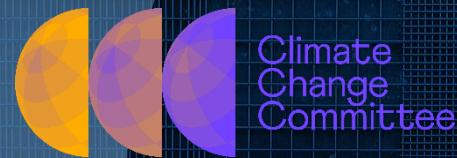

Report: Modelling Corporate Climate Targets in UK Industry



EcoAct in collaboration with the Climate Change Committee



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Executive summary

Executive Summary

UK emissions from manufacturing and construction (industry) accounted for 14% of total UK territorial greenhouse gas emissions in 2020. The aim of the project was to investigate how corporate emission reduction targets align to the pathway of industrial decarbonisation in the Climate Change Committee's (CCC) Sixth Carbon Budget.

Baseline emissions data and corporate target data was collected from publicly available sources (National Atmospheric Emissions Inventory (NAEI), CDP, Science Based Target initiative (SBTi) and corporate annual reports), using a target criteria threshold. This data was used to model the impact of corporate targets on CCC industrial pathway achievement out to 2050¹.

Key modelling results

- Baseline emissions data at the corporate level was collected for c. 70% of industrial emissions, of which 83% was covered by corporate emission reduction targets.
- Out of 781 companies with baseline emissions data collected, 477 companies have set targets, of which 266 are accredited science-based targets (SBTs).
- Based on corporate targets, total industrial sector emissions are projected to decrease by between 9% - 16% by 2030 and 14% - 21% by 2050 from 2020 compared to the CCC Balanced Pathway of 42% and 96% respectively.
- Where targets are set, alignment to CCC Balanced Pathway in the near-term (2030) is satisfactory. However, a lack of long-term Net Zero carbon reduction targets causes a divergence in pathways out to 2050.
- Science-Based Targets (SBTs) set to a 1.5°C ambition are aligned with the CCC balanced pathway in near-term, with the exception of the cement and lime sector and glass and other minerals sector.

Key recommendations on potential indicators to monitor progress on industrial decarbonisation

Indicator 1: percentage of industry emissions covered by SBTi targets or commitments

- Current status: of total industry 34% (19% accredited, 15% committed)

Indicator 2: industry corporate near-term & long-term target alignment with CCC balanced pathway to Net Zero

- Current status: 32% pathway completion in near-term (2030), 19% pathway completion in long-term (2050)

Introduction

Modelling corporate climate targets in UK Industry

- ▶ Part of the role of the CCC is to monitor the UK's progress on achieving carbon budgets and Net Zero by 2050
- ▶ The CCC's Sixth Carbon budget includes balanced pathways to Net Zero across different sectors, including for each sub-sector within manufacturing and construction
- ▶ The aim of this work was to investigate how companies published emission reduction targets relate to the current CCC balanced pathway to Net Zero and to answer two key questions

Key Questions

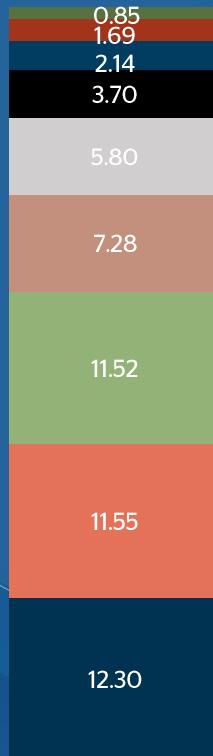
1. If companies achieve their emission reduction targets, to what extent would the UK industrial decarbonisation targets be met?
2. What is the potential of using corporate emissions reduction targets as an indicator in future CCC progress reports?

Industry sector emissions

UK emissions from manufacturing and construction in 2020 were 62 MtCO₂e, and accounting for 14% of total UK territorial greenhouse gas emissions.

The vast majority (>90%) of emissions in this sector come from industrial sites. Most industrial sites are privately owned and therefore it is important for the CCC to assess the progress of private companies against their own emission reduction targets to monitor the UK's progress towards Net Zero by 2050.

Off-road mobile machinery represents 5 MtCO₂e, or 8% of total manufacturing and construction emissions. For the purpose of this report, all off-road mobile machinery was excluded, reducing total manufacturing and construction (industry) emissions used in analysis from 62 MtCO₂e to 57 MtCO₂e.

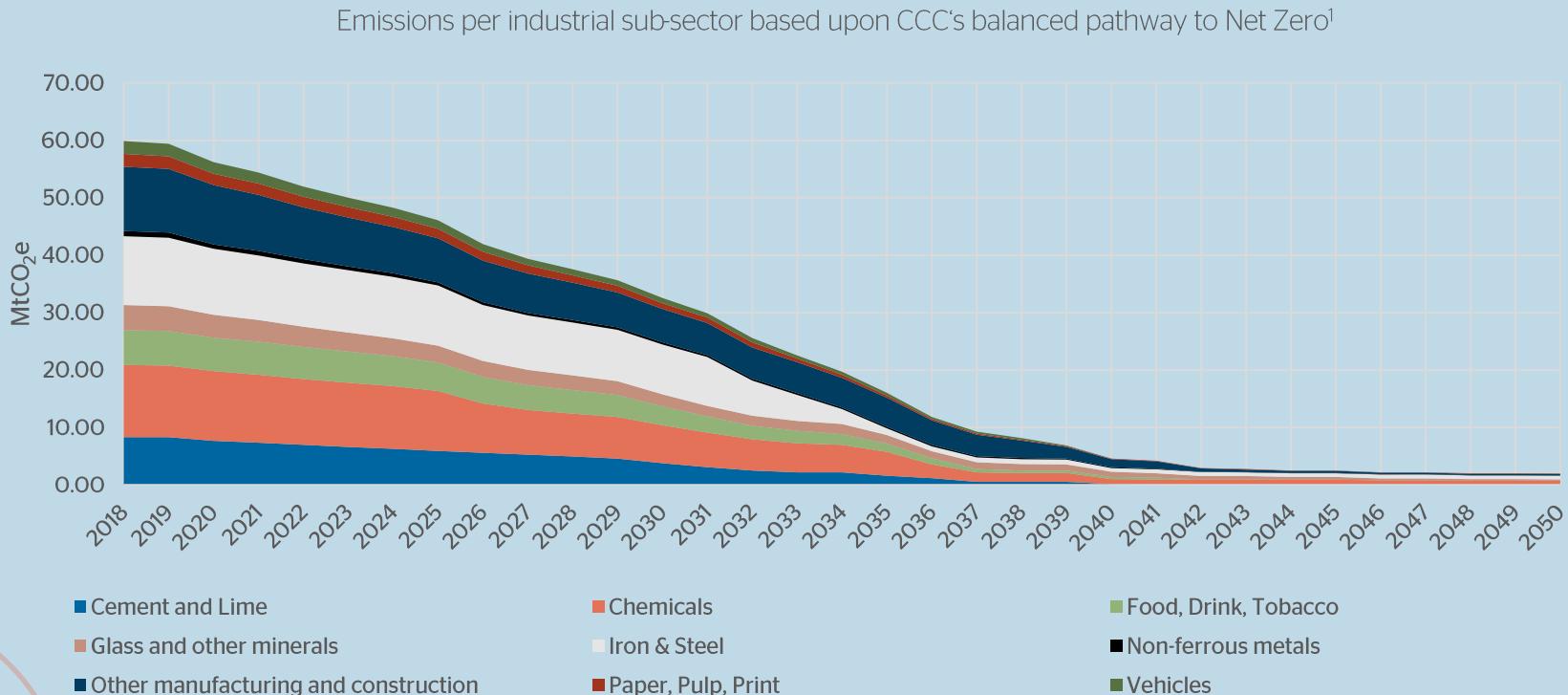


CCC industrial emissions by sector in 2020 (MtCO₂e)

- Non-ferrous metals
- Vehicles
- Paper
- Glass and other minerals
- Food and drink
- Cement and lime
- Other manufacturing and construction
- Chemicals
- Iron and steel

The CCC's Pathway for the Sixth Carbon Budget

The CCC has modelled a balanced pathway to Net Zero for the manufacturing and construction sector to 2050 in line with the UK's Net Zero target



¹Excludes off-road mobile machinery from CCC manufacturing and construction pathway

2020 progress against the CCC's pathway for the Sixth Carbon Budget

Comparison between reported emissions in 2020 and carbon emissions via the CCC's pathway for the Sixth Carbon Budget show that 2020 emissions were greater than pathway emissions by 0.59 MtCO₂e.

The sub-sectors with the greatest lag are iron and steel (0.77 MtCO₂e) and other manufacturing and construction (1.20 MtCO₂e).

However, chemical, cement and lime, glass and other minerals and vehicles sub-sectors were ahead of target based upon the CCC's pathway for the Sixth Carbon Budget.

2020 reported emissions were used as the basis for modelling target coverage, and progress against the CCC balanced pathway to 2050.

Sub-sector	2020 sub-sector emissions based upon CCC pathways (MtCO ₂ e) ¹	2020 Reported manufacturing and construction emissions (MtCO ₂ e)	Change
Iron and steel	11.53	12.30	↗
Chemical	12.11	11.55	↘
Other manufacturing and construction	10.32	11.52	↗
Cement and lime	7.70	7.28	↗
Food and drink	5.80	5.80	↘
Glass and other minerals	4.00	3.70	—
Paper	2.01	2.14	↘
Vehicles	2.02	1.69	↘
Non-ferrous metals	0.74	0.85	↗
Total	56.23	56.82	↗

Methods

Identifying baseline data and corporate climate targets

Baseline data collection

- ▶ Scope 1 & 2 emissions were extracted from NAEI, CDP and annual reports at the site level where possible, otherwise at the UK level.
- ▶ Data was then extracted at the UK level and aggregated Scope 1 activity level.
 - Baseline data collected by EcoAct accounted for c. 70% of Scope 1 industrial emissions taken from the CCC's 2021 Progress Report (2020 emissions).
- ▶ Mapping to CCC sub-sectors was conducted by EcoAct and agreed upon discussion with the CCC.

Target data collection

- ▶ Target data was extracted from the latest SBTi, CDP databases, and annual/sustainability reports, and assessed against a target quality threshold (see appendix), to determine inclusion or exclusion from the modelling.
 - Where organisation-level targets could not be identified for a respective organisation, group-level targets were assumed to cover the organisation.
 - “Carbon neutral”, “carbon positive” and “climate positive” targets were excluded unless a gross emission reduction % was stated.
 - Carbon offsetting was not treated as a carbon reduction mechanism and therefore targets reliant on carbon offsetting have been excluded.
 - SBTi accreditation and commitment to Net Zero target setting were recorded.



Modelling methods and analysis

Combined Scope emissions treatment

The focus of this work was to understand the Scope 1 impact from UK industrial organisations achieving their corporate emissions targets.

Most corporates set combined targets for Scope 1 & 2, and therefore the Scope 2 emissions proportion needed to be interpolated from the data set. This was done using three scenarios to give a range of confidence levels.

- **Grid Greening** assumes that the Scope 2 proportion of targets reduce in line with BEIS UK grid decarbonisation prediction
- **Split Proportion** assumes the Scope 2 proportion of the targets reduces at the rate specified in the target
- **100% renewable** assumes that the Scope 2 proportion of the target is 100% renewable by the near-term target year for market-based targets

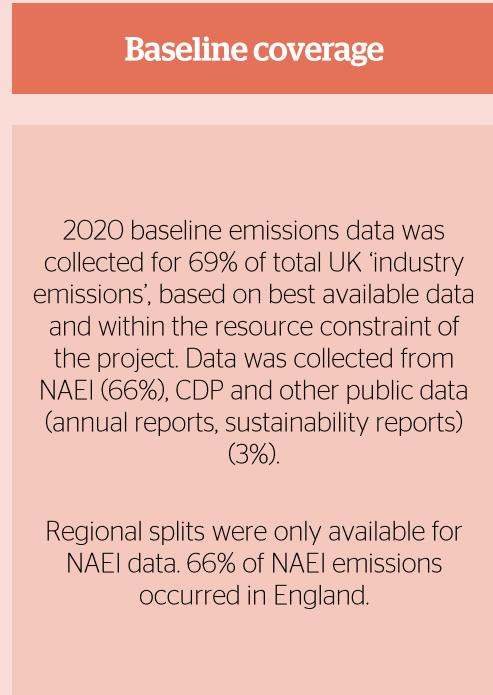
In the few instances targets included Scope 1, 2 & 3, Scope 2 was treated as above, and Scope 3 was interpolated assuming an equal apportionment of target ambition.

Year-on-year target reductions

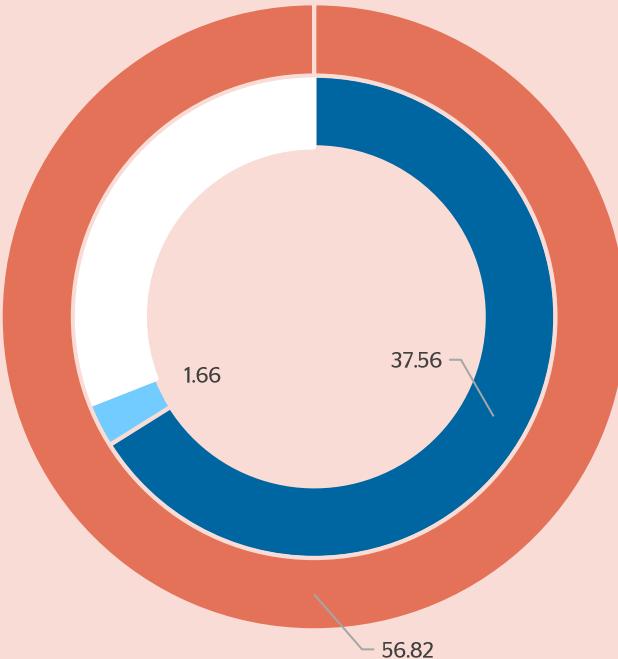
- Where the targets were absolute, a linear reduction pathway was assumed, in line with the SBTi criteria.
- Where the targets were intensity based:
 - A compound reduction pathway was assumed, in line with SBTi criteria.
 - SBTi sector activity projection rates were applied in accordance with sectorial decarbonisation tools (cement, steel & paper). If sector specific activity projections were not available, UK average growth projections were applied to engineer the absolute reductions of the target.

Results: Baseline data

Baseline emissions data collected for c70% of total industry emissions



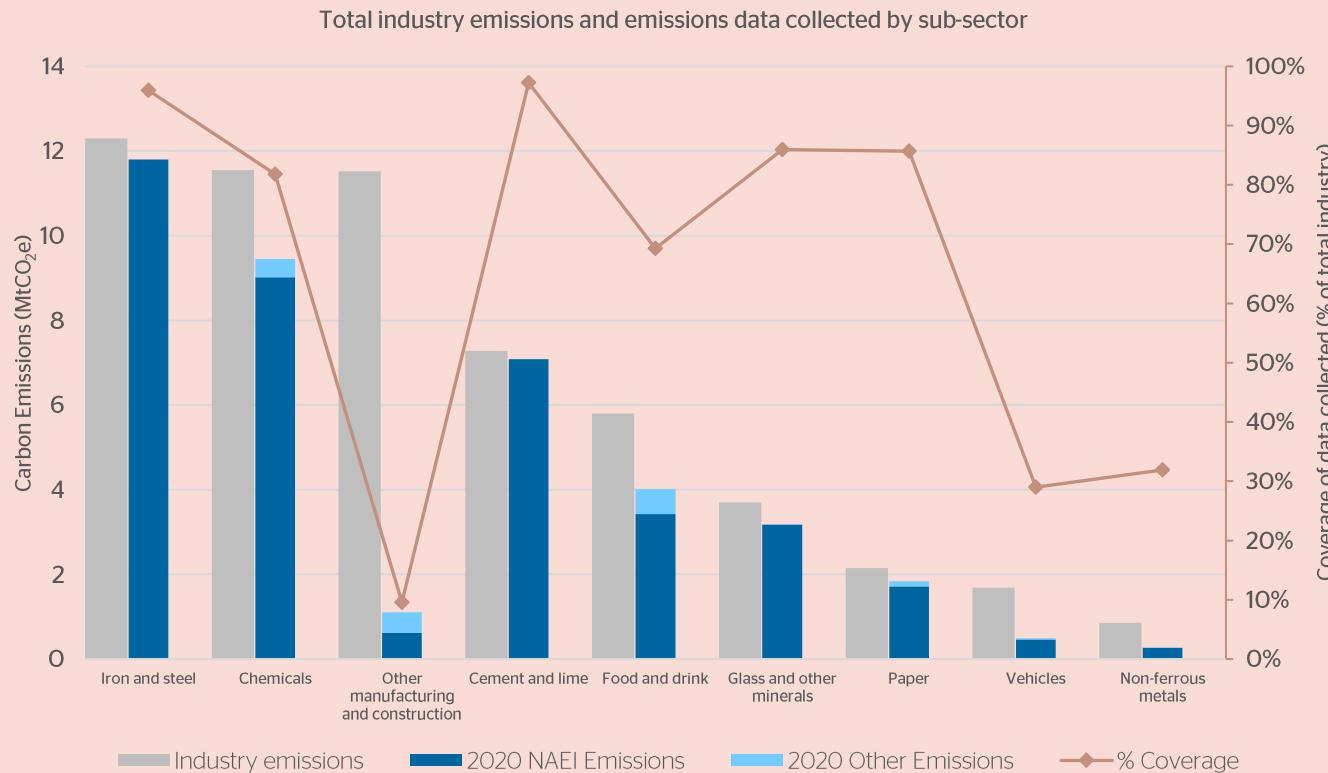
Total industry emissions and emissions data collected (MtCO₂e)



Region	NAEI Baseline Emissions (MtCO ₂ e)
England	24.8
Northern Ireland	0.7
Scotland	3.8
Wales	8.2
Total	37.56

- NAEI Baseline Data
- Other Baseline Data (CDP & Other Public Data)
- Total Industry emissions

Baseline data availability and coverage varies by sub-sector



Baseline emissions data availability was highest across cement and lime (97%), iron and steel (96%), glass and other minerals (86%) and paper (86%).

2020 baseline data availability for other manufacturing and construction was notably low across the NAEI and CDP emissions databases.

Results: Target coverage

Targets are set for 83% of companies with baseline data collected, covering 58% of UK industry emissions



The Science-Based Target Initiative (SBTi), founded by CDP, the UN Global Compact, the World Resources Institute and WWF, is an organisation which independently verifies targets allowing companies to make viable claims about their ambitions.

Of the emissions data collected, 83% of companies had emissions reduction targets. Of the companies with targets set, 33% had SBTi approved near-term targets (5-10 year) and 8% had SBTi approved long-term targets (out to 2050 or sooner).

It is expected that if further resource was allocated to the collection of baseline data, the percentage coverage of targets at the UK industry level would increase.

For more detail on minimum criteria for targets, see appendix assumptions.



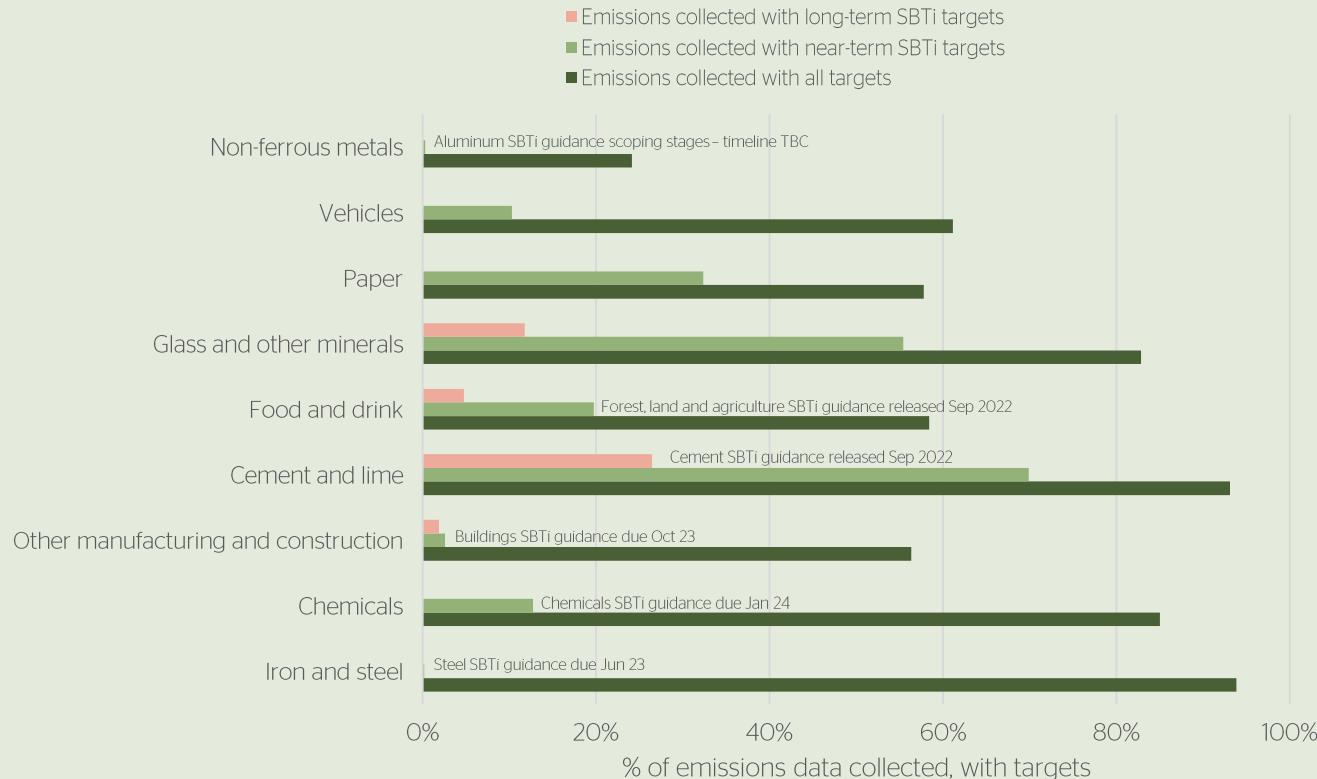
¹Minimum target threshold defined in methodology/appendix

Target uptake varies across industry sub-sectors

SBTi sub-sector variation

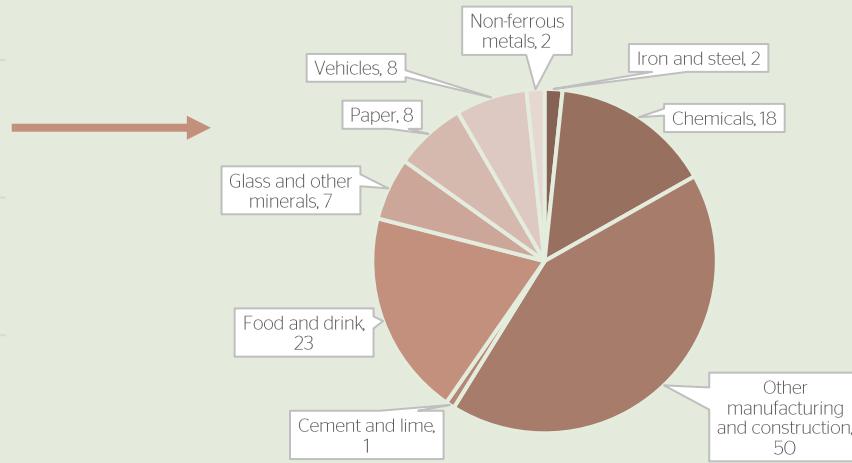
There is variance in the coverage of SBTi approved targets by sub-sector, with cement & lime and glass & minerals having the highest coverage respectively for both near-term and long-term targets.

SBT uptake across industry is likely impacted by the availability of SBTi sector specific guidance and reduction pathways. Where a sector specific pathway is not available, all companies can set SBTs using the cross-sector guidance and reduction pathways. However, in hard to abate sectors it is often beneficial for companies to await guidance before setting SBTs.



[Sector Guidance - Science Based Targets](#)

119 commitments to setting SBTi targets within the next 2 years, representing 15% of industry sector emissions



Once committed, companies have 24 months to submit targets to the SBTi.

As of January 2023, the SBTi introduced a new commitment compliance policy. The SBTi [companies taking action](#) dashboard will now indicate if companies withdraw or have an expired commitments.

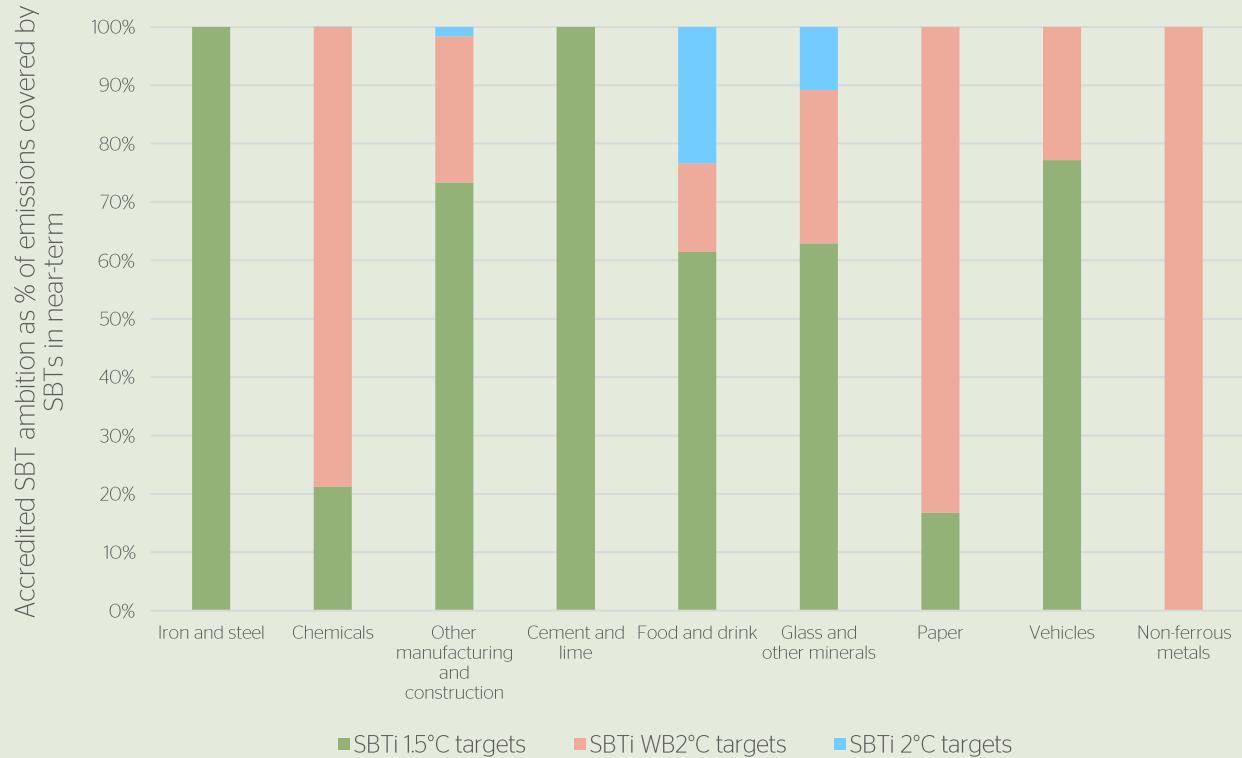
Near-term accredited SBTs ambition levels across sectors

SBTi ambition

The current SBTi criteria (V5.0) requires corporates to set Scope 1 & 2 targets aligned with 1.5°C ambition.

Prior to July 2022, corporates could set Scope 1 & 2 targets aligned with well-below 2°C and prior to October 2019 aligned with 2°C.

The SBTi requires corporates review and update targets in line with the latest criteria every 5 years, meaning well-below 2°C or 2°C targets will be gradually filtered out of corporate SBTs. Industry should be encouraged to update SBT ambition sooner where possible.

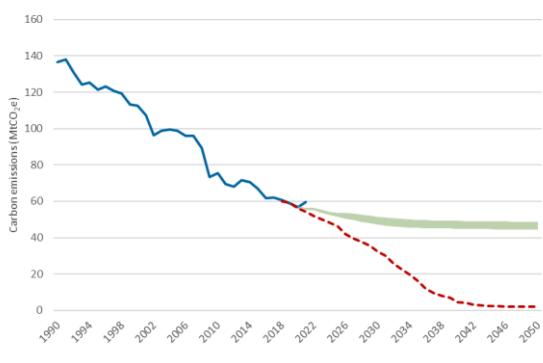


Results: Alignment to sector Net Zero needs

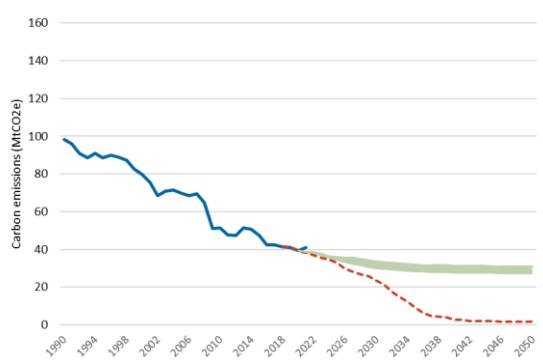
Total Industry

Corporate Target Projection (Range)
 Historic Emissions
 CCC Pathway

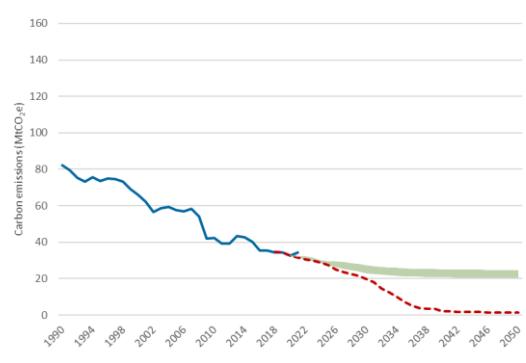
Total industry¹



Emission data captured²



Target data coverage³

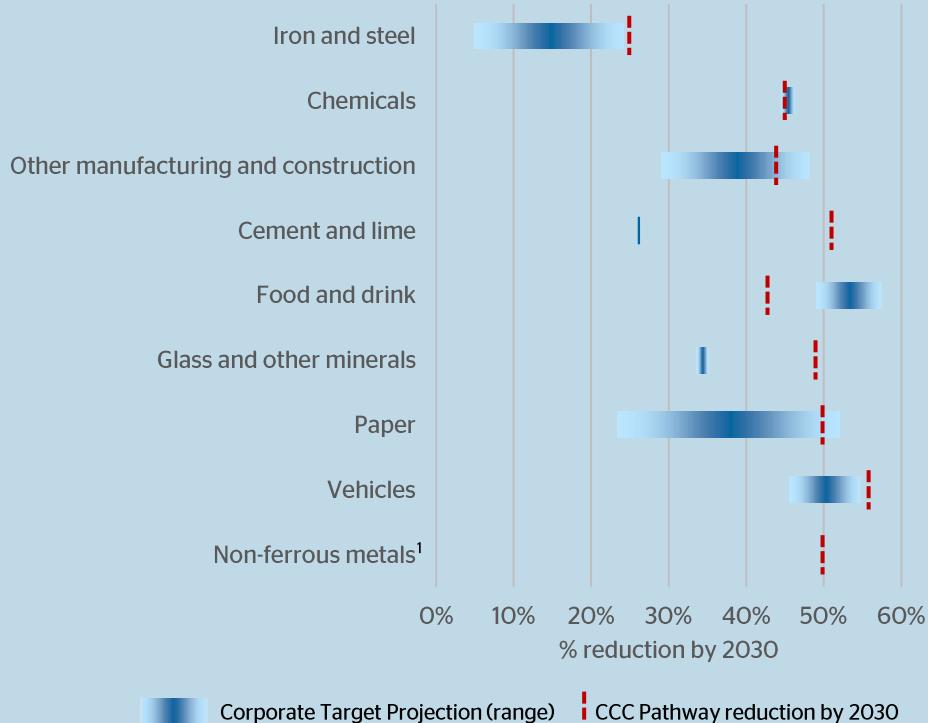


CO ₂ e reduction	2030	2040	2050
CCC Pathway	-42%	-92%	-96%
Corporate Target Projection (avg) ⁴	-13%	-17%	-17%
Δ (MtCO ₂ e)	▲ 17.1	▲ 42.8	▲ 44.9

Industry insights

- 58% of the industrial sector emissions are covered by near-term (2030) carbon reduction targets, where 19% of emissions are covered by accredited SBTs. However long-term (2050) target adoption is poor across all sectors.
- Where 1.5°C accredited SBTs have been set (c.14% of total industry emissions), alignment with CCC Pathway in the near-term to 2030 is high, with the exception of the cement and lime and the glass and other minerals sectors.
- This demonstrates that SBTi target setting should be encouraged and adopted as 'best practice' across UK industry for near and long-term targets which will lead to closer alignment with CCC Pathway requirements.

1.5°C accredited SBTs are closely aligned to CCC Pathway requirements



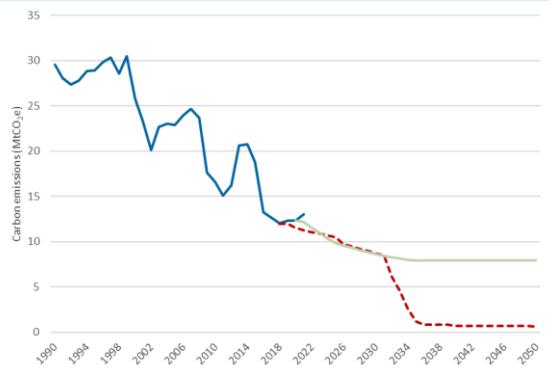
1.5°C SBTs vs. CCC Pathway

- ▶ There is close alignment in 2030 Scope 1 reduction levels between organisations who have set 1.5°C accredited SBTs and the CCC Pathway across multiple sectors.
- ▶ For sectors with a high proportion of targeted Scope 2 reductions (e.g., paper), the exact quantity of 2030 Scope 1 reduction is unknown, represented by the range in values.
- ▶ There are 2 sectors with poor 1.5°C alignment:
 - Cement and lime: 1.5°C accredited targets set by cement and lime organisations require an absolute reduction of c. 20% by 2030. The CCC Pathway requires a significantly higher ambition of 51%.
 - Glass and other minerals: multiple organisations in this sector have majority of their operations in the cement and lime sector (e.g. Holcim, Heidelberg, CRH, Cemex). Given the 1.5°C SBTi ambition requirements for cement and lime are lower than CCC Pathway, a reduced alignment is also seen in this sub-sector.

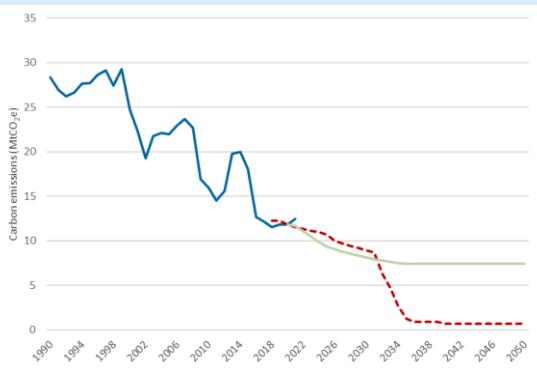
Iron and Steel

Corporate Target Projection (Range)
— Historic Emissions
— CCC Pathway

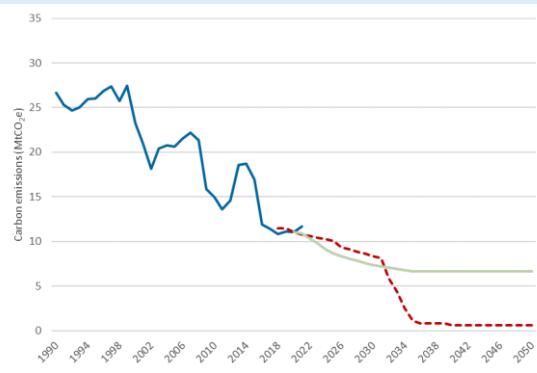
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-25%	-94%	-94%
Corporate Target Projection (avg) ⁴	-30%	-36%	-36%
Δ (MtCO ₂ e)	▼ -0.1	▲ 7.2	▲ 7.2

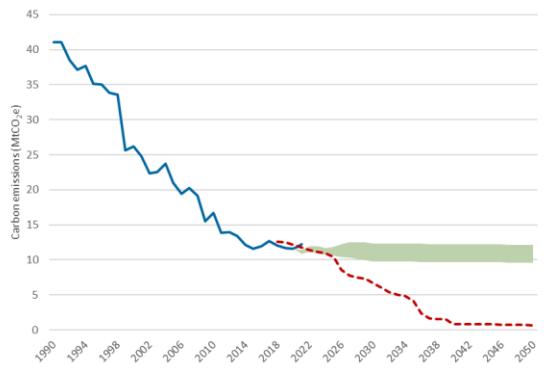
Sector insights

- Target coverage within the sector is high with >90% of sector emissions covered by emission reduction targets, however SBTi adoption is poor with only 0.2% of emissions in the sector covered by an accredited SBT.
- Alignment across the sector with the CCC Pathway for near-term targets is high, with the ambition of set targets exceeding the required pathway.
- Whilst there is reference to the UK Steel Net Zero initiative in company reports and high-level commitment to this goal, companies in this sector are yet to formally set long-term carbon reduction targets.

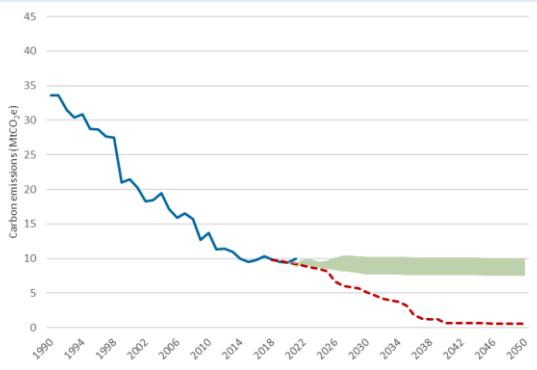
Chemicals

Corporate Target Projection (Range)
 Historic Emissions
 CCC Pathway

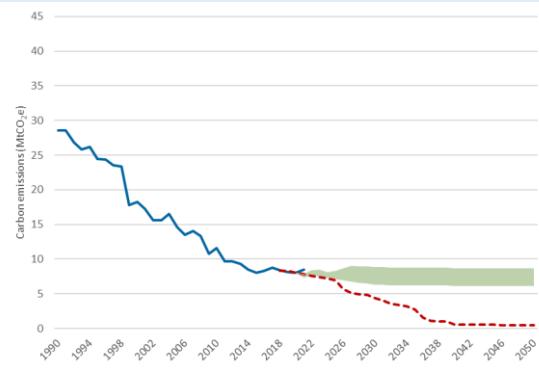
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-45%	-93%	-94%
Corporate Target Projection (avg) ⁴	-4%	-5%	-6%
Δ (MtCO ₂ e)	▲ 4.4	▲ 10.1	▲ 10.2

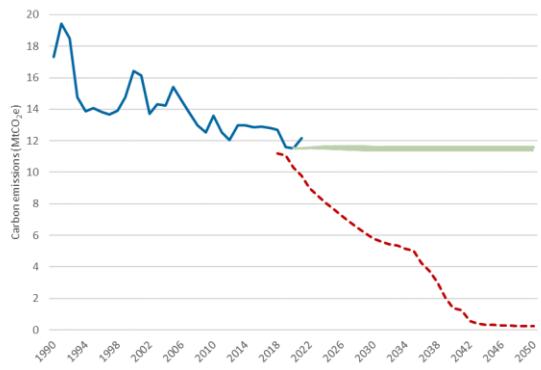
Sector insights

- Target coverage within the sector is good with >70% of sector emissions covered by emission reduction targets, however SBTi adoption is poor with only 13% of emissions in the sector covered by an accredited SBT.
- Within the ambition level of targets set, whilst 58% of target setting companies (22 out of 38) have 1.5°C accredited targets, this only represents 3% of sector emissions. The majority of targets are to a well-below 2°C ambition.
- Chemicals companies should look to increase the ambition of their targets to 1.5°C and gain accreditation from the SBTi, where sector specific guidance is due in January 2024.

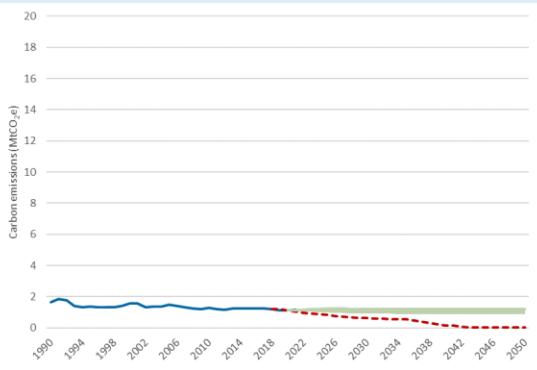
Other manufacturing and construction

█ Corporate Target Projection (Range)
— Historic Emissions
--- CCC Pathway

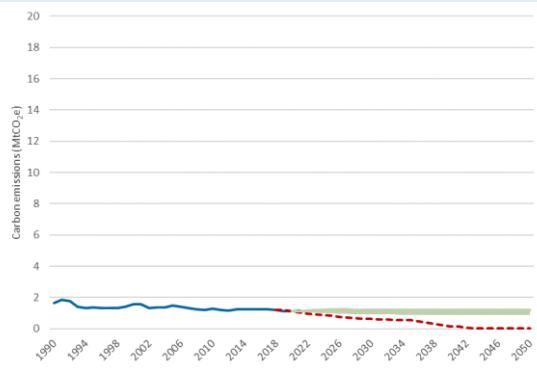
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-44%	-87%	-98%
Corporate Target Projection (avg) ⁴	-0%	-1%	-1%
Δ (MtCO ₂ e)	▲ 5.7	▲ 10.1	▲ 11.2

Sector insights

- The other manufacturing and construction sector is characterised by poor data availability of 2020 emissions. We expected further targets have been set in addition to those noted in this study.
- Where targets have been set, and accredited by SBTi, >75% of targets have been set to 1.5°C where there is strong alignment with the CCC Pathway (average sector 1.5°C target of 48% reduction by 2030 compared to 44% reduction in the CCC Pathway).
- Long-term target setting is poor, creating a divergence in the pathways to 2050.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels

² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance

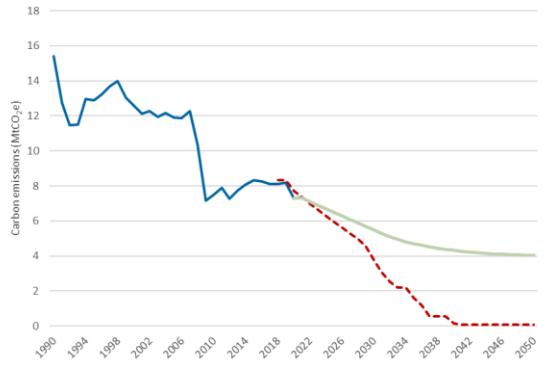
³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance

⁴ The average Scope 1 emissions has been used from the expected range

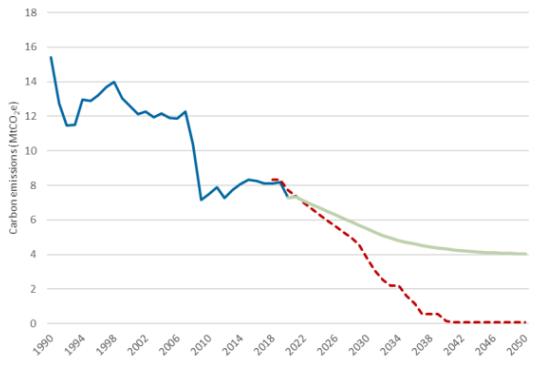
Cement and Lime

Corporate Target Projection (Range)
 Historic Emissions
 CCC Pathway

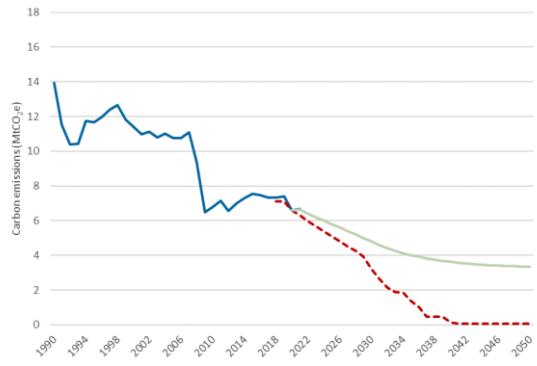
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-51%	-98%	-99%
Corporate Target Projection (avg) ⁴	-19%	-35%	-39%
Δ (MtCO ₂ e)	▲ 2.1	▲ 4.6	▲ 4.3

Sector insights

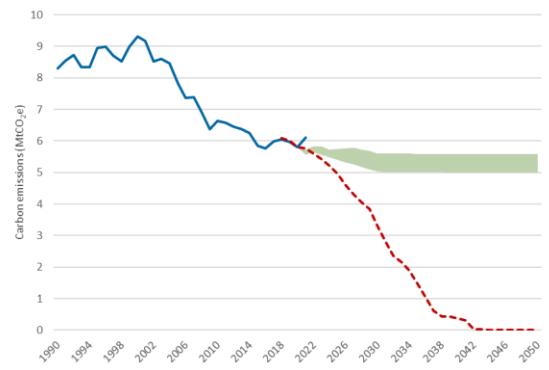
- Target coverage within the sector is high with >90% of sector emissions covered by emission reduction targets, and 70% of emissions aligning to a 1.5°C accredited SBT.
- The CCC Pathway requirements of 51% by 2030 is significantly more ambitious than SBTi guidance, where a c. 20% absolute or c. 24% intensity reduction is required for 1.5°C alignment.
- There is increased alignment in the long-term (2050), where a 95% reduction is required by SBTi. Currently there are only a limited number of cement and lime companies with published long-term reduction targets.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels.
² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance.
³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance.
⁴ The average Scope 1 emissions has been used from the expected range.

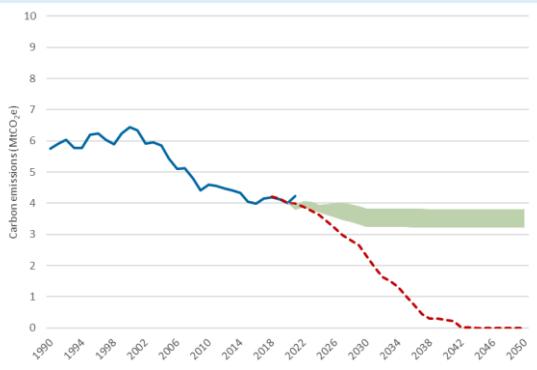
Food and Drink

Corporate Target Projection (Range)
— Historic Emissions
— CCC Pathway

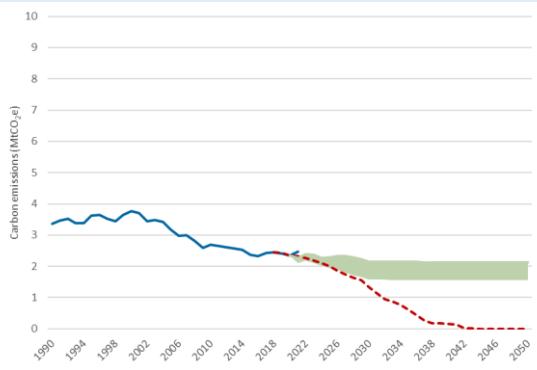
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-43%	-94%	-100%
Corporate Target Projection (avg) ⁴	-8%	-9%	-9%
Δ (MtCO ₂ e)	▲ 2.0	▲ 4.9	▲ 5.3

Sector insights

- Target coverage within the sector is average with only c.40% of sector emissions covered by emission reduction targets.
- However, where SBTs have been set, 3 in 4 targets are aligned to 1.5°C with these targets covering 12% of sector emissions.
- Average sector 1.5°C ambition is higher than CCC Pathway requirements to 2050 with 53% reduction targeted.
- Companies should be encouraged to set targets aligned to 1.5°C, extending these commitments to the long-term.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels

² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance

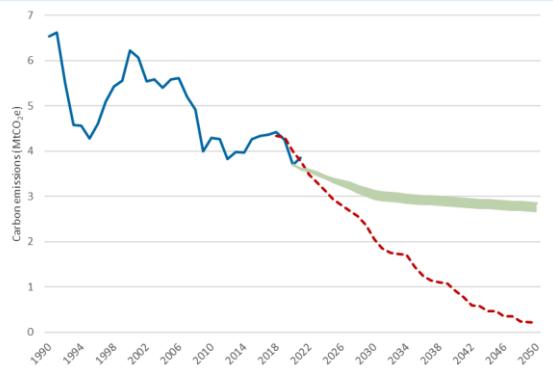
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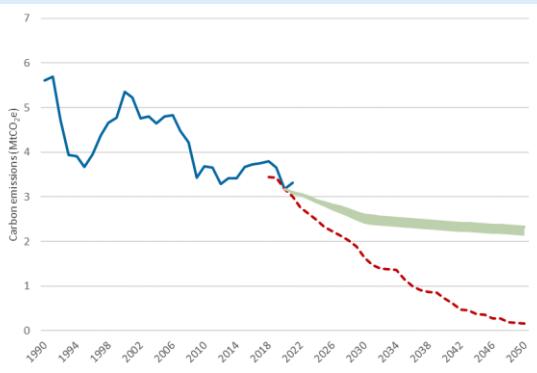
Glass and other minerals

■ Corporate Target Projection (Range)
— Historic Emissions
--- CCC Pathway

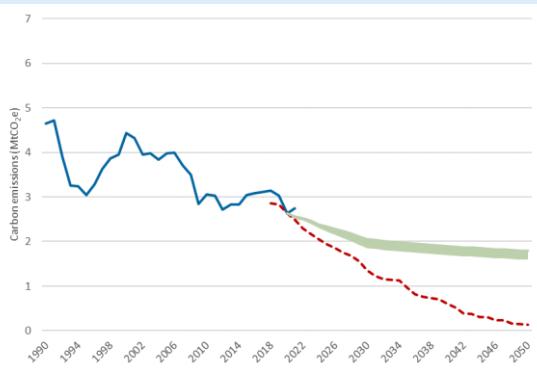
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-49%	-77%	-95%
Corporate Target Projection (avg) ⁴	-18%	-22%	-25%
Δ (MtCO ₂ e)	▲ 1.0	▲ 2.0	▲ 2.6

Sector insights

- Target coverage within the sector is good with >70% of sector emissions covered by emission reduction targets, with 55% of sector emissions covered by near-term SBTs.
- Where targets are accredited to 1.5°C by the SBTi, average target reduction is c. 34% by 2030, lowered by companies also captured by the cement and lime sector SBTi 1.5°C requirements.
- Companies within this sector should firstly be encouraged to set SBTs relevant to their primary operations and secondly set long-term reduction targets aligned to Net Zero abatement levels.

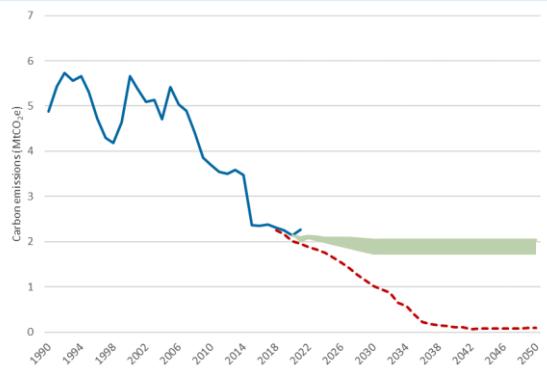
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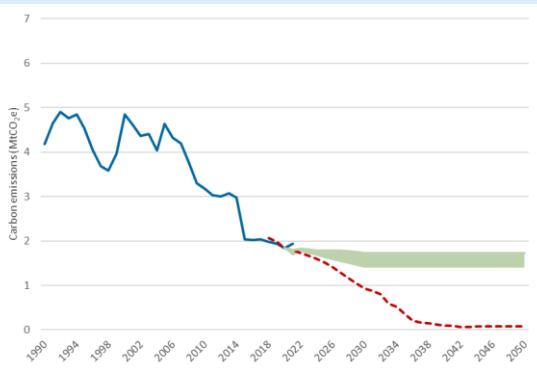
³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance

⁴ The average Scope 1 emissions has been used from the expected range

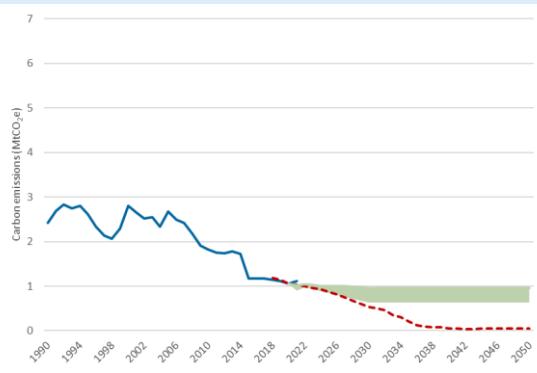
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-50%	-95%	-95%
Corporate Target Projection (avg) ⁴	-13%	-13%	-13%
Δ (MtCO ₂ e)	0.9	1.8	1.8

Sector insights

- Target coverage within the sector is good with c.50% of sector emissions covered by emission reduction targets, with a third of sector emissions covered by accredited SBTs.
- The ambition of targets within the sector is low with c.85% of emissions with SBTs set to a well-below 2.0°C ambition level.
- Where targets are set to 1.5°C, alignment to the CCC Pathway is high, however the high proportion of Scope 2 emissions in the sector gives high level of uncertainty to Scope 1 reduction forecasts.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels

² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance

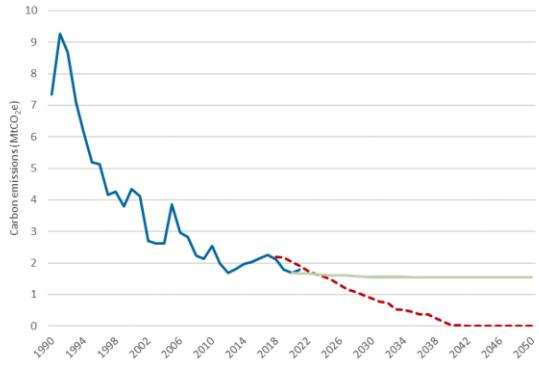
³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance

⁴ The average Scope 1 emissions has been used from the expected range

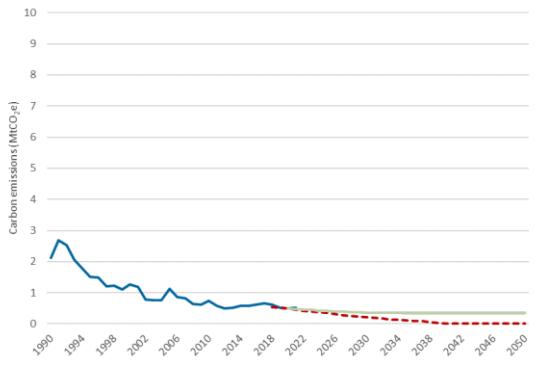
Vehicles

Corporate Target Projection (Range)
— Historic Emissions
— CCC Pathway

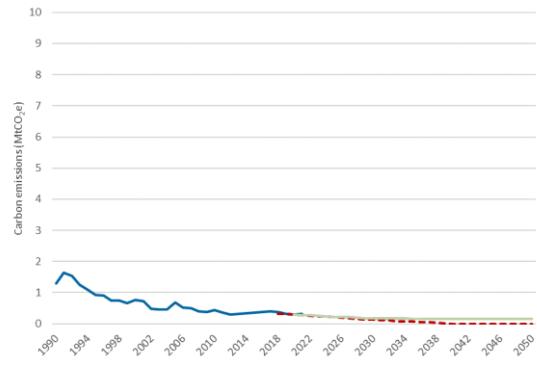
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-56%	-99%	-100%
Corporate Target Projection (avg) ⁴	-9%	-9%	-9%
Δ (MtCO ₂ e)	0.7	1.5	1.5

Sector insights

- The vehicles sector has poor data availability of 2020 emissions and target data, with only c.18% target coverage.
- Where targets have been set, c.85% of targets are aligned to 1.5°C, where there is high alignment to the CCC Pathway with an average targeted reduction of 50% across the sector.
- Long-term targets are lacking, with projected emissions and the required pathway diverging from 2030. Companies within this sector should be encouraged to adopt SBTs and set near and long-term targets.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels

² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance

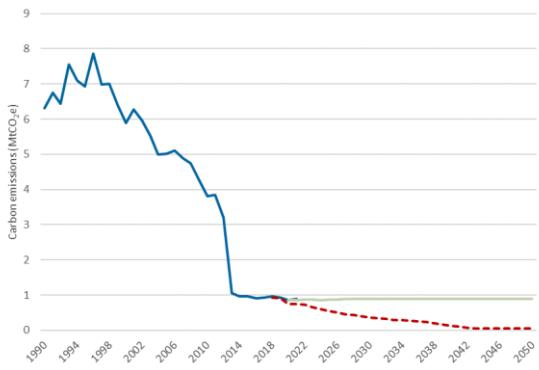
³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance

⁴ The average Scope 1 emissions has been used from the expected range

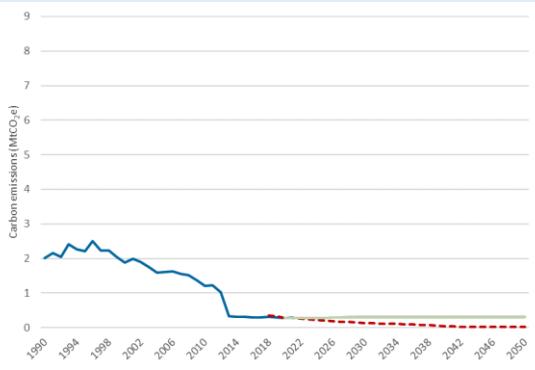
Non-ferrous metals

█ Corporate Target Projection (Range)
— Historic Emissions
--- CCC Pathway

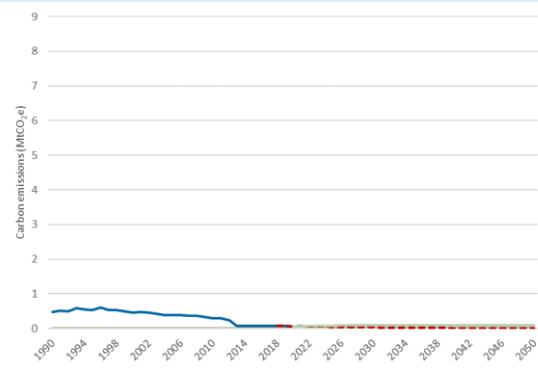
Total sector¹



Emission data captured²



Target data coverage³



CO ₂ e reduction	2030	2040	2050
CCC Pathway	-50%	-84%	-94%
Corporate Target Projection (avg) ⁴	1%	1%	1%
Δ (MtCO ₂ e)	▲ 0.5	▲ 0.8	▲ 0.8

Sector insights

- The non-ferrous metals sector has seen large decarbonisation since 2010, however the CCC Balanced Pathway requires a further 50% reduction by 2030 and 94% reduction by 2050.
- Data availability within the sector is poor, with targets only gathered for 8% of sector emissions.
- Only 2 companies within this sector have accredited SBTs, both to a well-below 2°C ambition.
- Companies within the sector should be encouraged to adopt SBTs and set near- and long-term targets.

¹ Includes all Scope 1 emissions within industrial sectors. Where emission and target data is not captured, emissions are projected to stay at 2020 levels

² Only includes emissions where captured at business level in 2020. Target pathway and historical data extrapolated from industry level year-on-year variance

³ Only includes emissions covered by business targets. Target pathway and historical data extrapolated from industry level year-on-year variance

⁴The average Scope 1 emissions has been used from the expected range

EcoAct Insights

EcoAct Insights

Target alignment to CCC's industry pathway for the Sixth Carbon Budget and need for transition plans

Where targets are set by corporates, alignment to CCC Balanced Pathway in the near-term (2030) is satisfactory. However, a lack of long-term (Net Zero) carbon reduction targets causes a divergence in pathways out to 2050.

There is a clear need for the industrial sector to set long-term targets for gross emission reductions and disclose credible transition plans to support how these targets will be achieved.

As part of transition plans, there also needs to be a clear separation of how corporates plan to reduce Scope 1 and Scope 2 emissions. Most targets are set on combined Scope 1 and Scope 2 emissions. As Scope 2 market-based accounting allows for market instruments (e.g., green tariffs), which are more readily applied emission reduction levers, it can be assumed there will be a higher weighting towards Scope 2 reduction in the near-term. Further disclosure at the industry level is needed to support this assumption.

SBTi is widely recognised as 'best practice' in corporate target setting

Where SBTi near-term targets are set to a 1.5°C ambition, alignment to the CCC's industry pathway is strong, except for the cement and lime and glass and other minerals sectors.

There is a need for corporates with existing WB2°C and 2°C targets to upgrade ambition to 1.5°C. The SBTi requires corporates review and update targets in line with the latest criteria (currently 1.5°C) every 5 years, however organisations should be encouraged to update sooner where possible, to align with CCC industry pathway for the Sixth Carbon Budget.

Corporates with existing near-term targets should also be encouraged to develop complimentary long-term (2050 or sooner) SBTs.

Possible indicators for use in CCC annual progress reports

Indicator 1: percentage of industry emissions covered by SBTi targets or commitments

Current status: 34% (19% accredited, 15% committed)

Indicator Pros:

- Where SBTi targets are set to 1.5°C ambition, alignment to the CCC's industry pathway is strong.
- SBTi is the most common target framework for corporates.
- It is expected industry SBTi commitments will grow with the release of steel, chemical, aluminum and buildings guidance, aligned to 1.5°C, over the next year.
- SBTi reduction rates are continually reviewed and updated in line with the latest science and corporates are required to align every 5 years.
- SBTi database provides a clear reference point for the indicator.

Indicator Cons:

- Excludes non SBTi targets.
- Excludes current & future emerging target setting frameworks.

Assumptions:

- Assumes that targets set are achieved at the stated rate.

Indicator 2: industry corporate near-term & long-term target alignment with CCC Balanced Pathway

Current status: 32% pathway completion in near-term (2030), 19% pathway completion in long-term (2050)

Indicator Pros:

- Ability to update progress based on data model created by EcoAct, as part of initial progress assessment.
- Future focused view enabling year-by-year comparison of expected emissions vs CCC Balanced Pathway.

Indicator Cons:

- Improving data and target coverage, beyond key NAEI, CDP and SBTi sources, will likely be resource intensive.
- High dependency on Scope 2 contribution to emission reductions.

Assumptions:

- Assumes that targets set are achieved at the stated rate, with linear yearly reductions for absolute targets and compound yearly reductions for intensity targets.



EcoAct recommendation - future research

In a future iteration of this research, once companies have had 2-3 years to reduce from target base year¹, it would be valuable to understand how companies are performing against targets, including:

- Recommendations on the need for additional government support for decarbonising industry Scope 1.
- Analysis of Scope 1 & 2 percentage reductions, to understand if companies are 'prioritising' Scope 2 electricity reductions due to the relative ease of green tariffs or other renewable instruments.
- Track release of company transition plans and additional insight into carbon reduction strategy.

¹ Many targets are set using a 2019 or 2020 baseline year. Given the data collected in this research is 2020, minimal progress analysis is possible

Appendix



Baseline data assumptions

Company types

- ▶ UK industrial emissions were assumed to cover the CCC sectors: iron & steel, chemicals, other manufacturing & construction, cement & lime, glass & other minerals, paper, vehicles and non-ferrous metals. The off-road mobile machinery sector was excluded from the analysis.

Baseline emissions data

- ▶ Used NAEI source data where available > CDP > Annual Reports.
- ▶ In the case of CDP and Annual Reports, if site level emissions data was not available, data was aggregated at a UK level.
- ▶ In the case of CDP and Annual Reports, Scope 1 data was split out by industrial processes vs fleet vs office buildings if available, otherwise data at UK level used. This assumed Scope 1 and 2 emissions from other activities (e.g. fleet) were negligible.
- ▶ Scope 2 data was gathered to enable modelling of combined Scope 1 & 2 emissions reduction targets.
- ▶ CDP data was excluded as additional data to NAEI where the NAEI organisation's parent company was identified in the CDP database to avoid double counting. This assumed that all the Scope 1 and 2 data from the NAEI organisation accounts for 100% of the parent company in CDP.
- ▶ Where no Scope 2 data was available for NAEI companies, the Scope 1:2 ratio was assumed to be similar to the other companies identified from the CDP data. An average of Scope 1:2 ratio per sector was calculated for location-based and market-based emissions and estimates were provided for both accounting approaches.
- ▶ In the Iron and Steel sector, when Scope 2 data was unavailable, the Scope 1:2 ratio of Celsa from their CDP response was applied to all companies other than British Steel, to account for the different Scope 2 usage between steel manufacturing methods (recycling vs. raw materials).





Target data assumptions and target quality threshold

- ▶ Targets sourced from SBTi, CDP, Annual Report, Sustainability Report or TCFD Report. If targets were a 'one off' press release and unable to be substantiated in public facing company disclosures, these targets have been discounted.
- ▶ Captured both near-term (e.g., 2020-2030) and long-term (e.g., 2020-2050) targets.
- ▶ Where there are multiple sources or overlap in target boundary and timeframe, favoured most recent and those specifically targeting Scope 1 emissions.
- ▶ Where both Group and UK/legal entity targets exist, prioritised UK/legal entity targets.
- ▶ Where part of a Group, and targets set at Group level only, assumed that the Group target covers UK entities unless clearly stated otherwise.
- ▶ Gross emission reduction targets were only included where reductions are explicitly targeted with or on an absolute or intensity basis. Net carbon emission targets not supported by a gross reduction target have been excluded.
- ▶ 'Carbon neutral', 'carbon negative', 'carbon positive', 'climate positive', 'Net Zero' targets were excluded from the reduction analysis unless specifically stated what proportion of the target will be achieved through gross emission reduction.
- ▶ Carbon offsetting was not treated as a carbon reduction mechanism and therefore targets reliant on carbon offsetting have been excluded.

Modelling assumptions

Year-on-year target reduction

- ▶ Where the targets were absolute, assumed a linear reduction, in line with the SBTi criteria.
- ▶ Where the targets were intensity based, assumed a compound reduction, in line with SBTi criteria.
- ▶ Where the targets were intensity based, SBTi sector activity projection rates were applied in accordance with sectorial decarbonisation tools (cement, steel & paper). If sector specific activity projections were not available, UK average growth projections were applied to engineer the absolute reductions of the target.
- ▶ Where both near-term (e.g., 2030) & long-term (e.g. 2050) targets exist, started the long-term target reduction trajectory from near-term target end date (e.g. 2030 to 2050).
- ▶ If the target baseline is before 2020, used the reported emissions figures to calculate achievement between baseline and 2020, and then model the remaining trajectory for CDP data.
- ▶ If the parent company of the operating site was dissolved, assumed emissions for the operating site remain the same as 2020 and treated the same as company without targets.

Group targets

- ▶ Where a business is part of a Group, and targets are set at Group level, assumed Group target covers the UK entities unless clearly stated otherwise. Assumed equal apportionment of target ambition across the Group.
- ▶ Where there are both Group and UK/legal entity targets, UK/legal entity targets were prioritised.



Modelling assumptions (continued)

International Targets

- ▶ Where the business was international, assumed all regions are targeted to decarbonise at the same rate.

Combined Scope Targets

- ▶ The majority of corporates set combined targets for Scope 1 & 2, and therefore the Scope 2 emissions proportion was to be interpolated from the data set. This was done using 3 scenarios to give a range of confidence levels.
 1. Grid Greening assumes that the Scope 2 proportion of targets reduce in line with BEIS UK grid decarbonisation prediction,
 2. Split Proportion assumes the Scope 2 proportion of the targets reduces at the rate specified in the target,
 3. 100% renewable assumes that the Scope 2 proportion of the target is 100% renewable by the near-term target year for market-based targets
- ▶ Where Scope 1, 2 & 3 is included in the target, Scope 2 treated as above, and Scope 3 will be 'backed out' through materiality, assuming an equal apportionment of target ambition (e.g., Scope 1, 2 & 3 target of 50%, EcoAct assumed Scope 1 & 2 50% reduction and Scope 3 50% reduction).

Climate action. Commercial sense.

EcoAct, an Atos company, is an international climate consultancy and project developer that supports companies to set robust science-aligned net-zero strategies and achieve their climate targets. Founded in France in 2006, the company now spans three continents with offices in Paris, London, Barcelona, New York, Montreal, Munich, Milan and Kenya.

With a team of more than 260 international climate experts, EcoAct's core purpose is to lead the way in delivering sustainable business solutions that deliver true value for both climate and client. EcoAct is a CDP Gold Partner, a founding member of ICROA, a strategic partner in the implementation of the Gold Standard for the Global Goals and reports to the UN Global Compact.

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