



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

NEAR-TERM TARGET VALIDATION REPORT

Nederlandse Spoorwegen

27 February 2024

Partner Organizations



United Nations
Global Compact



WORLD
RESOURCES
INSTITUTE



In collaboration with





ABOUT THE SCIENCE BASED TARGETS INITIATIVE

The Science Based Targets initiative (SBTi) is a global body enabling companies and financial institutions to set ambitious emissions reduction targets in line with the latest climate science. The SBTi's goal is to accelerate businesses across the world to support the global economy to halve emissions before 2030 and achieve net-zero before 2050.

The initiative is a collaboration between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) and one of the We Mean Business Coalition commitments. The SBTi defines and promotes best practice in science-based target setting, offers resources and guidance to reduce barriers to adoption, and independently assesses and approves companies' targets.

SBTi GLOBAL MOMENTUM BY THE NUMBERS



Data collected in 31/12/2022



INTRODUCTION

This report presents the results and recommendations of the submitted targets assessed against the SBTi Criteria and guidance. This includes an overview of the GHG emissions sources and inventory, target setting methodologies and ambition, emissions included in the target boundary, and company-specific feedback from the validation process, if applicable. A detailed overview of the criteria is provided in the appendix. The approved target language, which will be listed on the SBTi website and should be used in all company communications, is as follows:

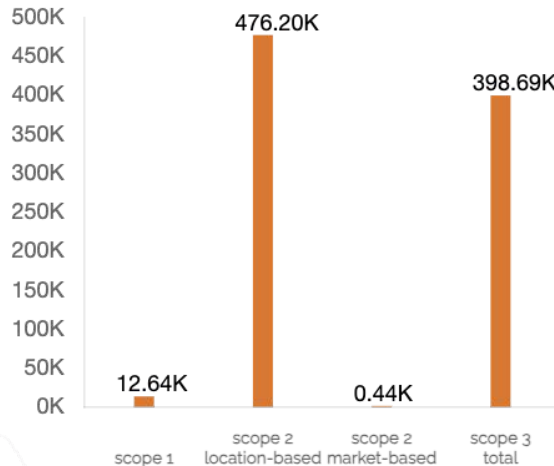
Nederlandse Spoorwegen commits to reduce absolute scope 1 and 2 GHG emissions 46.2% by 2030 from a 2019 base year. Nederlandse Spoorwegen also commits to continue annual active sourcing of 100% renewable electricity through 2030. Nederlandse Spoorwegen finally commits to reduce absolute scope 3 GHG emissions 27.5% by 2030 from a 2019 base year.

The SBTi's Target Validation Team has classified Nederlandse Spoorwegen's scope 1 and 2 target ambition and has determined it is in line with 1.5C trajectory.

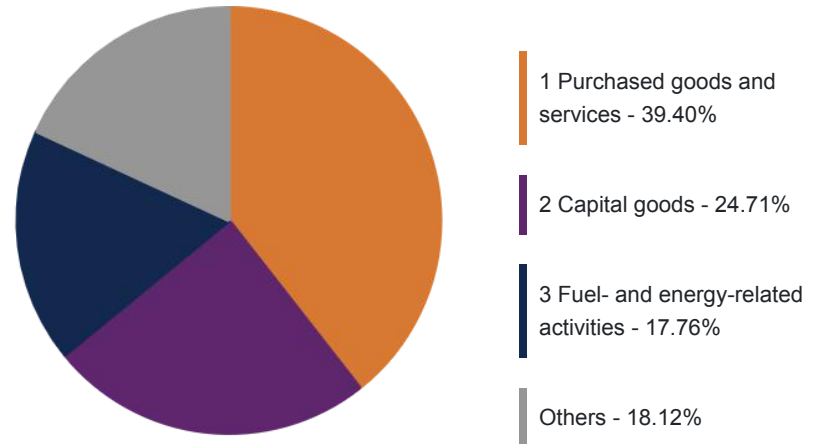
GHG INVENTORY OVERVIEW

Nederlandse Spoorwegen has submitted 2 GHG inventories for review by SBTi's Target Validation Team. In the calendar year of 2019 the company has reported total of 887,536 GHG emissions (tCO₂e) in the full minimum boundary (scopes 1, 2 and 3). In the calendar year of 2022 the company has reported total of 799,968 GHG emissions (tCO₂e). Nederlandse Spoorwegen has additionally chosen to report emissions outside the minimum boundary. Nederlandse Spoorwegen has reported no emissions from the combustion, processing and distribution phase of bioenergy and the land use emissions and removals, associated with bioenergy feedstocks. The full breakdown of Nederlandse Spoorwegen's GHG inventory, including optional emissions, is provided below.

TOTAL GHG EMISSIONS (tCO₂e) 2019



SCOPE 3 BREAKDOWN BY CATEGORY



2019 GHG INVENTORY

		Minimum boundary emissions	Share of total emissions (location-based scope 2)	Share of total emissions (market-based scope 2)	Percentage excluded from inventory	Outside minimum boundary (optional)	Bioenergy emissions	Bioenergy removals	Biogenic total
SCOPE 1 & 2	Scope 1	12,637.72	1.42%	3.07%	N/A	N/A	N/A	N/A	N/A
	Scope 2 location-based	476,204.75	53.65%	N/A	N/A	N/A	N/A	N/A	N/A
	Scope 2 market-based	441.59	N/A	0.11%	N/A	N/A	N/A	N/A	N/A
SCOPE 3	1. Purchased goods and services	157,094.01	17.70%	38.15%	N/A	N/A	N/A	N/A	N/A
	2. Capital goods	98,522.13	11.10%	23.93%	N/A	N/A	N/A	N/A	N/A
	3. Fuel- and energy-related activities	70,826.11	7.98%	17.20%	N/A	N/A	N/A	N/A	N/A
	4. Upstream transportation and distribution	2,107.27	0.24%	0.51%	N/A	N/A	N/A	N/A	N/A
	5. Waste generated in operations	7,145.24	0.81%	1.74%	N/A	N/A	N/A	N/A	N/A
	6. Business travel	1,070.43	0.12%	0.26%	N/A	N/A	N/A	N/A	N/A
	7. Employee commuting	3,980.67	0.45%	0.97%	N/A	N/A	N/A	N/A	N/A
	8. Upstream leased assets	38,420.63	4.33%	9.33%	N/A	N/A	N/A	N/A	N/A
	9. Downstream transportation and distribution	N/A	N/A	N/A	N/A	188,395.31	N/A	N/A	N/A
	10. Processing of sold products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11. Use of sold products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12. End-of-life treatment of sold products	0.00	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A
	13. Downstream leased assets	19,527.04	2.20%	4.74%	N/A	N/A	N/A	N/A	N/A
	14. Franchises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15. Investments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2022 GHG INVENTORY

		Minimum boundary emissions	Share of total emissions (location-based scope 2)	Share of total emissions (market-based scope 2)	Percentage excluded from inventory	Outside minimum boundary (optional)	Biogenic emissions	Biogenic removals	Biogenic total
SCOPE 1 & 2	Scope 1	11,010.10	1.38%	2.89%	N/A	N/A	N/A	N/A	N/A
	Scope 2 location-based	419,105.79	52.39%	N/A	N/A	N/A	N/A	N/A	N/A
	Scope 2 market-based	291.89	N/A	0.08%	N/A	N/A	N/A	N/A	N/A
SCOPE 3	1. Purchased goods and services	163,809.10	20.48%	42.98%	N/A	N/A	N/A	N/A	N/A
	2. Capital goods	75,609.70	9.45%	19.84%	N/A	N/A	N/A	N/A	N/A
	3. Fuel- and energy-related activities	67,490.63	8.44%	17.71%	N/A	N/A	N/A	N/A	N/A
	4. Upstream transportation and distribution	2,000.74	0.25%	0.52%	N/A	N/A	N/A	N/A	N/A
	5. Waste generated in operations	4,368.09	0.55%	1.15%	N/A	N/A	N/A	N/A	N/A
	6. Business travel	543.44	0.07%	0.14%	N/A	N/A	N/A	N/A	N/A
	7. Employee commuting	3,684.97	0.46%	0.97%	N/A	N/A	N/A	N/A	N/A
	8. Upstream leased assets	38,420.63	4.80%	10.08%	N/A	N/A	N/A	N/A	N/A
	9. Downstream transportation and distribution	N/A	N/A	N/A	N/A	118,075.71	N/A	N/A	N/A
	10. Processing of sold products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11. Use of sold products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12. End-of-life treatment of sold products	0.00	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A
	13. Downstream leased assets	13,924.89	1.74%	3.65%	N/A	N/A	N/A	N/A	N/A
	14. Franchises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15. Investments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

Nederlandse Spoorwegen has submitted 3 near-term targets for review by the SBTi. All targets have been assessed against the SBTi's quantitative and qualitative criteria, along with the Target Validation Protocol. For approval, a company's targets must comply with all applicable requirements. The following is an overview of the approved targets:

Target wording	Public?	Base year	Most recent year	Target year	Type	Target value	Method used
Nederlandse Spoorwegen commits to reduce absolute scope 1 and 2 GHG emissions 46.2% by 2030 from a 2019 base year.	Yes	2019	2022	2030	Absolute	46.2%	Absolute contraction
Nederlandse Spoorwegen commits to continue annual active sourcing of 100% renewable electricity through 2030.	Yes	2019	2022	2030	RE	100.0%	Renewable electricity procurement
Nederlandse Spoorwegen commits to reduce absolute scope 3 GHG emissions 27.5% by 2030 from a 2019 base year.	Yes	2019	2022	2030	Absolute	27.5%	Absolute contraction

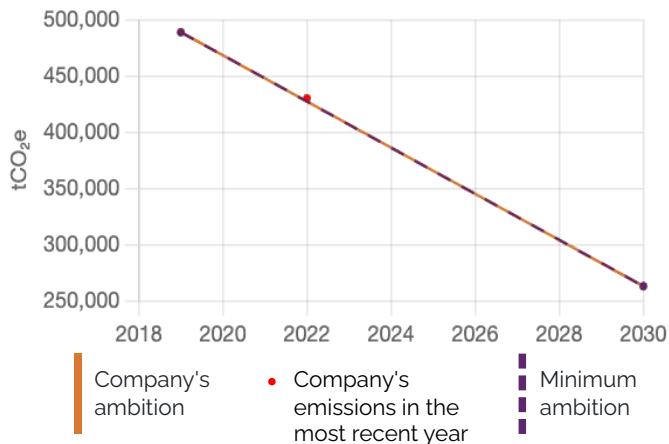
OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

Nederlandse Spoorwegen commits to reduce absolute scope 1 and 2 GHG emissions 46.2% by 2030 from a 2019 base year.

Public: Yes

Temperature classification: 1.5°C

ABSOLUTE EMISSIONS



Target Coverage

GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	100.00%	N/A	N/A
Scope 2 location-based	100.00%	N/A	N/A
Scope 3 total	N/A	N/A	N/A
1. Purchased goods and services	N/A	N/A	N/A
2. Capital goods	N/A	N/A	N/A
3. Fuel- and energy-related activities	N/A	N/A	N/A
4. Upstream transportation and distribution	N/A	N/A	N/A
5. Waste generated in operations	N/A	N/A	N/A
6. Business travel	N/A	N/A	N/A
7. Employee commuting	N/A	N/A	N/A
8. Upstream leased assets	N/A	N/A	N/A
9. Downstream transportation and distribution	N/A	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	N/A	N/A	N/A
13. Downstream leased assets	N/A	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

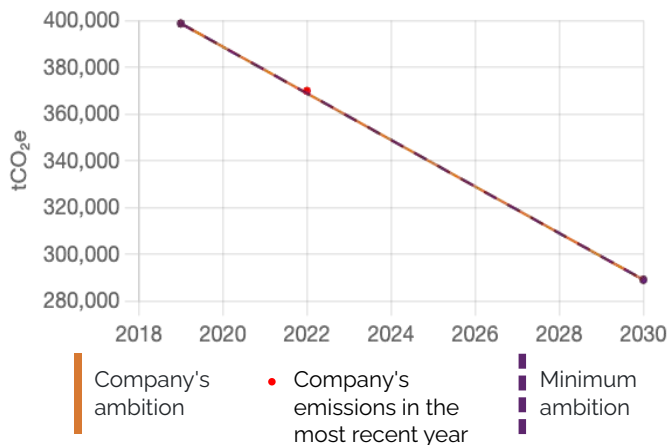
OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

Nederlandse Spoorwegen commits to reduce absolute scope 3 GHG emissions 27.5% by 2030 from a 2019 base year.

Public: Yes

Temperature classification: N/A

ABSOLUTE EMISSIONS



Target Coverage

GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	N/A	N/A	N/A
Scope 2 location-based	N/A	N/A	N/A
Scope 3 total	100.00%	N/A	N/A
1. Purchased goods and services	100.00%	N/A	N/A
2. Capital goods	100.00%	N/A	N/A
3. Fuel- and energy-related activities	100.00%	N/A	N/A
4. Upstream transportation and distribution	100.00%	N/A	N/A
5. Waste generated in operations	100.00%	N/A	N/A
6. Business travel	100.00%	N/A	N/A
7. Employee commuting	100.00%	N/A	N/A
8. Upstream leased assets	100.00%	N/A	N/A
9. Downstream transportation and distribution	N/A	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	100.00%	N/A	N/A
13. Downstream leased assets	100.00%	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

An aerial photograph of a rugged coastline. The left side of the image shows deep blue-green ocean water with white foam from breaking waves. The right side shows a rocky shore with dark, jagged stones and patches of green moss or algae. The text is overlaid on the left side of the image.

APPENDIX

Overview of compliance with SBTi Criteria

Communication of your targets

Mandatory reporting of progress against targets

Mandatory target review and target recalculation



OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

I. GHG EMISSIONS INVENTORY AND TARGET BOUNDARY

1. Organizational boundary	Operational control was chosen by Nederlandse Spoorwegen as the consolidation approach, and all subsidiaries have been accounted for in the inventory boundary. Therefore, the target submission complies with Criterion 1.	Compliant
2. Greenhouse gases	All GHGs have been included in the inventory and target boundary. The target submission therefore complies with Criterion 2.	Compliant
3. Scope 1 and Scope 2	Nederlandse Spoorwegen has set a target covering 100.00% company-wide scope 1 and 2 emissions. The target submission therefore complies with Criterion 5.	Compliant
4. Requirement to have a scope 3 target	Nederlandse Spoorwegen's scope 3 emissions amount to 44.92% in scope 3 base year of 2019, which is more than 40% threshold set by SBTi. Nederlandse Spoorwegen has set a target that covers scope 3. Therefore, the target submission complies with Criterion 4.	Compliant
5. Scope 1 and 2 significance thresholds	The proposed scope 1 and 2 target covers 100.00% of the Nederlandse Spoorwegen's scope 1 and 2 emissions in the base year of 2019, which is more than 95% threshold set by SBTi. And Nederlandse Spoorwegen has excluded 0.00% of emissions from scope 3 inventory in 2019, which is less than 5% threshold set by SBTi. The target submission therefore complies with Criterion 5.	Compliant



OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

6. Scope 3 emissions coverage for near-term targets	The proposed scope 3 near-term target covers 100.00% of total reported and excluded scope 3 emissions, which passes SBTi threshold of two thirds of scope 3 emissions being covered by near-term targets. Therefore submission complies with Criterion 6.	Compliant
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II. METHOD VALIDITY

7. Method validity	Nederlandse Spoorwegen's 3 separately modeled targets that have been assessed against multiple methods approved by the initiative. The target submission therefore complies with Criterion 7.	Compliant
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III. EMISSIONS ACCOUNTING REQUIREMENTS

8. Scope 2 accounting approach	A location-based approach is used to account for scope 2 emissions and to track performance. The target submission therefore complies with Criterion 8.	Compliant
9. Scope 3 screening	A complete screening or inventory has been carried out by Nederlandse Spoorwegen with scope 3 GHG emissions accounting for 44.92% of the total emissions. The target submission therefore complies with Criterion 9.	Compliant

OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

10. Bioenergy accounting	Nederlandse Spoorwegen reported CO2 emissions from the combustion, processing and distribution phase of bioenergy and the land use emissions and CO2 removals, associated with bioenergy feedstocks and has included them in the target boundary, covering N/A of biogenic CO2 emissions in scope 1, 2 and 3 total. 100.0% of biogenic CO2 emissions were excluded from inventory of scope 1, 2 and 3 total. As this these emissions represents insignificant portion of company's total emissions and the target coverage of reported biogenic CO2 emissions is sufficient, the target submission complies with Criterion 10.	Compliant
11. Carbon credits	The submitted targets do not include carbon credits. Therefore, the target submission complies with Criterion 11.	Compliant
12. Avoided emissions	The submitted targets do not include avoided emissions. Therefore, the target submission complies with Criterion 12.	Compliant

IV. TARGET FORMULATION

13. Base and target years	The target year of emissions reduction target(s) 2030 is between 5 and 10 years from the submission date of July 31, 2023. Base years of emissions reduction target(s) (2019) are not earlier than 2015. The target submission therefore complies with Criterion 13.	Compliant
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OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

14. Progress to date	The targeted reduction between the base year and the most recent year leads to emissions reductions in line with a 1.5°C pathway. The target submission therefore complies with Criterion 14.	Compliant
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V. AMBITION

15. Level of ambition for scope 1 and 2 targets	The proposed reduction in scope 1 and 2 emissions is aligned with a rate of decarbonization consistent to keep global temperature increase to 1.5°C compared to pre-industrial temperatures. The target submission therefore complies with Criterion 15.	Compliant
16. Absolute targets	Absolute reductions are as ambitious as the minimum emissions reductions required to align with the SBTi's 1.5°C temperature pathways. The target submission therefore complies with Criterion 16.	Compliant
17. Intensity targets	No scope 1 and 2 intensity targets were submitted. Therefore, Criterion 17 is not applicable.	N/A
18. Level of ambition for scope 3 emissions reduction targets	The proposed scope 3 target meets the minimum level of ambition required. The target submission therefore complies with Criterion 18.	Compliant
19. Supplier or customer engagement targets	No supplier or customer engagement target was submitted for validation, and therefore Criterion 19 is not applicable.	N/A
20. Combined scope targets	No combined scope 1+2+3 targets were submitted, and therefore Criterion 20 is not applicable.	N/A



OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

21. Renewable electricity	The proposed renewable electricity target meets all relevant ambition and timeframe criteria. The target submission therefore complies with Criterion 21.	Compliant
22. Fossil fuel sales or distribution	Nederlandse Spoorwegen is not involved in the distribution of natural gas or other fossil fuel products, and therefore Criterion 22 is not applicable.	N/A
23. Companies in the fossil fuel production business or with significant revenue from fossil fuel business lines	Nederlandse Spoorwegen is not involved in exploration, extraction, mining and/or production of oil, natural gas, coal or other fossil fuels, nor does the company derive 50% or more of its revenue from fossil fuels. The target submission therefore complies with Criterion 23.	Compliant

VI. SECTOR SPECIFIC GUIDANCE

24. Requirements from sector-specific guidance	No relevant sector-specific guidance is available, and therefore criterion 24 is not applicable.	N/A
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VII. REPORTING AND RECALCULATION

25. Frequency	Nederlandse Spoorwegen has committed to publicly reporting its full GHG inventory and target progress annually in a disclosed location. The target submission therefore complies with Criterion 25.	Compliant
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OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

26. Mandatory target recalculation	Nederlandse Spoorwegen agrees to review and if necessary, recalculate and revalidate its targets following the most recent criteria at a minimum of every 5 years. Nederlandse Spoorwegen has set a 5% significance threshold for emission recalculations. The target submission therefore complies with Criterion 26.	Compliant
27. Target validity	Nederlandse Spoorwegen agrees to publicly announce its targets by August, 2024. The target submission therefore complies with criterion 27.	Compliant



COMMUNICATION OF YOUR TARGETS

Consult the [SBTi communications pack](#) for information on publicly announcing your approved target(s). The SBTi plans to publish your approved target wording and temperature alignment on [our website](#) on Thursday following 27th of March, 2024.

To request a different publication date, contact the SBTi communications team at communications@sciencebasedtargets.org as soon as possible (please note this needs to be a Thursday). The SBTi requires approved target(s) to be published within six months from the date of target validation.

 [@ScienceTargets](#)

 [/science-based-targets](#)

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 sciencebasedtargets.org/newsletter



MANDATORY REPORTING OF PROGRESS AGAINST TARGETS

To ensure maximum transparency, accountability, and corporate leadership, Nederlandse Spoorwegen must publicly report the progress against any published targets on an annual basis along with your company-wide GHG emissions inventory as per criterion 25 of the [SBTi Criteria and Recommendations \(version 5.1\)](#).

When reporting progress against approved targets companies should disclose the following elements:

- Target description following the exact SBTi-aligned wording including target information such as the target type, coverage, base year and target year.
- Target progress from the target base year to the reporting year in terms of emissions reductions, share of renewable electricity, or supplier/ customer engagement (annual breakdowns are preferable). Variability between years is expected, so it is important to show trends over multiple years.
- Details on substantial emissions variations and targets reviews following the SBTi criteria about mandatory target review and target recalculation criteria.
- Actions towards meeting the target, including information on emission reduction projects in implementation and planning phase that will contribute to the achievement of their targets.
- Full GHG emissions inventory in accordance with the GHG Protocol Corporate Standard. Companies must report all emissions scopes (1, 2 and 3) and all scope 3 categories, including those that do not fall within a target boundary.

Please consult [the latest SBTi Corporate Manual](#) for more guidance.



MANDATORY TARGET REVIEW AND TARGET RECALCULATION

The IPCC special report on 1.5C highlighted the necessity to halve emissions by 2030 and to reach net-zero emissions by mid-century. Your science-based targets are a key element of your decarbonization trajectory while maximizing transparency and accountability.

In line with the SBTi Criteria, your company must review its targets against the latest criteria and guidance within five years, and if necessary, recalculate and revalidate for continued recognition by the SBTi.

The following changes should trigger a target recalculation:

- Scope 3 emissions become 40% or more of aggregated scope 1, 2 and 3 emissions.
- Emissions of exclusions in the inventory or target boundary change significantly.
- Significant changes in company structure and activities (e.g. acquisitions, divestitures, mergers, insourcing or outsourcing, shifts in goods or service offerings).
- Significant adjustments to the base year inventory or changes in data to set targets such as growth projections (e.g. discovery of significant errors or a number of cumulative errors that are collectively significant).
- Other significant changes to projections/assumptions used in setting the science-based targets.

Please consult criterion 26 and recommendation 11 of the [SBTi Criteria and Recommendations \(version 5.1\)](#), and [the latest SBTi Corporate Manual](#) for further guidance.



SCIENCE BASED TARGETS

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