reduction targets via the SBTi, and implementing strong governance infrastructure, annual reporting and offset schemes. However, there are some significant omissions from its climate work and key suggested improvements include: development of a quantified emissions reduction plan; clarification that offsets and removals can play only a limited role in its net zero strategy; and, short term action to reverse its increasing emissions trend.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	2	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	10	10
Target ambition: headline	6	10
Target ambition: interim	8	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	0	10
Reduction KPIs	2	10
OFFSETS & NEUTRALISATION		
Neutralisation	0.6	3
Offsets	1.2	2
ACTION		
Reduction delivery	1	5
Governance	4	5
Lobbying	5	5
TOTAL	57.6	100

TARGETS & DISCLOSURE 4 out of 5

Velux has performed well in this category. It has disclosed ambitious long and short-term carbon reductions targets, and detailed information on its offsets projects. As of 2022, Velux now also reports a detailed breakdown of its scope 1, 2 and 3 emissions.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

Velux specifies general reduction measures covering key areas, but does not detail specific actions, or quantify measures in terms of expected carbon impact. It also does not assess the level of technological readiness of its emissions reduction plans. Velux could also be clearer with its policies to responsibly remove residual emissions only, rather than offsetting significant quantities of emissions.

ACTION 3 out of 5

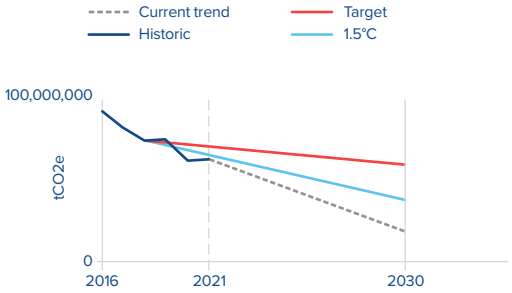
Velux has however not reduced emissions in recent years. While Velux has strong climate governance mechanisms in place, senior board accountability could be strengthened through the linking of rewards packages to climate goals. Velux has not been found to directly or indirectly support lobbying of public bodies or ministers detrimental to climate goals.

ThyssenKrupp
(steel)

RANKING **5**

SCORE **56**

ThyssenKrupp has made a good start on its journey to net zero with the inclusion of scope 1, 2 and 3 emissions in their targets, which will be verified through the SBTi, and the establishment of climate governance mechanisms. ThyssenKrupp has also set out plans to engage all employees in efforts to reduce emissions. Areas for improvement include: publishing quantified emissions reductions plans, committing to reviewing lobbying activities to ensure they are not involved in delaying climate action, and clarifying its stance on carbon offsets and removals.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	6	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0.8	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	10	10
Target ambition: headline	6	10
Target ambition: interim	6	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	0	10
Reduction KPIs	4	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0	2
ACTION		
Reduction delivery	5	5
Governance	5	5
Lobbying	1	5
TOTAL	56.2	100

TARGETS & DISCLOSURE 4 out of 5

ThyssenKrupp has disclosed and verified its short-term target through the SBTi and discloses carbon emissions breakdowns annually through the CDP. However, it only discloses some specific reduction activities and publishes limited information on its offsetting activities.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

ThyssenKrupp publishes little information on specific emissions reduction measures and has not published a detailed and quantified emissions reduction roadmap. ThyssenKrupp AG has announced some plans for hydrogen-reduction steel plants, but there is a general lack of detail on investment in technology, plans to scale developing technologies, or policies to ensure residual emissions are responsibly neutralised.

ACTION 4 out of 5

ThyssenKrupp has delivered significant emissions reductions in recent years and has strong climate governance mechanisms in place. However, it has received a low score for lobbying due to its association with organisations such as the Federation of German Industries (BDI), which takes a negative stance on some EU climate policies.

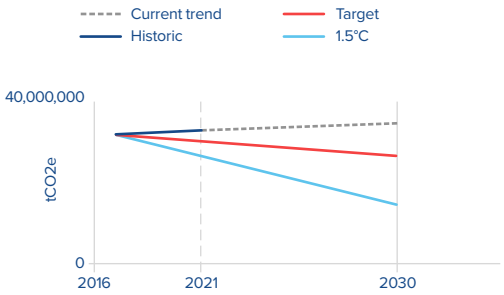
Saint Gobain

(building materials)

RANKING **6**

SCORE **55**

Saint Gobain has set out an ambitious public climate action plan, discloses its Scope 1, 2 and 3 emissions, and has set interim carbon reductions targets for Scope 1, 2 and 3 emissions verified through the SBTi. It has also set a verified 2050 net zero target and implemented strong governance mechanisms and annual reporting systems. Areas for improvement include: publishing a quantified emissions reduction strategy; including all Scope 3 emissions within reduction targets; and, clarifying its policy on neutralisation of residual emissions.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0.4	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	6	10
Target ambition: headline	6	10
Target ambition: interim	4	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	4	10
Reduction KPIs	8	10
OFFSETS & NEUTRALISATION		
Neutralisation	0.6	3
Offsets	0	2
ACTION		
Reduction delivery	1	5
Governance	5	5
Lobbying	2	5
TOTAL	54.8	100

TARGETS & DISCLOSURE 3 out of 5

Saint Gobain discloses all emissions through the CDP. Saint Gobain's membership of the "Business Ambition for 1.5°C" means that they have pledged to prioritise emissions reduction. However, its reduction target currently only includes two-thirds of its Scope 3 emissions. Saint Gobain does not disclose a residual emissions neutralisation strategy.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 2 out of 5

Saint Gobain has explained general reduction measures that cover key action areas of its emissions. However, the company does not publish a quantified emissions reduction plan or assess the need to scale developing technologies. Saint Gobain has invested into renewable energy, but does not appear to have made clear its position on responsible removal of residual emissions.

ACTION 3 out of 5

Saint Gobain has good climate governance mechanisms in place, but achieved recent scope 1 & 2 emissions reductions only. Saint Gobain has continuing membership of some industry associations, such as the IFIEC, CLEPA, and the National Association of Manufacturers that have engaged in negative lobbying on climate policy.

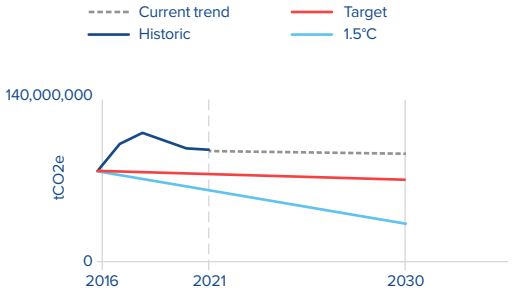
Heidelberg Cement

(cement)

RANKING **7**

SCORE **50**

HeidelbergCement operates in a hard-to-abate sector, but has made a commendable commitment to net zero, as well as setting a science-based interim target. The company is reducing emissions, but needs to accelerate the rate of reduction to meet its targets. Areas for improvement include: explicit inclusion of all Scope 3 emissions in all targets; publishing a detailed roadmap for achieving targets; publishing a policy on offsets; and, influencing industry associations not to obstruct climate action.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	4.2	6
Comprehensiveness of offset disclosure	0	2
Comprehensiveness of action disclosure	2.4	6
TARGETS		
Target coverage	2	10
Target ambition: headline	6	10
Target ambition: interim	3	10
REDUCTION PLANS		
Reduction measures	5	10
Reduction readiness level	6	10
Reduction KPIs	8	10
Neutralisation	0.6	3
Offsets	0	2
ACTION		
Reduction delivery	2.5	5
Governance	4	5
Lobbying	1	5
TOTAL	50.1	100

TARGETS & DISCLOSURE 2 out of 5

HeidelbergCement discloses Scope 1 and 2 emissions, but only some categories of Scope 3. HeidelbergCement has committed to net zero by 2050, and set a Paris-aligned interim target through SBTi, although this includes only Scopes 1 and 2.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 3 out of 5

HeidelbergCement has not quantified planned reduction activities, but indicates that it has done this internally. The company is making significant investment to commercialise technology to reduce emissions from cement. It is likely that it will have to rely on some carbon removals to achieve net zero, however, it appears that no policy has been published to ensure this is done responsibly.

ACTION 3 out of 5

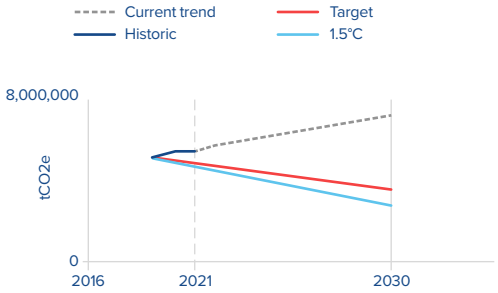
HeidelbergCement has delivered sustained emissions reductions since 2019 and their original 1990 base year, although their most recent 5-year trend shows an emissions increase. While strong climate governance measures have been implemented, the company is associated with CEMBUREAU and the BDI, which have been to lobby against ambitious climate action.

Tarkett
(flooring)

RANKING **8**

SCORE **47**

Tarkett Group discloses its scope 1, 2 and 3 emissions and has submitted an emissions reduction target to the SBTi. It has also implemented strong governance mechanisms. Areas for improvement include: making a clearer public commitment to net zero; including all scope 3 emissions in its reduction targets; publishing a quantified roadmap for carbon reduction; and, publishing a clearer policy on the role of residual emissions removals.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	3.6	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	1.6	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	6	10
Target ambition: headline	4	10
Target ambition: interim	4	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	0	10
Reduction KPIs	4	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0.8	2
ACTION		
Reduction delivery	2	5
Governance	5	5
Lobbying	4	5
TOTAL	47.4	100

TARGETS & DISCLOSURE 3 out of 5

Tarkett Group reports carbon emissions annually through the CDP, and has submitted an interim emissions reduction target to the SBTi. This target does not include all Scope 3 emissions. The company has committed to a net zero pathway. Its 'Carbon Conscious' Programme also outlines some elements of an offsets plan.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

Tarkett Group has outlined actions for some emissions hotspots, but these account for less than 20% of its total footprint, including Scope 3. The company has not yet published an emissions reductions plan that quantifies how its actions will reduce emissions hotspots. However, Tarkett Group has invested in several carbon reduction projects. The company has also indicated that it uses carbon credits for neutralisation, but it has not published a policy on their use.

ACTION 4 out of 5

Tarkett has reduced its emissions intensity, but it has not delivered absolute reductions of its overall emissions. The group has also implemented strong internal climate governance mechanisms, and supports climate action through lobbying and donations to a pro-climate organisation.

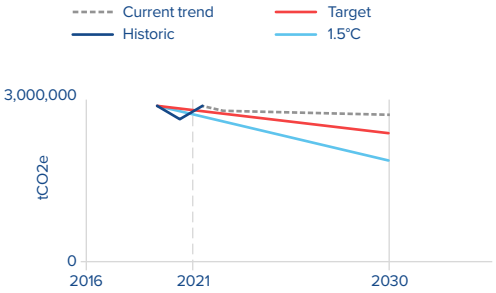
Rockwool

(insulation)

RANKING **9**

SCORE **44**

Rockwool has set interim emissions reduction targets, via the SBTi, covering its scope 1, 2 and 3 emissions and has implemented some climate governance structures. However, despite public support for climate action, it has not set a long-term target. Rockwool has also provided little detail on how it will deliver its planned emissions reductions. Areas for improvement include: setting a net zero target; publishing a quantified emissions reduction strategy, and disclosing a carbon removals policy.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	3	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	8	10
Target ambition: headline	0	10
Target ambition: interim	4	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	2	10
Reduction KPIs	6	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0	2
ACTION		
Reduction delivery	1	5
Governance	4	5
Lobbying	4	5
TOTAL	44.4	100

TARGETS & DISCLOSURE 3 out of 5

Rockwool discloses its scope 1, 2, and 3 emissions annually and has set verified interim reduction targets. However, the lack of a long term climate target and reduction strategy represent significant omissions.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

Rockwool has disclosed a few specific reduction actions, but has not specified measures to cover all its key emissions hotspots nor quantified its actions. Rockwool has invested in some technical solutions for reducing emissions, but not indicated how it plans to scale reductino technologies to market readiness. Rockwool has no apparent policy on the responsible removal of any residual emissions.

ACTION 4 out of 5

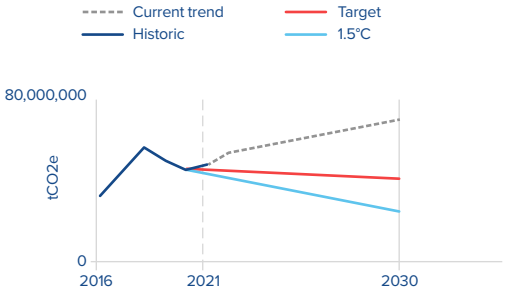
It was not possible to evidence sustained reductions from Rockwool, as the only data it has published since its baseline year was significantly affected by Covid-19 impacts. However, it has implemented strong climate governance structures and demonstrated significant public support for climate action, through its membership and support of groups such as EuroACE.

CRH
(cement)

RANKING **10**

SCORE **42**

CRH operates in a hard-to-abate sector, but has made progress by disclosing its emissions and setting targets through the SBTi. The company has invested in carbon reduction activity, reduced its carbon intensity, and set up good climate governance mechanisms. Areas for improvement include: including scope 3 emissions in reduction targets; quantifying emissions reduction actions, and indicating responsible policies for residual emissions removal. CRH might also reconsider its involvement with industry associations that obstruct climate action.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	5	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0.4	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	2	10
Target ambition: headline	6	10
Target ambition: interim	2	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	0	10
Reduction KPIs	6	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0	2
ACTION		
Reduction delivery	2	5
Governance	5	5
Lobbying	1	5
TOTAL	42.2	100

TARGETS & DISCLOSURE 2 out of 5

CRH discloses comprehensive information on its emissions through the CDP, and has set clear targets through the SBTi. However, the company's SBTi target does not include its Scope 3 emissions and it has not clarified the role offsets will play in achieving its targets.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

CRH is involved in carbon reduction activity, but does not publish an emissions reductions plan that quantifies how its actions will reduce emission hotspots. This means it is hard to assess the technological feasibility of their targets. CRH has also not set out a policy on responsible removal of residual emissions.

ACTION 3 out of 5

CRH has reduced the emissions intensity of a tonne of cement , but it has not delivered sustained emissions reductions. The company has implemented good climate governance mechanisms, such as board-level accountability. However, it maintains affiliations to organisations, such as the National Association of Manufacturers and CEMBUREAU, that have lobbied against climate policy in the US and Europe.

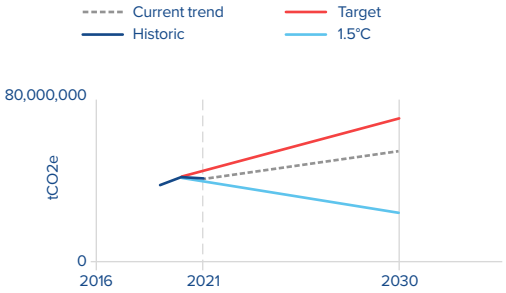
Tata Steel

(steel)

RANKING **11**

SCORE **34**

Tata Steel Group has made some initial steps on its climate journey and signalled a high-level commitment to net zero. However, this has not been formalised through a long-term target. The company lacks a quantified reduction plan, and will continue to increase absolute emissions under its current targets. Areas to improve include: committing to a formal net zero target and absolute emissions reductions in the shorter term; disclosing a quantified reductions strategy; and, reviewing associations with groups lobbying against climate action.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	1.8	6
Comprehensiveness of reduction disclosure	2.4	6
Comprehensiveness of offset disclosure	0	2
Comprehensiveness of action disclosure	6	6
TARGETS		
Target coverage	6	10
Target ambition: headline	0	10
Target ambition: interim	2	10
REDUCTION PLANS		
Reduction measures	4	10
Reduction readiness level	2	10
Reduction KPIs	4	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0	2
ACTION		
Reduction delivery	1	5
Governance	4	5
Lobbying	1	5
TOTAL	34.2	100

TARGETS & DISCLOSURE 2 out of 5

Tata Steel Group discloses an interim emissions reduction target. However, it falls far short of what is required. The group has also not set a long-term target. Through CDP reporting, Tata Steel discloses its emissions across all scopes and some of the technological measures it is taking to meet reduction targets.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

Tata Steel has identified some limited actions to reduce its emissions hotspots. However, the group has not set out a comprehensive and quantified reduction strategy. For example, the group has invested in innovative technologies to reduce the emissions from steel production, but it is not clear how or when it is envisioned that these solutions will scale to reduce emissions across all scopes. Tata has also not disclosed a policy on responsible removal of residual emissions.

ACTION 2 out of 5

Tata Steel has delivered some reductions, but they have not been sustained over the last 5 years. It has implemented climate governance structures, however the group's prominent membership in organisations, such as Eurofer, associates Tata with lobbying to reduce the ambition of EU climate policies.

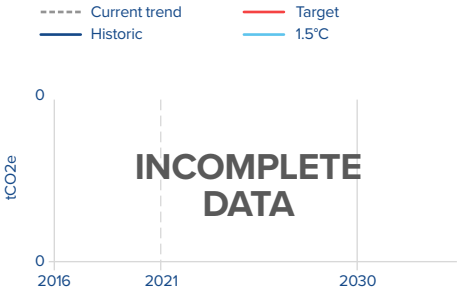
AWI

(ceiling, wall & suspension system solutions)

RANKING **12**

SCORE **18**

Armstrong World Industries, Inc. (AWI) has committed to an interim science-based target and introduced some elements of internal climate governance. However, the company has performed poorly in this scorecard. For example, the current target only covers Scope 1 and 2 emissions and no long term target has been set. AWI has also been associated with industry groups lobbying negatively against climate action. Areas for improvement include: committing to an interim target covering all scopes; disclosing scope 3 emissions, setting a long term target; and, reviewing associations with industry lobbying groups.



Scores

		MAXIMUM POINTS
MEASUREMENT & DISCLOSURE		
Comprehensiveness of target disclosure	2.4	6
Comprehensiveness of reduction disclosure	1.2	6
Comprehensiveness of offset disclosure	0	2
Comprehensiveness of action disclosure	1.2	6
TARGETS		
Target coverage	2	10
Target ambition: headline	0	10
Target ambition: interim	2	10
REDUCTION PLANS		
Reduction measures	2	10
Reduction readiness level	0	10
Reduction KPIs	2	10
OFFSETS & NEUTRALISATION		
Neutralisation	0	3
Offsets	0	2
ACTION		
Reduction delivery	1	5
Governance	3	5
Lobbying	1	5
TOTAL	17.8	100

TARGETS & DISCLOSURE 1 out of 5

AWI has committed to setting an interim target through the SBTi, but has not committed to a long-term climate goal. The company's current emissions reductions target only covers scope 1 and 2 emissions, and annual reporting does not yet include Scope 3 emissions.

REDUCTION PLANS, OFFSETS & NEUTRALISATION 1 out of 5

AWI has not published any significant detail on planned emissions reduction action. This lack of detailed plans makes it hard to assess the feasibility of its climate targets. AWI has also not published a policy on responsible removal of residual emissions.

ACTION 2 out of 5

AWI has set out some sustainability governance and reporting structures. While the company has recognised the climate crisis and the need for corporations to act, AWI has not delivered sustained emissions reductions and maintains membership of industry groups, including the National Association of Manufacturers, which have lobbied against climate action.

5.0. Towards best practice

Of the 12 companies assessed in this report, none have scored well across all of the criteria. This chapter expands on what we consider best practice corporate climate action. We have included some examples of excellent practice by two of the assessed companies and one company, Ørsted, outside of the scorecard. However, for some criteria we have not been able to identify examples of best practice, further highlighting the need for more ambitious climate action across the corporate world.

5.1 Targets

Best practice: Companies should set out credible and science-based long term and interim targets. The scope and boundaries of these targets should be clearly defined by the company and be in line with recognised greenhouse gas accounting standards. Where relevant, separate targets for reductions and neutralisation should also be set out. External verification, by recognised third parties, of both interim and long term targets should also be sought by companies.

Best practice examples:

Interface has set ambitious emissions reduction targets. Its interim target has been verified by the SBTi, aligns with a 1.5°C pathway, covers scopes 1, 2 and 3, and clearly sets out its boundaries. As a signatory to the Business Ambition for 1.5°C campaign, Interface has also signalled its intent to commit to aligning with a 1.5°C pathway beyond its interim target and to achieve net-zero. Alongside this, Interface has signed up to The Climate Pledge, which involves a commitment to achieving net zero by 2040 - 10 years ahead of the Paris Agreement. This ambitious public commitment represents a leading approach in the construction sector.

Ørsted is not included in this report, but provides an example of how a high-emitting company can transform its business for a net zero world. A decade ago the company's core business was gas-fired power generation. Now, it is an offshore wind specialist and the world's first energy company with a net zero target validated by the SBTi.[47] The target is for 2040 - 10 years ahead of the Paris Agreement. To achieve this, Ørsted has committed to reducing scope 1, 2 and 3 emissions by 99% per kWh by 2040.[48] The company has also set 1.5°C aligned interim targets with a commitment to reduce its scope 1 and 2 GHG emissions by 98% per kWh by 2025 (from a 2006 base year) and reduce scope 3 GHG emissions 50% by 2032 (from a 2018 base year).[49]

5.2 Reduction Plans

Best practice: Having set out their interim and long term targets, companies should look to set out quantified, robust, and detailed emissions reduction strategies. Public disclosure of such plans demonstrates not only a company's commitment to its climate targets, but also the credibility of the company's plans, and action, to meet these targets.

> **Quantified** - strategies should specify the reduction measures that companies will take with regards to their key emissions hotspots and provide quantified estimates that cover 100% of the company's targeted reductions. Timelines for the implementation of these measures should be set out and where relevant, KPIs for monitoring their implementation and progress should be included.

Robust - strategies should be robust in that they set out reduction measures reliant on commercially-available technologies or technologies that the company is commercialising through investment.

Detailed - strategies should provide full detail on their implementation of the planned measures, including any flagship projects; details on how measures will be scaled to full operation; the investments being made in commercialising new solutions; and, the expected overall cost of implementing these plans and how companies intend to fund this plan, such as, through the implementation of an internal carbon price.

5.3 Offsets & Neutralisation

Best practice: Companies should publicly disclose their carbon offset policy. The ideal scenario is for companies to reach absolute zero in their emissions, without the use of offsets, and simultaneously fund beyond value chain mitigation. However, this will not always be possible, particularly in hard-to-abate sectors. Where offsets are required, companies should restrict their use to a maximum of 10% of their baseline year emissions. Purchased offsets should also meet certain criteria, as set out in Table A.9 of this report's Appendix. Companies should make annual public disclosures that outline the offsets purchased, projects invested in, their external accreditation, and detail how they meet best practice.

In terms of beyond the value chain mitigation, companies should publicly disclose any financial support provided for such activities and they should align with the criteria set out in Table A.10 of this report's Appendix. Detail should be provided on the projects funded and it should be clear that the company has not claimed any credits arising from the project to neutralise its own emissions.

None of the companies assessed in this report have demonstrated best practice in terms of their public policies on offsets for neutralisation and financial support for climate change mitigation activities beyond the value chain.

5.4 Actions

Best practice: Companies should have implemented foundational measures to enable emissions reductions, and delivered sustained reductions over the last 5 years in line with their climate targets. Climate performance should also have been implemented within a company's governance structure and should meet the criteria set out in Table A.12 in this report's Appendix, with accountability at the board level. Finally, companies should not be found to have engaged either directly, or indirectly, in lobbying against, or to reduce, the ambition of climate action. Instead, it is expected that companies demonstrate support for increasing ambition and pushing for immediate action.

Best practice example:

Owens Corning achieves full marks for all criteria the *Action* category of the scorecard. The company has implemented good climate-related governance, been found to be positively lobbying for climate action, and delivered emissions reductions:

Sustained emissions reductions: Owens Corning has delivered sustained emissions reductions since it began reporting emissions in 2018, apart from a brief irregularity due to the Covid-19 pandemic. These reductions are not quite at the levels consistent with a 1.5°C future across all scopes, but given the short timescales and challenging global situation it is considered that

Owens Corning has begun to implement the foundational measures required to position it to deliver these reductions in the future.

Climate governance: Owens Corning has also implemented a comprehensive governance structure with board-level accountability, senior executives' award packages linked to climate targets, cross-functional working groups to drive reduction delivery, internal climate-related training annually, and formalised reporting and disclosure mechanisms.

Climate lobbying: Owens Corning discloses its lobbying activities, including links to trade bodies with positive stances on climate change, and no links to organisations lobbying against climate change have been found.

6.0. Recommendations

Based on the results of this assessment, a significant increase in the urgency and level of ambition of corporate climate action is needed across the building materials and construction sector. Key recommendations and outcomes of the report are listed below.

1. Companies should set short term targets in line with 1.5°C-aligned science based trajectories, covering all emissions scopes and categories as defined by the GHG Protocol. They should also set net zero targets aligned with the same pathway, and covering all emissions scopes, with the latest target date being 2050.
2. Companies should develop emissions reduction plans, with quantified reduction actions covering all sources of emissions. These plans should directly relate specific actions to carbon reduction estimates, and indicate how these will combine to achieve overall carbon targets.
3. Companies should collaborate across the sector to identify solutions that are not yet commercially viable, and develop a clear plan to urgently support and scale these solutions to become commercially viable in the next 5-10 years.
4. Companies should align all corporate lobbying and both public and private communications efforts with their published climate ambitions. This should include calls to action for national governments, positive feedback for climate legislation during industry consultations, and vocal support for increased climate ambition in industry bodies and trade associations.
5. Companies should develop a transparent and credible plan to neutralise residual emissions where required. Neutralisation should only be used where it is not technologically possible to abate emissions.

Overall, while it is apparent that companies are taking some action on climate, it is clearly not being prioritised to the extent that is required for the sector to contribute to averting dangerous levels of climate breakdown. Both individual companies, and the sector as a whole, must urgently increase the levels of investment, ambition, and action being taken to mitigate greenhouse gas emissions.

Appendix A - Scoring Criteria

A.1. Assessment Criteria Scoring Frameworks

This section outlines the guiding principles, scoring framework and relative weighting of each criteria.

A.1.1. Measurement & Disclosure

Measurement & Disclosure criteria aim to assess companies' transparency with regards to disclosure of their targets, reduction strategies, offset strategies and actions taken. These criteria do not assess companies' the integrity or level of ambition of companies' disclosure, as these are covered in other criteria.

i) Comprehensiveness of target disclosure (5%)

Companies should disclose both their long term net-zero target and their interim target(s), with separate targets made for reductions and neutralisation. These targets should have a clearly defined scope, boundary, baseline year and target year. To achieve maximum marks, these targets should be verified through an independent third party verification standard such as the Science Based Targets initiative (SBTi). This criterion is split into two scores out of 5, totalling a maximum score out of 10 for target disclosure, as shown in table A.1. below:

Table A.1:
Scoring framework for Comprehensiveness of target disclosure criterion (long term)

Company discloses a long term target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant. Company has verified long term target via third party target verification process (e.g. SBTi).	**10**
Company discloses a long term target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant. Company is committed to verifying long term target via third party target verification process (e.g. SBTi)	**8**
Company discloses a long term target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant	**6**
Company discloses a long term target, with scope and boundaries clearly defined	**4**
Company discloses a long term target but does not define scope and boundaries	**2**
Company has no disclosed long term emissions reduction target	**0**

Table A.1:
Scoring framework for Comprehensiveness of target disclosure criterion (interim)

Company discloses an interim target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant. Company has verified interim target via third party target verification process (e.g. SBTi).	**5**
Company discloses an interim target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant. Company is committed to verifying interim target via third party target verification process (e.g. SBTi)	**4**
Company discloses an interim target, with scope and boundaries clearly defined, and separate targets made for reductions and neutralisation where relevant	**3**
Company discloses an interim target, with scope and boundaries clearly defined	**2**
Company discloses an interim target but does not define scope and boundaries	**1**
Company has no disclosed interim emissions reduction target	**0**

ii) Comprehensiveness of reduction disclosure (5%)

Companies should disclose details of specific reduction actions planned, their estimated impact, and an indication of how each action contributes to the company meeting its overall interim and long term targets. For full marks, companies should also disclose the underlying KPIs it plans to track on a regular basis (annual or more frequent) to monitor its progress towards completing these actions.

Table A.2:
Scoring framework for Comprehensiveness of reduction disclosure criterion

Company discloses detailed (quantifiable) emissions reduction actions, for all sources of emissions. Company also discloses key performance indicators and their relation to the headline targets.	**10**
Company discloses detailed (quantifiable) emissions reduction actions, for all sources of emissions	**8**
Company discloses detailed (quantifiable) emissions reduction actions, for some sources of emissions	**6**
Company discloses specific reduction actions, but does not quantify expected reduction impacts	**4**
Company discloses key areas for reduction actions, but no further detail	**2**
Company does not state how it intends to reach its targets	**0**

iii) Comprehensiveness of offset disclosure (5%)

If a company intends to use greenhouse gas removals to neutralise residual emissions in achieving net zero, they must disclose full details of the role of these removals in doing so. This includes disclosure of the estimated percentage of baseline emissions to be removed, the type and verification standard of the intended project, and all measures taken to avoid issues such as leakage, lack of additionality, non-permanence and temporality. Similarly, if a company seeks to fund offset programmes beyond neutralisation of residual emissions, they must again disclose full details of the projects as previously outlined. If a company does not seek to use any carbon removals or offsets and instead intends to achieve absolute zero emissions, they must simply disclose this commitment to score 10/10 in this criterion.

Table A.3:
Scoring framework for Comprehensiveness of offset disclosure criterion

Company discloses full details on specific offset projects funded, and their contribution to the overall offset strategies for neutralising emissions, and providing further offsets beyond this where relevant. Companies that plan to achieve absolute zero, and reduce emissions to zero without the use of any carbon removals, can also score 10/10.	**10**
Company discloses details on type and verification standard of offsets specified, with separate strategies for neutralisation and wider offsets where relevant, and/or some detail on specific offset projects funded	**8**
Company discloses details on type and verification standard of offsets specified	**6**
Company discloses details on type of offsets specified	**4**
Company states an ambition to offset and neutralise emissions, but does not provide any further detail	**2**
Company does not disclose an offset strategy	**0**

iv) Comprehensiveness of action disclosure (5%)

In order to track companies' own progress in taking action to reduce their emissions, companies should disclose a full Scope 1, 2 and 3 footprint on an annual or more frequent basis. This footprint should have a clearly defined scope and boundary in line with the Greenhouse Gas Protocol Corporate Standard, or an equivalent framework. To achieve full marks, these footprints must be verified by a third party, or disclosed via a third party reporting standard such as CDP.

Table A.4:
Scoring framework for Comprehensiveness of action disclosure criteria

Company discloses Scope 1, 2 and 3 emissions, broken down by emissions hotspot, on an annual (or more frequent) basis. The scope and boundary are defined as outline in the GHG Protocol Corporate Standard, or equivalent standard. Emissions are verified and/or disclosed to CDP reporting, or equivalent standard.	**10**
Company discloses Scope 1, 2 and 3 emissions, broken down by emissions hotspot, on an annual (or more frequent) basis. The scope and boundary are defined as outline in the GHG Protocol Corporate Standard, or equivalent standard.	**8**
Company discloses Scope 1, 2 and 3 emissions at a high level, on an annual (or more frequent) basis. The scope and boundary are defined as outline in the GHG Protocol Corporate Standard, or equivalent standard.Company discloses details on type of offsets specified	**6**
Company discloses Scope 1 and 2 emissions only, on an annual (or more frequent) basis	**2**
Total GHG emissions (tCO2e) are not reported on an annual (or more frequent) basis	**0**

A.1.2 Targets

Targets criteria aim to assess companies' emissions reduction targets, including their coverage, integrity, and level of ambition relative to achieving a 1.5°C future. Both long term (net-zero) and interim targets are assessed on this basis.

i) Target coverage (10%)

Companies should set targets covering all scope 1, 2 and 3 sources as defined by the GHG Protocol Corporate Standard, or equivalent framework. For full marks, companies should include all required and optional scope 3 sources, but set separate targets for optional sources. For example, indirect emissions from product use (e.g. washing of clothes) are considered optional in the GHG Protocol Corporate Standard – best practice is to include these in order to monitor and track reductions, but to include them as a separate target – to avoid emissions outside of direct influence distracting from companies' direct value chain emissions. This criterion seeks to ensure that companies have at least one target covering these sources, and as such can be met by either an interim or a long term target.

Table A.5:
Scoring framework for Target coverage criterion

Company has emissions reduction target(s) covering all required scope 1, 2 and 3 sources, as defined by the GHG Protocol Corporate Standard, or equivalent - with separate targets for optional GHG Protocol source not included in required emissions boundary.	**10**
Company has emissions reduction target(s) covering all required scope 1, 2 and 3 sources, as defined by the GHG Protocol Corporate Standard, or equivalent.	**8**
Company has emissions reduction target(s) covering scope 1, 2 and major scope 3 sources	**6**
Company has emissions reduction target(s) covering scope 1 and 2 only	**2**
Company does not have an emissions reduction target	**0**

ii) Target ambition: long term (10%)

Companies should set a net-zero or equivalent target by latest mid-century, but ideally earlier. These targets should specify emissions reduction as a priority, and set separate emissions reduction and neutralisation targets to reflect this. For example, the SBTi's cross-sector pathway requires a minimum 90% reduction in absolute emissions relative to baseline year in order to attain net-zero, with all residual emissions neutralised once the 90% threshold has been reached. If a specific figure has not been given in the target, but companies' emissions reduction plans indicate this ambition, points may be awarded to reflect this.

Note – while there is a separate target above for target coverage, target coverage is still taken into account here as it was deemed unfair to score any target excluding all scope 3 emissions higher than a 2 out of 10.

Table A.6:
Scoring framework for Target ambition: long term criterion

Company has net zero target of 2040 or earlier, with coverage of scopes 1, 2 and all scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies emissions reduction as priority, with separate, quantified targets for residual emissions and neutralisation targets OR indicative emissions reduction plans supporting this.	**10**
Company has net zero target of 2040 or earlier, with coverage of scopes 1, 2 and all scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies emissions reduction as priority, with separate, quantified targets for residual emissions and neutralisation targets OR indicative emissions reduction plans supporting this.	**8**
Company has net zero target of 2050 or earlier, with coverage of scopes 1, 2 and all scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies emissions reduction as priority, but does not define residual emissions and neutralisation targets separately.	**6**
Company has net zero target of 2050 or earlier, with coverage of scopes 1, 2 and all important scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies emissions reduction as priority, but does not define residual emissions and neutralisation targets separately.	**4**
Company has net zero target of 2050 or earlier but target only includes scope 1 and 2, OR does not specify emissions reduction as priority.	**2**
Company does not have a long term emissions reduction target.	**0**

iii) Target ambition: interim (10%)

Companies should set interim emissions target(s), with at least one of those targets covering the immediate (≤5 years) time period. These targets should include specific emissions reduction targets, and be aligned with the level of reduction necessary to meet a 1.5°C future, as outlined by the SBTi.

Note – while there is a separate target above for target coverage, target coverage is still taken into account here as it was deemed unfair to score any target excluding all scope 3 emissions higher than a 2 out of 10.

Table A.7:
Scoring framework for Target ambition: interim criterion

Company has interim reduction target of ≤5 years aligned with a 1.5°C trajectory, with coverage of scopes 1, 2 and all scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies target is for emissions reductions only, and all targets are absolute 1.5°C-aligned reduction targets.	**10**
Company has interim reduction target of ≤10 years aligned with a 1.5°C trajectory, with coverage of scopes 1, 2 and all scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies target is for emissions reductions only, and all targets are absolute 1.5°C-aligned reduction targets.	**8**
Company has interim reduction target of ≤10 years aligned with a 1.5°C trajectory, with coverage of scopes 1, 2 and all important scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies target is for emissions reductions only, but Scope 3 target is intensity-based.	**6**
Company has interim reduction target of ≤15 years aligned with a 1.5°C or WB2°C trajectory, with coverage of scopes 1, 2 and all important scope 3 sources as defined by GHG Protocol Corporate Standard. Target specifies target is for emissions reductions only.	**4**
Company has interim reduction target of ≤15 years aligned with a 1.5°C or WB2°C trajectory, but target only includes scope 1 and 2, OR does not specify target is for emissions reductions only.	**2**
Company does not have interim emissions reduction targets.	**0**

A1.3. Reduction planning

i) Reduction measures (10%)

Companies should develop a list of specific reduction actions to be delivered, covering each of their key emissions hotspots. While it is difficult to predict the exact impact of each measure, a quantified estimate should be made to ensure that the scale of reduction measures is appropriate to meet the targets set by the company. To achieve full marks, this list should include deadlines for completion of each of these reduction measures.

Table A.8:
Scoring framework for Reduction measures criterion

Company specifies emissions reduction measures covering each of their key emissions hotspots, with quantified reduction estimates covering 100% of emissions reduction targets and indicating timing of expected reduction measures	**10**
Company specifies emissions reduction measures covering each of their key emissions hotspots, with quantified reduction estimates covering 100% of emissions reduction targets	**8**
Company specifies emissions reduction measures covering each of their key emissions hotspots, with quantified reduction estimates covering >80% of emissions reduction targets	**6**
Company specifies emissions reduction measures covering each of their key emissions hotspots, but does not indicate the expected scale of their impact and how they scale to meet emissions reduction targets	**4**
Company mentions some emissions reduction measures, but does not relate these to key emissions hotspots, indicate the scale or timing of their impact, or indicate how they contribute to reaching emissions reduction targets	**2**
Company has no significant plans for reducing emissions	**0**

ii) Commercial readiness (10%)

Companies should assess the commercial readiness of reduction solutions selected, to ensure that reduction strategies do not rely on unachievable levels of scaling and technological innovation. It is recognised that not all emissions can be abated with existing commercially available technologies, particularly in the construction materials sector, and so companies can score points for either selected commercially available solutions, or by playing an active role in commercialising any solutions that are not yet market-ready. 'Commercial readiness' of solutions has been defined on a case-by-case basis based on industry publications, sector benchmarks and widespread availability of the technologies in question.

Table A.9:
Scoring framework for Commercial readiness criterion

100% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**10**
>90% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**8**
>75% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**6**
>50% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**4**
>25% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**2**
<25% of targeted emissions reductions rely on commercially-available technologies or on technologies the company is playing an active role in commercialising.	**0**

iii) Reduction planning (10%)

Companies should develop detailed implementation plans for how it intends to scale up and deliver reduction actions specified in the sections above. This includes launching of flagship projects (e.g. hydrogen-powered steel plants), routes to market for scaling flagship projects to widespread implementation, significant investment in measures with low TRL (Technological Readiness Level, as defined by NASA), clearly defined timings and KPIs for monitoring progress, and an indication of approximate costs and funding sources for these plans.

Table A.10:
Scoring framework for Reduction planning criterion

Company provides detailed plan for funding and delivering emissions reductions measures, including: • specification of flagship projects • description of route to scaling these up to full operational implementation • significant investment in measures with low TRL • clearly defined KPIs and timings for implementation and monitoring of emissions reductions • approximate costing of plans and indication of funding source (e.g. internal carbon price)	**10**
Company provides plan for funding and delivering emissions reductions measures, including four of the above measures	**8**
Company provides plan for funding and delivering emissions reductions measures, including three of the above measures	**6**
Company provides plan for funding and delivering emissions reductions measures, including two of the above measures	**4**
Company provides plan for funding and delivering emissions reductions measures, including one of the above measures	**2**
Company does not indicate when or how it plans to implement reduction measures	**0**

A1.4. Neutralisation & Offsets

i) Neutralisation (3%)

While carbon removals and offsets are not a priority, construction materials producers do cover various hard-to-abate sectors, and as such it is possible that a degree of neutralisation is required to achieve net-zero. Where this is the case, companies should rely on removals to neutralise no more than 10% of baseline year emissions, and should meet all of the criteria outlined in the table below.

Table A.11:
Scoring framework for Neutralisation criterion

The company explicitly commits to procure only credits equivalent to a maximum of 10% of its baseline year emissions, that comply with the following criteria: • Projects are additional in the context of safeguarding Paris ambition (high hanging fruits). • Credits will be used only to neutralise residual emissions from hard-to-abate emission sources. • Carbon dioxide removals will have a high likelihood of high permanence. • The specific means of carbon dioxide removal and storage is not "scarce" and not associated with high environmental costs - see table below. • Removals are verified, synchronous, transparent, measurable and leakage-minimised.	**10**
The company explicitly commits to procure only credits equivalent to a maximum of 10% of its 2019 emissions, that comply with four of the above criteria	**8**
The company explicitly commits to procure only credits equivalent to a maximum of 10% of its 2019 emissions, that comply with three of the above criteria	**6**
The company explicitly commits to procure only credits equivalent to a maximum of 10% of its 2019 emissions, that comply with two of the above criteria	**4**
The company explicitly commits to procure only credits equivalent to a maximum of 10% of its 2019 emissions, that comply with one of the above criteria	**2**
Company does not indicate a plan to neutralise residual emissions	**0**

Table A.12:

Neutralisation project type reference table, from New Climate Institute (2022) [50]

APPROACH		FACTORS AFFECTING SUITABILITY FOR OFFSETTING				
			Scarcity in terms of additional potential (A) ($GtCO_2e$-yr)			
		LIKELY PERMANENCE	TOTAL TECHNICAL POTENTIAL	ENVIRONMENTALLY CONSTRAINED POTENTIAL	ENVIRONMENTAL CONSTRAINTS	DISPLACEMENT OF EMISSIONS
CDR measures with mineral storage have a reasonable likelihood to meet the criteria of permanence and additional potential to be considered a credible neutralisation of residual emissions from hard-to-abate emission sources. Uncertainties on the environmental limitations mean that the credibility of claiming the neutralisation of other unabated emissions is contentious.	**ENHANCED WEATHERING**	Centuries to millenniums	Likely vast 4-95 (Lenton, 2014; Taylor et al., 2015; Strefler et al., 2018)	Finite but possibly moderate 2-4 (Fuss et al., 2018)	Loss of habitats, water and air pollution from rock mining.	No issue
	MINERAL CARBONATION	Centuries to millenniums	Likely vast 8,200-34,700 $GtCO_2e$ cumulative (Kelemen et al., 2019)	Unknown, likely vast	High-water requirements; induced seismicity; groundwater contamination.	No issue
For BECCS and DACCS with underground storage, high storage permanence is possible, although uncertainty on the risk of leaks remains. The limited additional potential of these measures, as well as the considerable environmental concerns and energy system inefficiencies, mean that these measures are not a reasonable equivalent alternative to emission reductions for unabated emissions when further emission reductions are feasible.	**BIOENERGY WITH CARBON CAPTURE AND STORAGE (BECCS)**	Theoretically centuries to millenniums, (uncertain)	Finite and possibly scarce 0.4-11.3 (Roe et al., 2019)	Finite and possibly scarce 0.5-5 (Fuss et al., 2018)	Land scarcity; monoculture affecting biodiversity and soil health; very high-water requirements.	No issue
	DIRECT AIR CARBON CAPTURE AND STORAGE (DACCS)	Theoretically centuries to millenniums, (uncertain)	Likely vast 5-40 (Fuss et al., 2018)	Finite and possibly scarce 0.5-5 (Fuss et al., 2018)	High water and energy requirements; pollution from by-products.	No issue
CDR measures based on biological capture and storage do not have the necessary degree of permanence, nor the additional potential, to be credibly considered an equivalent to emission reductions. These measures are also vulnerable to the displacement of emissions to other locations.	**SOIL CARBON SEQUESTRATION**	Years to decades	Finite and possibly scarce 0.3-6.8 (Roe et al., 2019)	Finite and possibly scarce 0.9-1.9 (Hepburn et al., 2018)	Soil saturation; land scarcity.	Vulnerable
	SOIL CARBON	Decades to centuries	Finite and possibly scarce 0.03-6.6 (de Coninck et al., 2018)	Finite and possibly scarce 0.3-2 (Fuss et al., 2018)	Plant resilience; ecosystem albedo; land degradation; loss of habitat.	Vulnerable
	AFFORESTATION & REFORESTATION (AR)	Years to decades	Finite and possibly scarce 0.5-10.1 (Roe et al., 2019)	Finite and possibly scarce 0.5-3.6 (Fuss et al., 2018)	Land availability; food security.	Vulnerable

ii) Offsets (2%)

Beyond neutralising residual emissions, some companies choose to offset their emissions, through purchasing credits or investing in projects for the avoidance or removal of carbon emissions from the atmosphere. This is not a key part of a successful climate strategy, however some limited credit can be given to companies who have done this, as long as they meet the criteria outlined below. Where companies have made neutralisation claims but these have not been accepted by this framework in the previous section (for example if a company claimed to be neutralising emissions but was doing so with an emissions avoidance project), these credits have been considered in this section.

Table A.13:
Scoring framework for Offsets criterion

Separate to its neutralisation claims, the company provides an ambitious volume of financial support to climate change mitigation activities beyond the value chain. This activity meets the following criteria: • The company does not use any credits arising from the projects to claim the neutralisation of its own emissions. • The volume of finance is derived from, or at least equivalent to, an internal carbon tax across all scope 1, 2 and 3 emissions at a Paris-compatible price level. • Credits should only be procured from projects that are compatible with net-zero emission technology and infrastructure. • The transactions are subject to corresponding adjustments. • Projects are additional in the context of safeguarding Paris ambition (high hanging fruits).	**10**
Separate to its neutralisation claims, the company provides an ambitious volume of financial support to climate change mitigation activities beyond the value chain. This activity meets four of the above criteria.	**8**
Separate to its neutralisation claims, the company provides an ambitious volume of financial support to climate change mitigation activities beyond the value chain. This activity meets three of the above criteria.	**6**
Separate to its neutralisation claims, the company provides an ambitious volume of financial support to climate change mitigation activities beyond the value chain. This activity meets two of the above criteria.	**4**
Separate to its neutralisation claims, the company provides an ambitious volume of financial support to climate change mitigation activities beyond the value chain. This activity meets one of the above criteria.	**2**
The company does not invest in any offset mechanisms.	**0**

A1.5. Action

i) Reduction delivery (5%)

Given the urgency and long-standing knowledge of the need for action on climate, companies with credible climate plans should already be delivering sustained emissions reductions across all scopes. These should be absolute and intensity reductions, meaning growth must be decoupled from emissions, and should be occurring at a rate aligned with the reduction targets set by the company. There should also be evidence that companies have set up the correct procedures, structures and foundations (both operationally and in terms of governance) to continue to deliver these reductions in the coming years.

Table A.14:
Scoring framework for Reduction delivery criterion

• Company has delivered sustained emissions reductions (absolute AND intensity) over a period of at least 5 years • Company is on track to meet both its interim and long term targets since its baseline year • The company has implemented all foundational measures required to set up further reductions in future.	**10**
• Company has delivered sustained emissions reductions (absolute OR intensity) over a period of at least 5 years, and absolute emissions have not risen • Company is on track to meet both its interim and long term targets since its baseline year • The company has implemented or begun to implement all foundational measures required to set up further reductions in future.	**8**
• Company has delivered sustained emissions reductions (absolute OR intensity) over a period of at least 5 years, and absolute emissions have not risen • Company is on track to meet both its interim and long term targets since its baseline year • The company has implemented or begun to implement some foundational measures required to set up further reductions in future.	**6**
Company meets two of the above criteria	**4**
Company meets one of the above criteria	**2**
Company has not delivered any emissions reductions or set up infrastructure to do so.	**0**

ii) Governance (5%)

Companies should set up clear governance structures to allow and incentivise all employees to take the required action on climate This includes setting up board-level accountability for meeting climate targets (i.e. at least one board member with specified climate responsibilities), linking of senior executive rewards packages to climate performance, cross-functional working groups to embed climate across the business, regular internal training specific to job roles, and formalised structures for reporting on greenhouse gas emissions both internally and publically.

Table A.15:
Scoring framework for Governance criterion

Company has set up infrastructure and governance structures to deliver reduction targets, including: • Board-level accountability for meeting climate targets • Senior executive rewards packages aligned to climate targets • Cross-functional working groups set up to embed climate emissions reduction delivery • Regular (min. annual) internal training on climate issues specific to roles • Formalised reporting and disclosure mechanisms, both internally and externally	**10**
Company has set up infrastructure and governance structures to deliver reduction targets, including four of the above	**8**
Company has set up infrastructure and governance structures to deliver reduction targets, including three of the above	**6**
Company has set up infrastructure and governance structures to deliver reduction targets, including two of the above	**4**
Company has set up infrastructure and governance structures to deliver reduction targets, including one of the above	**2**
Company has no apparent governance structures in place relevant to reducing carbon emissions	**0**

iii) Lobbying (5%)

Companies' external positioning should be clearly aligned to their claimed stance on climate, meaning that they should be lobbying for greater collective action in industry groups, calling for greater action on climate from governments, and supporting climate-related measures in policy consultations and negotiations. This applies not only to the companies, but the industry groups they join, their representatives, and any paid lobbyists working on their behalf. For example, a company that claims to be taking serious action on climate while simultaneously lobbying against climate measures will score low marks in this criterion.

Table A.16
Scoring framework for Lobbying criterion

Company or company representative have been found to have engaged significantly in lobbying for climate action in the public sphere.	**10**
Company or company representative have not been found to have engaged in lobbying against climate action in the public sphere. Company has membership or is affiliated to organisations that are strongly supportive of climate action.	**8**
Company or company representative have not been found to have engaged significantly in lobbying for or against climate action in the public sphere. Company has membership or is affiliated to organisations that are generally supportive of climate action.	**6**
Company or company representative have been found to have engaged significantly in lobbying for or against climate action in the public sphere. Company has membership or is affiliated to organisations that are generally unsupportive of climate action.	**4**
Company or company representative have been found to have engaged in lobbying against climate action in the public sphere. Company has membership or is affiliated to organisations that are strongly unsupportive of climate action.	**2**
Company has been found to have engaged significantly in lobbying against climate action in the public sphere.	**0**

Corporate Scorecard Footnote List

1. United Nations Environment Programme, 2021
2. ibid
3. World Green Building Council, 2019
4. United Nations Environment Programme, 2021
5. World Green Building Council, 2019
6. ibid
7. Blanco, J., Engel, H., Imhorst, F., Ribeirinho, M. and Sjödin, E., 2021
8. In 2018. See: Hoffmann, C., Van Hoey, M. and Zeumer, B., 2020
9. Nature Editorial, 2021
10. Calculation based on annual emissions of 1.1 GtCO2. See: Cousins, S., 2021. And, estimated total global energy-related emissions of 33GtCO2 in 2019. See: IEA, 2020
11. Calculation based on annual emissions from glass manufacturing of 86 MtCO2 annual emissions from glass. See: Nature, 2021. And, estimated total global energy-related emissions of 33GtCO2 in 2019. See: IEA, 2020
12. Identifying a reliable estimate of global CO2 emissions from brick production proved challenging and given the uncertainty, a figure has not been included.
13. Identifying a reliable estimate of global CO2 emissions from insulation production proved challenging and given the uncertainty, a figure has not been included.
14. IEA, 2022c
15. IEA, 2022d
16. Jones, C. and Hammond, G., 2019
17. Jones, C. and Hammond, G., 2019
18. ibid
19. ibid
20. Calculation of joint emissions footprint. See 8. and 9.
21. IEA, 2021b
22. Vass, T., Levi, P., Gouy, A. and Mandová, H., 2021
23. ibid
24. ibid
25. ibid
26. ibid
27. Hodgson, D., Vass, T. and Hugues, P., 2021
28. ibid
29. ibid
30. ibid
31. Hodgson, D. and Vass, T., 2021
32. Jones, C. and Hammond, G., 2019
33. Hodgson, D. and Vass, T., 2021
34. Climate & Clean Air Coalition, n.d.
35. Estimated, with the assumption that 10% of emissions annual are embodied carbon, using data from IEA, 2022b
36. ibid
37. World Green Building Council, 2019
38. United Nations Framework Convention on Climate Change, 2021
39. IEA, 2022a.
40. ibid
41. United Nations Environment Programme, 2021
42. See: NewClimate Institute, 2022; World Economic Forum, 2019; NASA, 2012
43. Oxford Economics, 2021
44. Science Based Targets initiative, 2019
45. ibid
46. Tata Steel, 2021
47. Science Based Targets initiative, 2021
48. ibid
49. ibid
50. See p.32 of NewClimate Institute, 2022

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