

July 2022

Climate Bonds INITIATIVE

Climate Bonds Initiative Green Bond Database Methodology



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1. Introduction

The Climate Bonds Initiative ([Climate Bonds](#)) screens self-labelled debt instruments to identify bonds and other debt instruments as eligible for inclusion in the Climate Bonds Initiative Green Bond Database (Climate Bonds GBDB). The screening references the Climate Bonds Taxonomy (The Taxonomy), albeit using a modified sector list rather than the Taxonomy criteria. This document provides information on the approach and maintenance process.

There are three overarching prerequisites:

- 1. Debt instrument** includes but not limited to bonds, asset-backed securities, and loans. Short-term debt, such as deposits and commercial paper, is not included.
- 2. Self-labelled**, defined as a conscious decision by the issuer to label the instrument. Deals, which finance the right types of assets, projects, and activities, but are not self-labelled by the issuer, are excluded.
- 3. Public disclosure** that is sufficient to (1) determine if the financed assets / projects / activities are green and (2) allow inclusion of the debt instrument, most notably an amount outstanding and settlement date.

Notably, the label is used primarily to identify self-labelled debt. Several labels are considered (see page 8). Once past the initial screening, the process looks beyond the actual label and evaluates the assets, projects and activities being financed to determine if the debt warrants inclusion in the Climate Bonds Initiative Green Bond Database.

The screening is based on two key aspects: eligible sectors and eligible Use of Proceeds (UoP)

For the purposes of the Green Bond Methodology, UoP categories are divided into sectors of broad economic activity, such as energy and transport, and referred to as sectors in this document.

Eligible sectors for assets, projects and/or activities

The screening seeks to determine general alignment to the [Climate Bonds Taxonomy](#) (see Annex A), which specifies which activities are Paris aligned, i.e., 2 degrees or lower of global warming. The Taxonomy provides two levels of information:

- broad guidance on eligible sectors and subsectors, and
- Sector-specific metrics and indicators that identify assets, projects and activities consistent with the Paris Agreement, which are used in the Climate Bonds Certification scheme.

The Methodology's sector screening is primarily based on the first level (a). The Climate Bonds GBDB Methodology uses an adapted list of eligible sectors and types of assets, projects, and activities (see **Annex B**).

The indicators (b) are also used to inform the analysis. These indicators are sector- and subsector- specific. They link to [Sector-Specific Criteria](#), developed or being developed together with scientific and other technical and industry experts, under the Climate Bonds Standard and [Certification](#), a labelling scheme for financial instruments that are Paris compliant (see **Annex C**).

Green bonds included in the Climate GBDB are not expected to meet the requirements for Certification (although some might, if assessed). Rather, the Sector Criteria are used to determine the level of ambition and allow the screening out of less ambitious deals. Climate Bonds is an advocate for high levels of ambition, i.e., deals that deliver decarbonisation sooner and would help keep global warming to 1.5oC. So, over time the requirements are expected to tighten and converge.

Climate Bonds has also started using the [EU Sustainable Finance Taxonomy](#) as a point of reference. Climate Bonds has been working to upgrade its Taxonomy in such a way that it is consistent with the EU Taxonomy. As a guide, Climate Bonds aims to be at least as stringent as the EU Taxonomy, such that should a bond be eligible for our database it will also conform with the EU Taxonomy. In some cases where Climate Bonds has not yet developed its own guidance and/or Sector Criteria, reference is made to the EU Taxonomy. For Climate Bonds GBDB Methodology the Climate Bonds Taxonomy and Sector Criteria are the first port of call.

More information: section Climate Bonds Taxonomy and the EU Sustainable Finance Taxonomy; Annex A.

Eligible Use of Proceeds

Historically, the focus has been on direct financing of physical assets and projects and indirect financing thereof (e.g., loans to suitable assets / projects). **Annex D** provides the expanded eligibility list from the [Climate Bonds Standard version 3.0](#), which now includes physical assets and projects, financing thereof, and certain expenses.

More information: sections Climate Bonds Standard and Certification Scheme and Climate Bonds Initiative Green Bond Database screening process, Annex C and Annex D.

Climate change mitigation, adaptation, and resilience

Most green bond financing to date has been allocated to climate change mitigation. However, climate change adaptation and resilience (A&R) measures are also eligible.

Climate Bonds' [Climate Resilience Principles](#) provide a framework for issuers to demonstrate that for the assets and activities (re)financed via the bond they understand the related climate risks, have identified measures that address them and can deliver resilience benefits, and the financing is provided to implement them. As risks are idiosyncratic given geography, climate profile and operations, suitable measures would be context specific.

Over time, A&R have and will continue to be integrated in Climate Bonds' Sector Criteria. Specific assessment tools and/or indicators are expected to be developed to help determine that A&R measures do not involve unacceptable mitigation trade-offs, e.g., fossil fuel power generation lock-in. Until such guidance is developed, A&R-related bonds and measures will be considered on an ad hoc basis, engaging the issuer for dedicated A&R bonds, while the need for consultation will be determined based on materiality for other bonds. Climate Bonds may also draw on experts from its network.

Glossary:

Green bond framework: An issuance framework which defines eligibility categories for UoP and reporting.

UoP: Use of Proceeds, a.k.a. proceeds allocations

External reviews confirm compliance with the [Green Bond Principles \(GBP\)](#) or [Green Loan Principles \(GLP\)](#). Reviews include second party opinions, green bond ratings, assurance, etc.

Certified Climate Bonds (bonds, loans, debt programmes, deposits and other instruments) are Certified under the [Climate Bonds Standard](#). The green credentials profiles of the assets / projects are verified by an Approved Verifier against [Sector Criteria](#) to determine if the assets/projects being financed are within a trajectory to full decarbonisation by 2050.

2. Overview of the Climate Bonds Initiative Green Bond Database screening process

As noted, the overarching prerequisites include self-labelling of the debt instrument, defined as a conscious decision by the issuer to label the instrument in a public document, and public disclosure that is sufficient to determine if the financed assets / projects / activities are green and to allow inclusion of the debt instrument in the Climate Bonds GBDB.

Assuming these are met, the three-step screening process to classify a green bond as eligible covers the following:

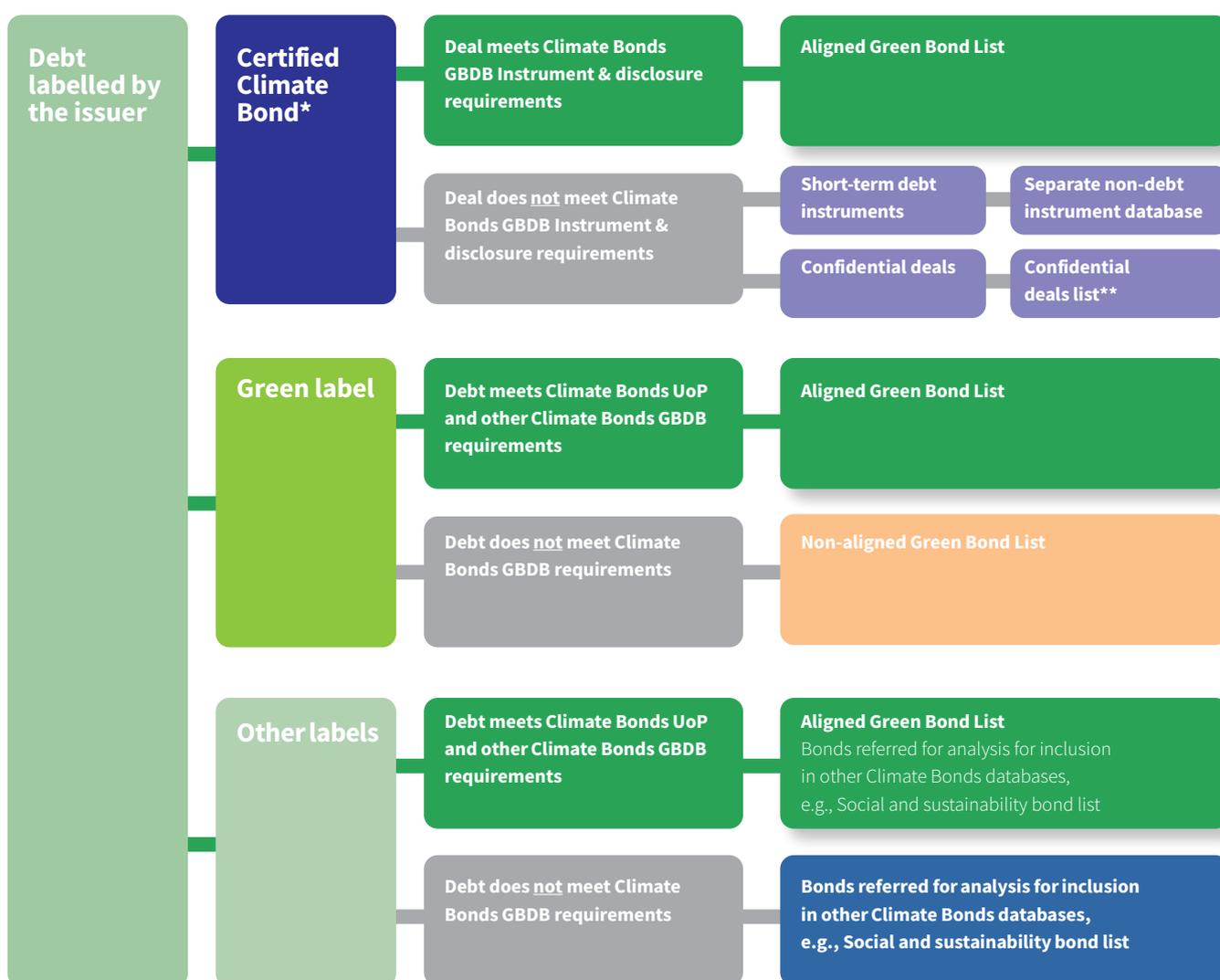
1. Identification of climate-themed, self-labelled debt.

2. Screening sectors and green credentials to determine if the proceeds will finance eligible expenses, assets, projects or activities are in line with the Green Definitions in **Annex B** (which is adapted from the Climate Bonds Taxonomy and Sector Criteria). More information is provided in the section on Certification and the details of screening below.

3. Evaluating the Use of Proceeds threshold. Only bonds which are expected to allocate 100% of net proceeds to aligned green assets, projects or activities are included in the Climate Bonds GBD.

Climate Bonds' decision tree is summarised below:

Climate Bonds Initiative Green Bond Database screening process



* Certified Climate Bonds/LoansBond/Loan are fully aligned with the Green Bond Principles/Green Loan Principles. They can be considered as a subset of the green bond/loan market.

** Confidential Certified Climate Bond list is not available to the public or data partners.

Certified Climate Bonds were previously identified as automatically included. However, Certification can also be applied to short-term debt and to private/confidential deals for which there is no public information.

By contrast, the GBDB captures labelled debt instruments, which have settled with a defined amount outstanding and for which there is at least a minimum level of public information (amount issued, issue date, type of instrument). Consequently, there may be Certified deals which do not meet the instrument and disclosure requirements for inclusion in the Climate Bonds GBDB.

3. Climate Bonds Initiative Green Bond Database and other labelled bonds

The screening methodology allows the classification of labelled debt. Climate Bonds curates and maintains the Climate Bonds GBDB, which contains the bonds that have passed the screening. It also curates and maintains further lists of labelled debt as detailed below.

Database	Sub-datasets & Definition	Availability
Green Bond Database	<p>Aligned list</p> <p>A list of labelled bonds and other debt instruments, which allocate all net proceeds to eligible sectors and comply with the criteria described in this methodology.</p> <p>Sustainability and SDG labelled bonds often have climate-related and social allocations. If the social assets / projects are also climate-related, i.e., 100% of UoP is also green, the deal is included in this GBDB.</p>	<p>Basic information is available to all Climate Bonds Partners through the Climate Bonds Partners Portal</p> <p>Comprehensive information is available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement</p>
	<p>Non-aligned List</p> <p>A list of labelled green bonds and similar debt instruments that fail to meet the criteria for inclusion in the Climate Bonds GBDB. Such bonds may meet local green bond rules: e.g., China's green bond catalogue (2015 version) used to allow the so-called clean coal projects, but Climate Bonds does not..</p>	<p>Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement</p>
	<p>Pending list</p> <p>A list of labelled bonds and similar instruments for which there is insufficient information to determine eligibility initially, and where they are kept temporarily. Upon further investigation, the bond may be categorised as aligned or non-aligned, i.e., excluded</p>	<p>Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement</p>
	<p>Repacks list</p> <p>A list of labelled debt instruments, primarily ABS but also bonds, which invest in green bonds that meet the screening criteria. Repacks are not included to avoid double counting.</p>	<p>Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement</p>

Note: The label is used primarily to identify bonds for screening, but the assessment of the green credentials is based on the assets, projects or activities financed.

Labelled loans

Historically, Climate Bonds has included labelled loans in the Climate Bonds GBDB, or in the various related lists. We are now considering separating loans into a stand-alone labelled loan database, structured in the same manner as the Climate Bonds GBDB., i.e., including a green loan list, pending loans and non-aligned loans. If this split occurs, Climate Bonds will provide a before-and-after reconciliation. All the above commentary and distinctions will apply in the same way to loans as they do to the bond universe. This includes the self-labelling and disclosure pre-requisites for inclusion in the Climate Bonds GBDB.

Labelled versus unlabelled climate-related debt

Unlabelled climate-related debt is not included in the Climate Bonds GBDB. While it is acknowledged that any debt which finances climate-friendly assets, projects and activities supports climate goals, the fact that the debt is not labelled is seen as an indication that the issuer is not committed to the green label. This could be because the issuer does not wish to provide disclosure, e.g., allocations reporting, and/or is not prepared to limit financing only to pre-defined eligible categories of assets, projects, and activities.

Climate Bonds also curates and maintains a database of climate-aligned issuers and outstanding unlabelled climate-aligned bonds. Upon screening the issuers' business in a similar manner to green bonds against the Climate Bonds Taxonomy, issuers are included if at least 75% of their revenues derive from aligned business lines, and they have outstanding debt.

The climate-aligned database is not covered by this methodology document and is only available under special arrangements with Premium Climate Bonds Partners.

4. Climate Bonds Taxonomy and the Green Bond Database Methodology

The [Climate Bonds Taxonomy](#) and [Sector Criteria](#) are used to define climate ambition towards the Paris goals and form the basis of the informed screening out of less ambitious deals in the context of the Climate Bonds GBDB Methodology.

The Criteria can change over time as science, technologies, regulations, policy, and climate thinking evolve. For instance, Climate Bonds has integrated adaptation and resilience considerations in more recently developed criteria (e.g., [Waste](#), [Hydropower](#)). Climate Bonds is also now developing taxonomy and methodology for hard-to abate sectors, such as Cement and Chemicals, and intends to revise older criteria (e.g., Buildings) to incorporate such aspects and/or update metrics and tighten requirements and/or add subsectors. The most recent list will be available at: <https://www.climatebonds.net/standard/sector-criteria>

Annex B provides the assessment guidelines for the Climate Bonds GBDB Methodology. While based on the Climate Bonds Taxonomy and informed to a degree by Sector Criteria, the guidelines have historically been adapted to:

1. allow assessment in the absence of metrics disclosure and/or third-party verification of metrics; and
2. encourage investment in nascent and harder-to-abate sectors.

However, the Climate Bonds GBDB screening criteria are now being tightened in more established sectors such as buildings and transport as the Green Bond market matures and the need to decarbonise becomes more pressing.

For some sectors where measurement is less of an issue (e.g., solar, wind) or metrics are typically met by certain types of assets (e.g., rail excluding fossil fuel freight), The Methodology follows The Taxonomy quite closely.

For sectors where metrics are not readily available and/or, if reported, metrics need further assessment against a benchmark or proxy and/or available information needs to be further analysed and mapped against criteria, The Methodology uses adapted approaches.

For Buildings, for instance, Sector Criteria seek to establish decarbonisation trajectories appropriate for different cities and regions. The sector has not been forthcoming with operational data to benchmark emissions performance and set appropriate trajectories, and the building standards that are being used by the industry do not have a sufficiently robust mitigation focus, i.e., do not provide good evidence of mitigation impact. A series of proxies for buildings, including a proxy of LEED Gold or Platinum plus 30% improvements on the level of ASHRAE 90.1, are thus used for Certification under the Climate Bonds Standard.

The buildings industry and property sector, however, are using the wider range of available building certification schemes as evidence of green impact. This methodology thus takes a pragmatic approach based on the information that is more readily available for property financing, i.e., building certification schemes and energy efficiency ratings.

The approach taken in this methodology seeks high levels of ambition from green bond issuers. In previous approaches the methodology accepted lower levels of building certification than the LEED Gold proxy used for Certification. That approach is now being tightened as compared to previous methodologies, with only higher rated, well-established international and local certification schemes and energy performance rating schemes now being eligible (see Annex E). In addition, The Methodology now specifies improvements of 30% or more as compared to significant improvements in the previous methodology.

However, unspecified efficiency improvements in the buildings with eligible certifications are considered acceptable on the basis that they extend the life of a desirable asset.

Criteria in advanced stages of development or in public consultation may be used for screening under the Climate Bonds GBDB Methodology even before adoption for Certification **subject to consultation** with the Climate Bonds Standards Team, which manages criteria consultation with technical and industry expert groups.

Over time, the requirements for inclusion will be further tightened.

Changes in assessment criteria will be notified, but the aim is to encourage high levels of ambition in the green bond market and promote a rapid transition to a low carbon economy.

Climate Bonds Taxonomy and the EU Taxonomy

In March 2020 the EU released a proposed [EU Taxonomy of Sustainable Activities](#). The EU Taxonomy may be used as a point of reference or proxy for sector-specific criteria for which there are currently no Climate Bonds Sector Criteria. This will be re-assessed as Climate Bonds develops and releases new Sector Criteria, or formally decides to adopt EU Taxonomy metrics.



5. Certification under the Climate Bonds Standard and the Green Bond Database

The Climate Bonds Standard and Certification Scheme is summarised in **Annex C**.

Debt instruments or other financing arrangements Certified under the [Climate Bonds Standard](#) are expected to satisfy the sector eligibility requirements for inclusion in the Climate Bonds GBDB (see introduction).

Confidential Certified Climate Bonds are not available to the public or data partners, as the Climate Bonds GBDB requires public disclosure of at least the label and basic information (e.g., amount issued, currency denomination and date issued).

Similarly, if issuers want to claim compliance with the Climate Bonds Standard, the GBP/GLP or the proposed EU Green Bond Standard, they must make at-issuance disclosure and post-issuance reporting publicly available. The proposed EU Green Bond Standard envisages publicly available reporting on the benchmark metrics set out in the EU Taxonomy. ICMA and the Global Reporting Initiative have published guidance and templates for impact reporting by sector. Under the CBI Certification Scheme, following post issuance reporting Issuers are required to report annually throughout the life of the instrument to confirm ongoing compliance with the Climate Bonds Standard.

Currently, Certified deals such as bilateral loans and private placements can be handled confidentially. This is changing: CBS v3.0 now requires public disclosure of the periodic post-issuance compliance statement, which confirms that the Certified Climate Bond continues to meet the Certification requirements.

Providing sufficient information on the greenness of assets, projects and activities – e.g., the issuer’s green bond framework and assessment metrics – allows market participants to assess for themselves if the deal merits inclusion for their purposes.



Comparison of the requirements for Certification vs Green Bond Database Inclusion

Requirement	Certification Scheme	Green Bond Database Inclusion
Governing document	Climate Bonds Standard v3	CBI Green Bond Database Methodology
Included in	Certified Bond Database, available on CBI website (except for confidential deals)	Green Bond Database, available to CBI Partners
Taxonomy alignment	CBI Taxonomy	CBI Taxonomy or EU Taxonomy where CBI has not yet developed relevant Sector Criteria
Sector criteria alignment	CBI Sector Criteria	CBI Screening criteria for inclusion in Green Bond Database
Criteria development methodology	New Sector Criteria are developed through expert TWG and IWG and a public consultation process. The Climate Bonds Standards Board oversees the Standard and Criteria development process	Criteria is developed internally by CBI by reference to CBI Sector criteria and/or EU taxonomy TSC
Bond selection process	Issuer submits an application under the Climate Bonds Standard v3, usually before the instrument is issued	CBI screens all self-labelled environmentally beneficial instruments after they are issued, based on publicly available information
Eligible instrument types	All debt instruments including short term instruments such as bank deposits	All debt instruments excluding short term instruments
Requirement for a green bond framework by the issuer	Mandatory	Not required
Requirement for external review/verification	Pre and post Issuance Verification by a CBI approved Verifier is mandatory under the Climate Bonds Standard v3	Not required but recommended. Certification/SPO details are available in the GBD
Annual Reporting by issuer	Mandatory for the term of the instrument	Not required
Impact reporting by issuer	Recommended, often combined with Annual Reporting	Recommended
Public disclosure	Recommended but not required for confidential deals	Required

6. Disclosure requirement for inclusion in the Climate Bonds Green Bond Database

Certain basic transparency requirements with respect to the **debt instruments** must be disclosed, namely:



1. Disclosure of the amount issued, issue date and maturity date of the instrument. Notably, no pricing, tranching, covenant or similarly sensitive information needs to be disclosed for private deals, but it is expected that all material information is disclosed in bond documentation for publicly listed instruments.



2. Type of debt instrument, e.g., bond, medium-term note, asset-backed securities, etc.

Impact reporting (e.g., GHG emissions metrics) is recommended but voluntary for Certification. Assessment of the indicators which determine compliance with Sector Criteria is required, but disclosure of these metrics is voluntary. Under the GBP and GLP as well as this methodology, impact reporting is also voluntary.

Eligible Use of Proceeds types

Climate Bonds GBDB Methodology references eligible UoP to the Climate Bonds Standard. As described in the Introduction, this pertains to the types of funding allowed. Historically, the focus has been on direct financing of physical assets and projects and indirect financing thereof (e.g., bank lending).

Annex D provides the eligibility list from the new [Climate Bonds Standard version 3.0](#) (CBS v.3.0). The green bond market has – so far – focused on climate change mitigation and primarily invested in physical assets and projects. However, in some sectors, mitigation can be achieved not so much through the asset (e.g., land) as through improved methods (e.g., sustainable agriculture practices) and effective monitoring. Also, adaptation and resilience measures do not always attach to investment in physical assets / projects. Finally, there is the need to implement and adopt technological innovation.

More information on how different types of allocations are assessed in the screening process is provided in subsection 3. Evaluating the Use of Proceed'. Broadly speaking, issuers will need to provide sufficient detail for Climate Bonds to be able to determine if any proposed expenditure financing under a green bond is in line with the approach of CBS v.3.0, although assessment for inclusion in the Climate Bonds GBDB will not necessarily seek to apply Sector Criteria but rather applies the screening indicators developed under the Green Bond Methodology (see Annex B), which are derived from those criteria.

7. Climate Bonds Initiative Green Bond Database screening process in detail

1. Identification of green bonds

The issuer of a green-themed bond must declare that the bond is intended to be environmentally beneficial through labelling the bond, ideally as green.

The Climate Bonds GBDB aims to capture all green bonds. Those bearing the climate label are a sub-set thereof.

The process of searching for and identifying eligible bonds and loans includes a wide search on various financial and other platforms for the most used labels, such as green bond. A full list of search criteria is not included in this document.

With regards to eligible labels, the most used label is green, but other labels are considered. Examples include, but are not limited to:

- Climate-awareness
- Solar, wind, renewable energy and similar
- Energy efficiency, PACE and similar
- GreenStar (BAM)
- Environmental
- Water bond and similar
- Blue, marine conservation and similar
- Energy transition / Sustainable transition
- ESG, SDG, sustainability, social and similar
- Climate action
- Transition

Glossary of abbreviations:

PACE: *Property assessed clean energy (US DOE scheme)*

BAM: *Build America Mutual*

ESG: *Environmental, Social and Governance*

SDG: *Sustainable Development Goals (UN scheme)*

The label should appear in a public document such as:

- press release,
- bond prospectus or other bond issuance document, whereby the label needs to be clearly visible on the bond description to make identification possible and confirm that it is labelled
- green/sustainability/SDG bond/Sukuk framework,
- external review of an issuer framework or other due diligence to confirm the green credentials,
- green bond assessment, green evaluation or other (e.g., green bond rating)

Unlabelled bonds will not be included in the Climate Bonds GBDB, even if they finance assets which are aligned to the Climate Bonds Taxonomy. In addition to asset alignment, we are looking for transparency, and labelling is key to green bond visibility. Furthermore, commitment to manage proceeds and to post-issuance reporting under [GBP](#) / [GLP](#) is integral to market credibility.



Our best -practice recommendations include:

- external review at issuance
- clearly set out commitment to post-issuance reporting on allocations and impacts.

Post-issuance use-of-proceeds reporting is a requirement under the GBP and the Climate Bonds Standard, and such disclosure is used for ongoing monitoring of bonds as follows:

- confirm basis for continued inclusion
- exclude if actual allocations are not to assets or projects aligned with the Climate Bonds Database screening criteria.
- consider inclusion for previously excluded bonds if the assets/projects are aligned with the Climate Bonds GBDB screening criteria.
- impact reporting is required under the proposed EU Green Bond Standard, increasingly demanded by investors, and highly encouraged by Climate Bonds. In the case of impact reporting, guidance on what constitutes impact reporting best practice is included in Climate Bonds' latest [Post-Issuance Reports](#): and the ICMA-led [Harmonized Framework for Impact Reporting](#).

2. Screening sectors and green credentials

Each bond or other debt instrument is reviewed based on the green credentials of the UoP. This may be earmarked proceeds for asset-linked, senior unsecured or secured bonds, projects funded by a project bond, or assets backing an ABS or other secured debt. The key is that the asset/project to be (re)financed is green.



At issuance, the issuer must declare the eligible asset and project categories. Most issuers specifically link their deal and framework to the GBP or GLP and obtain an external review to confirm compliance or choose to certify their instruments under the Climate Bonds Standard. This is now the prevalent practice and is helping to improve market integrity.

External reviews

We consider all types of external assessments (see summary table below). An external review is recommended but not required as long as equivalent information is clearly disclosed by the issuer in a bond framework, prospectus or other document. Equivalent information covers the four principles of GBP/GLP, namely:

1. Pre-determined eligibility criteria
2. Information on the selection process
3. Management of proceeds to ensure allocation
4. Post-issuance reporting (at least on allocations)

Obtaining an external review does not lead to automatic inclusion in the Climate Bonds GBDB, as compliance with GBP/GLP does not mean that the categories meet all the inclusion criteria. Rather, the review as well as other information disclosed by the issuer is independently assessed for alignment with the Climate Bonds Taxonomy.

We will consider bonds for which there is no external review, if adequate disclosure on the assets financed is provided by the issuer. For instance, US Munis, Solar ABS, PACE ABS and domestic market Chinese issuers typically provide this information in the bond prospectus.

Overview of external review types and providers

Pre-issuance review	Scope	Providers (examples)
Assurance	Positive or negative assurance on compliance with the Green Bond Principles (GBP) / Green Loan Principles (GLP)	EY, Deloitte, KPMG
Second Party Opinion (SPO)	Confirm compliance with GBP / GLP. Provide assessment of issuer's green bond framework. Some analyse the green credentials of eligible assets.	CICERO, DNV-GL, Sustainalytics, Vigeo Eiris, ISS-Oekom
Green bond rating	Assess the bond's alignment with GBP and integrity of its green credentials. (NB: Credit ratings, increasingly incorporating ESG factors, are assessed separately.)	S&P, RAM (Malaysia), R&I and JCRA (Japan)
Pre-issuance verification of the Climate Bonds Certification	Third party verification confirms that the process followed by the issuer and UoP adhere to the Climate Bonds Standard and sector specific criteria.	Approved Verifiers under the Climate Bonds Standard
Post-issuance review		
Assurance, audit or post-issuance SPO	Assurance of actual allocation of proceeds to eligible green projects.	Audit firms, ESG service providers
Post-issuance verification of the Climate Bonds Certification	Third party verification confirms the allocation of proceeds is to eligible green projects and the types of green projects conforms to requirements of the Climate Bonds Standard.	Approved Verifiers under the Climate Bonds Standard
Impact report	Assessment that seeks to quantify the environmental impact of financed projects/assets (<i>often not considered an external review per se as the assessment is done by the provider itself, and does not cover UoP information</i>).	ESG service providers, scientific experts, other specialised consultants

Disclosure

The assessment is typically based on publicly available information. Occasionally, Climate Bonds may obtain private information to determine alignment.

For post-issuance reporting, Climate Bonds relies solely on publicly available information. Information made available on the Climate Bonds website about [Certified instruments](#) is considered publicly available even if the issuer has not made it publicly available on their website.

Assessment

As noted, the methodology for inclusion in the Climate Bonds GBDB is aligned to the GBP/GLP, the [Climate Bonds Taxonomy](#) and the spirit of the scientific [Sector Criteria](#) but with less stringency. (See summary in [Annex B](#).)

A&R allocations are assessed on a case-by-case basis as noted in the introduction.

3. Evaluating the Use of Proceeds

Climate Bonds' focus is on climate change mitigation and adaptation/resilience. Only bonds which are expected to allocate all net proceeds to aligned green assets, projects and activities are included in the Climate Bonds GBDB.



Exclusions

The bond will not be eligible for inclusion if proceeds are (expected to be) used for social projects, general corporate purposes, working capital/operating and training expenses that are not part of an acceptable programme/project delivery, early-stage R&D without sufficient disclosure (as outlined below), and other expenses or assets that are not aligned.

The most significant exclusions are fossil fuel power and any process, product, asset or improvement, which locks in the use or extends the life of fossil fuels.

As new low-carbon technologies make alternatives mainstream (e.g., zero- and low-emission vehicles versus ICE vehicles), the list of assets that are not supportive of rapid decarbonisation will likely grow.

We also exclude assets / projects that do not meet the thresholds set out in Annex B, e.g., building upgrades that achieve some but not sufficient improvements in energy performance, or bioenergy production not meeting CO2 emission requirements.

Notably, broad categories – such as energy efficiency without reference to a specific sector / asset / project – may lead to exclusion if the detail is insufficient to determine alignment under this methodology, even if it can be broadly determined that the investment may have a positive climate impact.

Disclosure

Disclosure remains a key factor in establishing whether a bond is deemed to be eligible for the GB database.

Moreover, issuers and investors should be aware that several factors are leading to the need for increasing levels of disclosure.

These include:

- The tightening of The Taxonomy standards in line with more stringent requirements needed to align with the Paris Agreement. Taxonomies now apply a number of technical thresholds in areas from hydropower to shipping.
- The need to apply The Taxonomy to more complex sectors, such as industrial sectors (cement, chemicals).
- Geographical differences: for example, activities such as waste pyrolysis are deemed more acceptable in geographies with less effective waste collection and recycling infrastructure.

In order for Climate Bonds and investors to create an informed opinion as to the nature of investments, the granularity of disclosure (e.g., within a framework) should map back to the relevant sections of The Green Bond Methodology. Importantly, lack of sufficient information on a bond's green credentials to determine this also results in exclusion. Sufficient information covers:

- specificity of category definitions, e.g., energy efficiency financing should be linked to a sector such as buildings, transport, grids, etc.;
- technical detail, such as CO2 emission metrics, as required under more recent taxonomies;
- a detailed description of processes where this is required in order to assess the climate impact of a project/investment (e.g., industrial sectors such as cement);
- clarification on specific green objectives or benefits of social programmes, e.g., energy efficiency upgrades to social housing, and
- confirmation that no financing is allocated to improving fossil fuel power generation or related technologies.

Whilst disclosure has improved in many areas, certain sectors still lag. The banking sector, in particular, would benefit from improved disclosure, with many frameworks being framed too broadly or lacking enough detail to allow an informed opinion.

Excluded Bonds

A bond is added to the excluded bonds list if:

- proceeds are used or expected to be used for social projects, assets or working capital that do not align to the Climate Bonds Taxonomy; and/or
- there is insufficient information to determine alignment or lack thereof.

Excluded bonds are announced in the regular market updates, together with the reason for exclusion.

Post-issuance reporting on the actual allocation of proceeds can also lead to exclusion from the Climate Bonds' GBDB if the funding proves to be allocated to assets that are not aligned. Climate Bonds has undertaken three studies into post-issuance reporting (in [2017](#), [2019](#) and [2021](#)) and continues to monitor the market, with a further study to come in 2023.

Notably, excluded sustainability, SDG, ESG and similar bonds may, nonetheless, be funding primarily green assets and projects. Consequently, these may well be aligned to investment policies and thresholds for some investors, indices, and investment products. Bonds with other labels that do not meet the Climate Bonds GBDB inclusion criteria are recorded in a separate database.

Tracking the wider labelled market: social vs. green

An asset or project can have both social and green credentials but will be eligible for the Climate Bonds GBDB only if 100% of UoP are aligned with The Green Bond Methodology. For example, TLFF I (Indonesia) issued a sustainability bond to fund a sustainable rubber plantation and smallholder plots on degraded land. Employment, food security and equality are social goals, but the rehabilitation of degraded land to productive, sustainable use is in line with the Climate Bonds Taxonomy, so the bond is included in the Climate Bonds GBDB.

Issuers are advised to state if their projects meet both social and green criteria. An issuer financing social housing may also require that properties are energy efficient to a specific (ideally high) standard. However, without the green clarification, the bond will not be included in the Climate Bonds GBDB.

Financing capital assets versus eligible expenses

The transition to a low-carbon economy needs to be swift to keep global warming under 2oC. Consequently, the focus of Climate Bonds' advocacy is on mobilising bond markets at scale to fund sustainable and climate-resilient infrastructure, low-carbon buildings, sustainable use of natural resources and improving industrial processes to reduce emissions. Scale is achieved with the financing/refinancing of capital assets that can generate immediate or near-term impact and would continue generating a positive climate benefit over the medium- to long-term.

In this context, capital expenditure to improve assets and make them more energy efficient and/or more climate resilient is an acceptable UoP. In fact, it forms the basis of the Buildings (Upgrade) Sector Criteria used for Certification. As with any allocation, though, the level of ambition needs to be sufficient, which translates to meeting benchmark metrics where these are specified. For property Capex, for example, the threshold is 30% improvement in energy efficiency. On a case-by-case basis, the threshold may be re-assessed – e.g., if the work is being done on new and refurbished buildings that are already energy efficient and/or there is a combination of targets such as improving energy efficiency and reducing water consumption (as is the case with, say, Fannie Mae's Green Rewards programme).

Funding general operating expenses typically covers an immediate cost that is not necessarily linked to green assets, projects or activities. However, the funding of enabling expenses to deploy climate-friendly assets or projects will be considered as eligible. For instance, training farmers on sustainable agriculture practices is crucial to achieving a long-term benefit from investment in adaptation and resilience projects, assets and equipment.

Another example is financing the measurement and tracking of climate impacts, pollution control, natural resource conservation measures, and the effect of adaptation and resilience measures in the context of ensuring long-lasting climate benefits. We categorise such funding as adaptation and expect to see such allocations in the context of wider investment programmes. For instance, the Seychelles blue bond funds sustainable fisheries and marine reserve conservation as well as enabling measures such as scientific monitoring. The French Government is using part of the proceeds of its green sovereign bond for satellite observation of weather patterns and climate change, and partly to maintain wetlands and natural green spaces under biodiversity conservation programmes.

This approach acknowledges that developing effective measures and monitoring of implementation is vital to achieving the overall goal of limiting global warming and decarbonising the economy, including the preservation and growth of carbon sinks (e.g., forests).

Eligible R&D expenses

Climate Bonds recognises the importance of scientific study and R&D, especially emerging technologies, to meet the challenge of enabling a net zero transition.

Hence, Climate Bonds is supportive of and encourage R&D. Nevertheless, we accept that the assessment of R&D impact can be difficult, since the nature of R&D is speculative, and its results are uncertain.

The details of later stage R&D, together with its potential impact, are easier to assess. Such R&D investment is more likely to provide an immediate to near-term positive climate benefit and hence be considered to be an eligible green UoP. An example would be pilot projects for new technology or climate-resilience projects / products that – if successful – can continue to deliver benefits long-term. Spatial observation to identify, verify and/or implement mitigation and adaptation measures could also qualify.

Late-stage R&D is thus better defined. The existence of specific (existing or prototype) products, assets or processes for which there is a defined approach for improvement allows the quantification of climate benefits and the attainment of sector-relevant thresholds in the near- to medium-term.

For earlier stage R&D to be eligible more detail would be required. For example, the R&D should be accompanied by a clear plan or strategy. The aims of the R&D should have clear climate-related goals, such as the reduction in emissions or the reduction in the use of raw materials. Targeted processes and products should be clearly specified. Moreover, the determination of projects, allocation of proceeds, monitoring and reporting should fall within the framework of Green Bond Principles, meaning that R&D expenditure should be continually assessed with climate-related goals in mind.

An example of eligible earlier stage R&D is that of bonds issued by NXP, the global semiconductor company. NXP clearly set out a strategy for its R&D in its [Green Bond Framework](#) with an overall climate-related goal of improving energy efficiency. Detailed descriptions of the opportunities were outlined with reference to given products and processes. These details were embedded in a broader process which explained how NXP planned to manage, monitor and report on the proceeds raised.

Overall, acceptable R&D counts towards eligible UoP. Note that if the type of R&D is not specified, Climate Bonds will tend to err on the side of caution. This may result in exclusion if the poorly specified R&D (e.g., not sufficient information on what R&D relates to or its objectives, stage of R&D project, etc.) represents.

At the sovereign level, it is acknowledged that national governments provide enabling funding for various early-stage research programmes. Such programmes may have limited immediate practical application or may only lead to climate benefits in the medium to long-term future. Such investment is eligible.

Pure play investments

We have defined pure play companies as those which derive over 90% of their revenues from climate-aligned activities, as defined by the screening indicators set out in Annex B. In addition, pure play companies must not participate in any ineligible activities, for example the production of fossil fuels, etc. Lending by banks to pure play companies within their green loan portfolios (linked to green bond issuance) is deemed to be eligible under the Green Bond Methodology.

Climate Bonds also allows debt financing of M&A where the acquired company is a pure play company. Additionally, equity investments in pure play companies or assets within bank portfolios are allowed if the investor retains a controlling stake.

Adaptation and resilience measures

Climate Bonds set up an [Adaptation & Resilience Expert Group](#) to develop high-level guidance for determining when projects and assets are compatible with a climate-resilient economy. Climate resilience covers assessment of risks, which tend to be idiosyncratic depending on geographic location and local climate, as well as developing measures to address and adapt to acute events (e.g., storms) and long-term changes (e.g., temperature and sea level rises).

As a first step, Climate Bonds has published the **Climate Resilience Principles** (see <https://www.climatebonds.net/climate-resilience-principles>). These provide a framework for issuers to demonstrate that, for the assets and activities (re)financed via the bond, they:

- understand the climate risks faced by the asset, activity or system in question;
- have addressed those risks by undertaking risk-reduction measures and adopting flexible management plans that take account of inherent uncertainties around climate change, and ensuring that the asset, activity or system is robust, flexible and fit-for-purpose in the face of that uncertainty;

- can deliver resilience benefits over and above addressing identified risks (for system-focused investments); and
- are undertaking regular (re)evaluation of the asset and/or system's climate resilience performance, adjusting to risk reduction measures over time as needed.

These types of measures and programmes could involve both physical assets (e.g., coastal flood defences such as bollards (Louisiana) or dykes (Netherlands)), nature conservancy (e.g. land banks) and reforestation (e.g. Indonesia's TLFF I), as well as asset / project management that improves resilience and ongoing assessment of impact. So far, investments have been primarily in physical assets and projects, often in combination with mitigation measures in water management and sustainable land use.

Financing of A&R will be included in the Climate Bonds GBDB if the issuer can demonstrate that the A&R UoP does not finance assets or activities that undermine emissions reductions goals. For example, adaptation and resilience projects that lock in fossil fuel technology will not be eligible and may lead to the bond not being included.

Other Enabling Activities

Climate Bonds is keen to promote activities which enable the journey to net zero emissions. As a result, activities such as the manufacture of enabling products and related components are considered eligible. For example, this would include the manufacture and supply chains of products such as electric vehicles, eligible energy components and technology in general. In addition, activities such as advisory or consultancy and re-training of workers, either in the context of a company or within a broader economy context e.g., as allowed in the EU green bond framework are deemed eligible.

8. Pending deals and resolution process

In some cases, the information available on the deal's UoP is insufficient for an immediate decision as to whether the bond should be included or excluded. This is often the case for private deals, but may also occur if, say, documentation is not available in English or is only made available to bondholders or lenders.

Such bonds are marked as Pending and further work is undertaken to obtain or clarify information. This investigation process is carried out by contacting the issuer, underwriter, credit rating agency or external review provider (if applicable) within 30 days after the bond is identified. Also, Climate Bonds keeps monitoring further information disclosed to the market. If no further information is made available or the obtained information does not confirm sector alignment within 30 days after the bond is identified, and/or other database requirements are still not met, the bond is added to the excluded list or forwarded for consideration for inclusion in other bond databases within Climate Bonds, such as the Social and Sustainability database, as appropriate.

9. Re-classification of a bond

If a green bond is included but the issuer cannot fulfil the criteria later or the proceeds are eventually applied to non-green assets, it may be removed from the Climate Bonds GBDB. Conversely, excluded bonds may be re-classified if satisfactory information is provided or obtained later which confirms sector alignment.

Change in screening methodology

A change of status from excluded to included may also occur if we change the methodology to expand the list of acceptable approaches to labelling. For instance, in 2018 we started treating green bond ratings as equivalent to labelling and retroactively included bonds that had been excluded for lack of labelling. Likewise, in 2018 we formally started accepting ABS deals identified as solar, PACE or similar as acceptably labelled.

Updates of this nature are most likely to occur in connection with our annual and semi-annual Green Bond Market Highlights report.

Change in the definition of alignment

Excluded deals may be included retroactively to reflect the evolution of scientific thinking and internal guidance on asset categories. For instance, historical guidance was to exclude large-scale hydro. However, the updated Climate Bonds Taxonomy focuses on the power density and GHG footprint of reservoirs. Consequently, some previously excluded deals may be included.

Changes of this type are likely to occur after an update to the Taxonomy and/or the publication of new sector-specific Certification Criteria.

On the other hand, included deals will not be retrospectively excluded as Climate Bonds tightens the screening criteria levels used in this methodology.

Annex A: The Climate Bonds Taxonomy

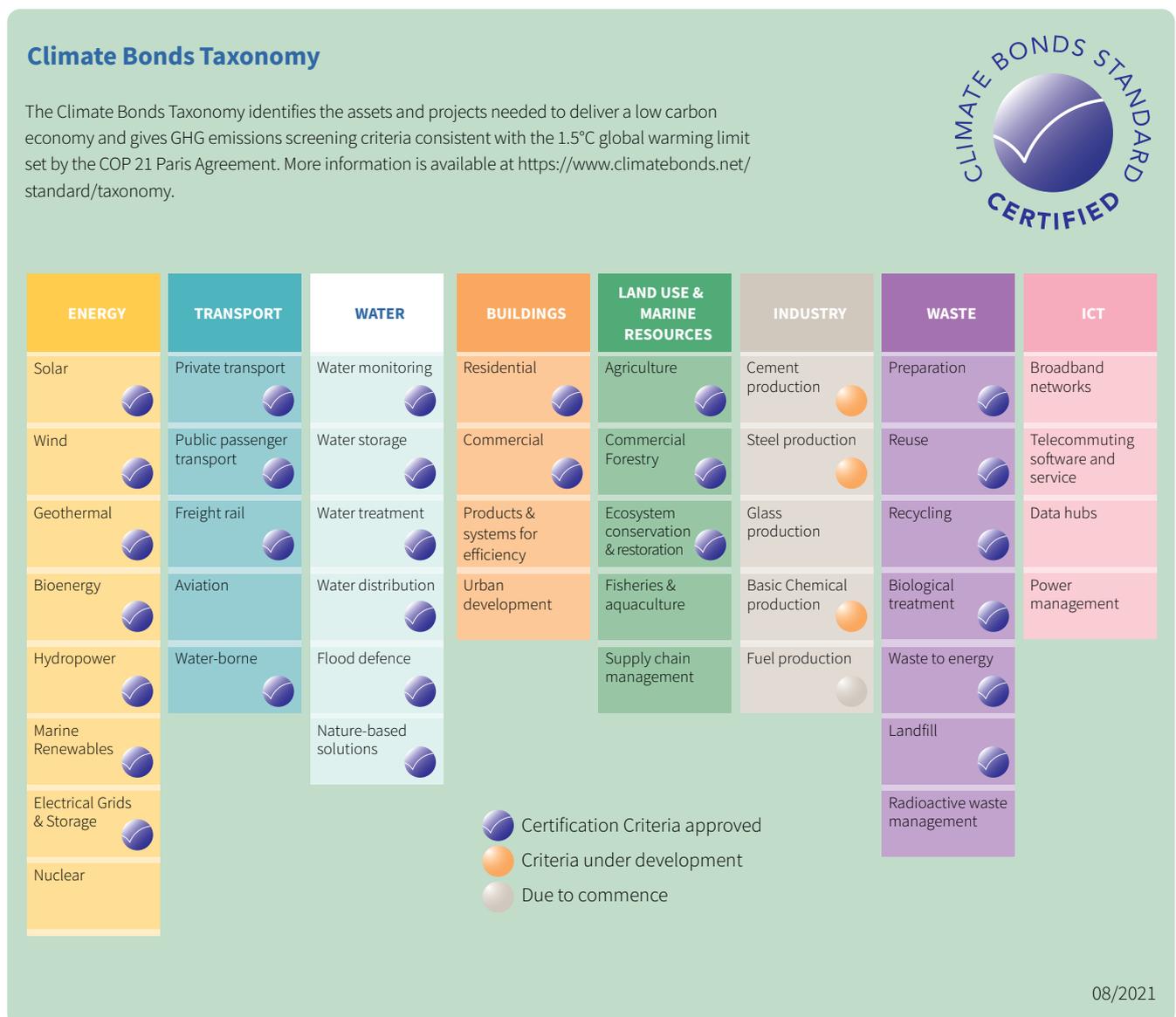
The Climate Bonds Taxonomy provides guidance for prospective green bond issuers and investors. The current diagram summarising eligible sectors in The Taxonomy is reproduced below. The underlying taxonomy document provides two levels of information:

1. broad guidance on eligible sectors and subsectors, and
2. metrics and other indicators to identify assets and projects which are on a trajectory to zero carbon by 2050, i.e., aligned to the Paris Agreement target of limiting global warming to 2°C or better.

Guided by the Climate Science Advisory Panel and overseen by the Climate Science Standards Board, the aim of The Taxonomy is to encourage common definitions across global markets, in a way that supports the growth of a cohesive green bond market.

The chart below summarises the sectors and subsector Climate Bonds considers green. Notably, what is recognised as eligible under each sector and sub-sector evolves over time as science, technologies and the economics of implementation progress. For the most up-to date version, please check the Climate Bonds website: <https://www.climatebonds.net/standard/taxonomy>.

The diagram also shows for which sectors there are Sector-Specific Certification Criteria, and which are under development. Sector Criteria are developed together with scientific and other technical and industry experts for the purpose of Certification under the Climate Bonds Standard, a labelling scheme for instruments that are 2°C-compliant or better.



For criteria under development see <https://www.climatebonds.net/standard/available-soon>

For criteria in public consultation see <https://www.climatebonds.net/standard/public-consultation/new>

Annex B: Green definitions for the Climate Bonds Initiative Green Bond Database

Energy



Solar and Wind	<ul style="list-style-type: none"> Offshore solar and wind power generation Onshore photovoltaic and concentrated solar heat & power generation. Onshore solar heat/cool cogeneration and solar thermal for heat/cool production provided there is not substantial backup generation from fossil fuel sources Onshore wind power generation. Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Nuclear	<ul style="list-style-type: none"> Power plants and dedicated supporting infrastructure (excluding uranium mining) but safety, waste management and social and environmental impacts should be disclosed and will be considered.
Geothermal Energy	<ul style="list-style-type: none"> Geothermal electricity with direct emissions less than 100g CO₂/kWh (further considerations apply for some countries – see assets needing further review below) Dedicated infrastructure, manufacturing (supply chain), storage and transmission related to geothermal energy
Heat Pumps	<ul style="list-style-type: none"> Electric and heat/cool technologies using heat pump technology (heat gradients). Refrigerant GWP must not exceed 675.
Bioenergy	<ul style="list-style-type: none"> Facilities producing biofuel, biomass, biogas from wood industry by-products, waste or sustainable feed stocks (preferably certified under schemes such as RSB, RTRS, FSC and ISCC Plus or national schemes such as EU RED, UK Renewable Obligation). Applies only to fuels to be used for electricity generation, heating and cogeneration, and transport. Facilities producing fuels for heating and cogeneration must have emissions either < 80% of fossil fuel equivalents or < 58g CO₂e/kWh Facilities producing fuels for transport must have emissions either < 80% fossil fuel equivalents or <68g CO₂e/kWh Power generation facilities, provided biofuel is sourced from sustainable feedstock (see above), for example, biomass power station, heating/cooling facilities, combined heat and power (CHP) and electricity generation facilities (including those with CCS). Emissions must either be < 80% fossil fuel equivalents or be < 58gCO₂e/kWh and achieve 80% efficiency Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Hydro	<ul style="list-style-type: none"> Power generation facilities including run-of-river, those with reservoirs and impoundment or built before 2020 with power density >5W/sqm or which achieve emissions of less than 100gCO₂/kWh. Facilities built in operation from 2020 onwards must achieve power density of >10W/sqm or emissions of less than 50gCO₂/kWh. Pumped storage facilities (attached to or separate from a reservoir) operational before 2020 with power density >5w/sqm or emissions <100g CO₂/kWh. Facilities operational after 2020 with power density >10W/sqm or emissions <50gCO₂/kWh. All facilities must have performed an environmental and social impact assessment. Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Hydrogen	<ul style="list-style-type: none"> Hydrogen generation where life cycle GHG emissions are less than 100gCO₂/kWh. Facilities that mix gas with hydrogen are eligible if lifecycle emissions are less than 100g CO₂ Hydrogen production using energy sources with emissions levels of 50gCO₂/kWh or less or where emissions are less than 3T CO₂/T H₂. This would include Green Hydrogen produced using renewable energy and Blue Hydrogen where lifecycle emissions are less than 3T CO₂/T H₂ Hydrogen Storage facilities and operation thereof whereby the hydrogen utilised complies with eligible production criteria Buildings, conversion and upgrade of infrastructure, such a pipes and valves, to enable the use of hydrogen within generation, heating and transportation systems.
Marine renewables	<ul style="list-style-type: none"> Tidal, wave and other energy generation using ocean thermals, salinity, gradients, etc. Fossil Fuels back up only allowable for restart, monitoring, operating or resilience if there is no power in the system. Dedicated infrastructure, manufacturing (supply chain), storage and transmission Marine heating and cooling facilities using ocean thermals

Energy continued



Transmission, distribution and storage	<ul style="list-style-type: none"> • Transmission infrastructure needed to integrate renewable energy or energy efficiency systems and their load-balancing (e.g., overhead transmission lines, conductors, insulators, towers) and infrastructure (e.g., buildings, fences, earth mats, busbars) • District heating network fed primarily by renewable energy • Products such as smart systems/meters, smart grid, off-grid power units, home storage batteries, supercapacitors, hydro and thermal heat storage, voltage regulation equipment, reactors, fuses, transformers and switchgear • Monitoring, control and information infrastructure which enables the integration of renewable energy or increases the efficiency within the energy system • Large scale energy storage facilities, batteries, capacitors, compressed air and flywheel plants, supercapacitors* • Interconnectors between transmission systems whereby one of the systems fulfil either criteria c or d below • Manufacturing facilities dedicated to the manufacture of eligible transmission, distribution and storage equipment • * Assets must fulfil one of the following criteria: <ol style="list-style-type: none"> a. Is a dedicated connection to a power production plant eligible under one of the Climate Bonds sector criteria (e.g., Solar) b. Is a dedicated connection to a power production plant operating under the low carbon power threshold (100g CO₂/kWh) c. The infrastructure is located on a system with a grid factor at or below 100g CO₂/kWh d. The infrastructure is located on a system for which at least 67% of its added generation capacity in the last 5 years falls below the low carbon power threshold
Assets need further review	
Geothermal Energy	<ul style="list-style-type: none"> • Geothermal electricity in Turkey, New Zealand, US and Canada, where gas emission levels from extraction typically require further assessment
Bioenergy	<ul style="list-style-type: none"> • Biofuel Blending facilities • Supply chain facilities related to blending facilities
Existing Pipelines and retired production facilities	<ul style="list-style-type: none"> • Leak detections and repair to avoid methane leakage where bonds have a maturity of 5 years or less
Nuclear	<ul style="list-style-type: none"> • Uranium mining and supporting infrastructure.
Ineligible assets	
Fossil fuels	<ul style="list-style-type: none"> • Coal/oil generation with or without carbon capture and storage (CCS) • Coal/oil/gas powered combined heat and power (CHP) • Coal/oil/gas mining/extraction, refining, processing, and associated supply chain infrastructure
Energy efficiency	<ul style="list-style-type: none"> • Efficiency upgrades to GHG-intensive power sources, e.g., so-called clean coal • Energy savings in fossil fuel extraction activities and anything that helps to extend the life of fossil fuel usage
Transmission	<ul style="list-style-type: none"> • District heating fed primarily by non-renewable energy sources
Bioenergy	<ul style="list-style-type: none"> • Power generation facilities using timber (except for waste wood) and other non-sustainably sourced fuels. • Traditional biomass use, such as a three-stone fire for heating and cooking in the residential sector
Onshore solar & wind	<ul style="list-style-type: none"> • Onshore thermal solar generation facilities if more than 15% of the power generation is backed up by fossil fuel sources

Buildings



Buildings and built environment	<ul style="list-style-type: none"> • Buildings which are EDGE Certified, Passivhaus or Living Building Challenge Certified, Nearly Zero Energy Buildings. • Buildings meeting well-established, widely used building industry certification schemes such as LEED, Miljöbyggnad, BREEAM, DGNB, China Green Building Label, CASBEE, NABERS), with eligible certification levels as detailed in Annex E • Upgrades and retrofits of commercial, residential and special-purpose public properties (e.g., hospitals, schools) aiming for a minimum of 30% energy performance improvement and/or improving emissions performance or which achieve an improvement resulting in the building meeting the eligible certification requirements as detailed in Annex E • Specific property upgrades being LED lighting, insulation retrofitting, highly efficient window glazing, HVAC upgrades with high efficiency standards, thermostats, motion detectors, smart meters, energy management systems and heat and energy storage systems. Such upgrades are allowed if the underlying properties already meet required certification levels detailed herein or will meet such certifications as a result of the upgrades. • Properties with EPC ratings of A and above in the EU (where A is the highest and G the lowest rating) and an equivalent level in other locations • Assets and urban policies/regulations directed at climate change mitigation such as street-lighting upgrades, passive heating/cooling, car-free areas which substantially improve emissions performance as measured in CO2/sqm
Data Centres	<ul style="list-style-type: none"> • See ICT
Other Building Types	<ul style="list-style-type: none"> • Stations, buildings for transport which support eligible transport activities • Manufacturing facilities dedicated to low carbon activities (e.g., manufacture of EV's, batteries)
Technology, products, systems and manufacturing for building efficiency	<ul style="list-style-type: none"> • Products meeting industry certification schemes such as ENERGY STAR • Manufacture of energy efficient components (e.g., LED lighting) • Systems which increase overall energy efficiency (e.g., district heating) as long as the energy source is primarily from renewable sources.) • Low-carbon and alternative building materials (e.g., alternatives to cement or concrete) • Building, maintaining, or upgrading utility tunnels for cables and pipes which improve resource and energy efficiency
Assets need further review	
Buildings and built environment	<ul style="list-style-type: none"> • Commercial, residential and special-purpose public properties (e.g., hospitals, schools) upgrades/retrofits aiming for less than 30% energy performance improvements, provided there are other targets (e.g., water consumption reduction) and/or properties, previously subject to significant energy and water performance improvements • Buildings meeting less well-known or local/regional certification schemes • Buildings funded by long dated debt which are not demonstrably on a path to Paris aligned targets
Ineligible assets	
Buildings and built environment	<ul style="list-style-type: none"> • Buildings not meeting the required certification standards (e.g., LEED Bronze or Silver) • Properties with EPC ratings of B and below in the EU (where A is the highest and G the lowest) and an equivalent level in other locations • Airport Terminal Buildings

Transport



Private, public and freight land transport	<ul style="list-style-type: none"> • Electric vehicles (EVs), hybrids and hydrogen fuel cell vehicles. Low carbon vehicles should adhere to a maximum of 50gCO₂/p-km to the end of 2025 and zero thereafter • Bicycle and public walking infrastructure and schemes • Passenger trains; urban rail systems such as metro, light rail, cable cars, trams with zero CO₂ emissions • Freight railways and rolling stock with zero emissions, provided <25% fossil fuel freight transport • Public transport buses and coaches, bus rapid transit (BRT). Vehicles must meet threshold of less than 50gCO₂/p-km to the end of 2025 and zero emissions thereafter. • Miscellaneous vehicles such a waste collection and construction vehicles with zero emissions • Dedicated manufacturing and infrastructure, energy efficient products (e.g., batteries, charging stations)
Passenger and cargo water transport	<ul style="list-style-type: none"> • Zero emission vessels less than 5,000GT (DWT) powered by electricity or otherwise low carbon fuels (sustainable biofuel, ammonia, hydrogen) • Vessels greater than 5000GT (DWT) which comply with Paris aligned thresholds as detailed in Annex F • Supporting infrastructure
Passenger and cargo aircraft and aviation	<ul style="list-style-type: none"> • Electric powered or otherwise low carbon (sustainable biofuel, hydrogen, solar, etc.) • Supporting infrastructure and manufacturing
Assets need further review	
Freight Trains	<ul style="list-style-type: none"> • Bimodal trains which rely on supporting infrastructure for zero emission operation
Transport logistics	<ul style="list-style-type: none"> • Sorting centres, smart freight logistics, intermodal rail freight facilities, port infrastructure directly related to the supply of zero emission fuel and associated facilities such as power from shore, multi-modal logistics hubs.
Ineligible assets	
Private, public and freight land transport	<ul style="list-style-type: none"> • ICE and CNG passenger vehicles and supply chain (components) • Hybrid and Biofuel trucks and supply chains • Biofuel vehicles, buses and trains and manufacturing supply chain • Rail lines/operators where fossil fuels account for more than 25% of freight • New roads, bridges and upgrades, parking facilities, fossil fuel filling stations and other assets which prolong the life and/or increase the ease-of-use of ICE transport
Passenger and cargo water transport	<ul style="list-style-type: none"> • Oil tankers, LNG carriers and other vessels transporting solely fossil fuels • Dry bulk carriers where coal (or other fossil fuels) takes up greater than 25% of cargo • Support vessels such as jack up rigs, and supply vessels dedicated to the oil and gas industry • Assets dedicated to the manufacture of non-zero emission ships • Port infrastructure not directly related to supply of zero emissions fuel
Passenger and cargo aircraft and aviation	<ul style="list-style-type: none"> • Aircraft using fossil fuel and investments related to supporting infrastructure

Water



Water monitoring	<ul style="list-style-type: none"> • Smart networks, early warning systems for storms, droughts, floods or dam failure, water quality or quantity monitoring processes
Water storage and management	<ul style="list-style-type: none"> • Rainwater harvesting systems, aquatic ecosystems (lakes, wetlands), aquifer storage, groundwater recharge systems, infiltration ponds, pumps and sand dams. Construction and operation of water distribution, collection, treatment and supply systems. • Gravity-fed canal systems, storm water management systems, hydrological restoration, water distribution systems, terracing systems, drip, flood and pivot irrigation systems • Water-efficient agricultural irrigation systems and water saving technology
Defences and storm water management	<ul style="list-style-type: none"> • Flood, sea and drought defences including surge barriers, pumping stations, levees, gates, ecological retention systems, snowpack management, wetland storage • Rainwater harvesting, constructed ecological retention ponds, erosion control systems, groundwater recharge, erosion control systems
Water treatment	<ul style="list-style-type: none"> • Water treatment including desalination plants where the average carbon intensity for power is 100g CO₂/kWh or less. • Water recycling, wastewater treatment, sewage, manure and slurry treatment
Nature Based Solutions	<ul style="list-style-type: none"> • Erosion control, hydrological restoration • Natural filtration systems such as wetlands, watersheds, forests and settling systems ecosystems, aquifer storage, snowpack runoff, groundwater recharge systems, riparian wetlands • Flood defences by ecological retention, restoration of riparian wetlands, relocation of assets • Drought defences by aquifer storage, recharge zone management, wetland management • Water treatment by natural filtration systems, forest and fire management • Stormwater management by permeable surfaces, erosion control systems, evapotranspiration system
Products	<ul style="list-style-type: none"> • Water Saving Technologies
	Assets need further review
General	<ul style="list-style-type: none"> • Either no net GHG emissions are expected and the issuer discloses the justification for the decision OR negative GHG emissions are expected for the operational lifetime of the project or asset.

Waste



Circular economy activities	<ul style="list-style-type: none"> • The process of recycling of metals, plastics, glass (except aggregate), paper whereby the secondary raw materials (such as steel, aluminium, glass, plastics) cease to be waste and are in a condition sold to be used as secondary raw materials .Facilities for collection, sorting and recovering materials. • Facilities for the re-use of materials (recycled products, refurbishing, repairing etc.). For WEEE, the product is covered by eco-labelling scheme and only those products meeting the three lowest energy use categories are eligible • Anaerobic digestion facilities to produce biogas from green waste (bioenergy source should be eligible as per Bioenergy Sector). Total methane emissions $\leq 1285\text{g CH}_4/\text{tonne}$ of waste input. Woody waste must be segregated before or after processing and sent to an eligible EfW or composting plant. Monitoring, sampling and control of the following is carried out in accordance with PAS110 or equivalent guidance. The solid and liquid products are not landfilled and replace non-waste materials in the market. • Composting facilities with zero measurable methane emissions. Monitoring, sampling and control is carried out in accordance with PAS100 or equivalent guidance. The resulting product is not landfilled and replaces non-waste material in the market • Waste-to-energy plants for solid waste incineration with energy capture, pyrolysis / gasification, plasma converter, anaerobic digestion outside the EU and the UK. Plant efficiency $\geq 25\%$; AND Bottom ash recovery; AND $\geq 90\%$ recovery of metal from ash; AND Average carbon intensity of electricity and/ or heat over the life of the plant \leq waste management allowance; AND capacity of the plant does not exceed the calculated residual waste at any time in the plant's life • Collection of waste where it is specified that the waste is to be recycled
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Waste continued



Waste Storage	<ul style="list-style-type: none"> Storage and bulking facilities dedicated to eligible waste for processing downstream.
Waste disposal	<ul style="list-style-type: none"> Adding gas capture to existing, closed landfill facilities. Eligible if gas capture is $\geq 75\%$ and biogas used for eligible activities (see bioenergy).
Collection Vehicles	<ul style="list-style-type: none"> Must meet transport criteria
Pollution control	<ul style="list-style-type: none"> Carbon capture and storage (excluded for fossil fuel energy)
Assets need further review	
Bioplastics and similar	<ul style="list-style-type: none"> Bioplastics and similar products that use biomaterials as a substitute for fossil fuels. Bioplastics should be derived from waste and other sustainable sources. Sources should be consistent with sources defined in bioenergy (e.g., sources should not include any inputs that divert arable land away from food), Bioplastic assets /supply chain are only included where these are single polymer (e.g., PLA or bio PET) products which are not mixed with other petrochemical derivatives. Bioplastics should be easily reused, recycled or compostable without significant heat/energy input
Waste to Energy Incineration	<ul style="list-style-type: none"> Waste to incineration outside the EU. Consideration will be given to existing waste collection, re-use and recycling infrastructure.
Nuclear waste	<ul style="list-style-type: none"> Radioactive waste disposal and nuclear power plant decommissioning
Ineligible assets	
Waste management	<ul style="list-style-type: none"> Collection of waste that is going to landfill and where it is not specified if the waste is to be recycled or sent to landfill Landfill without gas capture or if gas capture is used to extend landfill's life Waste-to-energy plants for solid waste incineration with energy capture, pyrolysis / gasification, plasma converter, anaerobic digestion in the EU and the UK Waste incineration without energy capture

Land Use and Marine Resources



Agriculture	<ul style="list-style-type: none"> Sustainable agriculture within the categories of growing non-perennial and perennial crops, animal production, mixed farming, and controlled environment agriculture, that demonstrates significant carbon sequestration, reduction in and GHG emissions, increases soil-based carbon sequestration and/or improves climate adaptation resilience Reduced water and energy use, verifiable reduced fertilizer use
	<ul style="list-style-type: none"> Supply systems for seed production, distribution and access Storage for agricultural produce Equipment, intelligent management systems and technology to manage sustainable agriculture
Commercial forestry	<ul style="list-style-type: none"> Natural forests and forest plantations certified under internationally accepted sustainability standards such as FSC or PEFC for large-scale forestry and otherwise sustainably managed forests for small-scale forestry. No conversion from natural landscape. Production facilities using energy- and water-efficient pulping processes, bio-refineries, use of recyclates Processing and storage facilities for sustainable forestry produce Primary processing for FSC, PEFC and other certified forestry produce Machinery and equipment, intelligent management systems and technology to manage sustainable forestry
Natural ecosystems	<ul style="list-style-type: none"> Natural ecosystem land (managed and unmanaged) Land remediation, afforestation, re-vegetation that creates habitat appropriate for the location
Green spaces	<ul style="list-style-type: none"> Reduced emissions from deforestation and degradation (REDD) Marine reserves and marine conservation Machinery and equipment, intelligent management systems and technology to manage ecosystems

Land Use and Marine Resources continued



	Assets need further review
Green spaces	<ul style="list-style-type: none"> Landscaping of recreational parks/gardens, golf courses and similar green spaces are unlikely to be included unless carbon sequestration impact is significant and/or their preservation/creation protects biodiversity Fish farms and sustainable fishing
	Ineligible assets
Agriculture & forestry	<ul style="list-style-type: none"> All agricultural production and commercial forestry on peatland Timber harvesting except for certified and otherwise sustainably managed forests

Industry



Energy-efficient products and processes	<ul style="list-style-type: none"> Facilities and equipment dedicated to manufacturing energy-efficient components, such as motors and automation systems Facilities, storage and equipment dedicated to manufacturing energy-efficient products and related components, such as household appliances (falling within highest two eco-labels or equivalent) and equipment (particularly white goods) and improvements in efficiency thereof Supply chain manufacturing facilities related to the production of eligible products (such as solar, wind turbines, electric rail, EV's etc.).
Hydrogen Production	<ul style="list-style-type: none"> See energy
Biofuel Production	<ul style="list-style-type: none"> See energy
Carbon Removals	<ul style="list-style-type: none"> Carbon scrubbers Carbon capture, utilisation and storage assets, projects and end products (except for fossil fuel power generation)
	Assets need further review
Cement	<ul style="list-style-type: none"> Production facilities, incorporating dry processes, reduced clinker content
Steel and Iron	<ul style="list-style-type: none"> Production facilities and equipment, incorporating electric arc furnace, smelting reduction, efficient casting processes
Chemicals	<ul style="list-style-type: none"> Production facilities incorporating lower carbon feedstocks and more efficient processes
Other	<ul style="list-style-type: none"> Other primary and secondary production
Non-heavy industry	<ul style="list-style-type: none"> Manufacturing and processing of other commodities and goods
Mining	<ul style="list-style-type: none"> Relating to essential minerals such as copper, nickel, lithium
	Ineligible assets
Energy-efficient products and processes	<ul style="list-style-type: none"> Facilities and equipment dedicated to manufacturing polystyrene and other non-recyclable plastics
Fossil Fuels	<ul style="list-style-type: none"> Products related to the clean up or increase in efficiency of fossil fuel production

Information and Communications Technology (ICT)



Broadband networks, IT solutions	<ul style="list-style-type: none"> • Teleconferencing, telecommuting software and services • Fibre optic and cable networks and exchanges • Data centres or with source power emissions less than 50gCO₂/kWh or Power Usage Effectiveness (PUE) of 1.5 or lower. • Development or use of ICT solutions that are aimed at collecting, transmitting, storing data and at its modelling and use where those activities are predominantly aimed at the provision of data and analytics enabling GHG emission reductions. Such ICT solutions may include, inter alia, the use of decentralized technologies (i.e., distributed ledger technologies), Internet of Things (IoT), 5G and Artificial Intelligence.
Power management	<ul style="list-style-type: none"> • Dedicated infrastructure, software, and hardware for remote and in situ power management, such as load balancing, energy monitoring and automatic switching off power systems
	Assets need further review
Broadband networks, IT solutions	<ul style="list-style-type: none"> • Data centres with energy source emissions of greater than 50gCO₂/kWh or not cooled naturally and related hardware and supply chain manufacturing facilities
	Ineligible assets
ODS refrigerant based cooling systems	<ul style="list-style-type: none"> • ICT facilities that use ODS (Ozone depleting substances)

Annex C: The Climate Bonds Standard and Certification Scheme

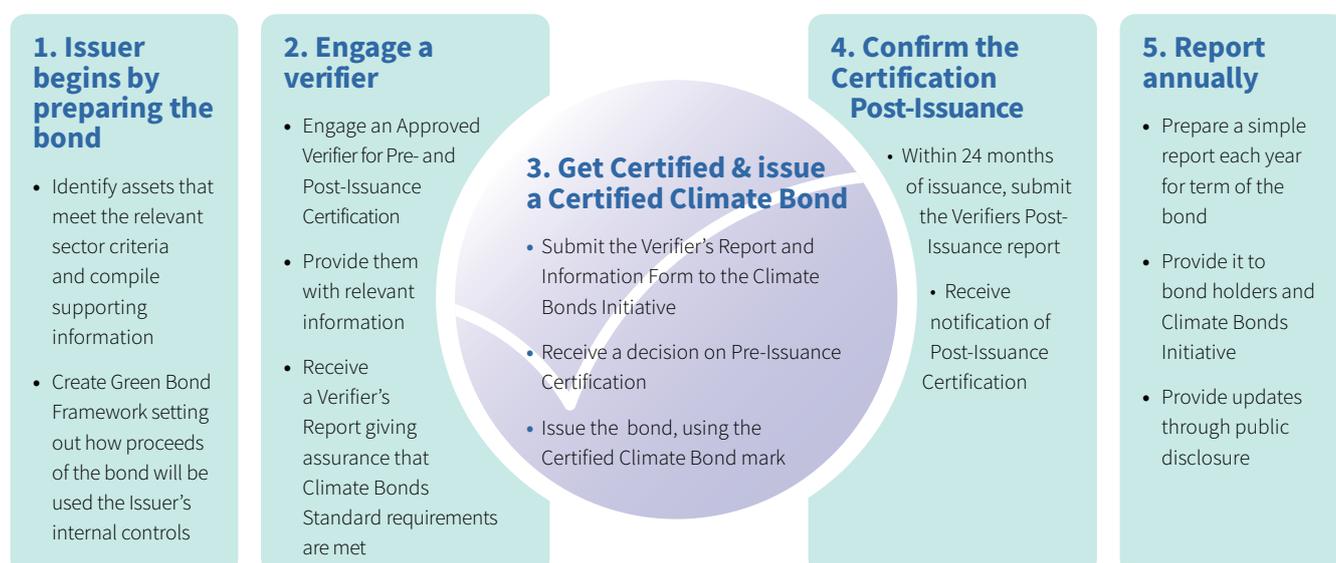
The [Climate Bonds Standard and Certification Scheme](#) is a labelling scheme. The scheme is used globally by bond issuers, governments, investors and the financial markets to prioritise investments which genuinely contribute to addressing climate change.

Rigorous scientific criteria ensure that it is consistent with the 2oC warming limit set in the Paris Agreement. Sector Criteria are developed by dedicated working groups of technical and industry experts, coordinated by the Climate Bonds Standards team. The [certification scheme and criteria development is overseen](#) by a Climate Bonds Standard Board representing institutional investors and environmental NGOs. The Standard Board reports to the Governors of the Climate Bonds.

Up-to-date information on the criteria available for Certification and in development is provided at: <https://www.climatebonds.net/standard/sector-criteria>

Certification requires that issuers identify eligible assets and projects, collate relevant metrics to determine that these are on a trajectory to decarbonisation by 2050, and obtain a verification by a third party to this effect. On an annual basis, they are required to reconfirm compliance through post-issuance verification.

The infographic below summarises the Certification process and disclosure requirements.



Annex D: Eligible projects and assets under the Climate Bonds Standard

Eligible assets and projects under Climate Bonds Standard version 3.0 (New, being phased in)

Eligible Projects and Assets: Parts or collections of the following (given alignment with definitions above):

1. Physical assets or projects owned by the Issuer, and/or
2. Debt or other financing arrangements provided by the Issuer to finance projects or physical assets, and/or
3. Related and supporting expenditures for projects or physical assets, where the projects or physical assets meet the relevant Sector Eligibility Criteria provided in the Climate Bonds Standard.

Physical assets or projects include:

- Physical assets: existing and operational equipment, machinery, infrastructure, buildings, or land
- Projects: equipment, machinery, infrastructure and/or buildings in construction, redevelopment, (upgrades, expansion) and similar asset value creation or enhancement activities.

Debt or other financing arrangements provided to finance projects or physical assets, including:

- Capital expenditure undertaken to increase the value and/or lifetime of the physical assets or projects
- Acquisition costs/purchase price for an entity (company, division or similar) which holds physical assets or projects or share thereof which approximately corresponds to the Market Value of the physical asset or projects holdings

- Leasing structures resulting in Right of Use assets and liabilities and long leaseholds on land, buildings and infrastructure
- Loans and mortgages
- Subsidies, tax and other incentives, credit schemes and grants, and other similar arrangements provided by public entities or agencies, including local and national governments.

Related and supporting expenditures include:

- Relevant installation and routine maintenance expenditure and upgrades undertaken to maintain the value and/or lifetime of the asset
- Relevant performance monitoring costs with respect to tracking climate credentials (e.g., GHG emissions) and climate information services (e.g., satellite monitoring and emissions testing)
- Relevant research and development, training and programme implementation costs and expenditures, where there is a definable future asset, product and/or process that can be linked to climate benefits under the relevant Sector Criteria.

Nominated Projects & Assets: Eligible Projects & Assets that are associated with the bond, loan or other debt instrument. These projects or physical assets may be existing, under construction, or yet to be deployed.

Annex E: Eligible Building Certifications

LEED: Gold, Platinum

BREEAM: Excellent or Outstanding

Miljöbyggnad: Silver and above

DGNB: Gold or above

China Green Building Label: 3 star

NABERS: Rating 5 and 6

Minergie: All certifications

Casbee: A and S

Green Star: 5 and 6 star

TR20 (France): All certifications

Living Building Challenge: Living Building Challenge Certified

EDGE Certified: In developing countries only

CalGreen: All certifications

Annex F: Eligible Shipping Metrics for ships greater than 5000GT (Deadweight)

Reporting Metrics

Metric Application Annual Efficiency Ratio: The Annual Efficiency Ratio (AER) measures carbon emissions associated with transport work, but it uses a ship's size (deadweight) as a proxy for cargo carried and assumes that the ship is fully loaded on all journeys. Any vessel 5,000 GT and above must report using IMO DCS data that enables AER measurement, unless it operates 100% of the time on voyages that include the EU (in which case it must the EEOI).

Energy Efficiency Operational Index: If the vessel operates 100% of the time on voyages that include the EU9, then it must report using EEOI. Vessels which are not operating 100% of the time on voyages that include the EU can opt to report EEOI but are required to verify this data independently. EEOI represents the CO2 emitted per tonne-nautical mile for a voyage or specific time period. It can either be calculated from fuel consumption measurements and information on cargo carried and distance travelled or estimated using satellite tracking data and fleet technical specifications. EEOI therefore accounts for the real operating conditions of the vessel and their impact on fuel consumption (e.g., speed, weather, draught).

EEOI/AER Decarbonisation Trajectories

The fleet type and size category median values in EEOI and AER for each decade starting from 2020 to 2050 are included in Table 1 below.

Type	Size	2020 EEOI/AER	2030 EEOI/AER	2040 EEOI/AER	2050
Bulk carrier	0-9999 DWT	35.1 / 24.6	23.4 / 16.4	11.7 / 8.2	0
Bulk carrier	10000-34999 DWT	12.2 / 6.6	8.1 / 4.4	4.1 / 2.2	0
Bulk carrier	35000-59999 DWT	9.2 / 4.6	6.2 / 3.1	3.1 / 1.5	0
Bulk carrier	60000-99999 DWT	8.4 / 3.6	5.6 / 2.4	2.8 / 1.2	0
Bulk carrier	100000-199999 DWT	4.6 / 2.4	3.1 / 1.6	1.5 / 0.8	0
Bulk carrier	200000+ DWT	4.1 / 2.3	2.7 / 1.5	1.4 / 0.8	0
Chemical tanker	0-4999 DWT	40.3 / 35.4	26.8 / 23.6	13.4 / 11.8	0
Chemical tanker	5000-9999 DWT	26.6 / 19	17.7 / 12.7	8.9 / 6.3	0
Chemical tanker	10000-19999 DWT	18.7 / 11.9	12.5 / 7.9	6.2 / 4	0
Chemical tanker	20000+ DWT	12.3 / 6.5	8.2 / 4.3	4.1 / 2.2	0
Container	0-999 TEU	27.3 / 16.9	18.2 / 11.3	9.1 / 5.6	0
Container	1000-1999 TEU	24.9 / 14.8	16.6 / 9.9	8.3 / 4.9	0
Container	2000-2999 TEU	19.5 / 10	13 / 6.7	6.5 / 3.3	0
Container	3000-4999 TEU	16.8 / 8.3	11.2 / 5.5	5.6 / 2.8	0
Container	5000-7999 TEU	16.2 / 7.8	10.8 / 5.2	5.4 / 2.6	0
Container	8000-11999 TEU	14.1 / 6.7	9.4 / 4.5	4.7 / 2.2	0
Container	12000-14500 TEU	10.4 / 4.6	6.9 / 3.1	3.5 / 1.5	0
Container	14500+ TEU	10.4 / 4.6	6.9 / 3.1	3.5 / 1.5	0
General cargo	0-4999 DWT	30.2 / 24.2	20.1 / 16.1	10.1 / 8.1	0
General cargo	5000-9999 DWT	27.2 / 16.7	18.2 / 11.1	9.1 / 5.6	0
General cargo	10000+ DWT	24.2 / 13.1	16.2 / 8.8	8.1 / 4.4	0
Other liquid tanker	0+ DWT	106.6 / 97.6	71.1 / 65.1	35.5 / 32.5	0
Ferry-pax only*	0-1999 GT	1272135.8	848090.5	424045.3	0
Ferry-pax only*	2000+ GT	1740606.6	1160404.4	580202.2	0
Cruise*	0-1999 GT	2044403.4	1362935.6	681467.8	0
Cruise*	2000-9999 GT	1286641.3	857760.8	428880.4	0
Cruise*	10000-59999 GT	1495064.7	996709.8	498354.9	0
Cruise*	60000-99999 GT	1738613.6	1159075.7	579537.9	0
Cruise*	100000+ GT	1337274.9	891516.6	445758.3	0
Ferry-RoPax*	0-1999 GT	822123.9	548082.6	274041.3	0
Ferry-RoPax*	2000+ GT	1137003.8	758002.5	379001.3	0
Refrigerated bulk	0-1999 DWT	72.8 / 48.7	48.5 / 32.5	24.3 / 16.2	0
Ro-Ro	0-4999 GT	258.2 / 212.4	172.1 / 141.6	86.1 / 70.8	0
Ro-Ro	5000+ GT	63.9 / 45.9	42.6 / 30.6	21.3 / 15.3	0
Vehicle	0-3999 Vehicles	124.7 / 46	83.2 / 30.7	41.6 / 15.3	0
Vehicle	4000+ Vehicles	58.1 / 13.8	38.7 / 9.2	19.4 / 4.6	0

*For Ferry-pax only, Cruise, and Ferry RoPax, the denominator is GT*nm instead of tnm.

DWT – Dead Weight Tonnes (the weight of the cargo)

TEU – Twenty-foot Equivalent Unit

GT – Gross tonnage

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Design: **Godfrey Design**

© Published by Climate Bonds Initiative, October 2020
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