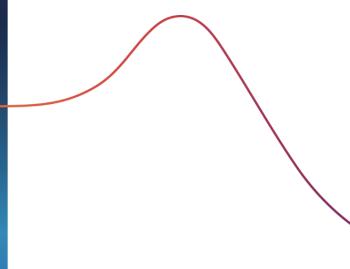


# SBTi POWER SECTOR NET-ZERO STANDARD

Version 1.0 First Consultation Draft September 2025



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# **VERSION HISTORY**

| Version     | Change/update description       | Release date         | Effective dates |
|-------------|---------------------------------|----------------------|-----------------|
| Version 1.0 | First Public Consultation draft | September 2,<br>2025 | N/A             |

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# **EXECUTIVE SUMMARY**

**Disclaimer**: The Executive Summary is intended to provide an overview and guidance for stakeholders and does not constitute a normative part of the draft Standard. For the full scope of the proposed requirements, users should refer to the main body of the consultation draft.

#### Introduction

The Science Based Targets initiative (SBTi) Power Sector Net-Zero Standard provides a framework for companies across the power sector—including power generation, electricity transmission and distribution, electricity storage, trade and retail—to set near- and long-term science-based targets aligned with limiting global warming and achieving net-zero emissions by 2050 at the latest.

The draft Power Standard builds on, and will replace the SBTi Quick Start Guide for Electric Utilities (2020). It aligns with the first consultation draft of the Corporate Net-Zero Standard V2 and incorporates best practices for decarbonization in the power sector. It lays out how companies in the power sector should use the latest version of the SBTi Corporate Net-Zero Standard V2, along with sector-specific criteria, to set targets covering all relevant activities and emissions.

The SBTi Power Sector Net-Zero Standard expands its scope to cover a more comprehensive list of sector activities and emission sources across the sector's value chains. It proposes target-setting methods tailored to specific activities including emissions intensity and low-carbon electricity trajectories. And, introduces new metrics, targets, and activity-based segmentation to reflect different operational realities.

#### Purpose of public consultation draft

This document is the first consultation draft of the SBTi Power Sector Net-Zero Standard. Feedback and consultation are critical to the development of a Standard that is practical for businesses, while scientifically robust and credible—helping accelerate climate action in line with net-zero goals.

Public consultation, alongside input from the Expert Advisory Group and pilot testing is a key step in the Standard's development process. We invite stakeholders to review this draft and share feedback on its content, clarity and applicability through the consultation survey. The public consultation will provide stakeholders with an opportunity to help shape the Power Sector Net-Zero Standard, ensuring it reflects sector realities, supports implementation, and accelerates climate action.

## **Key highlights of the draft**

The draft Power Sector Net-Zero Standard introduces several significant changes to current guidance and criteria for the power sector, including:

 A direct link with the first consultation draft of the SBTi Corporate Net-Zero Standard √2, including clarity on how to apply the criteria from each Standard.

- Comprehensive and clear scope, addressing companies with power generation, electricity transmission and distribution, electricity storage, trade and retail.
- Detailed rules for applicability of the Power Sector Ner-Zero Standard based on activities and emission sources in scope.
- Updated pathways based on IPCC AR6 and IEA NZE 2023 scenarios, used to derive emission intensity and low-carbon electricity trajectories for target setting.
- For power generation activities, targets based on emissions and low carbon power generation, with additional requirements for unabated fossil fuel capacity phase out.
- Specific metrics and targets for other value chain activities, including electricity losses for transmission and distribution, and storage activities, and low carbon electricity purchased for trade and retail.

#### How to participate in the public consultation

The Power Sector Net-Zero Standard project was initiated in May 2024, and is being developed in line with the Standard Operating Procedure (SOP) for Development of SBTi Standards.

The draft was developed through extensive research and input from a dedicated Expert Advisory Group. This first draft will be open for public consultation from September 2 until November 3, 2025. The SBTi welcomes all feedback on the draft Standard, especially on the following topics:

- Activities and emissions in scope of the Power Standard and its applicability.
- Applicability of the draft Corporate Net-Zero Standard V2 with this Standard.
- Metrics for determining base year performance.
- Options proposed for power generation activities to set interim targets based on emissions and low carbon power generation.
- Requirement for unabated fossil fuel capacity phase out and sustainable sourcing of biomass for power generation activities.
- Metrics and targets for other value chain activities, including electricity losses for transmission and distribution, and storage activities; and technology share targets for trade and retail activities.

Feedback can be submitted through the consultation survey. Respondents can choose to complete the full survey or respond to selected sections. Input will help strengthen the clarity, credibility, and ambition of the Standard. Depending on the sections chosen, completing the survey can take as little as 35 minutes.

#### **Next steps**

Following the public consultation period, all feedback received will be reviewed and analyzed. A summary of the feedback and how it has been addressed will be published on the power sector webpage in due course. The draft may then be revised in response to the input received and will undergo technical review and refinement in collaboration with the Expert Advisory Group. It will then be re-released for pilot testing and a second round of public consultation. Feedback from both the pilot testing and public consultation will further inform revisions to the draft. Before becoming operational, the Standard will be submitted for approval by the Technical Council and adoption by the Board of Trustees.

# A. INTRODUCTION

#### A.1 Introduction to SBTi

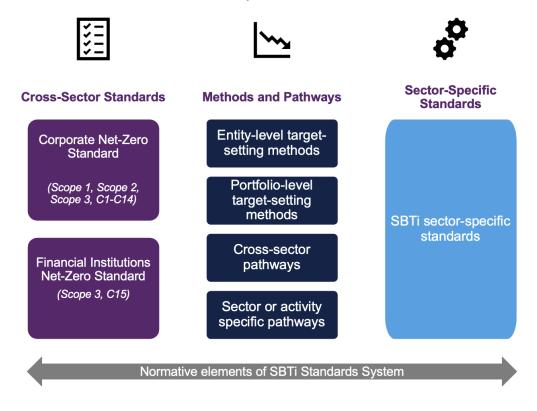
The Science Based Targets initiative (SBTi) is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in reducing greenhouse gas (GHG) emissions to reach net-zero. We develop standards, tools and quidance which allow companies to set GHG emissions reductions targets in line with what is needed to keep global heating to safer levels and reach net-zero by no later than 2050.

The SBTi is incorporated as a UK charity, with a subsidiary, SBTi Services Limited, which hosts the SBTi's target validation services. Our founding partners are CDP, the United Nations Global Compact, the We Mean Business Coalition, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF).

#### A.2 Framework of SBTi Standards

SBTi Standards are structured in a modular framework, comprising two cross-sector standards - the SBTi Corporate Net-Zero Standard and the SBTi Financial Institutions Net-Zero Standard - providing cross-sector requirements, guidance and recommendations to align value-chain activities with net-zero. Additionally, the suite of SBTi Standards includes multiple sector-specific standards intended for the heaviest emitting industries.

Figure A.1. Overview of SBTi Standards System



<sup>&</sup>lt;sup>1</sup> A company is a legal entity formed by one or more individuals to engage in and operate a business. This broad definition encompasses financial institutions and is the intended meaning when referencing companies in the SBTi Standards.

The SBTi Corporate Net-Zero Standard provides sector-agnostic requirements and recommendations for scope 1, scope 2 and scope 3 emissions, categories 1 to 14. The SBTi Financial Institutions Net-Zero Standard provides requirements and recommendations for financial activities (scope 3 emissions, category 15).

Companies shall assess their business activities against Scope and Applicability of the SBTi Power Sector Net-Zero Standard as detailed in Chapter A.5.

#### A.3 Application hierarchy of criteria between sector and cross-sector standards

The criteria stipulated in the SBTi Sector Standards are linked to and built upon the cross-sector criteria of the SBTi Corporate Net-Zero Standard (CNZS) (and the SBTi Financial Institutions Net-Zero Standard, if applicable).

All companies shall use the SBTi Corporate Net-Zero Standard as the starting point for setting SBTi targets. All companies shall calculate a complete GHG emissions inventory (as per CNZS-C5 in the SBTi Corporate Net-Zero Standard Version 2.0) and determine the applicability of SBTi sector-specific requirements (see CNZS-C6 in the SBTi Corporate Net-Zero Standard Version 2.0).

When a company falls within the scope of a sector with a specific standard or target-setting criteria that companies in that sector are required to follow, it must conform to that standard or those criteria within the applicable scope of that sector standard to seek validation. Emissions of the company falling outside the scope of a sector standard shall be addressed in line with the SBTi Corporate Net-Zero Standard.

In each chapter of the SBTi Power Sector Net-Zero Standard, all criteria from the SBTi Corporate Net-Zero Standard are referenced with their applicability to power companies clearly detailed.

The validation process for SBTi Sector targets follows the same cycle as the SBTi Corporate targets: SBTi Sector targets need to be validated and assessed together with the SBTi Corporate ones.

The following conformity assessments occur over a defined cycle for targets that are set over a five-year target time: entry check, initial validation and renewal validation. Please refer to the SBTi Corporate Net-Zero Standard Version 2.0 and to the SBTi Services webpage for more information on targets' validation.

Each chapter and sub-section outlines the assessment stage of each criterion of the SBTi Standards. It provides information on when the conformance with the criterion will be validated.

Additionally, an overview of all the criteria of this Standard and their corresponding assessment stages is provided in Annex B.

The SBTi Corporate Net-Zero Standard Version 2.0 being currently in draft, this section might be edited in the future to align with upcoming changes made to the SBTi Corporate Net-Zero Standard Version 2.0.

#### A.4 Intended users of the SBTi Power Sector Net-Zero Standard

The SBTi Power Sector Net-Zero Standard applies to companies with economic activities associated with power generation, electricity transmission and distribution, electricity storage and sales. This includes (see Annex C for further details):

- Power generation from low-carbon sources such as renewables (solar, wind, hydro, geothermal), biomass, nuclear, fossil fuel equipped with CCS2
- Power generation from unabated fossil fuel sources (e.g. coal, oil, natural gas not equipped with CCS<sup>3</sup>)
- Transmission and distribution of electricity
- Trade and retail of electricity (incl. retail of purchased electricity)
- Storage of electricity

This Standard is intended for any company worldwide, with operations in one or more of the above activities, irrespective of them being the core business activities, which falls within the applicability criteria described in A.5.

Companies operating in other sectors but with power generation for their own electricity consumption, are not included in the scope of this Standard<sup>4</sup> unless they sell the excess electricity to the market. In this case they shall follow applicable requirements set in this Power Sector Standard if they meet the applicability thresholds defined in A.5.

#### A.4.1 Company categorization

The SBTi Power Sector Net-Zero Standard proposes the same categorization model as the SBTi Corporate Net-Zero Standard Version 2.0, with companies being segmented in two categories. Please refer to the SBTi Corporate Net-Zero Standard Version 2.0 (consultation draft) to get familiar with segmentation criteria and identify the category your company belongs to. The criteria of the SBTi Power Sector Net-Zero Standard may apply differently according to the company's category. The applicability is mentioned as "Company segment" under each criterion.

#### A.5 Applicability of the SBTi Power Sector Net-Zero Standard

This Standard aims to cover the key GHG emissions sources related to power sector operations, while ensuring that it is actionable by all companies with significant activities within its applicability scope.

Companies shall follow all applicable criteria within this Standard when either of the following applies:

The company's GHG emissions from any of the power sector activities and sources in scope combined (as defined in A.5.1) represent at least 5% of the company's overall GHG inventory or are above 10,000 tCO2e.

<sup>&</sup>lt;sup>2</sup> Within this Standard, fossil fuel power generation with CCS is considered low-carbon where capture rate is 95% at a minimum.

<sup>&</sup>lt;sup>3</sup> Fossil fuel generation with CCS where the capture rate is less than 95% is included in the 'unabated' fossil fuel category for the purpose of this Standard.

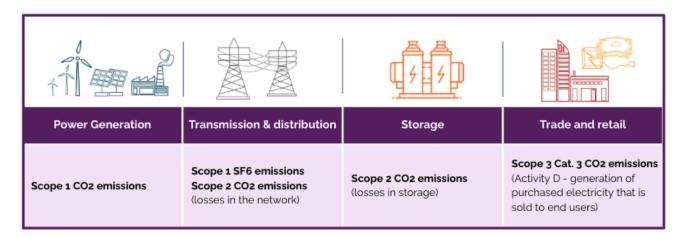
<sup>&</sup>lt;sup>4</sup> These emissions would already be covered by the related sector-specific standard, where applicable, as industrial process emissions or covered by the cross-sector standard.

The company's annual revenue from electricity generated<sup>5</sup> represents at least 5 % of the total annual revenue.

## A.5.1 Definition of activities and GHG emissions covered by this Standard

The figure below provides an overview of the power sector value chains' activities and emission sources in scope of this Standard (relevant for the calculation of the GHG emission thresholds described in A.5). Emission sources not covered within the scope of this standard are covered by the SBTi Corporate Net-Zero Standard.

Figure A.1 Illustrates the activities and emissions in scope of the Power Sector Standard.



Further detail on activities and emissions within scope and how these align to different sector classification systems is provided in Annex C.

#### A.5.2 Definition of activities and emissions outside the scope of this Standard

The following activities related to the power sector value chain are beyond the current scope of the SBTi Power Sector Net-Zero Standard. Companies shall refer to the SBTi Corporate Net-Zero Standard for target setting guidance for these activities, where applicable.

- Production, transmission and distribution of energy carriers other than electricity (e.g., natural gas, hydrogen, heat)
- Manufacture of equipment for use in the power sector, e.g., manufacture of renewable power generation technologies, manufacture of electricity transmission and distribution assets
- Activities related to the use of electricity, such as provision of energy efficiency
- Activities that involve the use of electricity for the production of other goods or other energy carriers, such as hydrogen production
- Companies with power generation activities solely for own electricity consumption

<sup>&</sup>lt;sup>5</sup> Revenue generated from sale by any mechanism, e.g., wholesale market, Power Purchase Agreement, etc., of electricity generated by plant within the ownership or control of the company.

#### A.6. Terminology

Within the criteria contained within SBTi Standards, the terms "shall", "should" and "may" are used as follows:

- "Shall" indicates criteria that are required for the applicable activities.
- "Should" indicates a recommendation. Recommendations are important for transparency and / or adherence to best practices, but are not required.
- "May" indicates an option that is permitted, allowed, or permissible.

The terms 'can' and 'must' are used with distinct meanings. 'Can' indicates possibility or capability, referring to options or actions available to the user. 'Must' denotes external constraints that are not requirements of this document but are provided for informational purposes. These terms reflect how SBTi Standards are applied in practice. For instance, 'must' could pertain to compliance with applicable laws in a user's country, region or sector, while 'can' might describe permissible actions that do not affect validation, such as using a specific technology or approach that may not count towards validation but does not preclude it.

The SBTi Glossary provides a list of terms and definitions, and of acronyms used in the SBTi's technical resources.

#### A.7 Compliance with regulatory requirements

In addition to meeting the criteria within SBTi Standards, companies are responsible for meeting or exceeding the national, subnational, regional, legislation and/or regulations that are applicable to them from time to time.

#### A.8 Language and translations

The working language for SBTi Standards is English. As appropriate, the SBTi shall arrange translations of SBTi Standards into languages other than English. Translated versions of a standard are for information only. In case of doubt, the official English language version shall be deemed definitive.

# **Consultation questions**

This subsection presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions below and submit responses via the online survey.

| Section   | Topic                     | Question   | Rationale  |
|---|---------------------------|--|--|
| A.4 Intended users<br>of the SBTi Power<br>Sector Net-Zero<br>Standard                | Standard<br>scope         | <ol> <li>Do you think the scope of the Power<br/>Sector Standard is clearly defined?</li> <li>Do you think the list of activities and<br/>emissions in scope is comprehensive<br/>and appropriate?</li> </ol>  | Rationale: The Standard is intended to address the main activities of the power sector that are required to decarbonise at a faster pace than the global economy. The intention of the question is to establish if this is being achieved with the current scope. The activities defined align with those listed in widely acknowledged sectoral classification systems.  Other activities in the supply chain are not included as their scope is too broad and the sectoral decarbonization pathway is not directly relevant to these.  |
| A.5 Applicability of<br>the SBTi Power<br>Sector Net-Zero<br>Standard                 | Applicabilit<br>y         | 3. Do you think the applicability criteria and thresholds of the Standard are adequate?  a. Do you think the absolute emission threshold (10.000 tCO2e) is too low? If yes, please explain why and suggest alternative thresholds. Feel free to include examples of companies types/structures that you believe should or should not be in scope based on these criteria | Rationale: The Standard is intended to capture material sources of GHG emissions and activity related to power generation and delivery to the end consumer. The intention of the question is to establish if this is being achieved with the current applicability criteria and thresholds.  The absolute emission threshold proposed (10.000 tCO2e) is aligned with other references in SBTi resources, but might be too low compared to the typical magnitude of emissions from fossil fuel power generation. SBTi aims to investigate further on this through the consultation process. |
| A.5.1 Definition of<br>GHG emissions<br>and activities<br>covered by this<br>Standard | Activities<br>definitions | Do you have any comments on the representation of activities and emissions in scope in A.5.1 and Annex C of the Standard?  | Rationale: The clarity of definition is important for companies to be able to determine whether the Standard is applicable to them.  |

# B. ABOUT THIS STANDARD

#### **B.1 Purpose of the SBTi Power Sector Net-Zero Standard**

The SBTi Power Sector Net-Zero Standard (hereby referred to as "this Standard") aims to maximize impact potential by establishing an ambitious and actionable approach to set and achieve net-zero targets for companies in the power sector.

The Intergovernmental Panel on Climate Change's (IPCC's) Special Report on Global Warming of 1.5°C states that we must pursue "rapid, far-reaching, and unprecedented changes in all aspects of society" to hold temperature rise to 1.5°C above pre-industrial levels or face irreversible damage to our societies, economies, and the natural world (Intergovernmental Panel on Climate Change, 2018). In response to this urgency, the Science Based Targets initiative (SBTi) defines standards consistent with reaching net-zero emissions by mid-century, acknowledging that the window to limit warming to 1.5°C is rapidly closing.

In all climate scenarios that limit warming to 1.5°C, the share of electricity in final energy consumption grows steadily between 2020 and 2050 (Bashmakov, Igor A., et al, 2022). Reasons for this trend are multifaceted but primarily reflect the potential for electricity to decarbonize at a much faster rate than alternative energy carriers.

This Standard accompanies the SBTi's Corporate Net-Zero Standard, incorporating a set of criteria for the power sector specifying how these pathways may be used to establish GHG emissions reduction targets that demonstrate the highest level of climate leadership.

The power sector is, in itself, a significant source of GHG emissions, accounting for around 40% of global energy-related emissions in 2023 (International Energy Agency, 2024). Simultaneously, it is an enabler of decarbonization of many other sectors, with power demand projected to climb due to growth in emerging markets, electrification, and green hydrogen (International Energy Agency, 2023). Overall, electricity is projected to increase its share as a final energy consumption from 20% today (2023) to over 50% by 2050 (International Energy Agency, 2023).

Of course growth of the power sector is not only limited to the generation of power, but also how it is transported and stored, as well as relying on the underlying growth of equipment and skills availability. As a result, the variety of organisations on which the decarbonization of the power sector depends is substantial.

#### **B.2 Changes versus previous SBTi Power Sector Guidance**

SBTi first published guidance for target setting in the power sector in 2020 with its Quick Start Guide for Electric Utilities (SBTi, 2020). The guidance was focused on the selection of 1.5°C-aligned pathways and target-setting methods for power generation emission intensity based on the Sectoral Decarbonization Approach<sup>6</sup> (SBTi, 2015).

This updated SBTi Power Sector Net-Zero Standard provides greater detail and expands its scope to a more comprehensive list of sector activities and proposes differentiated

<sup>&</sup>lt;sup>6</sup> The SDA is intended to help companies in homogenous, energy intensive sectors to align their emissions reduction targets with a global 1,5°C pathway

approaches in the target-setting methods based on value chain activities and emission intensity and scopes. Some of the key features introduced by this Standard include:

- A direct link with the draft SBTi Corporate Net-Zero Standard Version 2.0, including clarity on how to apply the criteria from each Standard.
- Comprehensive and clear scope, addressing companies with power generation, electricity transmission and distribution, electricity storage and sales.
- Detailed rules for Standard applicability based on activities and emission sources in scope.
- Updated pathways based on IPCC AR6 and IEA NZE 2023 scenarios, used to derive emission intensity and low-carbon electricity trajectories for target setting.
- For power generation activities, targets based on emissions and low carbon power generation, with additional requirements for unabated fossil fuel capacity phase out.
- Specific metrics and targets for other value chain activities, including electricity losses for transmission, distribution (T&D) and storage activities, and low carbon electricity purchased for trade and retail.

While this Standard aims to offer a more comprehensive framework for target setting by all companies in the power sector, SBTi acknowledges the potential to introduce a more granular approach based on technology or regional considerations, which are partially addressed in this version of the Standard but require further work. This could be supported by the feedback collected during this first public consultation.

#### **B.3 Structure of the SBTi Power Sector Net-Zero Standard**

The structure of the SBTi Power Sector Net-Zero Standard is aligned with that of the SBTi Corporate Net-Zero Standard Version 2.0 (first public consultation draft version). The SBTi Power Sector Net-Zero Standard covers six key topics which are presented over the following six chapters:

- 1. Corporate Net-Zero Commitment
- 2. Determining Performance in the Target Base Year
- 3. Target Setting
- 4. Addressing the Impact of Ongoing GHG Emissions
- 5. Assessing and Communicating Progress
- 6. SBTi Claims

Each chapter includes the intended outcomes describing how the criteria support the goals of this Standard. Each chapter also includes a table referencing the different criteria from the SBTi Corporate Net-Zero Standard Version 2.0 and how they apply within the SBTi Power Sector Net-Zero Standard. After this table, each chapter includes (if any) the sector-specific criteria (identified by "PS-C" followed by whole numbers) and sub-criteria (identified by "C" followed by decimal numbers). Criteria and subcriteria are the rules that companies shall adhere to in order to be validated by the SBTi-designated validation body.

Sections may also include recommendations (identified with an "R") followed by numbers, which represent best practices companies are encouraged to pursue.

This Standard also includes a number of annexes to support the use and assessment of conformance against this Standard.

Table B.4.1 Description, classification and status of normative annexes to the SBTi Power Sector Net-Zero Standard.

| Document or Annex                                      | Description  | Classification<br>(normative or<br>informative) | Status                        |
|--|--|---|-------------------------------|
| ANNEX A: Key<br>Terms and<br>acronyms                  | Key terms and acronyms introduced in this version of the Standard that are not already included in the SBTi Glossary.  | Normative                                       | Draft for public consultation |
| ANNEX B: Applicability of criteria by assessment stage | Lists the criteria assessed at each validation cycle stage.  | Normative                                       | Draft for public consultation |
| ANNEX C: Activities and emissions in scope             | Detailed description of the activities within scope of the SBTi Power Sector Net-Zero Standard.  | Normative                                       | Draft for public consultation |
| ANNEX D: Metrics, benchmarks and methods               | Provides the set of sector specific metrics designed to support the adoption of targets and the assessment of progress and performance over time.                  | Normative                                       | Draft for public consultation |
| ANNEX E: Pathways                                      | Describes the pathways and levels of emission reduction that need to be achieved for power sector GHG emissions to limit warming to 1.5C by the end of the century | Normative                                       | Draft for public consultation |
| ANNEX F: Sector specific claims                        | Describes the claims that are allowed to be made upon conformity with this Standard  | Normative                                       | Draft for public consultation |
| ANNEX G: Progress assessment formulas                  | Provides formulas for progress assessment to determine whether targets have been achieved once relevant pre-conditions have been met.                              | Normative                                       | Draft for public consultation |

# **B.4 Supporting documentation**

This Standard is supported by documentation that provides further background on the rationale and methodology for the selection of metrics, methods and pathways underlying the target setting framework proposed in this Standard.

Table B.4.2. Description of documentation (non-normative) to support the implementation of the SBTi Power Sector Net-Zero Standard.

| Document or Annex  | Description   | Classification<br>(normative or<br>informative) |
|--|---|---|
| Synthesis Report: Power Sector Metrics & Methods Draft Version 1.0 | Provides relevant background and recommendations for climate metrics and target-setting methods specific to the power sector.           | Informative                                     |
| Synthesis Report: Power Sector Pathway Draft Version 1.0           | Describes the review and evaluation process of scenarios that may be used for target setting in the SBTi Power Sector Net-Zero Standard | Informative                                     |

#### **B.5 Development process**

This Standard is being developed through a formal and transparent multi-stakeholder process in accordance with the Standard Operating Procedure for the Development of SBTi Standards. The Project Terms of Reference for this development process can be found here.

Publication of the consultation draft marks a significant step in the development process and serves as an opportunity for all stakeholders to contribute towards the final version of this Standard. The final version will aim to support the transition to a net-zero economy by 2050, while meeting the needs of the population within the limits of the planet.

We invite all interested parties to review this draft and provide feedback on its content. clarity, and applicability. Your feedback will play a key role in ensuring that this Standard is effective, inclusive, and fit for purpose.

#### Purpose of the public consultation draft

This document has been developed by the SBTi Technical Department and approved by the Technical Council to serve as the first consultation draft of the SBTi Power Sector Net-Zero Standard. It is informed by extensive research and analysis, incorporating feedback on current SBTi Quick Start Guide For Electric Utilities, as well as input from the Expert advisory group

Recognizing the importance of this update, the SBTi aims to provide ample opportunity for stakeholder feedback. The publication of this draft marks the first step in a process designed to incorporate broad stakeholder input and additional expert feedback to ensure this Standard is current, robust and practical.

Public consultation, alongside input from the Expert Advisory Group and pilot testing are key steps in the Standard's development process. We invite stakeholders to review this draft and share feedback on its content, clarity and applicability through this survey. The public consultation will provide stakeholders with an opportunity to help shape the Power Sector Net-Zero Standard, ensuring it reflects sector realities, supports implementation, and accelerates climate action.

#### How to participate in the public consultation

Feedback can be submitted through the consultation survey. Respondents can choose to complete the full survey or respond to selected sections. Input will help strengthen the clarity, credibility, and ambition of the Standard. Depending on the sections chosen, completing the survey can take as little as 20 minutes. We welcome feedback from all interested parties, including, for example, industry professionals, academics, Civil Society Organizations, and the general public. Your input can help refine this document and ensure it meets the needs of its intended users and serves the SBTi's mission to drive science-based climate action in the corporate sector consistent with limiting warming to 1.5°C.

Consultation questions on the content of criteria are also included at the end of each chapter in "Consultation Questions". The draft also presents options currently under consideration, which stakeholders can evaluate and provide comments on through the consultation survey. When the draft displays (shall / should) it means that the criterion is under consultation on whether that content is to be included in this Standard as a requirement (shall) or a recommendation (should). The online consultation survey will also include additional questions which are not displayed in this draft. These questions relate to the clarity and completeness of this Standard, as well as questions that collect data to identify and categorize respondents.

The SBTi invites stakeholders to review the draft and share feedback to help identify potential issues, practical challenges, or opportunities for improvement.

#### Next steps

Following the public consultation period, all feedback received will be reviewed and analyzed. A summary of the feedback and how it has been addressed will be published on the power sector webpage in due course. The draft may then be revised in response to the input received and will undergo technical review and refinement in collaboration with the Expert Advisory Group. It will then be re-released for pilot testing and a second round of public consultation. Feedback from both the pilot testing and public consultation will further inform revisions to the draft. Before becoming operational, the Standard will be submitted for approval by the Technical Council and adoption by the Board of Trustees.

The key milestones for the remainder of the Standard development are outlined below:

- Review and Integration of Feedback from First Public Consultation
- Second Public Consultation
- Pilot Testing
- Finalization and Approval

We will keep stakeholders informed throughout this process on the SBTi website and social media channels and provide updates as key milestones are achieved.

Within a maximum of five years and a minimum of one year of the date of approval of an SBTi Standard, the SBTi shall oversee a formal consultation to undertake a review of the SBTi Standard to ensure and improve its continuing relevance and effectiveness in meeting its objectives. The exact review date will be determined based on the evolving needs of stakeholders and advancements in the relevant field.

Stakeholders are able to submit feedback not only during the public consultation phase but also throughout the course of the project through the Project Feedback Form.

Responses to feedback will be published in the Public Consultation Feedback Report, the Pilot Testing Feedback Report, and the Project Feedback log. A Basis for Conclusions Report will be published at launch to summarize the main points of feedback received on the project and the responses to it.

# 1. CORPORATE NET-ZERO COMMITMENT

Intended outcome: Companies make a public commitment to achieve net-zero GHG emissions by no later than 2050. The commitment signals climate ambition to internal and external stakeholders and informs the companies' business strategy, targets, actions, investments and conduct in the near- and long-term.

#### 1.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0 Criterion   | Applicability to companies using both Standards in parallel  |
|---|--|
| <b>CNZS-C1</b> . Companies shall publicly commit to reaching net-zero GHG emissions by no later than 2050.  | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards). |
| CNZS-C2. Companies (shall/should) develop and make publicly available a climate transition plan within 12 months from initial validation which provides a roadmap of the actions that will be undertaken to achieve net-zero by no later than 2050. | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards). |

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within SBTi Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

## 1.2. Additional requirements introduced in this Standard

No additional requirements need to be followed by companies in the sector.

# **Consultation questions**

This subsection presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions presented in the table below and submit their responses via the online survey.

| Section  | Criterion                       | Question   | Rationale   |
|--|---------------------------------|--|---|
| 1.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 | CNZS<br>Version 2.0<br>criteria | 5. Do you think the way the draft Corporate Net-Zero Standard Version 2.0 criteria applicability is explained is clear enough to enable an efficient applicability of both Standards in parallel? If not, do you have any suggestions to improve on this aspect? | Rationale: Gathering feedback from stakeholders on the way SBTi Standards interoperability is explained will help identify the best solution to provide clarity and efficiency to the Standards' users.  Please note that the intention with this question is not about providing feedback on the draft Corporate Net-Zero Standard Version 2.0. For information on opportunities to share comments on the draft, visit the SBTi website Instead, this question is about the interoperability of the SBTi Power Sector Net-Zero Standard and the Corporate Net-Zero Standard Version 2.0 when used in parallel. |

# 2. DETERMINING PERFORMANCE IN THE TARGET **BASE YEAR**

Intended outcome: Companies define organizational and operational boundaries and develop a thorough understanding of climate-related performance in the target base year. Determining performance in the target base year helps establish priority areas to guide target setting and other actions for improvement.

#### 2.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0 Criterion   | Applicability to companies using both Standards in parallel   |
|---|---|
| CNZS-C3. Companies shall clearly define, describe and publicly report their organizational structure and boundary for GHG emissions accounting and target-setting.                        | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards).   |
| <b>CNZS-C4</b> . Companies shall select a base year for target-setting that accurately reflects the company's structure and performance.  | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards).   |
| CNZS-C5. Companies shall calculate a GHG emissions inventory for the target base year and for the consecutive years within the target time frame according to the GHG Protocol Standards. | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.  Note: CNZS-C5.1.2 applies to companies using |
| CNZS-C6. Companies shall determine the applicability of SBTi  | biomass for power generation.  Companies shall apply this criterion and corresponding sub-criteria at entity level, including   |
| sector-specific requirements.   | all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards).  |
|   | Companies shall check whether other standards apply to them beyond the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi  |

|   | Power Sector Net-Zero Standard.  |
|---|--|
| CNZS-C7. Companies shall identify relevant scope 3 emissions sources in the value chain, including significant scope 3 categories and emissions-intensive activities. | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards)   |
| <b>CNZS-C8</b> . Companies shall identify applicable metrics and determine their performance for those metrics at the target base year.                               | Companies shall apply C8.2.1, C8.2.5 and C8.3 at entity level, including all its activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.                              |
|   | Companies shall apply C8.1, C8.2.2, C8.2.3 and C8.2.4 to all activities (and corresponding GHG emissions) that are <u>not</u> covered by the SBTi Power Sector Net-Zero Standard.  |
|   | Additionally, companies shall apply <u>PS-C1</u> for the activities and corresponding GHG emissions covered by the SBTi Power Sector Net-Zero Standard.  |
| <b>CNZS-C9</b> . Companies shall obtain third-party assurance of their GHG emissions inventory.   | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.            |
|   | Notes: since GHG emissions in scope of this Standard are included in the company's full GHG inventory which is third-party verified, a single assurance statement is sufficient.   |
| CNZS-C10. Companies shall aim to improve quality and traceability of their GHG emissions data over time.  | Companies shall apply this criterion and corresponding sub-criteria to all its activities (activities covered by the SBTi Power Sector Net-Zero Standard and activities not covered by the SBTi Power Sector Net-Zero Standard) and corresponding GHG emissions. |

CNZS-C11. Companies shall re-evaluate and, if necessary, recalculate their target base year GHG emissions inventory and other applicable metrics in response to significant changes.

Companies shall apply this criterion and corresponding sub-criteria to all its activities (activities covered by the SBTi Power Sector Net-Zero Standard and activities not covered by the SBTi Power Sector Net-Zero Standard) and corresponding GHG emissions.

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within SBTi Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

#### 2.2. Additional requirements introduced in this Standard

#### 2.2.1 Determining performance in the target base year

PS-C1. Companies shall establish the climate performance in the base year for the relevant power-sector activities in their organisational boundary.

> Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C1.1. Companies shall determine performance in the selected base year for each applicable activity and metric as follows (see Table D.1.1 of Annex D: Metrics. benchmarks and methods for more detail):
  - 1.1.1. For companies involved in power generation activities, the following indicators shall be determined:
    - Scope 1 CO2 emissions from power generation (<u>Metric-PS.1</u>) and Metric-PS.2
    - Share of low-carbon electricity generation (Metric-PS.3a and Metric-PS.3b).
    - Share of biomass sustainably sourced (Metric-PS.4)
  - 1.1.2. For companies involved in transmission and distribution activities:
    - Scope 1 SF<sub>6</sub> emissions using Metric-PS.5a and leakage rate using Metric-PS.5b,
    - Scope 2 absolute indirect emissions from electricity losses using Metric -PS.6.
    - The share of electricity losses using Metric-PS.7
  - 1.1.3. For companies involved in trade and retail activities:
    - Scope 3 category 3 indirect emissions from electricity purchased and resold to the end consumer using Metric-PS.8
    - The share of low carbon and unabated fossil fuel electricity purchased and resold with Metric-PS.9a and Metric-PS.9b
  - 1.1.4. For companies involved in storage activities:
    - Scope 2 indirect emissions from storage losses using Metric-PS.10 and the share of electricity losses with Metric-PS.11.

# **Consultation questions**

This sub-section presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions presented in the table below and submit their responses via the online survey.

| Section  | Criterion                       | Question   | Rationale   |
|--|---------------------------------|--|---|
| 2.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 | CNZS<br>Version 2.0<br>criteria | 6. Do you think the way the draft Corporate Net-Zero Standard Version 2.0 criteria applicability is explained is clear enough to enable an efficient applicability of both Standards in parallel? If not, do you have any suggestions to improve on this aspect?   | Rationale: Gathering feedback from stakeholders on the way SBTi Standards interoperability is explained will help identify the best solution to provide clarity and efficiency to the Standards' users.  Please note that the intention with this question is not about providing feedback on the draft Corporate Net-Zero Standard Version 2.0. For information on opportunities to share comments on the draft, visit the SBTi website Instead, this question is about the interoperability of the SBTi Power Sector Net-Zero Standard and the Corporate Net-Zero Standard version 2.0 when used in parallel. |
| 2.2.2 Determining Performance in the base year                                       | PS-C1                           | <ul> <li>7. Are the metrics for determining performance in the base year sufficiently comprehensive and representative?</li> <li>a. Do you consider the metrics on the technology share useful indicators to assess performance of companies with Power Generation Activities?</li> <li>b. Do you consider the metrics on the technology share of electricity purchased and resold useful indicators to assess performance of companies with Trade and retail activities?</li> </ul> | Rationale: This criterion is for companies to determine the baseline performance in the target base year through sector-specific indicators.  |

|  | c. Do you agree with the application of the<br>technology share metrics with current binary<br>categorization into low-carbon and unabated<br>fossil fuel power generation technology? Or<br>would you suggest adding further granularity to<br>the metrics? |  |
|--|--|--|
|--|--|--|

# 3. TARGET SETTING

Intended outcome: Companies set public, science-based, measurable, time-bound targets to improve climate performance and align with pathways consistent with the global goal of reaching net-zero emissions by mid-century.

# 3.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0 Criterion  | Applicability to companies using both Standards in parallel  |
|--|--|
| CNZS-C12. Companies shall assess their current climate-related performance against net-zero aligned benchmarks.  | Companies shall apply this criterion to all activities (and corresponding GHG emissions) that are <u>not</u> covered by the SBTi Power Sector Net-Zero Standard.   |
|  | Companies shall apply <u>PS-C2</u> on the activities and corresponding GHG emissions covered in the scope of the SBTi Power Sector Net-Zero Standard, instead of CNZS-C12.   |
| <b>CNZS-C13</b> . Companies shall set one or multiple targets to achieve net-zero emissions within the timeframe specified in the net-zero commitment. | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.  |
|  | An exception is made to this criterion for companies who chose not to set a scope 1 interim target as per <u>PS-C3</u> . In this case, and for scope 1 only, CNZS-C13 only applies to the activities (and corresponding GHG emissions) that are not covered by the SBTi Power Sector Standard. |
| CNZS-C14. Companies shall set targets to abate scope 1 emissions from sources that are owned or controlled by the company.                             | Companies shall apply these criteria to all activities (and corresponding GHG emissions) that are <u>not</u> covered by the SBTi Power Sector Net-Zero Standard.   |
| CNZS-C15. Companies shall set targets to abate scope 2 emissions from purchased or acquired electricity, steam, heat and cooling.                      | Companies shall apply <u>PS-C3</u> , <u>PS-C4</u> , <u>PS-C5</u> , <u>PS-C6</u> , <u>PS-C7</u> and <u>PS-C8</u> for the activities and corresponding GHG emissions covered in the  |

| CNZS-C16. Companies shall set near-term targets to abate scope 3 emissions across their value chains.   | scope of the SBTi Power Sector Net-Zero Standard, instead CNZS-C14, 15, 16.  |
|---|--|
| CNZS-C17. Companies shall neutralize any residual emissions that remain at the net-zero year.   | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.                  |
| CNZS-C18. Companies shall set and implement removal targets to increase the volume of removals between now and the net-zero target year.                                      | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards) and corresponding GHG emissions.                  |
| CNZS-C19. Companies shall publicly report the target base year and target information in line with best practice and applicable regulations, within 6 months from validation. | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards.   |
|   | Companies shall not apply C19.1.8, C19.1.9, C19.1.10 and C19.2.13.4. on the targets set by applying the SBTi Power Sector Net-Zero Standard.   |
|   | C19.2.13.2. shall be replaced by "For alignment targets, the target value is dependent on the metric used for the specific metric used, see <a href="Annex D">Annex D</a> : Metrics, Benchmarks and Methods." in the scope of the SBTi Power Sector Net-Zero Standard. |
| cnzs-c20. Companies shall recalculate their targets when significant changes occur that could compromise the validity of the existing targets.                                | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards.   |

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

#### 3.2. Additional requirements introduced in this Standard

#### 3.2.1 General target-setting criteria

While companies shall assess performance through a broad range of metrics, as defined in PS-C1, targets are required only for selected metrics where sector specific benchmarks and methods are available. The available target-setting methods for each activity type and metric are detailed in Annex D: Metrics, benchmarks and methods and summarised in Table D.2.1, where it is specified where the metric is for disclosure or target-setting purposes.

#### PS-C2. Companies shall assess their current climate-related performance against net-zero aligned benchmarks

Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C2.1. Companies shall conduct an assessment on the metrics in Table D.2.1 against the associated net-zero benchmarks and identify any remaining gap relative to the performance in the base year.
- C2.2. Companies shall set a target when a gap is identified between the performance and the net-zero benchmark through the applicable criteria PS-C3 through PS-C8

#### 3.2.2 Targets for Power Generation activities

#### Rationale for PS-C3:

The Power Sector Standard consultation draft introduces a new method for near-term targets for power generation activities based on the share of low-carbon power generation, where emission intensity reduction targets are always mandatory for the net-zero year (PS-C5.2), while for the interim years two options are provided:

- 1. A near-term emission intensity reduction target (Metric-PS.1)
- 2. A near-term target on the share of low-carbon power generation (Metric-PS.3a)

The two methods lead to comparable outcomes in terms of the overall absolute emission reductions achieved, and can offer some flexibility to companies in choosing the metric that best represents their asset portfolio and decarbonization potential.

SBTi is also exploring novel methods based on actions, in instances where they lead to comparable outcomes. As part of the consultation process, SBTi therefore aims to investigate if an asset plan as defined in PS.C4 could also be an appropriate alternative to the quantitative target-setting methods proposed for the near term in C3.2 and in which circumstances (e.g. for Category B companies).

PS-C3. Companies shall set long-term and near-term targets consistent with achieving net-zero emissions from power generation activities by the net-zero target year.

> Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C3.1. Companies shall establish a target to achieve zero emissions from power generation by the net-zero target year (see Metric-PS.1 and Table D.2.1).
- C3.2. Companies shall establish near-term targets with a maximum five-year timeframe from the target base year based on at least one the following options (NOTE: These options will be further explored through the consultation process):
  - 3.2.1. **OPTION 1**: target to reduce the emission intensity from power generation (see Metric-PS.1).
  - 3.2.2. **OPTION 2**: target to increase the share of low-carbon power generation (see Metric-PS.3a).
- C3.3. Companies shall use the Power Sector Target-Setting Tool to establish the minimum level of ambition for their target(s) for metrics covered by the tool.

Rationale for PS-C4: This draft introduces a new criterion for companies with power generation activities to disclose and implement a plan to phase out unabated fossil fuel capacity.

This criterion is designed to drive structural transformation by mandating transparency on the timing and strategy for retiring unabated fossil-based generation assets.

Recognising the heterogeneity in technological, financial, and policy contexts, the Standard acknowledges that generation assets in OECD countries generally possess a greater capacity to accelerate decarbonization. To promote a more equitable net-zero transition, the framework establishes differentiated phase-out milestones for assets in OECD versus non-OECD countries (as summarized in Table 3.2), with interim target years for unabated capacity retirement. Alternative approaches are being investigated to determine interim unabated fossil retirement rates, as detailed in the Pathways Synthesis Report (5.2) and SBTi will seek for feedback during the public consultation process.

To acknowledge the different roles of power generation assets and need to maintain non-baseload capacity for either regulatory requirements or grid stability, this Standard proposes exemption for unabated natural gas assets when intended to serve as non-baseload capacity. SBTi will investigate through public consultation how to best define non-baseload capacity and provide proper guardrails.

Alternative option for near-term target setting: The SBTi is seeking for consultation feedback on whether this criterion could also be an appropriate alternative to the options proposed for near term targets for power generation activities in PS-C3. The rationale is that in some circumstances and depending on the company's asset portfolio, the decarbonization levers available may not be fully reflected by the global average sector pathways underlying the quantitative options proposed in PS-C3 for near-term targets.

#### PS-C4. Companies shall publicly disclose a plan to transition away from unabated fossil fuel power generation

Company category: All companies Assessment stage: Initial Validation, Renewal Validation

NOTE: THIS OPTION IS BEING EXPLORED AS AN ALTERNATIVE TO THE NEAR-TERM TARGET-SETTING APPROACHES PRESENTED IN THIS CONSULTATION DRAFT (C3.2) OR AS AN ADDITIONAL REQUIREMENT.

- C4.1. Companies shall disclose a plan to transition away from unabated fossil fuel generation assets, including interim actions to decarbonise, phase-out or retrofit unabated fossil fuel assets, with maximum 5-years milestones up to the net-zero year.
- C4.2. Companies shall cease investments in new unabated fossil fuel capacity<sup>7</sup>:
  - Immediate cessation of new investments in unabated coal and oil-fired<sup>8</sup> power generation capacity from the date of target validation
  - 4.2.2. Immediate cessation of new investments in unabated natural gas capacity for assets in OECD countries and by 2030 for assets in non-OECD countries, unless all of the following conditions are met:
    - 4.2.2.1. The new capacity is intended for non-baseload use:
    - 4.2.2.2. The asset is either retrofit-ready or is intended to be phased-out by 2040 or serve as non-baseload capacity later than the company's net-zero target year.
- C4.3. Plan for unabated fossil fuel assets: companies shall develop and disclose an asset-level plan for the retirement or abatement of the unabated fossil fuel generation assets within their portfolio, consistent with the company's net-zero target and aligned with the following milestones:
  - Coal assets 4.3.1.
    - 4.3.1.1. **OECD:** Full retirement or abatement of unabated coal capacity by 2030;
    - Non-OECD: Retirement or abatement of at least 80% of 4.3.1.2. unabated coal capacity by 2035 and 100% by 2040.
  - 4.3.2. Oil assets:
    - 4.3.2.1. **OECD:** Full retirement or abatement of oil unabated oil capacity by 2035;
    - 4.3.2.2. Non-OECD: Retirement or abatement of at least 85% of unabated oil capacity by 2035 and full retirement or abatement by 2040.
  - 4.3.3. Natural gas assets:
    - 4.3.3.1. **OECD:** Full retirement or abatement of natural gas capacity
    - 4.3.3.2. Non-OECD: Retirement or abatement of at least 55% of baseload natural gas capacity by 2035 and full retirement or abatement by 2040.

<sup>&</sup>lt;sup>7</sup> New capacity includes new assets, extensions or expansions of existing capacity that would require a Final Investment Decision.

<sup>8</sup> Intended as large oil-fired power plant exporting to a national grid.

4.3.4. Non-baseload natural gas capacity may be retained until 2050 only if it is demonstrably required for system flexibility or reliability (e.g. supported by relevant documentation such as reference to regulatory requirements, capacity-based contracts for ancillary services or reserve capacity, dispatch records, grid assessments).

Table 3.2: Summary of milestones for capacity retirement and phase out of unabated fossil fuel by asset location (2023 is

|                                |          | Target validation year | 2030             | 2035                       | 2040            |
|--------------------------------|----------|------------------------|------------------|----------------------------|-----------------|
| Unabated                       | OECD     | No new capacity        | Full retirement  |                            |                 |
| coal                           | non-OECD | No new capacity        |                  | Retirement of 85% capacity | Full retirement |
| Unabated OECD                  |          | No new capacity        |                  | Full retirement            |                 |
| oil                            | non-OECD | No new capacity        |                  | Retirement of 85% capacity | Full retirement |
| OECD No new capacity*          |          |                        | Full retirement* |                            |                 |
| natural gas                    | non-OECD |                        | No new capacity* | Retirement of 55% capacity | Full retirement |
| * except non-baseload capacity |          |                        |                  |                            |                 |

Rationale for PS-C5: The SBTi Power Sector Net-zero Standard introduces a criterion for companies using biomass for power generation to ensure it is sustainably sourced through relevant certification schemes (detailed explanation on treatment of bioenergy in this Standard can be found in the Pathways Synthesis Report). The SBTi recognizes the importance of building upon existing frameworks to avoid redundancy and additional administrative burden for companies and is considering introducing recognition of third-party certification schemes. To this end, SBTi is working on a protocol that will accompany this Standard, which will outline the methodology for benchmarking and recognising certification schemes to be used for setting targets as defined in PS-C5 below. As further research is ongoing, the following key elements<sup>9</sup> will be investigated also as part of the first public consultation:

- Standard-setting requirements: to ensure the certification scheme is developed based on good practices and stakeholder participation
- Assurance requirements: assurance is performed by third parties, those should be aligned with requirements for certification bodies (e.g. as per ISO 17065)
- Certification requirements: including, but not limited to, legal compliance, best practice implementation, environmental and social sustainability, carbon accounting

<sup>&</sup>lt;sup>9</sup> Based on the Framework for benchmarking and recognition of certification schemes relevant to the scope of SBP certification.

#### PS-C5. Companies using biomass for power generation shall commit to source 100% of the biomass from sustainable sources

Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C5.1. Companies using biomass for power generation shall commit to source 100% of the biomass from certified sustainable sources by 2030.
  - 5.1.1. Companies shall provide evidence that the data on land-related emissions and removals represents the relevant biomass feedstock production through recognized biomass certification schemes.
  - 5.1.2. Companies shall disclose the certification or assurance undertaken and the share of biomass compliant with the above as per Metric-PS.4.

#### 3.2.3 Targets for transmission and distribution, and storage activities

Rationale for PS-C6 and PS-C7: The SBTi Power Sector Net-Zero Standard consultation draft introduces a criterion to improve efficiency of electricity networks and storage systems and minimize electricity losses (PS-C6). Transmission and distribution, as well as storage play a key role in decarbonization of the power sector, as necessary to meet growing demand of electrification, expansion of renewable and network stability. However, improving efficiency of these systems might not always be technically or economically feasible, and as the electricity mix reaches full decarbonization, reducing electricity losses becomes less relevant in the longer term. For storage activities it was noted that might be particularly challenging so SBTi aims to investigate if C6.2 should be a requirement or a recommendation.

This Standard also proposes a criterion for companies with transmission and distribution networks to minimize SF6 emissions (PS-C7). SF6 has a very high Global Warming Potential (GWP) and can become a significant source of GHG emissions for companies with large T&D systems. However, mitigation and SF<sub>6</sub> phase out capabilities vary significantly among regions and depend on technology availability, therefore the criterion proposed focuses on companies commitments and best practice implementation.

PS-C6. Companies shall set targets to improve efficiency and minimize electricity losses in networks and storage systems

# Company categorization: This criterion includes adjustments to accommodate **Category B companies**

Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C6.1. Companies with transmission and distribution activities shall maintain their electricity losses as defined in Metric-PS.7, below the average benchmark values until 2035 for their company category as defined in Table D.2.1
- C6.2. Companies with electricity storage activities (shall/should) maintain their electricity losses as defined in Metric-PS.11 below the benchmark value as defined in Table D.2.1, until 2035.

#### Recommendations

- R6.1. Companies with transmission and distribution activities should aim to reach the best practice values for their electricity losses as defined in Metric-PS.7 for their company category.
- PS-C7. Companies with transmission and distribution activities shall publicly commit to minimize SF6 emissions and phase out use and installation of SF6 equipment

# Company categorization: This criterion includes adjustments to accommodate Category B companies

Company category: All companies Assessment stage: Initial Validation, Renewal Validation

- C7.1. Companies shall commit to adopt best practices and technologies in tracking and handling SF6 emissions, including the following:
  - Periodical Leak Detection And Repair (LDAR) campaigns 7.1.1.
  - 7.1.2. Plans for equipment upgrade and replacement in line with technology availability
  - 7.1.3. Recycling of recovered SF6 gas
  - 7.1.4. Ensure proper decommissioning of SF6 equipment

#### Recommendations

R7.1. Category A companies should commit to maintain SF6 leakage rate (as defined in Metric-PS.5b) below 0.1%

#### 3.2.4 Targets for Trade and retail activities

Rationale on PS-C8: The SBTi Power Sector Net-Zero Standard introduces a dedicated criterion for companies with trade and retail activities to set targets to increase their share of low-carbon electricity that is purchased and sold to end-users. Compared to previous methods based on emissions, this metric and target setting method is more consistent with the mitigation levers available to retailers to reduce portfolio emission intensity. Moreover, the power sector pathway for the emission intensity of electricity generation considered the direct emissions from power generation, while for companies only purchasing and reselling electricity, those would be Scope 3 cat. 3 emissions.

PS.C8. Companies shall set targets to increase the share of electricity purchased and resold to end users from low carbon power generation

> Company category: All companies Assessment stage: Initial Validation, Renewal Validation

C8.1. Companies with Electricity Trade and retail activities shall set a target to increase the share of electricity that is purchased and sold to end users from low carbon power generation as defined in Metric-PS.9a according to the target-setting method specified in Table D.2.1.



# **Consultation questions**

This subsection presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions presented in the table below and submit their responses via the online survey.

| Section   | Criterion                          | Question   | Rationale   |
|---|------------------------------------|--|---|
| 3.2 Additional requirements introduced in this Standard | CNZS<br>Version<br>2.0<br>criteria | 8. Do you think the way the draft Corporate Net-Zero Standard Version 2.0 criteria applicability is explained is clear enough to enable an efficient applicability of both Standards in parallel? If not, do you have any suggestions to improve on this aspect?   | Rationale: Gathering feedback from stakeholders on the way SBTi Standards interoperability is explained will help identify the best solution to provide clarity and efficiency to the Standards' users.  Please note that the intention with this question is not about providing feedback on the draft Corporate  Net-Zero Standard Version 2.0. For information on opportunities to share comments on the draft, visit the SBTi website. Instead, this question is about the interoperability of the SBTi Power Sector Net-Zero Standard and the Corporate Net-Zero Standard Version 2.0 when used in parallel. |
| 3.2.2 Targets<br>for Power<br>generation<br>activities  | PS-C3                              | <ul> <li>9. Do you agree with providing different options for setting targets in the interim years other than emission intensity reduction?</li> <li>10. Do you think an asset plan as defined in criterion PS-C4 could also be used as an alternative to the near-term target options defined in sub-criteria 3.2.1 and 3.2.2? (see also question #19)</li> </ul> | Rationale: This criterion for companies with power generation provides more flexibility in the near-term in the means of achieving the emission intensity benchmark in the net-zero year.  SBTi is also exploring if the submission of an asset plan as defined in criterion PS-C4 can be an alternative approach for setting near term targets instead of the options in sub-criteria 3.2.1 and 3.2.2.   |

- 11. Does the maintenance method suitably address the need for 100% renewables/low carbon power companies to have achievable targets?
- 12. Does the SDA Linear Convergence adjustment suitably address the need for highly (but not fully) decarbonised power generation companies to have achievable targets, while maintaining the fundamental principles of the SDA?
- 13. Are the physical intensity values in the low intensity threshold too low to serve the intended purpose, i.e. would power generation companies with physical intensity above the threshold still struggle to achieve near-term SDA targets?
- 14. Is the level of accuracy required to calculate the intensity values in the threshold realistic for most power generation companies? If not, what is a reasonable level of accuracy that most companies are able to achieve?
- 15. Do you think the low-carbon technology share is an appropriate alternative for emission intensity reduction targets for the interim target years?
- 16. Do you agree with proposed differentiation in technology share between low carbon and unabated fossil fuel power generation?
- 17. Would you prefer additional granularity in the technology share metrics to further distinguish between power generation technologies?
- 18. Do you think the low carbon generation target should follow a different method and trajectory (e.g. linear)?

Rationale: In order to adjust the Sectoral Decarbonization Approach (SDA) approach to accommodate the realities of low-intensity power generation companies, the Standard introduces the maintenance method for companies whose base year emission intensity is below the net-zero benchmark and a Linear Convergence adjustment as an option for companies whose base year emission intensity is above, but near, the net-zero benchmark, as determined by the Power Sector Pathway.

Please refer to Annexes D and E, the Synthesis Report on Metrics & Methods and Synthesis Report on Pathways for further background on these questions.

**Rationale**: The transition for companies towards net-zero might need very different near-term actions at the asset level that might not fully conform to the assumptions underlying the average emission intensity pathway for the sector. Asset-level alignment target setting approaches may enable an equitable phaseout of high-emitting assets and ensure that a growing share of assets is aligned with relevant carbon budgets. The technology share metric introduced allows to better track the make up of the electricity generation asset portfolio.

Please refer to Annexes D and E, the Synthesis Report on Metrics & Methods and Synthesis Report on Pathways for further background on these guestions.

| PS- | 6-C4 | <ul> <li>19. Do you agree with the inclusion of a mandatory requirement for companies to disclose an asset plan to phase out unabated fossil fuel power generation capacity?</li> <li>20. Do you think criterion PS-C4 should be a mandatory requirement or is an appropriate alternative to the near-term target-setting approaches presented in sun-criterion C3.2? <ul> <li>a. If yes, in which circumstances</li> </ul> </li> <li>21. Do you agree with the milestones for unabated fossil fuel capacity proposed for OECD and non-OECD countries?</li> <li>22. Do you agree with the requirement to include maximum 5-years interim milestones in the plan?</li> <li>23. Do you think more flexibility should be provided for unabated coal capacity for security purposes or retrofit planning?</li> </ul> | Rationale: a phase out plan would provide transparency and additional guardrails to ensure the transformation needed at the asset level as companies will need to detail how and when they plan to phase out unabated fossil fuel power generation, including clear milestones (minimum 5 years timeframe).  Please refer to Annexes D and E, the Synthesis Report on Metrics & Methods and Synthesis Report on Pathways for further background on these questions.   |
|-----|------|--|---|
|     |      | <ul> <li>24. Do you agree with the exemption of non-baseload capacity from unabated natural gas phase out requirements?</li> <li>25. Do you think the requirements in sub-criterion C4.3.4 to demonstrate exemption of non-baseload capacity are appropriate? <ul> <li>a. If not, what relevant supporting documentation should be provided by companies?</li> </ul> </li> <li>26. Do you agree with the definition of non-baseload capacity included in Annex A of this Standard?</li> <li>27. Should a more quantitative definition be included for the exempted capacity and what is the suggested value/approach.</li> </ul>   | Rationale: To acknowledge the different roles of power generation assets and need to maintain non-baseload capacity for either regulatory requirements or grid stability, this Standard proposes exemption for unabated natural gas assets when intended to serve as non-baseload capacity. Establishing a unique definition and/or quantitative threshold for non-baseload capacity is challenging, as it may vary significantly depending on local regulations and grid operating conditions. This will be further investigated through the consultation process. |

|  | PS-C5 | <ul> <li>28. Do you agree with the inclusion of a criterion for biomass for power generation being 100% sustainably sourced by 2030?</li> <li>29. Do you agree with the disclosure requirements around certification schemes and assurance?</li> <li>30. Do you think we should specify additional reporting requirements on forest, land and agriculture (FLAG) emissions other than those specified in the SBT guidance and the GHG Protocol?</li> <li>31. Do you think we should add a specific requirement that companies shall report biomass upstream emissions, or guidance in Corporate Net-Zero Standard Version 2.0 on emission intensive activities, which include land-use, is clear enough?</li> <li>32. In your opinion, what are the criteria that SBTi should set up to endorse biomass certification schemes?</li> </ul> | Rationale: There is a difference between how the IEA and IPCC treat biogenic emissions from bioenergy in modelled decarbonization pathways. Although the IEA Net Zero scenario reports positive emissions from bioenergy through 2030, these emissions are excluded from the emission intensity calculation. This adjustment reflects the IPCC convention of treating biogenic CO <sub>2</sub> as carbon neutral at the point of combustion, assuming sustainable sourcing and separate accounting of land-use impacts. However, this convention risks masking value-chain emissions if upstream impacts are not accounted for. To preserve the environmental integrity of the SDA, guardrails are proposed in the Power Sector Standard.  Please refer to Annexes D and E, the Synthesis Report on Metrics & Methods and Synthesis Report on Pathways for further background on these questions. |
|--|-------|---|---|
| 3.2.3 Targets for transmission and distribution and storage activities | PS-C6 | <ul> <li>33. Do you agree with the proposed approach to address reduction of electricity losses?</li> <li>34. Do you agree with the benchmark values proposed or suggest an alternative approach?</li> <li>35. Do you agree with limiting the requirement within the near-term?</li> <li>36. Do you think targets for storage losses (in sub-criterion C6.2) should only be a recommendation?</li> </ul>  | Rationale: Transmission and distribution, as well as storage play a key role in decarbonization of the power sector, however, improving efficiency of these systems might not always be technically or economically feasible, and as the electricity mix reaches full decarbonization, reducing electricity losses becomes less relevant in the longer term.  Using absolute emissions as a metric here was considered less appropriate due to the lack of control of the networks over the emissions intensity of the electricity transported /stored in the system. Using share of losses is an alternative that network operators have control over and can reduce through efficiency improvements.  Please refer to Annexes D and E, the Synthesis Report   |

|       |  | on Metrics & Methods and Synthesis Report on Pathways for further background on these questions.   |
|-------|--|--|
| PS-C7 | <ul> <li>37. Do you agree with the inclusion of a criterion to address SF6 emissions from transmission and distribution activities and its content?</li> <li>38. Do you agree with the proposed framing of SF6 mitigation requirement?</li> </ul>  | Rationale: SF6 is a powerful greenhouse gas and may be a significant source of emissions in T&D networks. However, mitigation levers are constrained by market limitations and technology availability. A commitment criterion is proposed to allow flexibility in planning phase out/mitigation of SF6 emissions taking into account the different levers for mitigation companies might have.                                |
| PS-C8 | <ul> <li>39. For Trade and retail activities, do you think the technology share convergence is an appropriate method?</li> <li>40. Would you prefer additional granularity in the unabated fossil fuel technology share to distinguish also between unabated coal, oil and natural gas?</li> </ul> | Rationale: the primary decarbonization lever for Scope 3 Category 3 emissions from the sale of electricity is changes made to the generation portfolio mix of electricity purchased and sold to the end user, therefore the technology share metric and target is proposed for companies with trade and retail activities.  Please refer to Annexes D and E, the Synthesis Report on Metrics & Methods and Synthesis Report on |
|       |  | address SF6 emissions from transmission and distribution activities and its content?  38. Do you agree with the proposed framing of SF6 mitigation requirement?  PS-C8  39. For Trade and retail activities, do you think the technology share convergence is an appropriate method?  40. Would you prefer additional granularity in the unabated fossil fuel technology share to distinguish                                  |

# 4. ADDRESSING THE IMPACT OF ONGOING GHG **EMISSIONS**

Intended outcome: Companies take responsibility for ongoing emissions, a key driver of continued negative climate impacts during the transition to net-zero, through additional mitigation measures. In doing so, they contribute to broader societal net-zero transformation and strengthen their climate credibility.

#### 4.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0<br>Criterion   | Applicability to companies using both Standards in parallel  |  |  |  |  |
|--|--|--|--|--|--|
| cnzs-c21. Companies seeking additional recognition for addressing ongoing emissions shall take responsibility for ongoing emissions that continue to be released into the atmosphere on an annual basis. | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and Sector Standards) and corresponding GHG emissions. |  |  |  |  |
| CNZS-C22. Companies seeking additional recognition for addressing ongoing emissions shall publicly report actions to take responsibility for ongoing emissions.  | Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net-Zero Standard Version 2.0 and Sector Standards) and corresponding GHG emissions. |  |  |  |  |

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

#### 4.2. Additional requirements introduced in this Standard

No additional requirements need to be followed by companies in the sector.

## 5. ASSESSING AND COMMUNICATING PROGRESS

Intended outcome: Companies assess and communicate their progress against targets at the end of each target cycle, evaluate their performance level against net-zero benchmarks and set new targets to continue their transformation to net-zero.

#### 5.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0 Criterion   | Applicability to companies using both Standards in parallel  |
|---|--|
| <b>CNZS-C23.</b> Companies shall substantiate progress against targets with mitigation measures that are accurate, permanent, transparent, and verifiable.  | Companies shall apply this criterion for all targets set under the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards.   |
| CNZS-C24. Companies shall determine progress on their targets and other metrics at the end of the target timeframe.   | Companies shall apply this criterion for all targets and metrics set under the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards.   |
| CNZS-C25. Based on the performance achieved at the end of the target cycle and any remaining gap towards achieving net-zero emissions, companies shall establish new targets to address this gap. | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and Sector Standards.  C25.1 and C25.2. applies to sector-specific metrics in the SBTi Power Sector Net-Zero Standard as well as those found in the SBTi Corporate Net-Zero Standard Version 2.0 |
| CNZS-C26. Companies shall demonstrate conformance with this Standard for the previous cycle to be eligible for Renewal Validation.  | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and the Sector Standards.  |
| <b>CNZS-C27.</b> Companies shall publicly report on their target progress at the end of their target cycle.   | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and the Sector Standards.  C27.6 applies this way to targets set by applying the SBTi Power Sector Net-Zero Standard: "Any communication related to target progress or                           |

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within SBTi Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

## 5.2. Additional requirements introduced in this Standard

No additional requirements need to be followed by companies in the sector.

# 6. SBTi CLAIMS

Intended outcome: Companies ensure that all claims covered in this Standard, including those regarding target achievement, are accurate, verifiable, and adhere to high-integrity standards and applicable regulations.

### 6.1. Applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0

The following table specifies the applicability of criteria from the SBTi Corporate Net-Zero Standard Version 2.0 for companies who apply both the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Power Sector Net-Zero Standard in parallel.

| SBTi Corporate Net-Zero<br>Standard Version 2.0<br>Criterion  | Applicability to companies using both Standards in parallel   |
|---|---|
| cnzs-c28. Companies shall ensure all net-zero related claims are accurate, transparent, and verifiable and compatible with the requirements in the SBTi Corporate Net-Zero Standard and | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net- Zero Standard Version 2.0 and the SBTi Sector Standards.  To apply C28.2 on the targets in the scope of the      |
| applicable regulations.   | SBTi Power Sector Net-Zero Standard, companies shall refer to Annex F.  |
| cnzs-c29. Companies shall ensure that any claim occurring before initial validation is accurate and transparent and reflects the company's assessment stage in                          | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net- Zero Standard Version 2.0 and the SBTi Sector Standards.   |
| the SBTi target-setting process.  | To apply C29.1 on the targets in the scope of the SBTi Power Sector Net-Zero Standard, companies shall refer to Annex F.  |
| cnzs-c30. Following initial validation, companies shall ensure that target-related "ambition claims" accurately reflect their validation status and                                     | Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net-Zero Standard Version 2.0 and the SBTi Sector Standards.  |
| the ambition level of their validated targets.  | For claims related to criteria in the SBTi Power Sector Net-Zero Standard, companies shall refer to Annex F instead of the links included in C30.1 and C30.2 in the SBTi Corporate Net-Zero Standard Version 2.0. |

CNZS-C31. Following assessment of progress and Renewal Validation, companies shall ensure that progress-related claims and renewal claims accurately reflect the outcome of the assessment and re-validation process.

Companies shall apply this criterion for all the targets set by applying the SBTi Corporate Net- Zero Standard Version 2.0 and the SBTi Sector Standards.

To apply C31.3 on the targets in the scope of the SBTi Power Sector Net-Zero Standard, companies shall refer to Annex F.

CNZS-C32. Companies addressing ongoing emissions through Beyond Value Chain Mitigation (BVCM) measures may make additional claims in line with the criteria outlined in this section.

Companies shall apply this criterion and corresponding sub-criteria at entity level, including all activities (activities covered by the SBTi Corporate Net- Zero Standard Version 2.0 and Sector Standards) and corresponding GHG emissions.

Please note that the SBTi is currently researching the best way to clearly explain the applicability of the SBTi Corporate Net-Zero Standard Version 2.0 criteria within SBTi Sector Standards' scopes, which means that the above table might evolve in future versions of SBTi Standards.

#### 6.2. Additional requirements introduced in this Standard

No additional requirements need to be followed by companies in the sector.

# ANNEX A: KEY TERMS AND ACRONYMS

A full list of SBTi terms, definitions, and acronyms is in the SBTi Glossary. Please find here a list of new or updated key terms used in this Standard. Terms marked 'revised' differ from the current definitions in the SBTi Glossary.

| Term   | Definition  |
|--|---|
| Asset  | As per SBTi Glossary, an item of property, such as land, buildings, equipment, owned by a company and used to produce income for the company (Cambridge Dictionary, 2021). In the context of power generation activities, an asset is defined as any physical infrastructure dedicated to power generation (e.g. coal, oil and natural gas fired power plants). |
| Cross-sector<br>company level<br>criteria    | These criteria are located in the SBTi Corporate Net-Zero Standard Version 2.0. They apply at company level and on the complete corporate GHG inventory boundaries as defined and calculated per CNZS-C5.   |
| Demand side<br>energy efficiency<br>services | Refers to initiatives and programs aimed at reducing energy consumption by improving the efficiency of energy use on the consumer side. These services can include: time of use tariffs, retrofits, upgrades and behavioral programs.   |
| Energy carrier                               | A substance or system that contains energy that can be later converted to other forms, such as electricity or mechanical work. Examples of energy carriers include: Electricity, Hydrogen, chemical batteries, biofuels and fossil fuels.   |
| Final Investment<br>Decision (FID)           | A critical milestone in the development of a project, such as a major energy asset, at which the decision by the Board or sponsor to proceed is made with a financial commitment to construction or ownership.  |
| Low carbon power generation                  | Power generation derived from sources with low direct emissions, including the following: renewables, nuclear power, fossil fuel with CCS (where capture rate is 95% at a minimum), BECCS.  |
| No-load<br>consumption                       | The amount of electrical power consumed by a device when it is plugged in but not actively performing its primary function. This is also known as standby power or vampire power.   |
| Non-baseload capacity                        | Power generation capacity which is not intended to run continuously, typically dedicated to peak load management and grid security and stability.   |
| Power losses                                 | The energy that is dissipated in an electrical or electronic system, commonly by heat from resistive losses as well as eddy currents, hysteresis and auxiliary components not contributing to the primary output.   |
| Renewable energy                             | Renewable energy is any form of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use. Renewable energy is   |

|                                       | obtained from the continuing or repetitive flows of energy occurring in the natural environment and includes low-carbon technologies such as solar energy, hydropower, wind, tide and waves and ocean thermal energy, as well as renewable fuels such as biomass.  Respectively electricity generated from sources that naturally replenish over a human timescale, and electricity generated from finite sources that will typically deplete with usage.  |  |
|---------------------------------------|--|--|
| Specified-emission s criteria         | <ul> <li>These criteria apply only to the portion of GHG emissions included in a specific target scope:         <ul> <li>For Sector Standards: they apply to the GHG emissions included in the applicability scope of the Standard.</li> <li>For the SBTi Corporate Net-Zero Standard: they apply to the scope of applicability of the SBTi Corporate Net-Zero Standard, hence on the GHG emissions that are not included in any Sector Standard.</li> </ul> </li> </ul>   |  |
| Storage                               | Within this Standard storage shall refer to the process of retaining or holding energy for future use as electricity.  |  |
| Sulphur<br>HexaFlouride (SF6)         | Synthetic, colorless, odorless, non-flammable, and non-toxic greenhouse gas, widely used in the electrical industry for its excellent insulating and arc-quenching properties but with a global warming potential (GWP) of 23,500 and atmospheric lifetime of 3,200 years.   |  |
| Sale                                  | <ul> <li>Within this Standard, sale of electricity shall refer to the sale of purchased electricity to the user and include:</li> <li>Sale: the transaction where electricity is sold from a supplier to an end-user or consumer, also known as electricity retail.</li> <li>Brokerage: acting as an intermediary between electricity suppliers and consumers in deregulated energy markets. Electricity brokers help businesses, government entities, and individuals navigate the complexities of procuring electricity services.</li> </ul> |  |
| Transmission and distribution (T&D)   | <ul> <li>The stages of delivering electricity from power plants to end users.</li> <li>Transmission: this involves moving electricity over long distances from power plants to substations using high-voltage power lines.</li> <li>Distribution: this stage involves delivering electricity from substations to homes, businesses, and other end users.</li> </ul>  |  |
| Unabated fossil fuel power generation | Fossil fuels power generation without carbon capture, utilization, and storage (CCUS) or equipped with CCS with a capture rate less than 95%.  |  |

### **Consultation questions**

This subsection presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions presented in the table below and submit their responses via the online survey.

| Section | Criterion | Question  | Rationale  |
|---------|-----------|---|--|
| ANNEX A | n.a.      | 41. Do you think Annex A provides a comprehensive and clear set of the definitions for terms used in this Standard?   |  |
|         |           | 42. Do you agree with the definition proposed for non-baseload capacity?  | Establishing a unique definition and/or quantitative threshold for non-baseload capacity is challenging, as it may vary significantly depending on local regulations and grid operating conditions. This will be further investigated through the consultation process.  |
|         |           | <ul><li>43. Do you agree with the definition for low carbon and unabated fossil fuel power generation?</li><li>44. Do you agree with the minimum threshold for carbon capture for the low-carbon technology category to be set at 95%</li></ul> | There is extensive and varying literature on definitions for unabated/abated fossil fuel power generation and consideration of power generation equipped with carbon capture and storage. For the purpose of this Standard, SBTi is proposing a minimum threshold of 95% for fossil fuel power generation to be considered abated and seeking for feedback from stakeholders during consultation (reference for figure proposed: <a href="https://www.sciencedirect.com/science/article/pii/S2666278725000303">https://www.sciencedirect.com/science/article/pii/S2666278725000303</a> . |

# **ACRONYMS**

| Term  | Definition   |
|---|--|
| European Financial<br>Reporting Advisory<br>Group (EFRAG)   | Private association established in 2001. Its Member Organisations are European stakeholders and National Organisations having knowledge and interest in the development of International Financial Reporting Standards |
| Expert Advisory<br>Group (EAG)  | A project-specific advisory group providing expert consultation that forms the stakeholder engagement and input to this SBTi Standard.   |
| International Standard Industrial Classification of All Economic Activities (ISIC)                        | United Nations system for classifying economic activities, providing a comprehensive framework to categorize productive activities and enable the collection and reporting of statistical data.                        |
| Nomenclature<br>statistique des<br>activités<br>économiques dans<br>la Communauté<br>européenne<br>(NACE) | Industry standard classification system used in the European Union providing a framework for collecting and presenting statistical data according to economic activity via four hierarchical levels.                   |
| Standard Operating Procedure (SOP)  | The processes and guidelines for developing or revising SBTi Standards, this ensures the Standards are created systematically, transparently, and in alignment with scientific principles.                             |

# ANNEX B: APPLICABILITY OF CRITERIA BY ASSESSMENT STAGE AND **COMPANY CATEGORY**

To incentivize continuous improvement towards urgent decarbonization in the near-term while keeping companies on track to achieve their net-zero commitments, the criteria included within this Standard are assessed at different stages over a defined cycle. Companies shall conform to all criteria required at each conformity assessment stage at the time the assessment is conducted.

Table B1. Overview of criteria that are applied at each conformity assessment and for each company segment

| Chapter  |  | Sub-section<br>(if applicable)                        | Criteria      | Conformity Assessment |                       |                    | Company category |               |
|--|--|---|---------------|-----------------------|-----------------------|--------------------|------------------|---------------|
|  | Section  |   |               | Entry<br>check        | Initial<br>Validation | Renewal validation | Category<br>A    | Category<br>B |
| 2. Determining performance in the target base year | 2.2. Additional requirements introduced in this Standard | 2.2.1 Determining performance in the target base year | PS-C1.        |                       | ν                     | ν                  | V                | ν             |
| 3. Target setting                                  | 3.2. Additional requirements introduced in this Standard | 3.2.1 General Target setting criteria                 | PS-C2.        |                       | ν                     | v                  | v                | v             |
|  |  | 3.2.2 Targets for Power generation activities         | PS-C3.        |                       | ν                     | ν                  | ν                | ν             |
|  |  |   | PS-C4         | ν                     | ν                     | ν                  | ν                | ν             |
|  |  |   | PS-C5         |                       | ν                     | ν                  | ν                | ν             |
|  |  | 3.3.4 Targets for T&D and storage activities          | <u>PS-C6.</u> |                       | ν                     | ν                  | ν                | ν             |
|  |  |   | <u>PS-C7.</u> | ν                     | ν                     | ν                  | ν                | ν             |
|  |  | 3.3.3 Targets for trade and retail activities         | PS-C8.        |                       | ν                     | V                  | V                | V             |

### ANNEX C: ACTIVITIES AND EMISSIONS IN SCOPE

The activities within scope of this Standard have been defined in line with main industry classification systems<sup>10</sup> and can be described as follows:

- Power generation from low carbon sources: operation of generation facilities that produce electricity from renewable sources (e.g. biofuels, hydropower, on-shore and off-shore wind power, photovoltaic solar energy, thermal solar energy, geothermal energy, green hydrogen-to-power, and tide, wave and ocean energy), nuclear, fossil fuels equipped with carbon capture and storage (within this Standard, fossil fuel power generation with CCS is considered low-carbon where capture rate is 95% at a minimum).
- Power generation from 'unabated' fossil fuels: operation of generation facilities that produce electricity from non-renewable sources (e.g. natural gas, coal, fossil-based hydrogen and other fossil fuels) without carbon capture and storage directly applied to the generation plant, or equipped with carbon capture and storage where capture rate is less than 95%.
- Transmission of electricity: operation of transmission systems that convey the electricity from the generation facility to the distribution system .
- **Distribution of electricity**: operation of distribution systems (i.e., consisting of lines, poles, meters, and wiring) that convey electric power received from the generation facility or the transmission system to the final consumer.
- Trade and retail of electricity: sale of purchased electricity to the user, such as retail of purchased electricity, activities of electric power brokers or agents that arrange the sale of electricity via power distribution systems operated by others, operation of electricity and transmission capacity exchanges for electric power.
- Storage of electricity: conversion of electrical energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical energy (e.g. operation of pump storage facilities, compressed air storage facilities, or battery storage facilities).

The table below summarizes the value chain activities and key emissions sources typically associated with the Power sector, with a clear distinction between those covered by the SBTi Power Sector Net-Zero Standard and those covered by the Corporate Net-Zero Standard (as not requiring sector specific criteria):

SBTi Power Sector Net-Zero Standard Consultation Draft

<sup>&</sup>lt;sup>10</sup> This classification is in line with many sector-acknowledged classification systems, including EFRAG. Note that EFRAG sector classification is still under development 04-02 - Sector Classification SEC 1 - clean - SRB 240917.pdf.

Table C.1 Activities and emission sources in and out of scope of the SBTi Power Sector Net-Zero Standard

| Power sector                              | Power sector activities and emission sources in/out of scope                    |   |   |   |  |  |  |
|---|---|---|---|---|--|--|--|
| associated<br>activities                  | Power Generation  | Electricity Transmission and Distribution                                       | Electricity Storage   | Electricity Trade and Retail  |  |  |  |
| Purchased<br>material and<br>services     | Scope 3 Cat 1 and 2   |  |  |  |
| Construction and installation             | Scope 1 (where self-build) Scope 2 (construction power) Or Scope 3 Cat. 1 and 2 | Scope 1 (where self-build) Scope 2 (construction power) Or Scope 3 Cat. 1 and 2 | Scope 1 (where self-build) Scope 2 (construction power) OR Scope 3 Cat. 1 and 2 | Scope 1 (where self-build) Scope 2 (construction power) Or Scope 3 Cat. 1 and 2             |  |  |  |
| Power generation                          | Scope 1<br>(from generation assets)   | Scope 2<br>(losses in the network)  | Scope 2<br>(losses in storage)  | Scope 3 Cat. 3 (Activity D - generation of purchased electricity that is sold to end users) |  |  |  |
| Asset management, operations, maintenance | Scope 1 and 2   | Scope 1 and Scope 2 from purchased electricity                                  | Scope 1 and Scope 2 from purchased electricity                                  | Scope 1 and Scope 2 from purchased electricity  |  |  |  |
| Transmission,<br>distribution,<br>storage | Scope 3 Cat. 3<br>(Activity A - Upstream<br>emissions of purchased fuels)       | Scope 1 SF6 emissions   | Scope 3: Cat. 3<br>( Activity C - T&D losses)                                   | Scope 3 Cat. 3<br>(Activity C - T&D losses)   |  |  |  |

| Covered by the Corporate | Covered by the Power Sector |
|--------------------------|-----------------------------|
| Net-Zero Standard        | Standard                    |

Table C.2. lists the activities falling within the scope of the SBTi Power Sector Net-Zero Standard in relation to the International Standard Industrial Classification of All Economic Activities (ISIC)<sup>11</sup> section and class codes, as well as the Statistical classification of economic activities in the European Community (NACE)<sup>12</sup> and European Financial Reporting Advisory Group (EFRAG)<sup>13</sup> sector classification class codes.

Table C.2. Economic activities within the scope of the Power Sector Net-Zero Standard as defined by sector classification codes

| ISIC<br>Class                         | ISIC<br>Class  | Activity/<br>NACE<br>Group                           | NACE class                                       |  | EFRAG   | SBTi Power<br>Sector Net-Zero<br>Standard activity                  |                             |   |                             |
|---------------------------------------|----------------|--|--|--|---|---|-----------------------------|---|-----------------------------|
|                                       |                |  | 35.11  | Production of electricity from non-renewable sources     | D.35.11 Production of electricity from non-renewable sources  | Power generation from low carbon sources (including all renewables, |                             |   |                             |
| , gas,                                | Electric power | 35.12  | Production of electricity from renewable sources | D.35.12 Production of electricity from renewable sources | nuclear, fossil fuel<br>with CCS,<br>BECCS) and<br>unabated fossil<br>fuels (coal, oil,<br>natural gas) |   |                             |   |                             |
| steam,<br>and air<br>conditioni<br>ng | 3510           | generation,<br>transmissio<br>n, and<br>distribution | transmissio<br>n, and                            | transmissio n, and                                       | transmissio n, and  | 35.13   | Transmission of electricity | D.35.13<br>Transmission of<br>electricity | Electricity<br>transmission |
| supply                                |                |  | 35.14  | Distribution of electricity                              | D.35.14 Distribution of electricity   | Electricity distribution  |                             |   |                             |
|                                       |                |  | 35.15  | Trade of electricity                                     | D.35.15 Trade of electricity  | Electricity sales   |                             |   |                             |
|                                       |                |  | 35.16  | Storage of electricity                                   | D.35.16 Storage of electricity  | Electricity storage   |                             |   |                             |

ISIC Revision 4, (United Nations, 2008).
 NACE Rev. 2.1, (eurostat, 2022).

<sup>&</sup>lt;sup>13</sup> Note that EFRAG sector classification is still under development, (EFRAG, 2024).

# ANNEX D: METRICS, BENCHMARKS AND METHODS

This annex provides metrics, benchmarks, and methods used to set targets. Applicable to companies in the power sector, these three elements support assessing performance toward net-zero over time and setting targets. The metrics are used to inform the development of science-based targets and improvement plans to guide companies in determining applicability of this Standard (see A.4), assessing their performance (PS-C1) and benchmarking (see PS-C2).

This annex specifies the following elements:

- 1. **Metrics:** A metric is a measurable variable used to track progress or assess conditions in a specific area, often to evaluate changes over time or performance against a set goal.
- 2. **Benchmarks:** A benchmark is a reference point against which a company's performance can be compared. The net-zero aligned benchmarks (i.e. end-point value of the metric) stipulate the required level of performance to be consistent with a net-zero economy. Net-zero aligned benchmarks apply to GHG impact and performance metrics.
- 3. Target-setting methods: The method (algorithm) which uses 1.5°C pathways and input variables to define the interim performance values for each metric. Interim performance values are not provided as they are dependent on the specific company variables, such as base year performance levels.

Companies shall use these tables to select the required metrics to be measured to reach net-zero aligned performance by 2050.

#### **D.1 Metrics overview**

Metrics measure quantitative data about the company's activities that are relevant to setting climate targets. They include GHG metrics and alignment metrics. GHG metrics measure the direct and indirect GHG emissions associated with the company's operations and its value chain. Alignment metrics measure various metrics that reflect the company's operational and value chain performance against alignment with a net-zero economy.

Table D.1.1 provides an overview of all the sector specific metrics that are used in the Power Sector Standard, grouped by power sector activity and scope. To be noted that some metrics are only used for disclosure purposes and/or to determine applicability thresholds of the Power Sector Standard. Table D.2.1 clarifies which metrics are used for target setting.

Table D.1.1. Metrics overview

| Code          | Metric   | Scope   | Description   | Unit                     |
|---------------|--|---------|---|--------------------------|
| Power General | tion   | •       |   | ,                        |
| Metric-PS.1   | Physical CO <sub>2</sub> emissions intensity from power generation | Scope 1 | Physical CO <sub>2</sub> emissions intensity of power generation from assets and activities owned or controlled by the entity.  | kg CO <sub>2</sub> / MWh |
|               |  |         | Calculated by dividing the Scope 1 CO <sub>2</sub> emissions from power generation by annual power generation. Gross emissions from biomass power generation should not be included but still reported separately as per CNZS-C5.                   |                          |
| Metric-PS.2   | Absolute CO <sub>2</sub> emissions from power generation           | Scope 1 | Direct CO <sub>2</sub> emissions from power generation from assets and activities owned or controlled by the entity. For disclosure use only.   | t CO <sub>2</sub>        |
|               |  |         | Measured annual CO <sub>2</sub> emissions from power generation. Gross emissions from biomass power generation should not be included but still reported separately as per CNZS-C5.   |                          |
| Metric-PS.3a  | Share of low carbon power generation                               | Scope 1 | Share of total power generation derived from sources with low direct emissions, including the following: renewables, nuclear power, fossil fuel with CCS (where CCS capture rate is at minimum 95%), BECCS.   | %                        |
|               |  |         | Calculated by dividing the power generation production from sources with low direct emissions (low carbon generation in MWh per year) by the total power generation (total generation in MWh per year) and multiplied by 100, expressed in % terms. |                          |
| Metric-PS.3b  | Share of unabated fossil fuel power generation                     | Scope 1 | Share of total power generation derived from unabated fossil fuel power generation (e.g. coal, oil, natural gas power generation not equipped with CCS, or where capture rate is less than 95%).  | %                        |
|               |  |         | Calculated by dividing the power generation production from   |                          |

| Code             | Metric   | Scope   | Description   | Unit              |
|------------------|--|---------|---|-------------------|
|                  |  |         | unabated fossil fuel, (unabated fossil fuel power generation, in MWh per year) by the total power generation (total generation in MWh per year) and multiplied by 100, expressed in % terms.  |                   |
| Metric-PS.4      | Share of biomass sustainably sourced   | Scope 1 | Share of the total biomass used for power generation that is sustainably sourced as certified by an accredited verification body  | %                 |
| Electricity Tran | smission & Distribution  |         | •   |                   |
| Metric-PS.5a     | Absolute SF <sub>6</sub> emissions from electricity transmission & distribution          | Scope 1 | Gross $SF_6$ emissions from electricity transmission and distribution by assets and activities owned or controlled by the entity. $SF_6$ emissions in electricity transmission and distribution is largely due to equipment leakage caused by imperfect seals, damage or wear-and-tear, and improper handling during installation, maintenance, or disposal. Absolute emissions from $SF_6$ leakage are calculated through a combination of direct measurement (monitoring) and estimation methods (mass balance approach: input vs. output). | t SF <sub>6</sub> |
| Metric-PS.5b     | SF <sub>6</sub> leakage rate in electricity transmission and distribution                | Scope 1 | Rate at which $SF_6$ gas escapes from electrical equipment in transmission and distribution networks due to leaks, measured as a percentage of the total $SF_6$ gas volume within the equipment, per year. $SF_6$ leakage can be calculated through direct measurement (preferred approach), pressure/density monitoring, mass balance  | %                 |
| Metric-PS.6      | Absolute CO <sub>2</sub> emissions from transmission and distribution electricity losses | Scope 2 | Gross CO <sub>2</sub> emissions from electricity losses and no-load consumption within the entity's operated transmission and distribution system. For disclosure use only.  Calculated by multiplying transmission and distribution losses between secondary energy and final energy (in MWh per year) by  | t CO <sub>2</sub> |

| Code           | Metric   | Scope                    | Description  | Unit              |
|----------------|--|--------------------------|--|-------------------|
|                |  |                          | location-based grid emission factor (in t CO <sub>2</sub> per MWh per year).   |                   |
| Metric-PS.7    | Total share of electricity lost in electricity network (transmission and distribution)         | Scope 2                  | Electricity lost in transmission and distribution networks as a share of total electricity transmission and distribution. This includes both technical and non-technical losses.  Calculated by dividing electricity transmission and distribution losses (in MWh per year) by total electricity transmitted and distributed (in MWh per year) and multiplying by 100, expressed in % terms.   | %                 |
| Trade and reta | il of Electricity  |                          |  |                   |
| Metric-PS.8    | Absolute CO <sub>2</sub> emissions from electricity purchased and sold to end user             | Scope 3<br>Category<br>3 | Gross CO <sub>2</sub> emissions from electricity purchased and sold to the end user. For disclosure use only.  Calculated by multiplying total electricity purchased and sold to the end user (in MWh per year) by the relevant grid CO <sub>2</sub> emission factor.  | t CO <sub>2</sub> |
| Metric-PS.9a   | Share of electricity purchased and sold to end user from low carbon power generation           | Scope 3<br>Category<br>3 | Share of total electricity purchased and sold to the end user from sources with low direct emissions, including the following: renewables, nuclear power, fossil fuel with CCS (where CCS capture rate is at minimum 95%), BECCS.  Calculated by dividing the purchased and sold electricity from sources with low direct emissions (low carbon electricity in MWh per year) by the total purchased and sold electricity (total electricity in MWh per year) and multiplying by 100, expressed in % terms. | %                 |
| Metric-PS.9b   | Share of electricity purchased and sold to end user from unabated fossil fuel power generation | Scope 3<br>Category<br>3 | Share of total electricity purchased and sold to the end user from unabated fossil fuel power generation (e.g. coal, oil, natural gas power generation not equipped with CCS, or where capture rate is less than 95%).   | %                 |

| Code            | Metric   | Scope   | Description   | Unit              |
|-----------------|--|---------|---|-------------------|
|                 |  |         | Calculated by dividing the purchased and sold electricity from unabated fossil fuel power generation (unabated fossil fuel electricity in MWh per year) by the total purchased and sold electricity (total electricity in MWh per year) and multiplying by 100, expressed in % terms. |                   |
| Storage of Elec | tricity  |         |   |                   |
| Metric-PS.10    | Absolute CO <sub>2</sub> emissions from electricity storage losses | Scope 2 | Gross CO <sub>2</sub> emissions from electricity losses within the entity's electricity storage system. For disclosure purposes only.   | t CO <sub>2</sub> |
|                 |  |         | Calculated by multiplying electricity storage losses (in MWh per year) by location-based grid emission factor (in t CO <sub>2</sub> per MWh).   |                   |
| Metric-PS.11    | Total share of electricity lost in                                 | Scope 2 | Electricity storage losses as a share of total electricity storage.   | %                 |
|                 | electricity storage  |         | Calculated by dividing electricity storage losses (in MWh per year) by total electricity storage input (in MWh per year) and multiplied by 100, expressed in % terms.   |                   |

#### D.2 Power sector net-zero performance metrics, benchmarks, and methods

Metrics and target-setting methods for any power sector activity-scope pairs not listed below shall follow the Corporate Net-Zero Standard. Table D.2.1 below summarizes the performance metrics for operational related GHG emissions, upstream value chain related GHG emissions, and for downstream value chain related GHG emissions that are applicable across all sectors.

Table D.2.1. Metrics, net-zero aligned benchmarks and methods for target-setting grouped by power sector activity type.

| Code          | Metric  | Scope   | Net-zero aligned<br>benchmark value                          | Unit                        | Net-zero<br>aligned<br>benchmark<br>year               | Reference<br>pathway         | Interim target-<br>setting method             |
|---------------|---|---------|--|-----------------------------|--|------------------------------|---|
| Power Generat | ion   |         |  |                             |  |                              |   |
| Metric-PS.1   | Physical CO <sub>2</sub><br>emissions intensity<br>from power<br>generation | Scope 1 | 1.03   | kg CO <sub>2</sub> /<br>MWh | 2050 or<br>earlier                                     | SBTi power sector pathway    | Sectoral<br>Decarbonization<br>Approach (SDA) |
| Metric-PS.2   | Absolute CO <sub>2</sub> emissions from power generation                    | Scope 1 | N/A, for disclosure<br>and applicability<br>calculation only | t CO <sub>2</sub>           | N/A, for disclosure and applicability calculation only |                              |   |
| Metric-PS.3a  | Share of low carbon power generation  | Scope 1 | 99.43  | %                           | 2050 or<br>earlier                                     | SBTi Power<br>Sector Pathway | Technology Share<br>Convergence<br>(TSC)      |
| Metric-PS.3b  | Share of unabated fossil fuel power generation                              | Scope 1 | 0.57   | %                           | 2050 or<br>earlier                                     | SBTi Power<br>Sector Pathway | Technology Share<br>Convergence<br>(TSC)      |
| Metric-PS.4   | Share of biomass sustainably sourced  | Scope 1 | 100  | %                           | 2030   | SBTi Power<br>Sector Pathway | Linear Alignment<br>Approach                  |

| Code             | Metric   | Scope   | Net-zero aligned<br>benchmark value                          | Unit              | Net-zero<br>aligned<br>benchmark<br>year | Reference<br>pathway                                   | Interim target-<br>setting method         |  |
|------------------|--|---------|--|-------------------|--|--|---|--|
| Electricity Trai | nsmission and Distrib  | ution   |  |                   |  | •  |   |  |
| Metric-PS.5a     | Absolute SF <sub>6</sub> emissions from electricity transmission and distribution        | Scope 1 | N/A, for disclosure<br>and applicability<br>calculation only | t SF <sub>6</sub> | N/A, for disclos                         | sure and applicability                                 | calculation only                          |  |
| Metric-PS.5b     | SF <sub>6</sub> leakage rate in electricity transmission and distribution                | Scope 1 | N/A  | %                 | N/A                                      | N/A  | Commitment only (refer to PS-C8)          |  |
| Metric-PS.6      | Absolute CO <sub>2</sub> emissions from transmission and distribution electricity losses | Scope 2 | N/A, for disclosure<br>and applicability<br>calculation only | t CO <sub>2</sub> | N/A, for disclos                         | N/A, for disclosure and applicability calculation only |   |  |
| Metric-PS.7      | Total share of electricity lost in electricity network (transmission and                 | Scope 2 | Average: Category A: 10% Category B: 20%                     | %                 | N/A                                      | N/A  | Maintenance<br>target (refer to<br>PS-C7) |  |
| distribution)    |  |         | Best Practice: Category A: 2% Category B: 6%                 | %                 | N/A                                      | N/A  |   |  |
| Trade and Sale   | of Electricity   |         |  |                   |  |  |   |  |

| Code            | Metric   | Scope                    | Net-zero aligned<br>benchmark value                          | Unit              | Net-zero<br>aligned<br>benchmark<br>year               | Reference<br>pathway         | Interim target-<br>setting method                 |
|-----------------|--|--------------------------|--|-------------------|--|------------------------------|---|
| Metric-PS.8     | Absolute CO <sub>2</sub><br>emissions from<br>electricity<br>purchased and sold<br>to end user             | Scope 3<br>Category<br>3 | N/A, for disclosure<br>and applicability<br>calculation only | t CO <sub>2</sub> | N/A, for disclosure and applicability calculation only |                              |   |
| Metric-PS.9a    | Share of electricity<br>purchased and sold<br>to end user from<br>low carbon power<br>generation           | Scope 3<br>Category<br>3 | 99.43  | %                 | 2050 or<br>earlier                                     | SBTi Power<br>Sector Pathway | Technology Share<br>Convergence<br>(TSC)          |
| Metric-PS.9b    | Share of electricity<br>purchased and sold<br>to end user from<br>unabated fossil fuel<br>power generation | Scope 3<br>Category<br>3 | 0.57   | %                 | 2050 or<br>earlier                                     | SBTi Power<br>Sector Pathway | Technology Share<br>Convergence<br>(TSC)          |
| Storage of Elec | tricity  |                          |  |                   |  |                              |   |
| Metric-PS.10    | Absolute CO <sub>2</sub><br>emissions from<br>electricity storage<br>losses                                | Scope 2                  | N/A, for disclosure<br>and applicability<br>calculation only | t CO <sub>2</sub> | N/A, for disclosure and applicability calculation only |                              |   |
| Metric-PS.11    | Total share of electricity lost in electricity storage   | Scope 2                  | 6.46   | %                 | 2035   | SBTi power sector pathway    | Index Alignment<br>Approach (for<br>consultation) |

#### **D.3 Target-setting methods**

Target-setting methods are algorithms that translate the level of ambition defined in global or sectoral emissions mitigation pathways into a company-level performance value in the form of a climate-relevant metric. This guides the formulation of science-based, measurable, and time-bound targets aligned with pathways that are consistent with limiting warming to 1.5°C with no or limited overshoot. Methods are one of several elements of target design, as shown in Figure D.3.1.

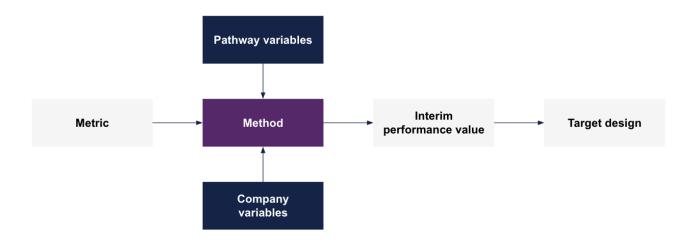


Figure D.3.1. Elements of target design.

Table D.3.1 below provides an overview of the types of methods used to determine interim benchmarks. Interim benchmarks for climate-critical activities are exclusively defined in the SBTi's Sector Standards. For activities where companies have already achieved Net-Zero-aligned benchmark values, they shall maintain that level of performance.

Table D.3.1. Target-setting methods for each type of power sector activity and GHG emissions scope.

| Type of power sector activity | Scope   | Metric | Method                                  |
|-------------------------------|---------|--------|---|
| Power generation              | Scope 1 | PS.1   | Sectoral Decarbonization Approach (SDA) |

|                              | Scope 1            | PS.2  | N/A,for disclosure use only        |
|------------------------------|--------------------|-------|------------------------------------|
|                              | Scope 1            | PS.3a | Technology Share Convergence (TSC) |
|                              | Scope 1            | PS.3b | Technology Share Convergence (TSC) |
|                              | Scope 1            | PS.4  | Linear Alignment Approach          |
| Electricity transmission and | Scope 1            | PS.5a | N/A,for disclosure use only        |
| distribution                 | Scope 1            | PS.5b | N/A,for disclosure use only        |
|                              | Scope 2            | PS.6  | N/A,for disclosure use only        |
|                              | Scope 2            | PS.7  | N/A,for disclosure use only        |
| Sale of electricity          | Scope 3 Category 3 | PS.8  | N/A,for disclosure use only        |
|                              | Scope 3 Category 3 | PS.9a | Technology Share Convergence (TSC) |
|                              | Scope 3 Category 3 | PS.9b | Technology Share Convergence (TSC) |
| Storage of electricity       | Scope 2            | PS.10 | N/A,for disclosure use only        |
|                              | Scope 2            | PS.11 | N/A,for disclosure use only        |

Table D.3.2 characterizes the types of methods used by SBTi for establishing interim targets in the power sector

Table D.3.2. Target-setting method characterization.

| Method type   | Method name                                   | Applicable scope and activities | Benchmarks            | Method function   |  |
|---|---|---------------------------------|-----------------------|---|--|
| GHG emissions reduction methods (applied to GHG impact metrics) | Sectoral<br>Decarbonization<br>Approach (SDA) | Scope 1:  • Power generation    | Net-zero aligned only | Method defines interim performance levels required to reach net-zero aligned benchmarks |  |

| Alignment methods (applied to performance metrics) | Technology Share<br>Convergence | Scope 1:     Power generation  Scope 3:     Sale of electricity (category 3 only) | Net-Zero aligned and interim benchmarks available | N/A. Interim and net-zero performance values are derived directly from selected pathways |  |
|--|---------------------------------|---|---|--|--|
|  | Linear Alignment<br>Approach    | Scope 1:  • Power generation  | Net-zero aligned only                             | N/A. Net-zero performance values are derived directly from selected pathways.            |  |

#### D.3.1 Sectoral Decarbonization Approach (SDA)

#### Method description

The SDA produces a GHG emissions intensity pathway between the base year and the target year representing the company's idealized reduction curve. The SDA is based on a physical intensity convergence approach, with GHG emissions grandfathered from the base year. It also reflects a physical production allocation, where the more a company expects to increase its production, the larger its share of residual GHG emissions. Although the SDA is applicable to multiple GHGs, in the context of target setting in the power sector it is applicable only to CO<sub>2</sub>, which is reflected in the remainder of this documentation.

#### Method implementation

Company CO<sub>2</sub> emissions intensity is calculated using the standard SDA system of equations (Equations D.3.1 - D.3.4). Company activity projections are produced using a target year output approach, in which the company provides projected activity levels in the target year.

The company is not required to follow the idealized reduction curve on a strict annual basis. Such an approach would be overly prescriptive and would not reflect actual trends in corporate CO<sub>2</sub> emissions reduction. For example, a capital investment in a low carbon power generation asset could produce a substantial reduction in scope 1 CO<sub>2</sub> emissions intensity from one year to the next, resulting in a stepwise reduction that differs from the annual reduction in the idealized reduction curve.

Equation D.3.1. Calculating target year intensity using the SDA

Where:

CIv Company average CO<sub>2</sub> emissions intensity in year y

d Initial performance parameter in the base year relative to the Net-Zero year sector target (t CO<sub>2</sub> / MWh)

 $P_{v}$ Sector decarbonization index in year y

 $M_y$ Market share parameter in year y (%)

SI<sub>nzy</sub> Sector CO<sub>2</sub> emissions intensity in the Net-Zero year of the sector pathway (t CO<sub>2</sub> / MWh)

If the company intensity target calculated using the SDA is below the low intensity threshold defined in Table D.3.2, the company has the option to set a target using the SDA Linear Convergence adjustment documented in section D.3.2.

Equation D.3.2. Calculating the initial performance parameter

$$d = CI_{by} - SI_{nzy}$$

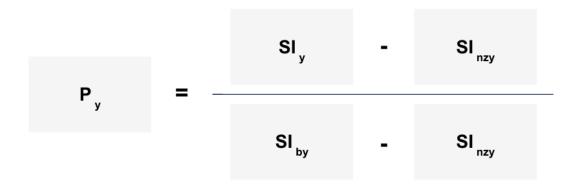
#### Where:

Initial performance parameter in the base year relative to the Net-Zero year sector d target (t CO<sub>2</sub> / MWh)

Company average CO<sub>2</sub> emissions intensity in the base year (t CO<sub>2</sub> / MWh) CI<sub>bv</sub>

SI<sub>nzy</sub> Sector CO<sub>2</sub> emissions intensity in the Net-Zero year of the sector pathway (t CO<sub>2</sub> / MWh)

Equation D.3.3. Calculating the sector decarbonization index



#### Where:

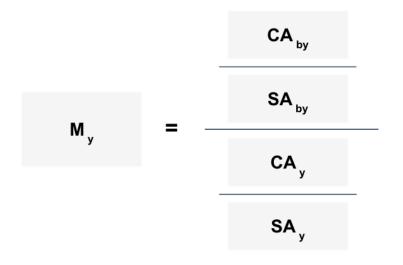
 $P_{v}$ Sector decarbonization index in year y

Sector CO<sub>2</sub> emissions intensity in year y (t CO<sub>2</sub> / MWh) Sly

SI<sub>nzy</sub> Sector CO<sub>2</sub> emissions intensity in the Net-Zero year of the sector pathway (t CO<sub>2</sub> / MWh)

SI<sub>by</sub> Sector CO<sub>2</sub> emissions intensity in the base year (t CO<sub>2</sub> / MWh)

Equation D.3.4. Calculating the market share parameter



#### Where:

 $M_y$ Market share parameter in year y (%)

CA<sub>y</sub> Company activity in year y (MWh)

CA<sub>by</sub> Company activity in the base year (MWh)

SA<sub>y</sub> Sector activity in year *y* (MWh)

SA<sub>by</sub> Sector activity in the base year (MWh)

#### Required company input variables

The company shall provide the following input data for the above equations:

- Base year
- Base year GHG emissions (t CO<sub>2</sub>)
- Base year power generation activity (MWh)
- Interim target year
- Interim target year projected power generation activity (MWh)

#### D.3.2. SDA Method Adjustment - Linear Convergence (Beta for public consultation)

#### Method adjustment description

Power generation companies with very low scope 1 power generation physical emissions intensity have the option to use a linear convergence adjustment if, at any given milestone year, the conventional SDA yields an interim performance level that is overly challenging or infeasible to achieve. This may be due to factors beyond the companies' control, e.g. regulatory requirements for security of supply that may imply a certain minimum level of baseline power generation from fossil fuels.

To provide an alternative solution, the adjustment first establishes an ambitious threshold for low intensity power generation that is derived from the updated SBTi power sector pathway. A simple backcasting methodology uses the power sector pathway curve from 2045-2050 to create a low intensity threshold between 2020 and 2050, visualized in Figure D.3.3. Table D.3.2 lists the scope 1 power generation low intensity threshold values at each milestone year from 2020-2050.

Figure D.3.3. A linear threshold for low intensity power generation derived from the power sector pathway curve between 2045 and 2050.

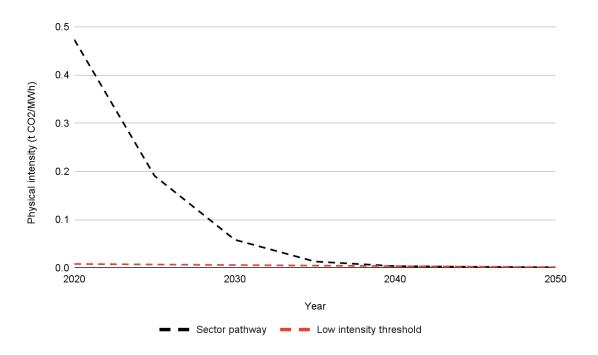


Table D.3.2. Scope 1 power generation low intensity threshold values used in the SDA linear convergence adjustment.

| Milestone year  | 2020    | 2025    | 2030    | 2035    | 2040    | 2045    | 2050    |
|---|---------|---------|---------|---------|---------|---------|---------|
| CO <sub>2</sub> emissions intensity<br>threshold value<br>(t CO <sub>2</sub> / MWh) | 0.00607 | 0.00523 | 0.00439 | 0.00355 | 0.00271 | 0.00187 | 0.00103 |

The company's target reduction curve, calculated using the SDA, is compared against this threshold. If the target reduction curve falls below the threshold within the target timeframe, an adjusted target curve is modeled following a linear convergence trajectory to the net-zero benchmark value in 2050 (Figure D.3.4)

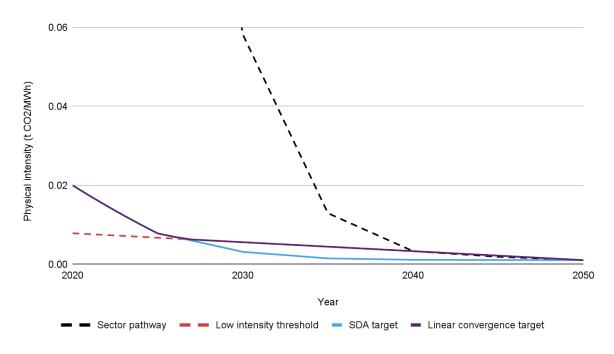


Figure D.3.4. An SDA target curve that crosses the low intensity threshold and is subsequently altered to a linear convergence trajectory to the net-zero benchmark in 2050. The sector pathway and low intensity threshold curves are the same as in Fig. D.3.3, with a scaled-down y-axis to provide more visual detail.

This adjustment presents some risk of sector carbon budget overshoot. A scenario analysis using four archetypal power generation companies is provided in the Synthesis Report on Power Sector Metrics & Methods to illustrate the potential scope of this risk. Only the company archetype with the highest base year physical intensity (150% of sector average emissions intensity in 2020) fails to trigger the linear convergence adjustment. The resulting increase in cumulative absolute emissions for the medium and low intensity archetypes is low, 0.11% and 1.04% respectively. The very low intensity archetype (10% of sector average emissions intensity in 2020) sees an increase in cumulative

absolute emissions of 13.84%. While this is a substantial portion of the archetype's total emissions, because of the very low starting intensity the resulting overshoot is very small in absolute terms relative to the sector carbon budget. The extent to which this adjustment risks budget overshoot depends largely on the number of power generation companies that are eligible for a target adjustment, and the subset of those that would elect to apply the adjustment based on their legitimate inability to meet their initial SDA target, e.g. due to regulatory requirements.

#### Method adjustment implementation

The calculation steps to model an SDA target with a linear convergence adjustment are as follows:

#### 1. Model target using the SDA and check against the low intensity threshold

A target is modeled using the standard SDA system of equations. If, during the target timeframe, the SDA target reduction curve crosses the low intensity threshold, the adjustment is triggered.

#### 2. Model SDA linear convergence adjustment target

An adjusted target is modeled using linear convergence, applicable to the timeframe between the year the SDA target curve crosses the low intensity threshold and the target year.

Equation D.3.5. Calculating an SDA linear convergence adjustment target.

$$SDALC_{y} = SDA_{y-1} - \left(\begin{array}{c|ccc} SDA_{y-1} & - & SI_{nzy} \\ \hline \end{array}\right)$$

Where:

= SDA linear convergence adjustment target in any year y (t CO<sub>2</sub> / MWh) SDA LC<sub>v</sub>

SDA<sub>v-1</sub> = SDA target in any year y - 1 (t CO<sub>2</sub> / MWh)

= Sector emissions intensity in the net-zero year (t CO<sub>2</sub> / MWh) SI<sub>nzv</sub>

= The net-zero year of the sector pathway nzy

= Any year y in the target timeframe У

#### Required company input variables

The company shall provide the following input data for the above equations:

- Base year
- Base year GHG emissions (t CO<sub>2</sub>)
- Base year power generation activity (MWh)
- Interim target year
- Interim target year projected power generation activity (MWh)

### D.3.3. Technology Share Convergence (Beta for public consultation)

#### Method description

The Technology Share Convergence method sets targets on electricity generation or sales produced using certain power generation technologies as a share of the company's total electricity generation or sales. The method determines interim performance values of electricity generation or sales that align with the generation technology growth assumptions in the power sector pathway.

This method can be applied to technology pathways at various levels of granularity. In this beta version for public consultation, a high-level categorization approach is proposed. Power generation technology types are aggregated into two categories: low carbon electricity and unabated fossil fuel electricity. Companies can then set targets to ensure that their technology shares meet minimum (for low carbon electricity) and maximum (for unabated fossil fuel electricity) thresholds and gradually converge with the power sector pathway technology share values in the net-zero year.

Figure D.3.6 shows a simplified illustrative example of how the technology share convergence method is implemented under this approach.

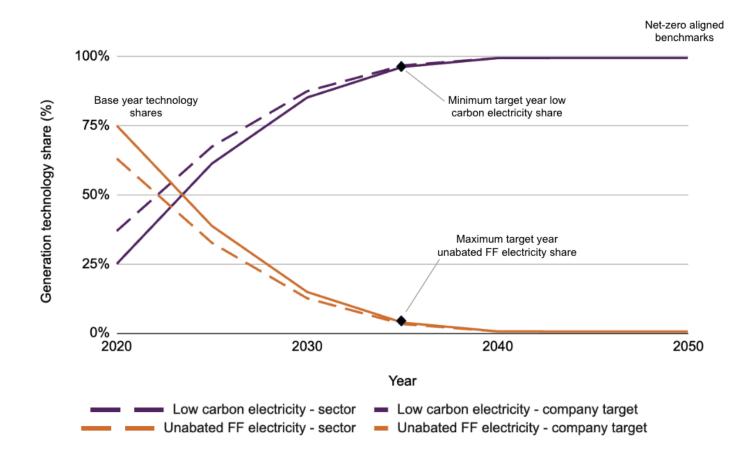


Figure D.3.6. Illustrative example of the Technology Share Convergence method. Series labeled 'sector' represent the sector technology share of each generation technology category. Series labeled 'company target' represent a company-level target modeled using the Technology Share Convergence method for each generation technology category.

#### Implementation options

#### Metric and target formulation

Targets use a percentage share metric of annual electricity generation. Targets can therefore be formulated as the minimum and maximum percentage of total annual generation from different technology categories in the target year e.g. annual low carbon electricity generation will increase from 10% of total annual generation in the base year to 30% in 2030.

### **Technology phase out**

The company's technology exposure pathway implies the phase out of generation technologies by certain points in time that is consistent with the phase out criteria explicitly described in Chapter 1 of this Standard. These criteria should be used to determine company decisions regarding phase out dates.

#### Method implementation

#### Step 1: Calculate the initial performance parameter

The initial performance parameter establishes the gap between the current technology share versus the net-zero aligned benchmark value.

Equation D.3.12. Calculating the initial performance parameter.



#### Where:

d Initial performance parameter in the base year relative to the net-zero year sector benchmark value (%)

TS<sub>by</sub> Technology share in the base year (%)

STS<sub>nzy</sub> Sector technology share benchmark value in the net-zero year (%)

#### Step 2: Calculate the sector technology share index

The method assumes that the technology share for the generation technologies will converge in the net-zero year. This convergence is represented by an index of the sector's technology share being equal to 1 in the base year and 0 in the net-zero year.

Equation D.3.13. Calculating the sector technology share index.

$$P_{y} = \frac{STS_{y}}{STS_{by}} - \frac{STS_{nzy}}{STS_{nzy}}$$

Where:

 $P_{v}$ Sector technology share index in year y

STS Sector technology share in year y (%)

STS<sub>bv</sub> Sector technology share in the base year (%)

STS<sub>nzy</sub> Sector technology share benchmark value in the net-zero year (%)

# Step 3: Calculate the target year technology share of company assets

Combining the company's initial performance parameter with the sector technology share index for year y results in an equation that provides the portfolio's technology share target for any year y between the base year and the target value in the net-zero year.

Equation D.3.14. Calculating the target year technology share.

$$TS_{y} = \left( d x P_{y} \right) + STS_{nzy}$$

Where:

TS<sub>v</sub> Company technology share in year y

Initial performance parameter in the base year relative to the net-zero year sector benchmark value (%) d

 $P_{v}$ Sector decarbonization index in year *y* 

STS<sub>nzy</sub> Sector technology share benchmark value in the Net-Zero year (%)

**Required company input variables:** Based on the above equations, the company has to provide the following input data:

Technology share in the base year

# D.3.4. Linear Alignment Approach

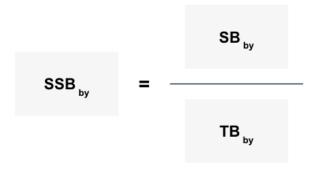
# Method description

The Linear Alignment Approach applies a sector convergence principle that requires all companies to converge to the sector benchmark value in the net-zero year, which is independent of the company's starting point. In the power sector, this method is applied to sustainable biomass sourcing to ensure that companies using biomass for power generation are sourcing 100% sustainable biomass by 2030. This value is targeted regardless of the company's performance in the base year.

The minimum share of biomass from sustainable sources at the interim target year is determined by measuring the base year share of biomass from sustainable sources and applying a linear growth rate consistent with reaching 100% alignment by the benchmark year of 2030.

# **Method Implementation**

Equation D.3.15. Calculating base year alignment of sustainable biomass sourcing



Where:

SSB<sub>by</sub> Share of biomass sustainably source in the base year (%)

SB<sub>by</sub> Sustainable biomass sourced in the base year (t)

 $TB_{by}$ Total biomass sourced in the base year (t)

Equation D.3.16. Calculating interim targets for alignment of sustainable biomass sourcing

$$SSB_{ty} = 100\% - \left( nzy - ty \right) X \left( \frac{100\%}{nzy} - by \right)$$

Where:

Share of biomass sustainably sourced in the target year (%) SSB<sub>ty</sub>

The net-zero year nzy

The target year ty

Share of biomass sustainably sourced in the base year (%) SSB<sub>bv</sub>

The base year by

**Required company input variables:** Based on the above equations, the company shall provide the following input data:

- Sustainable biomass sourced in the base year
- Total biomass sourced in the base year

# **Consultation questions**

This subsection presents the key consultation questions related to this chapter. Stakeholders are invited to review the questions presented in the table below and submit their responses via the online survey.

| Section | Criterion | Question   | Rationale |
|---------|-----------|--|-----------|
| ANNEX D | n.a.      | For the questions on metrics and methods refer to questions 6 through 26 |           |

# ANNEX E: PATHWAYS

This section describes the emission reduction targets and the mitigation trajectory of key activity metrics in the power sector. These targets align with the goal of limiting warming to a 1.5 °C with no or limited overshoot. The pathways detailed here are derived from the scenarios from the C1 category of the sixth Assessment report of the IPCC (IPCC, 2022) that pass the SBTi principles. The pathway also includes the Net Zero Emission (NZE) scenario developed by the IEA (IEA, 2023). The power sector pathway delineates a 83% emission reduction between 2020 and 2030, and 99% by 2050 (Table E.1, Table E.2). The power sector transformation is driven by the phase out of unabated coal generation by 2040, and scale up of low carbon sources (Table E.3 and Table E.4). By 2030, renewable energy accounts for 83% of total electricity generation, rising to 93% by 2050 (Figure E.1). For further background on the scenario selection process and criteria, please refer to the Synthesis Report on Pathways, in particular section 4.2. Please note that SBTi is also exploring alternative approaches for the 2nd consultation draft, aligning with any potential revision of pathway selection criteria for SBTi Corporate Net-Zero Standard Version 2.0.

Table E.1: Absolute gross emission reduction in power generation. The interguartile range is presented in bracket

| Greenhouse<br>gas (GHG) | Unit | 2020-2025 (%)    | 2020-2030 (%)    | 2020-2035 (%)    | 2020-2040 (%)    | 2020-2045 (%)    | 2020-2050 (%)    |
|-------------------------|------|------------------|------------------|------------------|------------------|------------------|------------------|
| Gross CO2<br>emission   | %    | 56.4 [37.5-55.4] | 83.4 [62.7-84.2] | 95.5 [84.1-96.1] | 98.6 [97.1-98.7] | 99.1 [98.2-99.1] | 99.4 [99.2-99.4] |

Table E.2: Gross emissions and benchmarks for target setting

|                                | Unit     | 2020   | 2025    | 2030   | 2035   | 2040  | 2045   | 2050   |
|--------------------------------|----------|--------|---------|--------|--------|-------|--------|--------|
| Absolute gross<br>CO2 emission | MtCO2/yr | 13071  | 5698.57 | 2165   | 587    | 180   | 123    | 79     |
| Gross CO2 intensity            | tCO2/MWh | 0.4737 | 0.1973  | 0.0645 | 0.0148 | 0.003 | 0.0019 | 0.0010 |

Table E.3: Projected global electricity generation by source.

| Technology                                       | Unit   | 2020 | 2025  | 2030  | 2035  | 2040  | 2045  | 2050  |
|--|--------|------|-------|-------|-------|-------|-------|-------|
| Electricity generation from unabated coal        | TWh/yr | 9426 | 3328  | 751   | 73    | 0     | 0     | 0     |
| Electricity generation from unabated natural gas | TWh/yr | 6632 | 5596  | 3467  | 1301  | 281   | 329   | 396   |
| Electricity generation from unabated oil         | TWh/yr | 567  | 235   | 92    | 57    | 36    | 24    | 12    |
| Electricity generation from fossil CCS           | TWh/yr | 0    | 3     | 794   | 1453  | 1686  | 2067  | 2326  |
| Electricity generation from renewables           | TWh/yr | 6975 | 14868 | 25514 | 36083 | 44253 | 52126 | 58765 |
| Electricity generation from BECCS                | TWh/yr | 0    | 0     | 20    | 61    | 137   | 283   | 393   |
| Electricity generation from nuclear              | TWh/yr | 2741 | 3439  | 4342  | 5348  | 6786  | 8597  | 10831 |
| Electricity generation from low carbon sources   | TWh/yr | 9720 | 18914 | 29966 | 42200 | 52599 | 62572 | 71810 |

Table E.4: Projected global electricity generation. Low carbon sources include renewables, nuclear, BECCS, and fossil fuels w/CCS.

|                         | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
|-------------------------|------|------|------|------|------|------|------|
| Low-carbon electricity  | 37%  | 67%  | 87%  | 97%  | 99%  | 99%  | 99%  |
| Unabated FF electricity | 63%  | 33%  | 13%  | 3%   | 1%   | 1%   | 1%   |

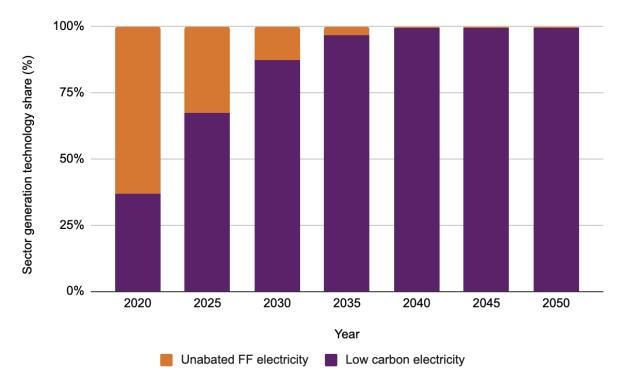


Figure E.1- Technology share of electricity generation. Low carbon electricity includes renewables, nuclear, fossil fuel equipped with CCS, BECCS.

# ANNEX F: SECTOR SPECIFIC CLAIMS

This list of ambition sub-claims is non-exhaustive and shall be aligned with the final version of this Standard and Annex D on Indicators, Benchmarks and Methods

Table F.1 Example target claims

| Target metric/<br>Target type   | Target sub-claims and target language  |
|---|--|
| CO2 scope S1 emission intensity reduction ambition                    | "[Company A] strives to reduce our scope 1 CO2 emissions intensity from power generation by [x%] by target year [year Y] compared to the base year [year X]"   |
| Share of low carbon power generation                                  | "[Company A] strives to transition to [x%] share of low carbon power generation by [year X] and [%] by [year Z]."  |
| Share of low carbon electricity purchased and sold to end users       | "[Company A] strives to transition to [x%] share of low carbon electricity purchased and sold to end by [year X] and to [%] by [year Z]."  |
| Share of biomass for power generation sustainably sourced             | [Company A] strives to reach [x%] share of biomass used for power generation sourced from sustainable sources by [year X] and [%] by [year Z]."  |
| Share of electricity losses in transmission and distribution networks | "[Company A] strives to maintain its electricity losses from transmission and distribution activities below [x%] until year 2035."   |
| SF6 leakage in transmission and distribution networks                 | "[Company A] commits to minimize SF6 emissions from its transmission and distribution activities"  "[Company A] commits to maintain SF6 leakage rate from its transmission and distribution activities below 0.1%" |
| Share of electricity losses in storage systems                        | "[Company A] strives to maintain its electricity losses from storage activities below [x%] until year 2035."   |

# ANNEX G: PROGRESS ASSESSMENT FORMULAS

This annex provides SBTi's formulas for progress assessment for physical emissions intensity reduction targets, and is supplementary to the progress assessment formulas provided in the Corporate Net-Zero Standard Version 2.0 covering emissions reduction and alignment targets. These formulas shall be followed to undertake the progress assessments that are necessary for companies seeking revalidation in conformity with SBTi Standards. Please note that the formulas shall be applied only after any necessary recalculations have been undertaken.

## **G.1 Emissions intensity reduction targets**

The SBTi's formulas for progress assessment of emissions intensity reduction targets calculate (1) the % of target achieved and (2) the change in emissions intensity (in g CO<sub>2</sub> per kWh).

Equation G.1.1. Percentage of target achieved for emissions intensity reduction targets

To establish the percentage of target achieved for emissions reduction targets, the following equation shall be used:

$$TA = \left(\begin{array}{c|cccc} EI_{by} & - & EI_{ty} \\ \hline \\ EI_{by} & X & TR \end{array}\right) X 100$$

#### Where:

TA Percent of target achieved (%)

Company emissions intensity in the base year (g CO<sub>2</sub> / kWh) EI<sub>by</sub>

 $EI_{tv}$ Company emissions intensity in the target year (g CO<sub>2</sub> / kWh)

TR Targeted percent reduction over the target timeframe (%)

#### Equation G.1.2. Change in emissions intensity for emissions intensity reduction targets

To establish the change in total emissions from the target base year for emissions reduction targets, the following equation shall be used:



#### Where:

ΔΕΙ Change in emissions intensity (g CO<sub>2</sub> / kWh)

EI<sub>ty</sub> Company emissions intensity in the target year (g CO<sub>2</sub> / kWh)

Company emissions intensity in the base year (g CO<sub>2</sub> / kWh) EI<sub>by</sub>

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