

Land Transport Criteria

The Land Transport Sector Eligibility Criteria of the Climate Bonds Standard & Certification Scheme

Updated: April 2023

NOTE: *These Criteria can be used to certify Use-of-Proceeds Instruments and Assets, and also in some circumstances, Sustainability-Linked Debt Instruments and Entities per the [Climate Bonds Standard v4.0](#)*

Revision	Date	Summary of Changes
Rev. 2.2	13 April 2023	Revisions to enable Entity Certification and SLD Certification in line with release of CBS v4.0
Rev. 2.1	August 2022	Clarification of years new thresholds are applicable (viz. passenger transport thresholds become zero from 2026 onwards). Clarification that Hydrogen vehicles are eligible as opposed to Biofuel vehicles.
Rev. 2.0	October 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.
Rev. 1.0	February 2016	First publication of original Criteria

Acknowledgements

Climate Bonds gratefully acknowledges the Technical and Industry Working Group members who provided their time and expertise during the development of these Criteria. Members are listed in

Appendix A: at the end of this document.

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.

Definitions

Applicant: The term or name for any potential bond issuer, or non-financial corporate entity that might seek certification under this Criteria.

Certified Entity: The entity or part thereof which is being certified under the Climate Bonds Standard. Currently, Entity Certification is limited to non-financial Entities or segregated segments thereof, for which the Climate Bonds Initiative has Climate Bonds Standard Sector Criteria for Entity Certification.

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

Climate Bonds Standard (CBS): A screening tool for investors and governments that allows them to identify green bonds the proceeds of which 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 Climate Bonds Standard 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 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 CBS, including the adoption of additional sector Criteria, (ii) Approved verifiers, and (iii) Applications for Certification of a bond under the CBS. The CBSB is constituted, appointed, and supported in line with the governance arrangements and processes as published on the Climate Bonds website.

Climate Bond Certification: allows the applicant to use the Climate Bond Certification Mark in relation to that bond. Climate Bond Certification is provided once the independent CBSB is satisfied the bond conforms with the CBS.

Critical interdependencies: The asset or activity's boundaries and interdependencies with surrounding infrastructure systems. Interdependencies are specific to local context but are often connected to wider systems through complex relationships that depend on factors 'outside the asset fence' that could cause cascading failures or contribute to collateral system benefits.

Green Bond: A green bond is a bond of which the proceeds are allocated to environmental projects or expenditures. 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 or expenditures, but in practice they have mostly been earmarked for climate change projects.

Grid assets and projects: Assets and projects relating to the transmission and distribution, and storage of electricity.

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

Investment Period: The interval between the bond's issuance and its maturity date. Otherwise known as the bond tenor.

Sustainability-Linked Debt (SLD): Any debt instrument for which the financial and structural characteristics can vary depending on whether the issuer achieves predefined Sustainability/ ESG objectives. Such objectives are measured through predefined KPIs and assessed against predefined performance targets. Proceeds of SLD are intended to be used for general purposes.

Technical Working Group (TWG): A group of key experts from academia, international agencies, industry and NGOs convened by Climate Bonds. 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 (see below) 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.

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1 Introduction

1.1 The Climate Bonds Standard

Investor demand for climate bonds is strong and is expected to 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 will be essential to improve confidence and transparency, which in turn will enable further strong growth in the market.

Today, 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. Proposals are currently under consultation to also expand certification to entities with climate integrity.

A key part of the Standard is a suite of sector-specific eligibility Criteria. Each sector-specific Criteria sets climate change benchmarks for that sector that are used to screen debt instruments, assets and/or entities, so that only those that have climate integrity, either through their contribution to climate mitigation, and/or to adaptation and resilience to climate change, will be certified.

These sector-specific Criteria are determined through a multi-stakeholder engagement process, including TWG and IWG, convened and managed by Climate Bonds, and are subject to public consultation. Finally, they are reviewed and approved by the Climate Bonds Standard Board (CBSB).

The second key part of the Climate Bonds Standard (CBS) is the overarching [Climate Bonds Standard v4.0](#). This documents the cross-sectoral criteria all certified instruments/ assets/ entities must meet, in addition to meeting the sector specific Criteria.

1.2 Environmental scope of the Land Transport Criteria

Currently, the Land Transport Sector Criteria address climate change mitigation only.

1.3 What can be certified under the Land Transport Criteria

Use-of-Proceeds¹ instruments, Sustainability-Linked Debt Instruments, Assets and Entities relating to various land transport activities and assets can be Certified using these Land Transport Criteria. **Table 1** below provides an overview of which assets and activities are eligible for which types of Certification and a forward guide to any land transport-related eligibility criteria for those Certifications. Additional overarching guidance on Sustainability-Linked Debt and Entity Certification is given in **Section 4**.

See also the [Climate Bonds Standard v4.0](#) for any cross sectoral requirements for Use-of-Proceeds, Sustainability-Linked Debt, Asset or Entity Certification. These cross sectoral requirements must be met in addition to the land transport-specific requirements described in this document.

1.4 Documents supporting these Criteria

Land Transport-specific information to support Applicants and Verifiers is available at [Low Carbon Transport](#) as follows:

- [Background Paper](#) that details why the criteria were chosen

In addition, the following cross cutting information to support Applicants and Verifiers is available as follows:

- The [Climate Bonds Standard v4.0](#): contains the requirements of the overarching CBS

¹ Use-of-Proceeds (UoP) is used as shorthand throughout this document for a variety of targeted finance instruments, including green loans, repos, and asset-backed securities. Annex 1 of the [Climate Bonds Standard v4.0](#) details the full list of instruments that can be certified.

- The [Climate Bonds Standard v4.0 Entity and Sustainability-Linked Debt Checklist documents](#): provides further information on the cross-sectoral requirements for Entity and Sustainability-Linked Debt Certification respectively.

For more information on Climate Bonds and the Climate Bonds Standard and Certification Scheme, see www.climatebonds.net.

1.5 Revisions to these Criteria




These Criteria will be reviewed three years after launch, or potentially earlier if the need arises, at which point the TWG will take stock of issuances that arise in the early stages and any developments in improved methodologies and data that can increase the climate integrity of future bond issuances. As a result, the Criteria are likely 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.

2 Land Transport activities in scope and associated Certifications

To summarise, these Criteria can variously be used to certify Use-of-Proceeds Instruments, Sustainability-Linked Debt Instruments, Assets and Entities 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

Table 1. provides a summary of what is eligible for what Certification and signposts to any relevant Criteria detailed in **Section 3**. To guide the interpretation of the criteria requirements, **Table 1** provides signposting as follows:








	A green circle indicates these proceeds/ assets/ activities and any associated debt instruments (if any) when fully described and documented, are automatically eligible for Certification.
	An orange square indicates that the eligibility of these proceeds/ assets/ activities and any associated debt instrument is conditional on meeting specific criteria.
	A red triangle indicates that these proceeds/ assets/ activities and any associated debt instrument are not eligible for certification under any circumstances.







It is the Applicant's responsibility to provide the information to prove compliance with each component of these Criteria. Verifiers must include this information in the scope of verification.






For Use-of-Proceeds and Asset Certification, where the certification portfolio includes several separately identifiable projects, expenditures, or groups of assets, these criteria must be met for each separately identified project or asset grouping. Applicants should determine these project boundaries, which may be based on geographical and/or supply chain linkages.







For Entity and SLD Certification, further guidance is given in **Section 4**.







Table 1: Illustrative eligible certifications under the Land Transport Criteria

Sub-sector within Land Transport	Example eligible proceeds/ assets/ activities	Mitigation Criteria (for UoP and Asset Certification)	Mitigation Criteria (for Entity and SLD Certification)	Adaptation & Resilience
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 	 section 3.2.1	Dedicated to electric or other zero direct emission vehicles	n/a
	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 	 Section 3.2.1	n/a	n/a
	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 	 Section 3.2.2 Section 3.2.4	n/a	n/a
	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	n/a	n/a
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 	 Section 3.2.1	Dedicated to electric or other zero direct emission vehicles	n/a
	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 	 Section 3.2.1	n/a	n/a
	Manufacture and upgrade, purchase, and/or operation of other buses and coaches, for example:		n/a	n/a

Sub-sector within Land Transport	Example eligible proceeds/ assets/ activities	Mitigation Criteria (for UoP and Asset Certification)	Mitigation Criteria (for Entity and SLD Certification)	Adaptation & Resilience
	<ul style="list-style-type: none"> Public bus manufacturing Banks leasing hybrid vehicles Private coach companies operating hybrid vehicle fleets 	Section 3.2.2 Section 3.2.4		
	Manufacture and upgrade, purchase, and/or operation of biofuel buses and coaches	 No criteria as ineligible	n/a	n/a
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 	 Section 3.2.1 Section 3.2.3	Dedicated to electric or other zero direct emission vehicles AND not dedicated to the transport of fossil fuels	n/a
	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	n/a	n/a
	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 	 Section 3.2.1	n/a	n/a
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 	 Section 3.2.1	Dedicated to rolling stock and vehicles for electric or other zero direct emission rail lines	n/a
	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 	 Section 3.2.1 Section 3.2.5 (if new interurban rail)	Dedicated to rolling stock and vehicles for electric or other zero direct emission rail lines	n/a

Sub-sector within Land Transport	Example eligible proceeds/ assets/ activities	Mitigation Criteria (for UoP and Asset Certification)	Mitigation Criteria (for Entity and SLD Certification)	Adaptation & Resilience
	<ul style="list-style-type: none"> Train companies operating electrified passenger rail rolling stock 			
	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 	 Section 3.2.2 Section 3.2.4 Section 3.2.5 (if new interurban rail)	n/a	n/a
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 	 Section 3.2.1 Section 3.2.3	Dedicated to rolling stock and vehicles for electric or other zero direct emission rail lines AND not dedicated to the transport of fossil fuels	n/a
	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 	 Section 3.2.2 Section 3.2.3 Section 3.2.4 Section 3.2.5 (if new interurban rail)	n/a	n/a
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 	 Section 3.2.1	Dedicated to rolling stock and vehicles and/ or infrastructure for electric or other zero direct emission rail lines AND not dedicated to the transport of fossil fuels	n/a
	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 	 Section 3.2.1 Section 3.2.3 (if freight transported on the line)	Dedicated to rolling stock and vehicles and/ or infrastructure for electric or other zero direct	n/a

Sub-sector within Land Transport	Example eligible proceeds/ assets/ activities	Mitigation Criteria (for UoP and Asset Certification)	Mitigation Criteria (for Entity and SLD Certification)	Adaptation & Resilience
	<ul style="list-style-type: none"> Network operators operating a regional electrified railway network 	Section 3.2.5 (if new interurban rail)	emission rail lines AND not dedicated to the transport of fossil fuels	
	<p>Construction and development, purchase, and/or operation of railway lines not used exclusively by zero direct emissions rolling stock, for example:</p> <ul style="list-style-type: none"> Construction of interurban railway lines Leasing of railway contracts Network operators operating a regional railway network 	 Section 3.2.2 Section 3.2.3 Section 3.2.4 (if freight transported on the line) Section 3.2.5 (if new interurban rail)	n/a	n/a
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)	<ul style="list-style-type: none"> Manufacture, operation and leasing of zero direct emissions waste collection vehicles 	 Section 3.2.1	Dedicated to electric or other zero direct emission vehicles	n/a
	<p>Manufacture of zero direct emissions miscellaneous vehicles used in other sectors, for example:</p> <ul style="list-style-type: none"> Mobile stairways or buggies Off-road excavators or concrete trucks used in construction 	 Section 3.2.1	Dedicated to electric or other zero direct emission vehicles	n/a
	<p>Manufacture of key components to be used in eligible vehicles, for example:</p> <ul style="list-style-type: none"> Manufacturing of high-density lithium-ion batteries Leasing of high-density lithium-ion batteries 	 Section 3.2.1	n/a	n/a
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.	Construction of dedicated infrastructure for other types of emissions-free travel such as public walking and cycle lanes	 Section 3.2.1	Dedicated to dedicated emissions free travel	n/a
	Dedicated charging and alternative fuel infrastructure (when separable from fossil fuel filling stations and garages)	 Section 3.2.1	Dedicated to electric or other zero direct emission charging infrastructure	n/a

Sub-sector within Land Transport	Example eligible proceeds/ assets/ activities	Mitigation Criteria (for UoP and Asset Certification)	Mitigation Criteria (for Entity and SLD Certification)	Adaptation & Resilience
<p>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.</p> <p>(See Section 3.9 for an overview of the criteria for this asset category)</p>	<p>Construction and development, purchase, and/or operation of dedicated infrastructure for eligible rolling stock, railway lines and networks, for example:</p> <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 	 <p>section 3.9 (automatically eligible if 100% dedicated to eligible lines and vehicles)</p>	Dedicated to eligible lines and vehicles	n/a
	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.)	 <p>Section 3.9 (Eligible on a case-by-case basis)</p>	n/a	n/a
	Construction of facilities for intermodal freight and development of smart freight logistics	 <p>Section 3.9 (Eligible on a case-by-case basis)</p>	n/a	n/a
	Development and integration of transport and urban development planning systems - for example, improvements to terminals to improve journey times	 <p>Section 3.9 (Eligible on a case-by-case basis)</p>	n/a	n/a
	Construction of new roads, road bridges, road upgrades, parking facilities, fossil fuel filling stations, etc.	 <p>No criteria as ineligible</p>	n/a	n/a
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.	 <p>Refer to CBS4.0</p>	n/a	n/a

2.1 Alignment with other Sector Criteria

Table 2 identifies which Sector Criteria should be referred to for other land transport-related assets and activities which are not in the scope of these Criteria.

Table 2: Assets or projects partially or wholly covered by other sector criteria

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>
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>
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>
Transport sector 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 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	<p>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 Energy Criteria (for example, electricity generated through solar power must meet the Solar Criteria).</p>
Shipping vessels	<p>Assets relating to water transport, be it passenger or freight, such as vessels, will be applicable for certification under the Shipping Criteria.</p>

3 Eligibility Criteria for Land Transport

3.1 Overview

When seeking certification an issuer or verifier can first consult **Table 1** to determine which criteria are pertinent for Use-of-Proceeds and Asset Certification, depending on the sub-sector of land transport. The diagrams in sections 3.3 - 3.9 then provide a broader overview of how criteria are met for each sub-sector as follows:

- **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

In addition, **Section 3.2** described the cross cutting emissions thresholds and criteria and associated methodological notes that are referenced in many of the sub-sectoral criteria per **Sections 3.3** to **Section 3.9**.

3.2 Cross cutting eligibility emissions thresholds and criteria

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.

3.2.2 Universal emissions thresholds

Table 3 presents the EU taxonomy emissions targets for p-km in 2020 through to 2025², after which (2026 onwards) they drop to zero, and IEA 2DS emissions targets for t-km in 2020 through to 2050³. Supporting methodological notes are provided for additional aid in using the thresholds.

Table 3: Universal emissions thresholds for passenger and freight activity

Direct Emissions	Emissions thresholds per year of issuance			
	2020	2026	2030	2050
Passenger Activity Threshold (g CO ₂ eq per p-km)	50	0	0	0
Freight Activity Threshold (g CO ₂ eq per t-km)	25		21	18

² 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.

³ 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).

3.2.3 Methodological notes on use of these thresholds for determining compliance

3.2.3.1 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.

3.2.3.2 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.

3.2.3.3 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:

Formulae:

$$\frac{\text{vehicle emissions per km when fully loaded}}{\text{Load factor} \times \text{full capacity}} < \text{universal passenger (per p – km) threshold}$$

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:

$$\frac{437}{0.3 \times 50} < \text{universal passenger (per p – km) threshold}$$

$$29.1 \text{ gCO}_2/\text{p – km} < \text{universal passenger (per p – km) threshold}$$

(likely to be the case until 2026)

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:

$$\frac{3,000}{0.6 \times 3,000} < \text{universal freight (per t – km) threshold}$$

$$16.6 \text{ gCO}_2/\text{t – km} < \text{universal freight (per t – km) threshold}$$

(likely to be the case until 2050)

3.2.3.4 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.

3.2.3.5 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.

3.2.4 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.

3.2.5 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.*

3.2.6 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:

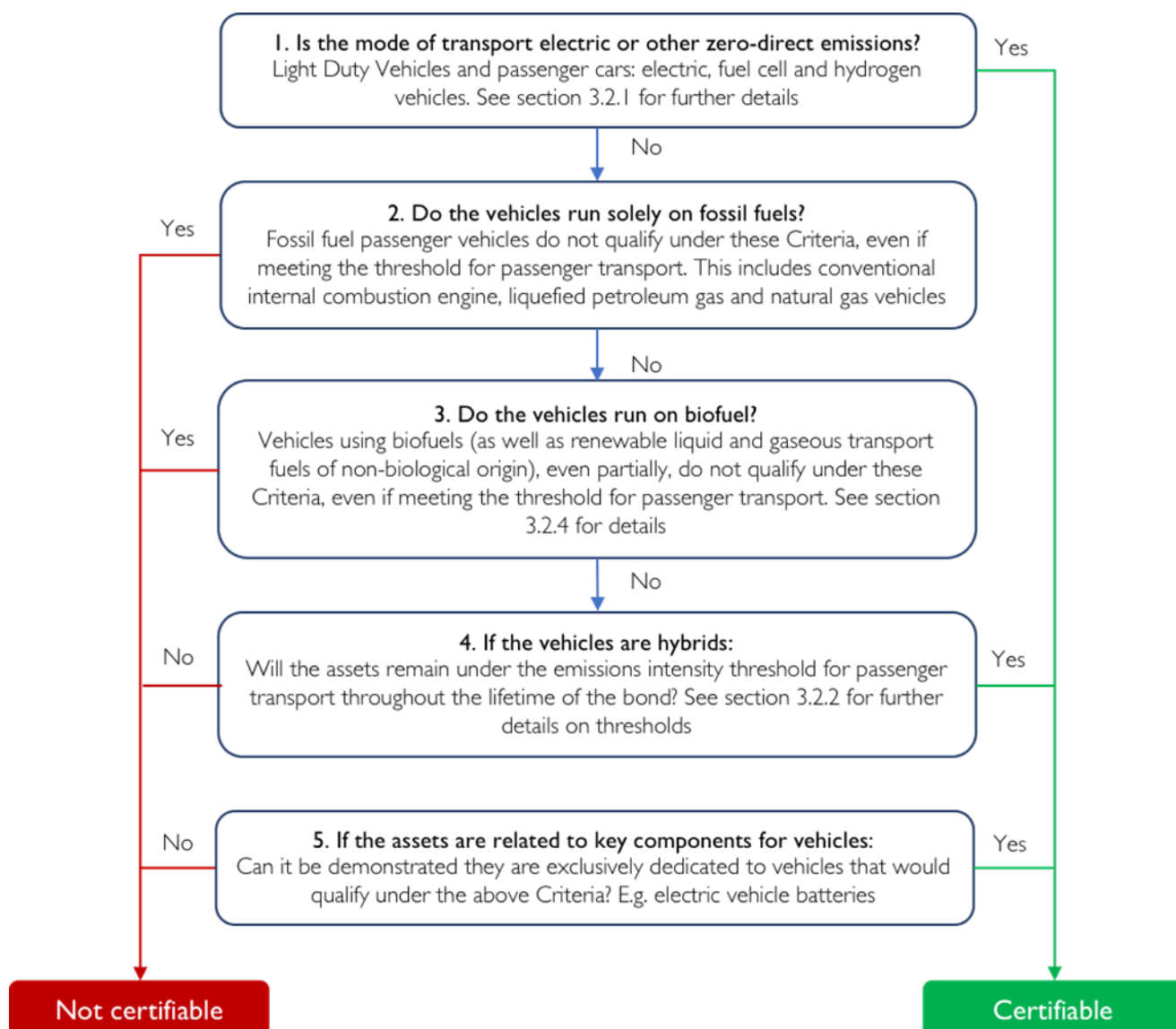
- a) the developer has used reputable sources for references and emissions factors (for example government agencies, UNFCCC, IEA, EEA) and;
- b) that the Verifier has checked and approved the study.

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. 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.

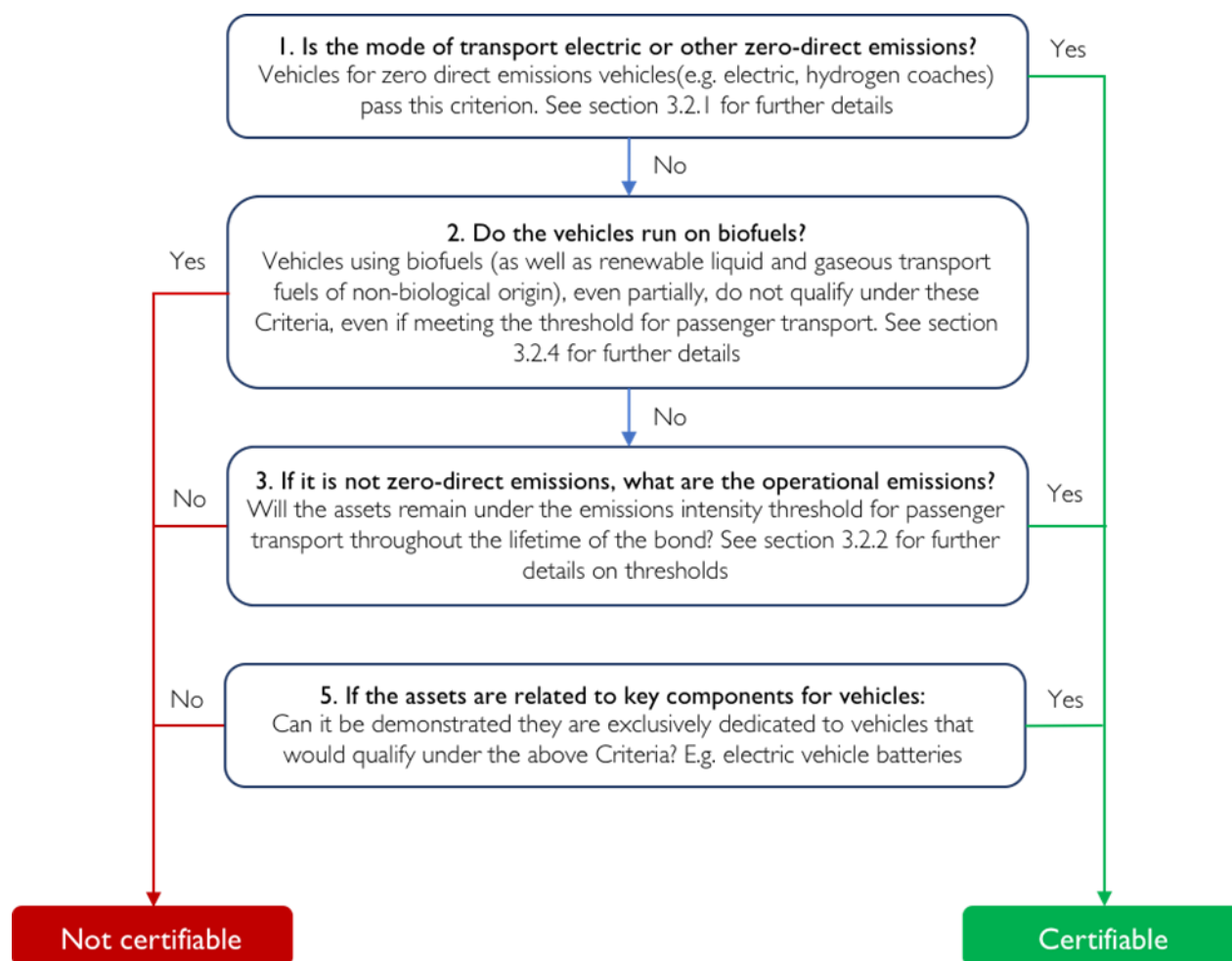
Note *that for bonds refinancing existing interurban rail projects, the issuer need not meeting this requirement.*

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.

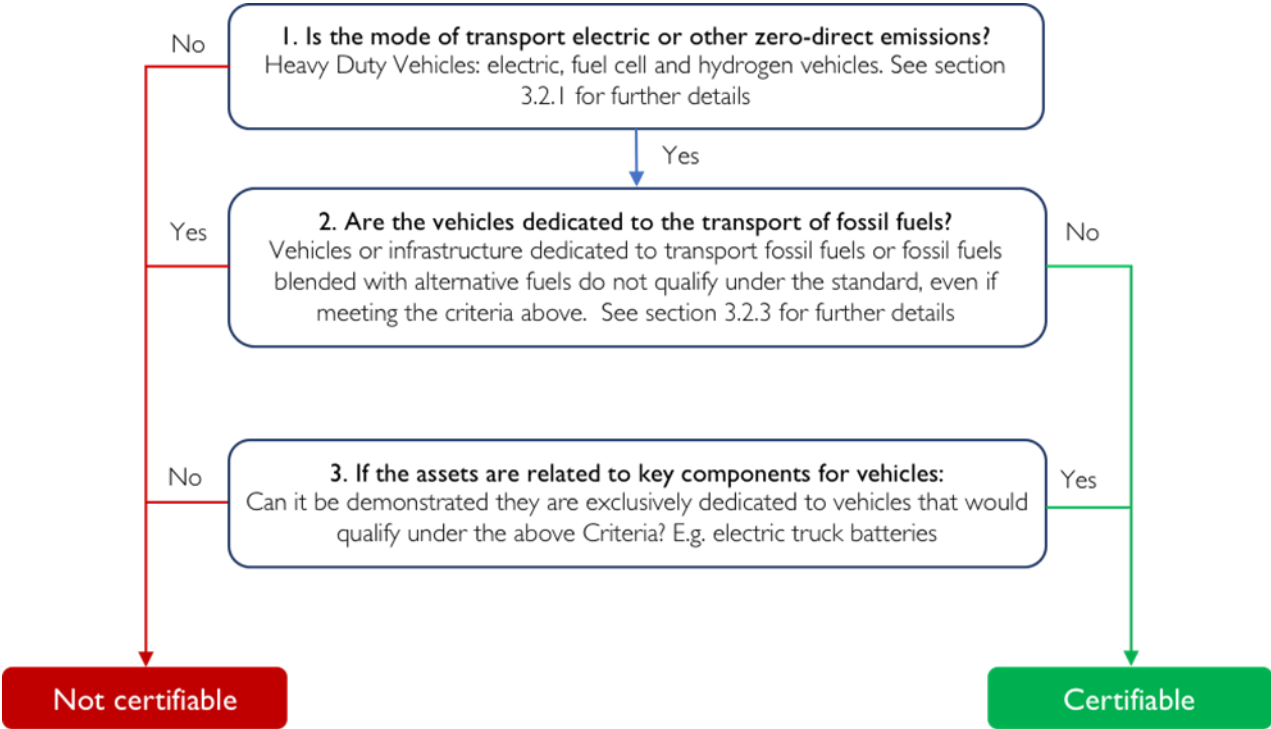
3.4 Requirements for public passenger transport by road



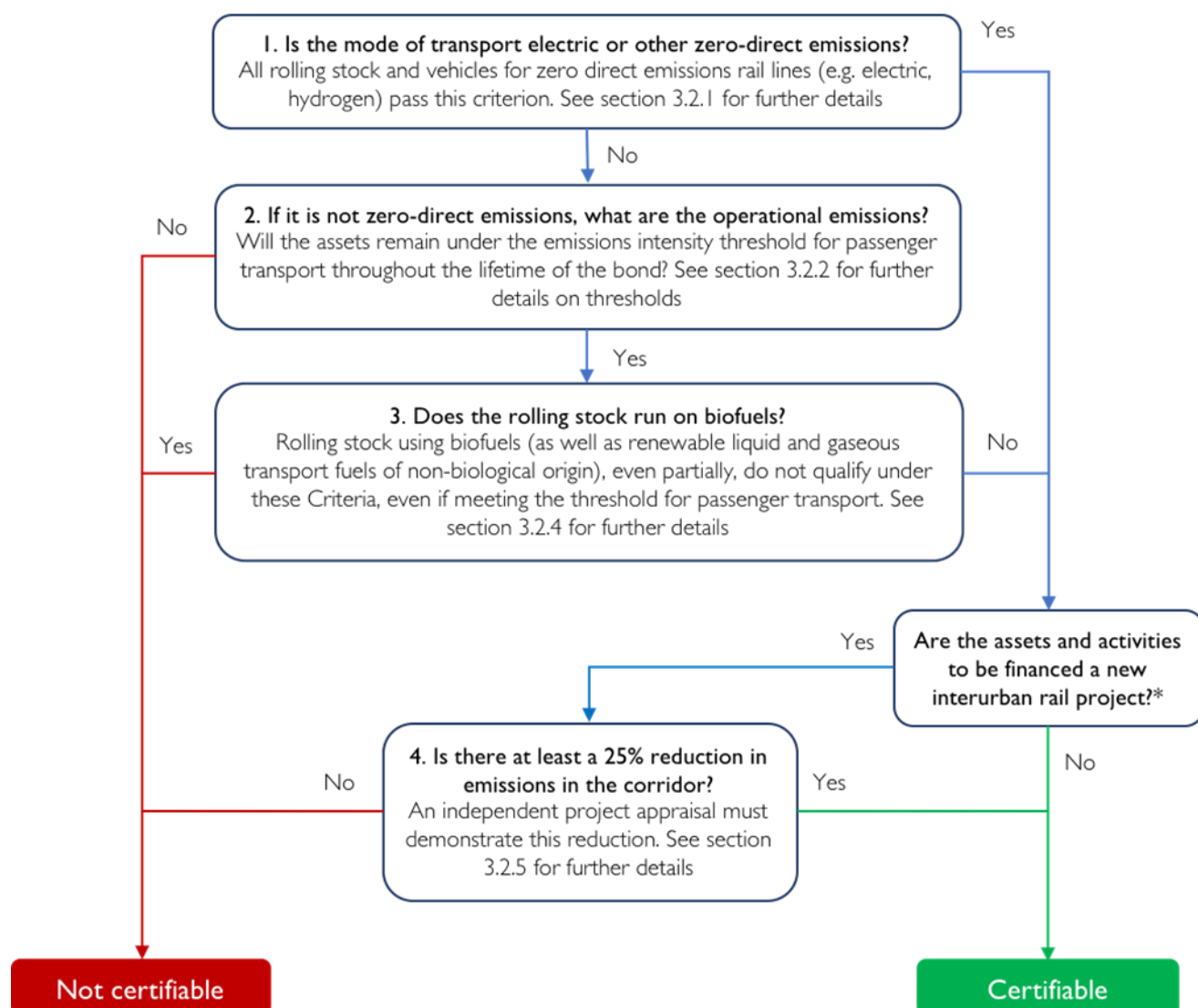
Note: for Bus Rapid Transit systems in developing countries (as defined by the OECD), the BRT Criteria⁴ under the Climate Bonds Standard should be used. For such systems in developed countries (OECD defined), the Transport Criteria should continue to be used.

⁴ BRT Criteria and Guidelines (climatebonds.net)

3.5 Requirements for freight transport by road

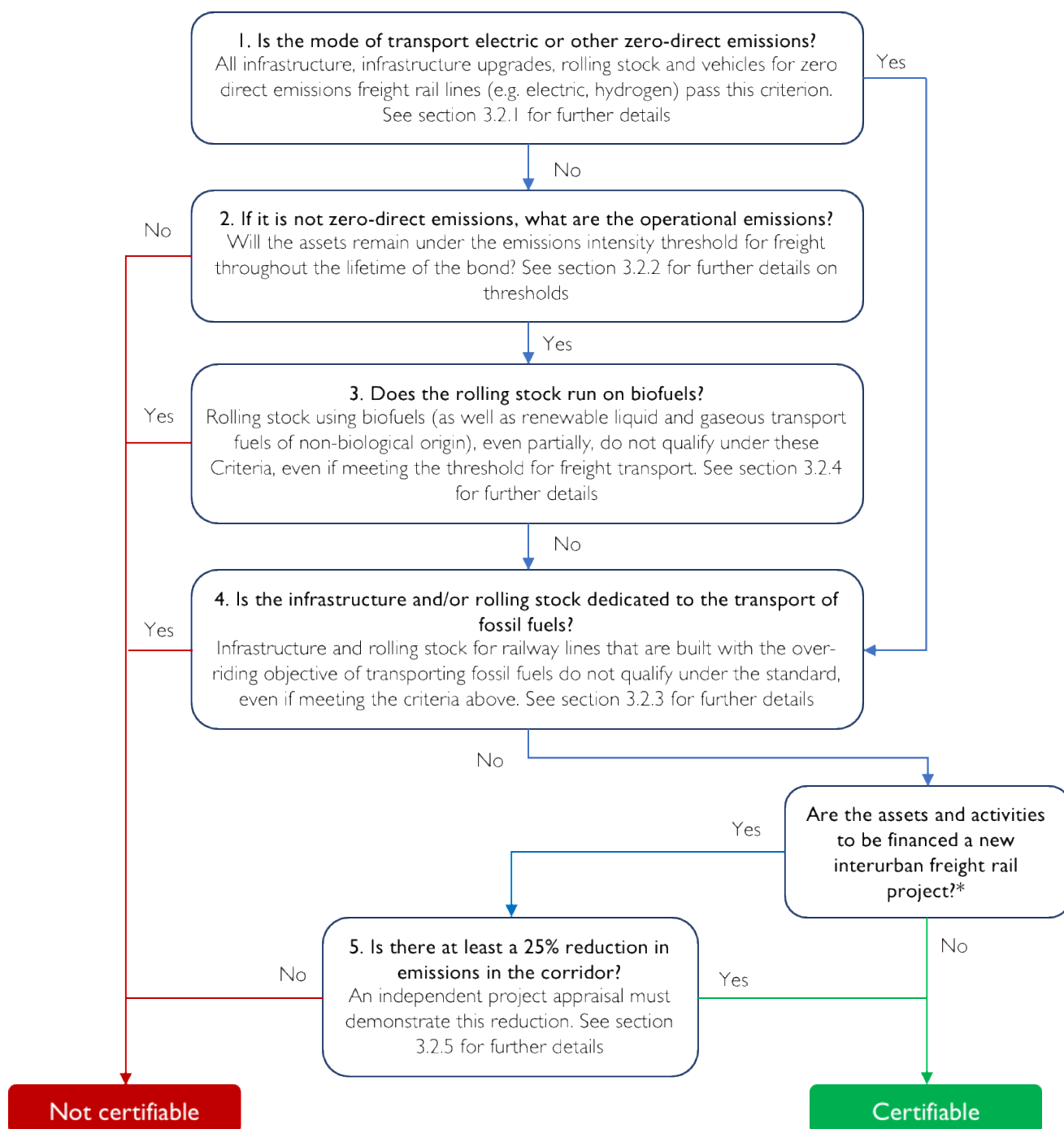


3.6 Requirements for passenger rail rolling stock



Note: * 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



Note: 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 certifiable⁵:

- 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 basis⁶ 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 time*
 - *Smart freight logistics*
-

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

⁵ 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.

⁶ 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.

4 Additional notes for Certification of Entities and Sustainability-Linked Debt

At this time, where Entity and SLD Certification are available only one level of Entity and SLD Certification is available, namely Level 1: “Aligned”. Achieving this requires:

- **Entity Certification:** At the time of certification, the Certified Entity’s activity meets the criteria listed in **Table 1** and they are committed to remaining in compliance with these criteria to 2050
- **SLD Certification:** At the time of certification, the activities represented by the Performance Targets linked to the SLD meet the criteria listed in **Table 1** and the future Performance Targets to 2050 continue to meet those criteria going forward.

Climate Bonds is considering the criteria that would enable Level 2 certification (Level 2: “Transition”) in line with Entity and SLD certification in other sectors.

See also the [Climate Bonds Standard v4.0](#) for the cross sectoral requirements for Entity and SLD Certification relating to Transition Plans and Disclosure for the Certified Entity and requirements in respect of the Parent Group (if any). These cross sectoral requirements must be met in addition to the land transport-specific requirements described here.

NOTE: The Climate Bonds Standard allows for the certification of only part of a company or group of companies (the ‘Certified Entity’), or SLD that relates to only part of a company or group of companies. See the [Climate Bonds Standard v4.0](#) for full details. This flexibility enables the certification of, for example, a subsidiary dedicated to the manufacture of electric vehicles, separate from the certification of other segments or subsidiaries of the company or group of companies of which it forms a part.

Appendix A: TWG and IWG members

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