

Land Transport Criteria

Version 2

The Land Transport Criteria
for the Climate Bonds Standard & Certification Scheme

August 2022





Document revision number	Date	Summary of changes
2.1 Clarified threshold years	Aug 2022	Clarification of years new thresholds are applicable. I.e., passenger transport thresholds become zero from 2026 onwards. Clarification that Hydrogen vehicles are eligible as opposed to Biofuel vehicles.
2. Formal update to criteria	Oct 2020	Lowering passenger transport emissions thresholds, lower acceptable percentage of rail freight being fossil fuels (now 25%), clearer exclusions of biofuel and fossil fuel vehicles, clarify fossil fuel transport exclusions, inclusion of zero emissions supporting vehicles in other sectors, clearer requirements for emissions reductions for new interurban rail, addition of coaches into scope, and changes to layout to align with other sector criteria.
1. First publication of original Criteria	Feb 2016	

Definitions

Climate Bonds Initiative (CBI): An investor-focused not-for-profit organisation, promoting large-scale investments that will deliver a global low carbon and climate resilient economy. The Initiative seeks to develop mechanisms to better align the interests of investors, industry and government so as to catalyse investments at a speed and scale sufficient to avoid dangerous climate change.

Climate Bond: A climate bond is a bond used to finance – or re-finance - projects needed to address climate change. They range from wind farms and hydropower plants, to rail transport and building sea walls in cities threatened by rising sea levels. Only a small portion of these bonds have been labelled as green or climate bonds by their issuers.

Certified Climate Bond: A Climate Bond that is certified by the Climate Bonds Standard Board as meeting the requirements of the Climate Bonds Standard, as attested through independent verification.

Climate Bonds Standard (CBS): A screening tool for investors and governments that allows them to identify green bonds where they can be confident that the funds are being used to deliver climate change solutions. This may be through climate mitigation impact and/ or climate adaptation or resilience. The CBS is made up of two parts: the parent standard (Climate Bonds Standard V3) and a suite of sector specific eligibility Criteria. The parent standard covers the certification process and pre- and post-issuance requirements for all certified bonds, regardless of the nature of the capital projects. The Sector Criteria detail specific requirements for assets identified as falling under that specific sector. The latest version of the CBS is published on the Climate Bonds Initiative website

Climate Bonds Standard Board (CBSB): A board of independent members that collectively represents \$34 trillion of assets under management. The CBSB is responsible for approving i) Revisions to the Climate Bonds Standard, including the adoption of additional sector Criteria, ii) Approved verifiers, and iii) Applications for Certification of a bond under the Climate Bonds Standard. The CBSB is constituted, appointed and supported in line with the governance arrangements and processes as published on the Climate Bonds Initiative website.

Climate Bond Certification: allows the issuer to use the Climate Bond Certification Mark in relation to that bond. Climate Bond Certification is provided once the independent Climate Bonds Standard Board is satisfied the bond conforms with the Climate Bonds Standard.

Green Bond: A Green Bond is where proceeds are allocated to environmental projects. The term generally refers to bonds that have been marketed as “Green”. In theory, Green Bonds proceeds could be used for a wide variety of environmental projects, but in practice they have mostly been the same as Climate Bonds, with proceeds going to climate change projects.

Industry Working Group (IWG): A group of key organisations that are potential issuers, verifiers and investors convened by the Climate Bonds Initiative. The IWG generally provides feedback on the draft sector Criteria developed by the TWG before they are released for public consultation.

Technical Working Group (TWG): A group of key experts from academia, international agencies, industry and NGOs convened by the Climate Bonds Initiative. The TWG develops the Sector Criteria - detailed technical criteria for the eligibility of projects and assets as well as guidance on the tracking of eligibility status during the term of the bond. Their draft recommendations are refined through engagement with finance industry experts in convened Industry Working Groups and through public consultation. Final approval of Sector Criteria is given by the CBSB.

Transport assets and projects: Assets and projects relating to the production of private and / or public vehicles, and / or the development of associated infrastructure, logistics and ICT.



The Climate Bonds Initiative gratefully acknowledges the Technical Working Group members who supported the development of these Criteria. Members are listed in Appendix 4.

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1 Introduction

1.1 Overview

This Criteria Document provides all the requirements that must be met for land transport related assets and projects to be awarded Climate Bonds Certification. The purpose is to provide instruction to issuers and verifiers about the requirements of the Land Transport Criteria¹ (hereafter referred to as the Transport Criteria). The Criteria Document is supported by a Background Document that captures the various dialogues and inputs and substantiates the reasoning behind the requirements set in the Transport Criteria.

These Criteria were developed through a consultative process with technical and industry experts forming a Technical Working Group (TWG) and through public consultation. The TWGs comprise academic and research institutions, civil society organisations, multilateral banks and specialist consultancies. A period of public consultation offers the opportunity to any member of the public to comment on the Criteria.

Supplementary information available in addition to this document include:

1. Transport Criteria Brochure: a 2-page summary of the Transport Criteria
2. Transport Background Document: the rationale behind the Transport Criteria
3. Climate Bonds Standard V3: the umbrella document laying out the common requirements that all Certified Climate Bonds need to meet, in addition to the sector-specific Criteria (V3 is the most recent update version)
4. Climate Bonds Standard & Certification Scheme Brochure: an overview of the purpose, context and requirements of the Climate Bonds Standard & Certification Scheme

For more information on the Climate Bonds Initiative and the Climate Bonds Standard & Certification Scheme, see <https://www.climatebonds.net/standard>. For the documents listed above, see <https://www.climatebonds.net/standard/transport>

1.2 The Climate Bonds Standard

Investor demand for Green Bonds and Climate Bonds is strong and will increase in line with the delivery of quality products into the market. However, investor concerns about the credibility of green labelling are also growing. standards, assurance & certification is essential to improve confidence and transparency, which in turn will enable further strong growth in the market.

The Climate Bonds Standard and Certification Scheme is an easy-to-use screening tool that provides a clear signal to investors and intermediaries on the climate integrity of Certified Climate Bonds.

A key part of the Standard is a suite of sector-specific eligibility Criteria. Each Sector Criteria sets climate change benchmarks for that sector that are used to screen assets and capital projects so that only those that have climate integrity, through their contribution to climate mitigation, and adaptation and resilience to climate change, will be certified. Where a bond encompasses a mixed portfolio of

¹ Please note that the document does not include water-based transport or aviation.

assets across several sectors, each sub-category of assets will be subject to the relevant Sector Criteria for those assets.

The Sector Criteria are generally determined through a multi-stakeholder engagement process, including a Technical Working Group (TWG) and Industry Working Group (IWG), convened and managed by the Climate Bonds Initiative, and are subject to public consultation. Finally, they are reviewed and approved by the Climate Bonds Standard Board.

The second key part of the Climate Bonds Standard is the overarching Climate Bonds Standard available at https://www.climatebonds.net/standards/standard_download. This gives the common fund management and reporting requirements that all Certified Climate Bonds must meet, in addition to meeting the specific Sector Criteria.

1.3 The need for Transport Criteria

Transport is the second largest contributor to global GHG emissions after electricity generation, responsible for 23% of all energy-related CO₂ emissions globally and 14% of total GHG emissions². Road transportation for passengers and freight remains the primary source of emissions in the sector, responsible for 73% of CO₂ emissions from all transport.

According to the IEA, \$17.5 trillion in transport investment per year will be required between now and 2060 to achieve the rapid decarbonisation needed to limit global temperature rises to 2 ° Celsius over a business as usual scenario³. This compares with a current cumulative total for low carbon transport bonds of \$509 billion⁴. Current investment flows are insufficient to meet low carbon transport infrastructure needs. Transport infrastructure drives transport behaviour and choice. Choices made today will lock in governments to either a high or low carbon transport future. There is a need to scale up and shift investment towards low carbon transport infrastructure.

Leveraging debt capital markets towards sustainable transport infrastructure development and services has significant potential to help achieve this. The demand for green bonds has been growing rapidly with total issuance increasing tenfold from \$3bn in 2012 to \$35bn in 2014. The market has been driven by a strong investor appetite for fixed income products consistent with low carbon and sustainable investment commitments.

Transport currently dominates the universe of climate-themed bonds, with 59% of bonds issued clearly aligned with low carbon transport. This is largely due to a number of rail issuers, usually large state-backed rail entities, which have a long history of using bonds to raise finance. Auto manufacturers also featured for the first time in 2013 with Tesla and Toyota issuing debt instruments to finance electric and hybrid vehicles. There is near-term potential for further green bond issuance from other vehicle manufacturers such as Nissan and General Motors, as well as further potential from rail and freight. It is thought that there is significant potential for climate bonds for both passenger and freight transport.

Climate Bonds Certification will allow both public and private issuers to be part of a broader investment-grade climate bond portfolio including renewable energy, green property and water investments; and will also facilitate the issuance of bonds from issuers who would otherwise find it difficult to gain recognition for their low carbon investments. The goal is to attain a large and liquid market in bonds for *qualifying assets* quickly that attracts mainstream players and helps lower the cost of capital.

² Sims R. et al. (2014) Transport. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

³ IEA ETP 2012; http://www.wri.org/sites/default/files/trillion_dollar_question_working_paper.pdf

⁴ <http://www.climatebonds.net/bonds-climate-change-2014>

1.4 Scope of the Transport Criteria

These Criteria apply to assets and projects relating to:

- Passenger cars and commercial vehicles
- Public passenger transport by road
- Freight transport by road
- Passenger rail rolling stock
- Freight rail rolling stock
- Railway networks and lines
- The manufacture of miscellaneous vehicles for other sectors
- Infrastructure for low carbon transport

Further details of the scope of the Transport Criteria are in Chapter 2, Table 1.

1.5 Key elements to the Criteria

As a general principle, bonds will meet the requirements of the Climate Bonds Standard if the associated use of proceeds:

- Promote GHG mitigation through reduced emissions or increased carbon sequestration;
 - Demonstrate significant attention to climate risks and a clear plan for achieving a positive effect on operational resilience;
- and
- Meet minimum disclosure requirements to raise the level of transparency in green bonds⁵.

In the case of the Transport Criteria, mitigation requirements are set as the principal component of the criteria, prioritising reduced emissions and/or carbon sequestration in the sector. It is proposed that eventually these criteria will incorporate robust resilience requirements in line with Climate Resilience Principles (further discussed in section 1.7).

1.6 This document

This document details:

- Current scope of land transport assets and projects eligible for certification under the Climate Bonds Standard – Chapter 2;
- Specific eligibility Criteria under which these assets and projects can be certified – Chapter 3;
- General reporting requirements for becoming certified – Chapter 4;
- List of Technical Working Group members – Appendix 1

Supporting information is available at <https://www.climatebonds.net/standard>, and <https://www.climatebonds.net/standard/transport> as follows:

⁵ Disclosure requirements are stipulated in the overarching Climate Bonds Standard rather than the Land Transport Criteria. However, there are additional disclosure requirements relating to criteria compliance data that issuers must provide.

1.7 Revisions to these Criteria

These Criteria represent the second iteration and therefore first revision to the original Transport Criteria. CBI and the TWG have taken stock of issuances that arose in the early stages and any developments in improved methodologies and data that can increase the climate integrity of future bond issuances. The Criteria will continue to be refined over time, as more information becomes available. However, certification will not be withdrawn retroactively from bonds certified under earlier versions of the Criteria.

In consistency with other CBI Criteria, further requirements will in time be added that incorporate a resilience component into the Transport Criteria. This is to ensure that certified transport projects and assets will not only help to mitigate climate change but will be resilient to potential climate scenarios and are thus compatible with a climate-resilient economy. A set of guiding principles have been developed by an Adaptation and Resilience Expert Group (AREG), convened by CBI, to be used in future development of resilience requirements in any criteria.

2 Assets and Projects in Scope

2.1 Assets in scope

Table 1 presents use of proceeds that can be included in a Certified Climate Bond, subject to meeting the Criteria described in Chapter 3. The first column in Table 1, 'Eligible activity types', gives a descriptive list of all the activity types that are within scope of the Transport Criteria. The second column, 'Example use of proceeds', is an illustrative list of the type of projects that may be included in a Certified Climate Bond. It is not possible to include an exhaustive list of all potential use of proceeds due to the breadth of possibilities, but all use of proceeds must fall within one of the specified eligible activity types. The relevant criteria for each example use of proceeds are referenced in column 4.

The assets in Table 1 are eligible for inclusion in a Certified Climate Bond if they meet the relevant mitigation requirements (see Chapter 3 for details).

Bonds financing multiple projects may also have to prove compliance with other Sector Criteria to be eligible for Climate Bonds Certification. For example, if a bond includes both rail projects and solar farms it would be necessary for the issuer to comply with the Transport Criteria and the Solar Criteria respectively.

Table 1 provides signposting as follows:

- A green circle indicates these use of proceeds, when fully described and documented, automatically meet the Criteria requirements, with no further disclosure or documentation required
- An orange square indicates that the eligibility of these use of proceeds is conditional on meeting specific requirements
- A red triangle indicates these use of proceeds are not eligible for certification under any circumstances⁶

⁶ The red triangles in Table 1 are excluded either because they are deemed incompatible with a low carbon or climate-resilient economy or because determining their eligibility is outside the mandate of the Land Transport Criteria. The justifications for exclusions are presented in section 3.3 of the Background Document.

Table 1: scope of eligible projects and assets for Climate Bonds Certification under the Transport Criteria

Asset category	Example use of proceeds	Mitigation	See Criteria section(s)
Passenger cars and commercial vehicles – private and light commercial vehicles which transport private passengers along with key components for such vehicles (See section 3.3 for an overview of the criteria for this asset category)	Manufacture and upgrade, purchase, and/or operation of zero direct emissions passenger or light commercial vehicles, for example: <ul style="list-style-type: none"> ○ Electric vehicle manufacturing ○ Banks leasing electric vehicles ○ Taxi firms operating electric vehicle fleets 		○ 3.2.1
	Manufacture and upgrade and/or purchase, of key components to be used in eligible vehicles, for example: <ul style="list-style-type: none"> ○ Manufacturing of high-density lithium-ion batteries ○ Leasing of high-density lithium-ion batteries 		○ 3.2.1
	Manufacture and upgrade, purchase, and/or operation of other passenger and light commercial vehicles, for example: <ul style="list-style-type: none"> ○ Hybrid vehicle manufacturing ○ Banks leasing hybrid vehicles ○ Taxi firms operating hybrid vehicle fleets 		○ 3.2.2 ○ 3.2.4
	Manufacture and upgrade, purchase, and/or operation of fossil fuel or biofuel passenger and light commercial vehicles (for example Internal Combustion Engine)		No criteria as ineligible
Public passenger transport by road – buses (urban) and coaches (interurban) transporting public passengers along with key components for such vehicles (See section 3.4 for an overview of the criteria for this asset category)	Manufacture and upgrade, purchase and/or operation of zero direct emissions buses or coaches, for example: <ul style="list-style-type: none"> ○ Electric bus manufacturing ○ Entities leasing electric buses ○ Private coach companies operating electric coach fleets 		○ 3.2.1
	Manufacture and upgrade and/or purchase, of key components to be used in eligible vehicles, for example: <ul style="list-style-type: none"> ○ Manufacturing of high-density lithium-ion batteries ○ Leasing of high-density lithium-ion batteries 		○ 3.2.1
	Manufacture and upgrade, purchase, and/or operation of other buses and coaches, for example: <ul style="list-style-type: none"> ○ Public bus manufacturing ○ Banks leasing hybrid vehicles ○ Private coach companies operating hybrid vehicle fleets 		○ 3.2.2 ○ 3.2.4
	Manufacture and upgrade, purchase, and/or operation of biofuel buses and coaches		No criteria as ineligible
Freight transport by road – heavy-duty vehicles used for the purpose of moving goods along with key components of such vehicles (See section 3.5 for an overview of the criteria for this asset category)	Manufacture and upgrade, purchase, and/or operation of zero direct emissions heavy duty vehicles, for example: <ul style="list-style-type: none"> ○ Electric truck manufacturing ○ Banks leasing electric trucks ○ Logistics companies operating electric truck fleets 		○ 3.2.1 ○ 3.2.3
	Manufacture and upgrade, purchase, and/or operation of all other heavy duty vehicles, for example: <ul style="list-style-type: none"> ○ Hybrid or biofuel truck manufacturing ○ Banks leasing non-electrified trucks ○ Logistics companies operating hybrid or biofuel truck fleets 		No criteria as ineligible
	Manufacture and upgrade and/or purchase, of key components to be used in eligible vehicles, for example:		○ 3.2.1

Asset category	Example use of proceeds	Mitigation	See Criteria section(s)
	<ul style="list-style-type: none"> ○ Manufacturing of high-density lithium-ion batteries ○ Leasing of high-density lithium-ion batteries 		
Passenger rail transport rolling stock – rolling stock for the purpose of transporting public passengers (See section 3.6 for an overview of the criteria for this asset category)	Manufacture and upgrade, purchase, and/or operation of zero direct emissions urban rail transit rolling stock, for example: <ul style="list-style-type: none"> ○ Manufacturing of electrified metro rolling stock ○ Leasing of tramway carriages ○ Entities operating electrified metro rolling stock 		○ 3.2.1
	Manufacture and upgrade, purchase, and/or operation of zero direct emissions rolling stock, for example: <ul style="list-style-type: none"> ○ Manufacturing of electrified passenger rail rolling stock ○ Leasing of passenger rail carriages ○ Train companies operating electrified passenger rail rolling stock 		○ 3.2.1 ○ 3.2.5 (if new interurban rail)
	Manufacture and upgrade, purchase, and/or operation of other rolling stock, for example: <ul style="list-style-type: none"> ○ Manufacturing of diesel passenger rail rolling stock ○ Leasing of passenger rail diesel carriages ○ Train companies operating diesel passenger rail rolling stock 		○ 3.2.2 ○ 3.2.4 ○ 3.2.5 (if new interurban rail)
Freight rail transport rolling stock – rolling stock for the purpose of transporting goods (See section 3.7 for an overview of the criteria for this asset category)	Manufacture and upgrade, purchase, and/or operation of zero direct emissions rolling stock, for example: <ul style="list-style-type: none"> ○ Manufacturing of electrified freight rail rolling stock ○ Leasing of freight rail carriages ○ Train companies operating electrified freight rail rolling stock 		○ 3.2.1 ○ 3.2.3
	Manufacture and upgrade, purchase, and/or operation of other freight rail rolling stock, for example: <ul style="list-style-type: none"> ○ Manufacturing of diesel passenger rail rolling stock ○ Leasing of diesel passenger rail carriages ○ Train companies operating freight rail rolling stock 		○ 3.2.2 ○ 3.2.3 ○ 3.2.4 ○ 3.2.5 (if new interurban rail)
Rail transport networks – rail networks and lines and supporting infrastructure for the purpose of transporting passengers, goods, or a mixture of both (See section 3.7 for an overview of the criteria for this asset category)	Construction and development, purchase, and/or operation of zero direct emissions urban rail transit lines, for example: <ul style="list-style-type: none"> ○ Construction of metro or tramway lines ○ Leasing of metro or subway lines ○ Network operators operating an urban rail transit network 		○ 3.2.1
	Construction and development, purchase, and/or operation of exclusively zero direct emissions railway lines, for example: <ul style="list-style-type: none"> ○ Construction of electrified interurban railway lines ○ Leasing of railway contracts ○ Network operators operating a regional electrified railway network 		○ 3.2.1 ○ 3.2.3 (if freight transported on the line) ○ 3.2.5 (if new interurban rail)
	Construction and development, purchase, and/or operation of railway lines not used exclusively by zero direct emissions rolling stock, for example: <ul style="list-style-type: none"> ○ Construction of interurban railway lines ○ Leasing of railway contracts ○ Network operators operating a regional railway network 		○ 3.2.2 ○ 3.2.3 ○ 3.2.4 (if freight transported on the line) ○ 3.2.5 (if new interurban rail)

Asset category	Example use of proceeds	Mitigation	See Criteria section(s)
Miscellaneous vehicles for other sectors – mobile vehicles that serve purposes other than transporting passengers or freight along with key components for such vehicles (See section 3.8 for an overview of the criteria for this asset category)	Manufacture, operation and leasing of zero direct emissions waste collection vehicles	●	○ 3.2.1
	Manufacture of zero direct emissions miscellaneous vehicles used in other sectors, for example: <ul style="list-style-type: none"> ○ Mobile stairways or buggies ○ Off-road excavators or concrete trucks used in construction 	●	○ 3.2.1
	Manufacture of key components to be used in eligible vehicles, for example: <ul style="list-style-type: none"> ○ Manufacturing of high-density lithium-ion batteries ○ Leasing of high-density lithium-ion batteries 	●	○ 3.2.1
Infrastructure for low carbon transport – other supporting infrastructure and logistics that link directly to one or more mode of transport, or physical asset or activity. These activity types might concern system operations, or facilities that improve the performance of such supporting systems. Construction and running of facilities may still be included in these activities. (See section 3.9 for an overview of the criteria for this asset category)	Construction of dedicated infrastructure for other types of emissions-free travel such as public walking and cycle lanes	●	○ 3.2.1
	Dedicated charging and alternative fuel infrastructure (when separable from fossil fuel filling stations and garages)	●	○ 3.2.1
	Construction and development, purchase, and/or operation of dedicated infrastructure for eligible rolling stock, railway lines and networks, for example: <ul style="list-style-type: none"> ○ Train and bus stations ○ Inspection depots for freight rail rolling stock ○ Traction maintenance depots / Motive power depots for rolling stock ○ Backup electricity generators ○ Signalling infrastructure including buildings 	●	Automatically eligible if 100% dedicated to eligible lines and vehicles (see section 3.9)
	The implementation and integration of Information and Communication Technology (ICT) systems that improve asset utilisation, flow and modal shift, regardless of transport mode (for example public transport information, car-sharing schemes, smart cards, road charging systems, etc.)	■	Eligible on a case-by-case basis (see section 3.9)
	Construction of facilities for intermodal freight and development of smart freight logistics	■	Eligible on a case-by-case basis (see section 3.9)
	Development and integration of transport and urban development planning systems – for example, improvements to terminals to improve journey times	■	Eligible on a case-by-case basis (see section 3.9)
	Construction of new roads, road bridges, road upgrades, parking facilities, fossil fuel filling stations, etc.	▲	No criteria as ineligible
Research and Development	Relevant research and development, training and program implementation costs and expenditures, where there is a definable future asset, product and/or process that can be linked to climate benefits under the Transport Criteria.	●	See Climate Bonds Standard V3

2.2 Alignment with other Sector Criteria

It is essential that clear guidance on which Sector Criteria assets and projects are eligible for Climate Bonds Certification is given. This saves confusion and means that it is clear to the verifier, issuer and investor, which requirements a given asset or project is expected to meet. Table 2 identifies possible overlaps and explains which Sector Criteria should be referred to in which cases. The following sections give further explanation.

Table 2: clarification of under which Sector Criteria assets or activities are eligible for Climate Bonds Certification

Assets or Activity	Applicable Sector Criteria
Bus Rapid Transit	<p>Bus Rapid Transit are specific systems seen in many countries whereby buses have dedicated roadways and priority over other road traffic. Issuers seeking to certify such systems in developing countries (as defined by the OECD) should use the BRT Criteria.</p> <p>Bus Rapid Transit systems in developed countries (OECD defined) should use the Transport Criteria.</p>
Vehicles for use in forestry projects	<p>Vehicles used within a forest concession up to the forest gate are applicable for Certification under the Forestry Criteria, rather than the Transport Criteria.</p> <p>Vehicles used beyond a forest concession and past the forest gate must comply with the Transport Criteria.</p>
Vehicles for use in agriculture projects	<p>Vehicles used within a farm up to the farm gate are applicable for Certification under the Agriculture Criteria, rather than the Transport Criteria.</p> <p>Vehicles used beyond a farm and past the farm gate must comply with the Transport Criteria.</p>
Forest Roads	<p>Roads constructed through forest concessions can be Climate Bonds certified under the Forestry Criteria so long as they meet all the necessary requirements (see Section 3.7 of the Forestry Criteria).</p> <p>Note: regular, non-forest roads are not currently eligible for certification under the Transport Criteria.</p>
Infrastructure - Buildings	<p>Buildings constructed that are not used solely for the purposes of supporting transport assets and activities (for example an office building partially operating an ICT support system for a public transport network), must also meet the requirements of the Low Carbon Buildings Criteria.</p> <p>Any buildings to be constructed for the purposes of acting as dedicated supporting infrastructure for transport activities and projects (for example a freight train depot), need only meet the Transport Criteria. This means that the assets or activities it supports must meet the criteria.</p>

Renewable energy production for powering electrified transport	Any use of proceeds marked for financing projects and assets pertaining to renewable energy production to generate electricity for transport assets listed in these Criteria will be dealt with its appropriate Criteria (for example, electricity generated through solar power must meet the Solar Energy Criteria).
Shipping	Assets relating to water transport, be it passenger or freight, such as vessels or port infrastructure, will be applicable for certification under the Shipping Criteria.

3 Eligibility Criteria

3.1 Overview

The Transport Criteria is underpinned by a principal mitigation component, with additional adaptation criteria proposed to be added in future with the reconvening of a Technical Working Group.

The Mitigation component applies to all types of transport assets or projects, but there are different requirements depending on the type of transport asset or projects in question. Sections 3.3-3.9 explain the details of each requirement and the evidence that projects must give to be compliant and how to provide it.

When seeking certification an issuer or verifier can first consult Table 1 to determine which criteria are pertinent for the assets and activities that they are seeking to get certified. Details on the criteria themselves and how to prove compliance with them are described in sections 3.2.1 – 3.2.5. Consult these sections to understand the detail of the Criteria that apply to them and how to prove compliance. The diagrams in sections 3.3 – 3.9 then provide a broader overview of how criteria are met for each asset category as described in Table 1. Below are the corresponding sections to each asset category:

- Section 3.3: Passenger cars and commercial vehicles
- Section 3.4: Public passenger transport by road
- Section 3.5: Freight transport by road
- Section 3.6: Passenger rail rolling stock
- Section 3.7: Railway networks and Freight rail rolling stock
- Section 3.8: Manufacture of miscellaneous vehicles for other sectors
- Section 3.9: Infrastructure for low carbon transport

Where the bond portfolio includes several separately identifiable transport projects or groups of assets, these conditions must be met for each separately identified project or asset grouping. Bond issuers should determine and justify these project boundaries.

3.2 Mitigation requirements

The following sections (3.1.1 to 3.1.4) describe the criteria that will be relevant for certain asset and project categories. Table 1 provides information on what criteria must be met for each type of asset or activity being financed by the bond.

3.2.1. Automatic eligibility

All zero direct emissions transport along with key components and dedicated supporting infrastructure are automatically eligible and therefore certifiable under the Transport Criteria.

Note: for some asset categories that are zero direct emissions, additional criteria will need to be met. Consult Table 1 for further details.

3.2.2. Universal emissions thresholds

Table 4 presents the EU taxonomy emissions targets for p-km in 2020 through to 2025⁷, after which (2026 onwards) they drop to zero, and IEA 2DS emissions targets for t-km in 2020 through to 2050⁸. Supporting methodological notes are provided for additional aid in using the thresholds.

Table 4. Universal emissions thresholds for passenger and freight activity

	Year of Issuance			
	2020	2026	2030	2050
Direct Emissions				
Passenger Activity Threshold (g CO ₂ eq per p-km)	50	0	0	0

	Year of Issuance		
	2020	2030	2050
Direct Emissions			
Freight Activity Threshold (g CO ₂ eq per t-km)	25	21	18

Methodological note 1: Using the thresholds

The threshold to be used by the issuer for certification is the starting year of the bond (year of issuance). As an example of how the thresholds should be used, a bond for rail freight issued in 2020 should meet the threshold for 2020 for the lifetime of the bond, in this case 25g CO₂ per t-km.

Methodological note 2: Fleet Averages

For bonds financing vehicle fleet operation or manufacturing, fleetwide averages cannot be used to show compliance with the thresholds. Each vehicle must meet the threshold. The only exception is for vehicle fleets that transport public passengers – for example public bus fleets or taxi companies. More information can be found in the corresponding background paper, section 4.1.14.

Methodological note 3: Using load factors to calculate emissions intensity

For relevant fossil fuel or hybrid vehicles or rolling stock needing to meet the thresholds, the project, product or supporting infrastructure passes if:

vehicle emissions per km when fully loaded < passenger (per p-km) or freight (per t-km) threshold

⁷ For passenger transport, the thresholds align with the EU taxonomy on sustainable finance, based off reference data that gives a benchmark for low emitting vehicles across all modes of transport. In 2020, this is set at 50g CO₂ per p-km until 2025, after which (2026 onwards) only zero emissions vehicles (0g CO₂ per p-km) will be eligible.

⁸ Mobility Model (MoMo) data, *ibid*, provides global stock-wide average of emissions where, to qualify in 2020, assets need to perform better than the Global Fuel Economy Initiative (GFEI) target accounted for in the IEA 2 Degree Scenario (2DS) emission targets (50% better fuel economy for new vehicle registrations by 2030, compared to 2005).

load factor x full capacity

Example:

A municipality in the USA borrows money to replace a large proportion of its public bus fleet. Each new bus has 50 seats and emits 437 gCO₂/km when fully loaded. Buses are 30% full on average across all routes and times. A bond issued to pay for the buses is eligible under the Criteria if:

$$\frac{437}{0.3 \times 50} = 29.1 \text{ gCO}_2/\text{p-km} < \text{universal passenger (per p-km) threshold} \quad (\text{likely to be the case})$$

Example:

A private locomotives company in China borrows money to replace a large proportion of its freight rolling stock. Each new train can transport up to 3000 tonnes of cargo and emits 30,000 gCO₂/km when fully loaded. Trains are 60% full on average across all routes and times. A bond issued to pay for the trains is eligible under the Criteria if:

$$\frac{30000}{0.6 \times 3000} = 16.6 \text{ gCO}_2/\text{t-km} < \text{universal freight (per t-km) threshold} \quad (\text{likely to be the case})$$

Methodological note 4: load factors of passenger cars and commercial vehicles

For passenger cars and commercial vehicles, the load factor should always be taken as one passenger per vehicle in line with the Worldwide Harmonised Light Vehicle Test Procedure (WLTP), or other similar emissions testing procedures. The threshold metric for cars and commercial vehicles can therefore be taken in practice also as gCO₂/km.

As such there is no need to calculate average ridership, for example.

Additional notes

Thresholds currently do not differ between geographical regions and there are separate thresholds for passenger transport and freight transport.

For freight transport, a threshold has not yet been set in the EU taxonomy. This will be 50% lower than average reference CO₂ emissions of HDVs as defined for the Heavy Duty CO₂ Regulation, for which data will be available in the future. It should be noted that, in a situation where a subsequent threshold for freight in the EU taxonomy is lower and thus more stringent than what is currently stipulated in the Transport Criteria, such a threshold would be adopted in these criteria in future versions to reflect the highest green standards. Vice versa, these new thresholds would not be adopted into these criteria once known to avoid backsliding on standards.

3.2.3. Exclusion of dedicated fossil fuel transport

Railway lines and rolling stock

Infrastructure and rolling stock for railway lines that are built with the over-riding objective of transporting fossil fuels do not qualify under the Criteria. That is if any of the following are true:

- a) The primary purpose of the line is clearly described as fossil fuel freight by authoritative government sources; or, in the absence of this:
- b) More than 25% of the freight in t-km transported by the line, on average, is comprised of fossil fuels*; or alternatively:
- c) More than 25% of the rolling stock is dedicated to the transport of fossil fuels

*This can be demonstrated by issuers a number of ways:

- For operators of railway lines and rolling stock, receipts may provide data that establish the tonnage of fossil fuels transported as a percentage of total freight transported on the line.
- Lessors of rolling stock financing operations may demonstrate using their own internal data that the percentage of their clients that are engaged in fossil fuel activities or transport is below 25%.
- For banks issuing a bond in order to lease rolling stock, data may be provided which demonstrates that the proportion of rolling stock dedicated to fossil fuel transport is below 25%.

Road vehicles

For road freight vehicle and component manufacturers, purchasers and operators (see Table 1), any proportion of a vehicle or fleets cargo being made up of fossil fuels makes that vehicle or fleet ineligible and thus not certifiable.

3.2.4. Exclusion of biofuel vehicles

Road vehicles or rolling stock designated as using biofuels, even partially, do not qualify under these Criteria, even if meeting the relevant threshold for passenger or freight transport. The same exclusion rule holds for railway lines or networks that are being financed on which biofuel rolling stock will run.

Note: vehicles or rolling stock using petrol blends containing small percentages of biofuels as seen in some countries are still eligible so long as they meet the rest of the criteria relevant to them.

3.2.5. Independent project appraisals for new interurban rail transport

For new interurban rail projects (including high-speed rail and dedicated freight lines):

A project only qualifies if an independent project appraisal demonstrates that the investment will reduce total transport related greenhouse gas emissions (per p-km or per t-km) in the affected transport corridor by at least 25%.

Guidance on project appraisals

In the development of a new interurban rail project, it may already be subject to carbon accounting or appraisal procedures that could provide additional information. The project developer may thus have already chosen prior to pre-issuance an external party to develop the methodology or which owns a software tool that can provide the analysis. This may be a transportation planning software or similar.

In general, there are no specific requirements on the type of appraisal that is needed. A study commissioned by the project developer to determine the level of emissions reductions would be accepted as an appropriate appraisal. The two key factors that will be used to evaluate whether the study is suitably robust are:

- a) the developer has used reputable sources for references and emissions factors (for example government agencies, UNFCCC⁹, IEA, EEA) and;
- b) that the Verifier has checked and approved the study.

Assuming then that the study projects a minimum 25% emissions reduction in the transport corridor, the bond will suitably meet this criterion.

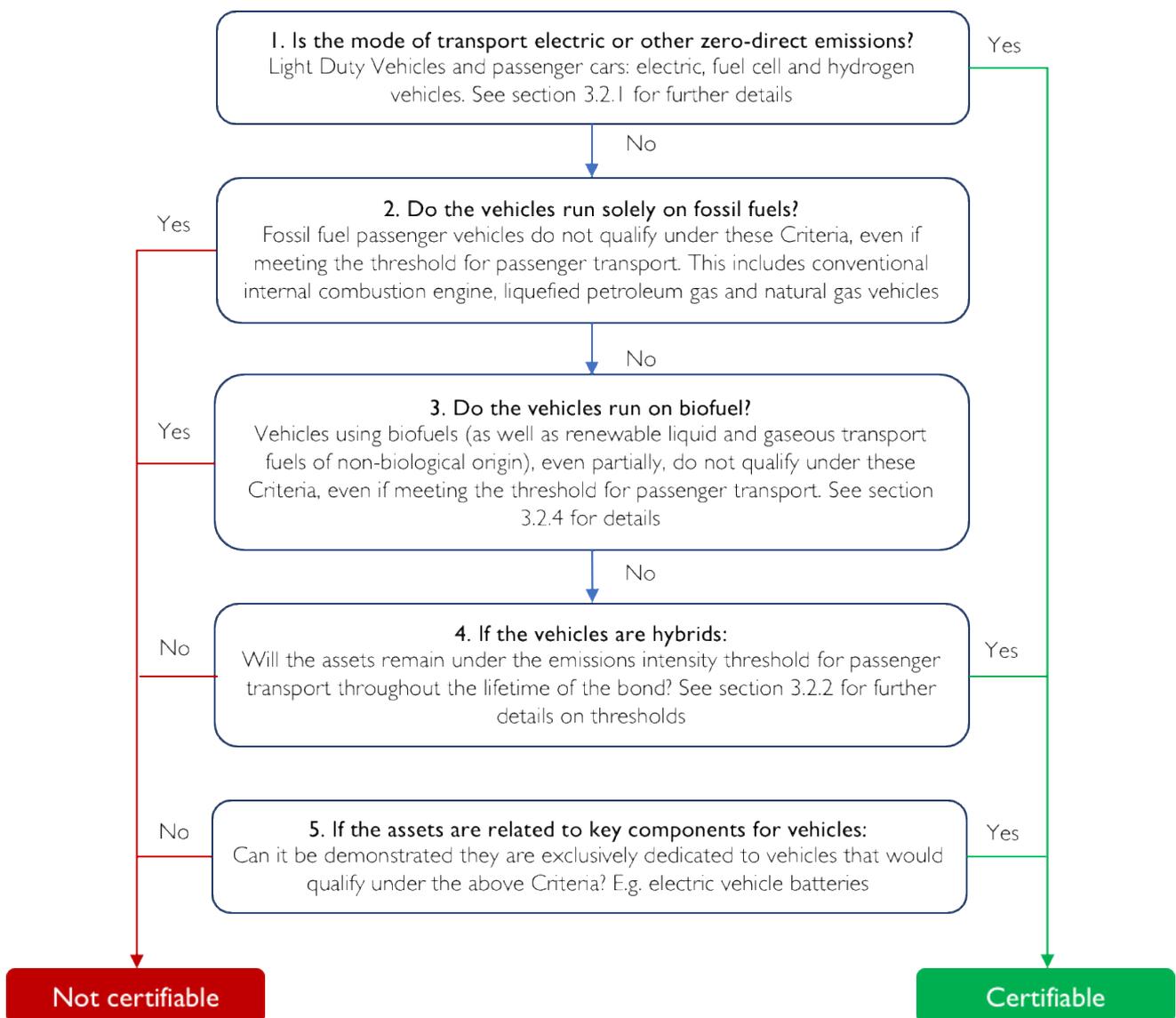
A range of greenhouse gas emissions methodologies and calculators exist for railway lines including, but not limited to: IFEU 2011, RFF-SNCF-ADEME 2011, NTNU 2011, UIC 2011, and AEA-CE Delft-TNO 2012.¹⁰ However, it is accepted the issuer will likely have identified its own appraisal methodology to meet this requirement. As such, the Climate Bonds Initiative do not specifically require or make distinctions between any type of appraisal or methodology and these are intended simply as examples for context.

Note that for bonds refinancing existing interurban rail projects, the issuer need not meeting this requirement.

⁹ The UNFCCC Clean Development Mechanism (CDM) illustrates one such example of a GHG methodology for modal shift from road to rail or sea in freight transport: <https://cdm.unfccc.int/methodologies/DB/4DOIK2WYP8P3AGAVJKT0CHY1NXJ4QP>

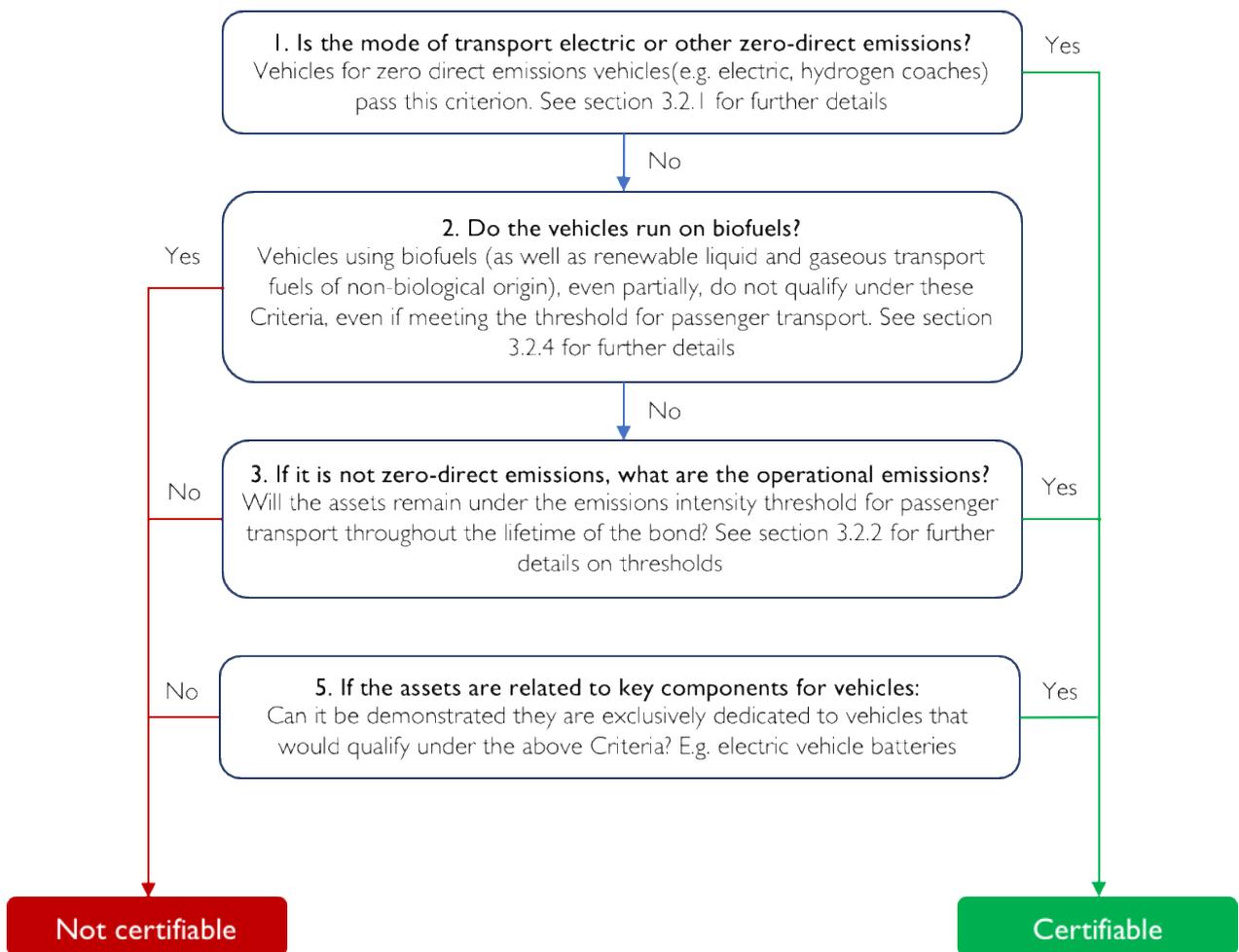
¹⁰ These example methodologies were taken from the following study, but is not necessarily an exhaustive list: https://uic.org/IMG/pdf/carbon_footprint_of_railway_infrastructure.pdf

3.3 Requirements for passenger cars and commercial vehicles



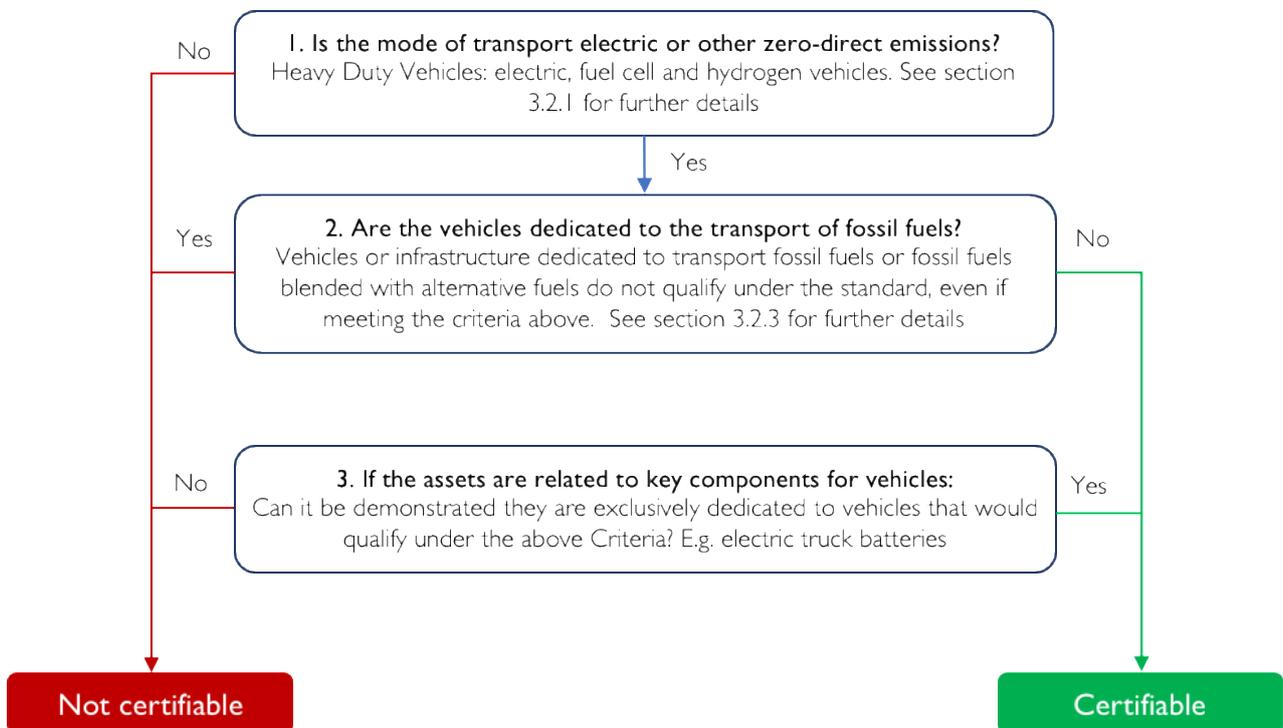
Note: for passenger cars and commercial vehicles, the load factor used in meeting the thresholds (if relevant) should always be one passenger. As such, the metric can be gCO2/km in practice.

3.4 Requirements for public passenger transport by road



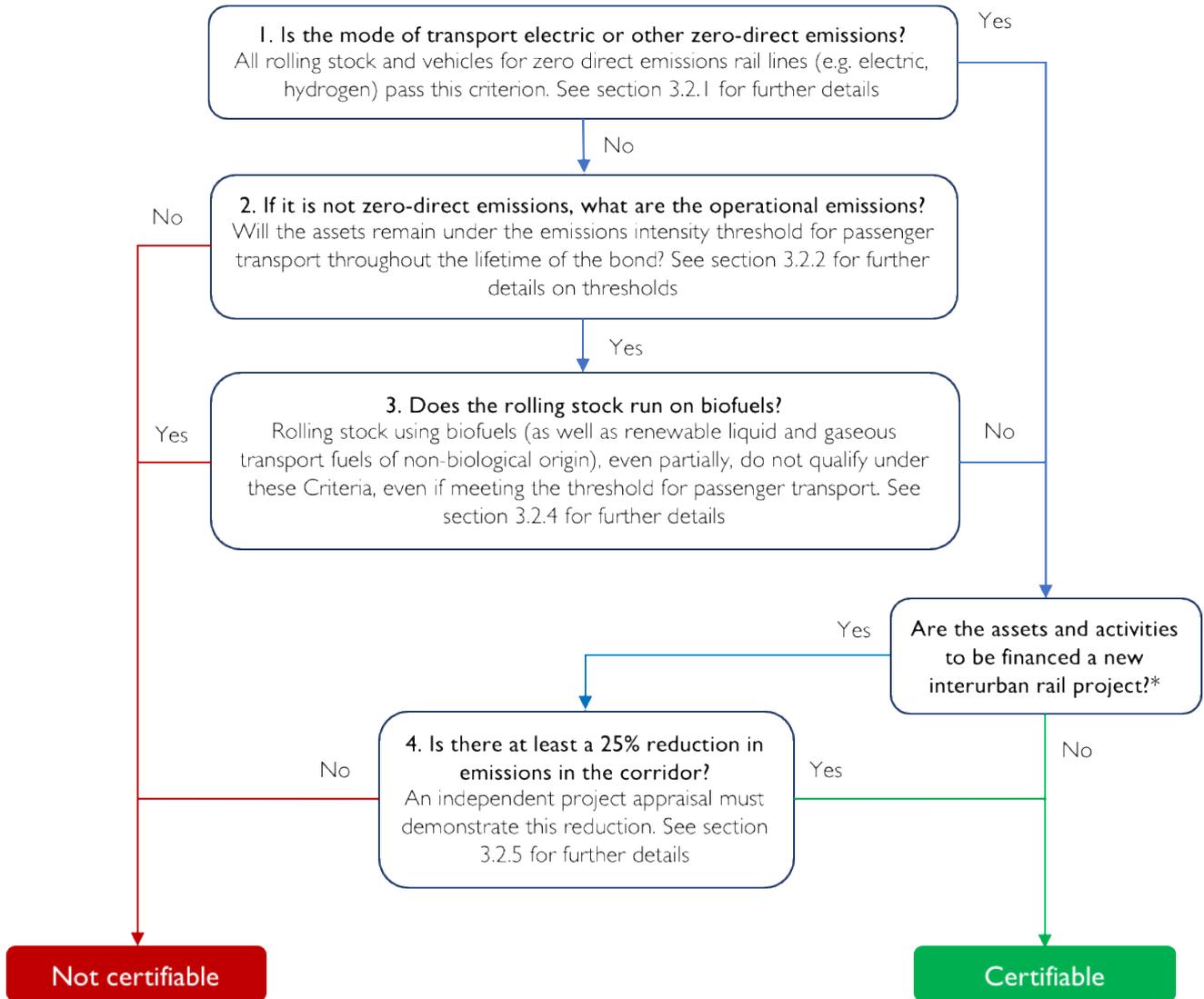
Note: for Bus Rapid Transit systems in developing countries (as defined by the OECD), the BRT Criteria¹¹ under the Climate Bonds Standard should be used. For such systems in developed countries (OECD defined), the Transport Criteria should continue to be used.

3.5 Requirements for freight transport by road



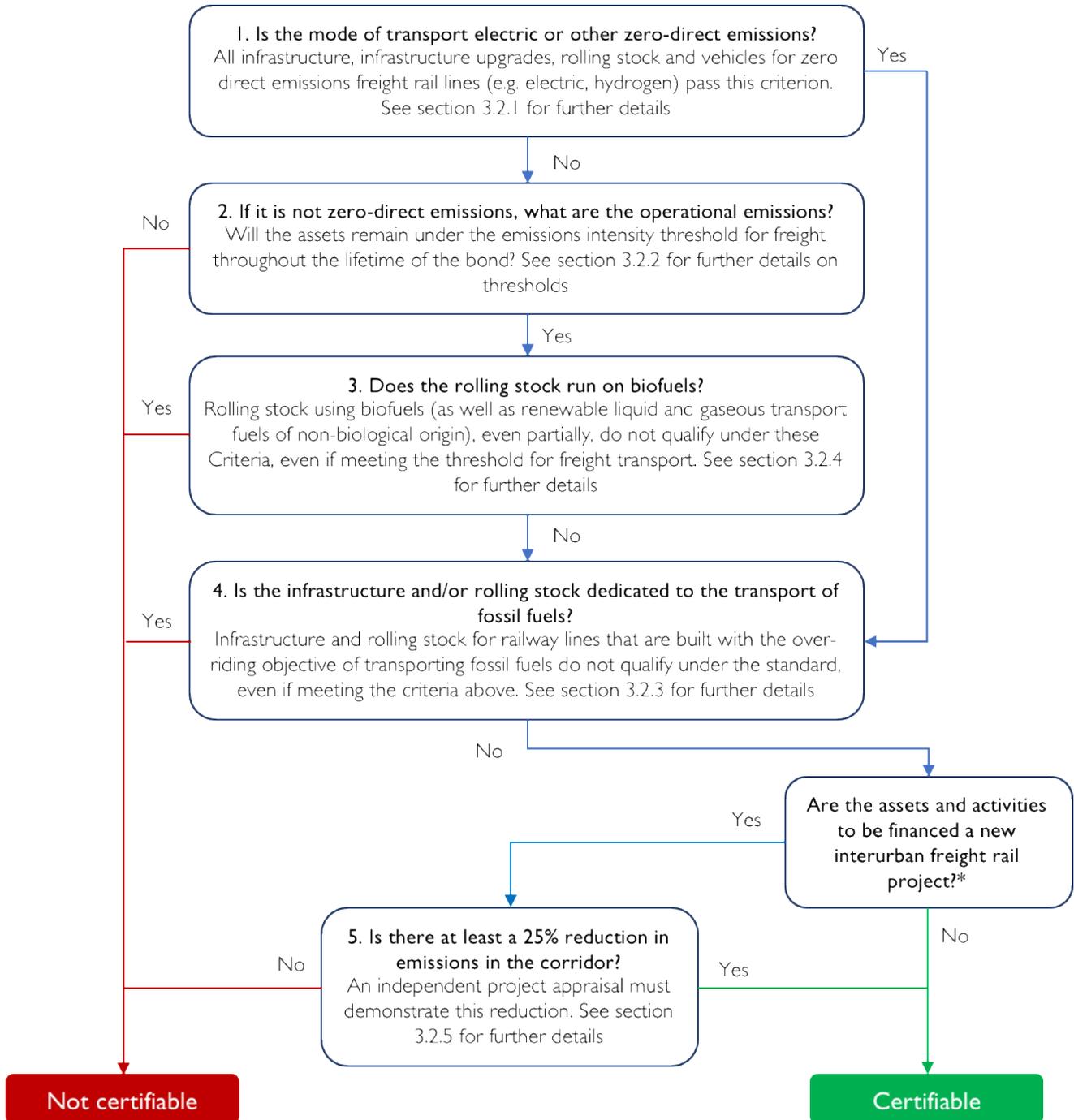
¹¹ https://www.climatebonds.net/files/files/standards/Land%20transport/final_brt_criteria_and_guidelines.pdf

3.6 Requirements for passenger rail rolling stock



*This requirement does not need to be met for bonds refinancing existing interurban rail lines, only for new ones.

3.7 Requirements for railway networks and freight rail rolling stock



*This requirement does not need to be met for bonds refinancing existing interurban rail lines, only for new ones.

3.8 Miscellaneous vehicles for other sectors

Resulting criteria

The manufacture of miscellaneous vehicles used in other sectors that are zero direct emissions, e.g. off-road diggers, are automatically eligible and therefore certifiable

Waste collection vehicles

In addition to their manufacture, the operation and leasing of waste collection vehicles that are zero direct emissions is also eligible under these criteria

3.9 Requirements for infrastructure for low carbon transport

The following other infrastructure types are automatically eligible and therefore certifiable:

- Dedicated charging and alternative fuel infrastructure (when separable from fossil fuel filling stations and garages)
- Retrofits for public transport infrastructure
- Public walking and cycling infrastructure; cycling schemes
- Construction and development, purchase, and/or operation of dedicated infrastructure for eligible rolling stock, railway lines and networks, for example: train and bus stations, inspection depots for freight rail rolling stock, traction maintenance depots / motive power depots for rolling stock, backup electricity generators, signalling infrastructure including buildings

The following infrastructure types are eligible on a case-by-case basis** and may include the following:

- ICT that improves or is necessary for asset utilization, flow and modal shift, regardless of transport mode (public transport information, car-sharing schemes, smart cards, road charging systems, etc.).
- Intermodal freight facilities
- Investment in terminals to improve journey times
- Smart freight logistics

*These are intended merely as examples. The principle is that many types of vehicles exist which may not fall easily or intuitively into the other categories in these criteria yet form a significant part of an issuer's transport assets and activities. This requirement is intended to allow for such instances. Other examples may exist which, providing they are zero direct emissions, are eligible under these requirements.

**The infrastructure types listed in box 2 are evaluated for certification on a case-by-case basis by the Climate Bonds Initiative. A 25% emissions reduction benchmark is intended as last resort if it is uncertain how effective or necessary the infrastructure assets are to decarbonisation. If Climate Bonds is not satisfied with the general information provided by the issuer to the verifier then it will request demonstration of such a reduction, or vice versa.

The following other infrastructure encourage maintained or increased ICE vehicle use patterns and are ineligible and therefore not certifiable:

- New roads, road bridges, road upgrades etc.
- Parking facilities
- Fossil fuel filling stations

4 Reporting

4.1 Mandatory reporting requirements

In accordance with the Climate Bonds Standard, it is the issuers responsibility to provide to the verifier the information necessary to demonstrate compliance with each component of these Criteria as described below. Verifiers must include this information in the scope of verification.

In accordance with the overarching reporting requirements as laid out in the Climate Bonds Standard V3.0, issuers are required to provide this information as follows:

- Pre-issuance reporting (supported by independent verifiers report): Full disclosure information relating to all nominated assets and projects at time of issuance.
- Post-issuance reporting (supported by independent verifiers report): Any amendments relating to all nominated assets and projects, including any additions or changes to allocated use of proceeds.
- Annual reporting thereafter: Any amendments to the previously provided information should be reported by the issuer by exception as changes arise. If there has been a reallocation of proceeds after post-issuance reporting, the issuer is required to re-engage the verifier to assess whether the newly identified assets and projects meet these Criteria. Equally, issuers with assets or activities needing to stay below the universal thresholds must show continued compliance in the annual reporting.

Additional disclosure requirements – version 2

Version 2 of the Transport Criteria now stipulates additional disclosure requirements for issuers to provide at the pre-issuance reporting stage. All data or information, numerical or otherwise, used to prove compliance with the criteria must be provided in the independent verifiers report.

For example, emissions data in accordance with the universal thresholds or freight data to prove less than 25% fossil fuel transport dedication for freight rail.

Appendix 1: Technical Working Group members

Members of the Low Carbon Transport Technical Working Group

- Heather Allen, Transport Research Laboratory
- Lewis Fulton, Davis Institute of Transportation Studies, University of California
- Michael Replogle, Institute for Transport and Development Policy
- Gary Hoffman, GM Hoffman Consulting
- Elizabeth Deakin, Berkeley Institute for Environment Design, University of California
- Karl Josef-Kuhn, Siemens
- Cornie Huizenga, Partnership on Sustainable, Low Carbon Transport (SLoCaT)
- Benoit Lefevre, World Resources Institute
- Arie Bleijenberg, Koios Strategy / The Netherlands Organisation for Applied Scientific Research (TNO)
- Prof. Dr. Danang Parikesit, Indonesian Transport Society / Universitas Gadjah Mada
- Carol Lee Rawn, Ceres
- John Dulac, Organisation for Economic Co-operation and Development (OECD), previously International Energy Agency (IEA)
- Pierpaolo Cazzola, International Transport Forum (ITF) / OECD, previously International Energy Agency (IEA)

Special thanks go also to Peter Anderson of the European Investment Bank (EIB) and Andreas Barkman of the European Environment Agency (EEA) for their kind input and engagement.

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