

## **BANGKOK MASS TRANSIT SYSTEM PCL PRE-ISSUANCE VERIFICATION LETTER**

### **LOW CARBON TRANSPORTATION CRITERIA OF THE CLIMATE BONDS STANDARD**

**Type of engagement:** Assurance Engagement

**Period engagement was carried out:** October 2021

**Approved verifier:** Sustainalytics

**Contact address for engagement:** De Entrée 35-37 – 1101 BH, P.O. Box 22703 – 1100 DE, Amsterdam, The Netherlands

**Pre-Issuance Engagement Team:** Cristhian Veintimilla, [cristhian.veintimilla@sustainalytics.com](mailto:cristhian.veintimilla@sustainalytics.com),  
Arnab Deb, [arnab.deb@morningstar.com](mailto:arnab.deb@morningstar.com)  
Maliha Taj, [Maliha.taj@morningstar.com](mailto:Maliha.taj@morningstar.com)

---

#### **Scope and Objectives**

Bangkok Mass Transit System PCL (BTSC, or the “Company”), an affiliate and mass rail transit unit of BTS Group Holdings PCL (BTSG) has engaged Sustainalytics to review and verify that BTSC’s green bond meets the requirements under the Low Carbon Transportation criteria of the Climate Bonds Standard.<sup>1</sup>

BTSC operates and maintains Sky Train system, an elevated trackwork covering 68.25 kilometers of train track and Bus Rapid Transit system with 12 stations through 15 kilometers of dedicated bus lanes in Bangkok. BTSG was founded in 1968 and is headquartered in Bangkok, Thailand. BTSC intends to issue green bonds and use the proceeds to finance development of electrified transportation services and related infrastructure while supporting Company’s and BTS Group’s objective of reducing energy consumption and allied GHG emissions.

#### **Climate Bonds Standard Criteria**

Pre-issuance requirements under Version 3.0<sup>2</sup>:

- Low Carbon Transportation
  - Public passenger transport - rolling stock, electrical and mechanical work including maintenance costs

#### **Issuing Entity’s Responsibility**

BTSC was responsible for providing information and documents relating to:

- The details concerning the selection process for the Nominated Projects
- The details of the Nominated Projects
- The management systems for internal processes and controls for Nominated Projects, including: tracking of proceeds, managing unallocated proceeds and Earmarking funds to Nominated Projects
- The details of commitments for reporting prior to issuance, including: investment areas, management of unallocated proceeds and frequency of periodic Assurance Engagements

#### **Independence and Quality Control**

Sustainalytics, a leading provider of ESG and corporate governance research and ratings to investors, conducted the verification of BTSC’s green bond, issued to finance low carbon transportation and provided an independent opinion informing BTSC as to the conformance of the green bond with the Pre-Issuance requirements and Low Carbon Transportation criteria of the Climate Bonds Standard.

Sustainalytics has relied on the information and the facts presented by BTSC and BTSG. Sustainalytics is not responsible if any aspect of the Nominated Projects referred to in this opinion including estimates, findings, opinions, or conclusions are incorrect. Thus, Sustainalytics shall not be held liable if any of the information or data provided by BTSC’s and BTSG’s management and used as a basis for this assessment were not correct or complete.

---

<sup>1</sup> Climate Bonds Standard, Low Carbon Transportation Criteria under the Climate Bonds Standard. See more, at: <https://www.climatebonds.net/standard/transport>

<sup>2</sup> Climate Bonds Standard, Climate Bonds Standard Version 3.0. See more, at: [https://www.climatebonds.net/files/files/Climate%20Bonds\\_Standard\\_Version%203\\_0\\_December%202017.pdf](https://www.climatebonds.net/files/files/Climate%20Bonds_Standard_Version%203_0_December%202017.pdf)

Sustainalytics makes all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight over the assessment of the bond.

### **Verifier's Responsibility**

The work undertaken as part of this engagement included conversations with relevant BTSC and BTSG employees and review of relevant documentation to confirm the green bond's conformance with the Climate Bonds Certification Pre-Issuance Requirements, which include:

- Conformance of BTSC's green bond with the Climate Bonds Standard Version 3.0;
- Conformance with the Low Carbon Transportation Technical Criteria;
- Conformance with the Internal Processes & Controls requirements;
- Conformance with Reporting Prior to Issuance requirements

### **Basis of the Opinion**

Sustainalytics conducted the verification in accordance with the Climate Bonds Standard Version 3.0 and with International Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits or Reviews of Historical Information.

Sustainalytics planned and performed the verification by obtaining evidence and other information and explanations that Sustainalytics considers necessary to give limited assurance that BTSC's green bond meets the requirements of the Climate Bonds Standard. Upon reviewing evidence and other information, Sustainalytics is of the opinion that BTSC will ensure compliance with Climate Bonds Standards requirements.

### **Conclusion**

BTSC intends to use the proceeds raised by the issuance of green bonds to finance clean transportation through investments in fully electrified public passenger and electrical and mechanical and operational expenditures, including maintenance of these systems. These investments will further contribute to increasing Bangkok's capacity of electrified passenger rail transport and will support BTSG's core-business of efficient transportation, enabling the modal shift to rail. Sustainalytics has assessed the Nominated Projects that BTSC has selected for this green bond and has concluded that they align with the Low Carbon Transportation criteria as outlined by the Climate Bonds Standard. The assets to be financed include, Rolling stock and Electrical & Mechanical systems. Based on the limited assurance procedures conducted of BTSC's green bond under the Low Carbon Transportation criteria of the Climate Bonds Standard, nothing has come to Sustainalytics' attention that causes us to believe that, in all material aspects, BTSC's green bond is not in conformance with the Low Carbon Transportation of the Climate Bonds Standard's Pre-Issuance Requirements.

## Schedule 1: Detailed Overview of Nominated Projects and Assets

Details of the Nominated Projects are provided below:

Asset or expenditure	Description of investment	Investment amount funded by green bond (THB million)	Investment amount funded by green bond (USD million) <sup>3</sup>
Rolling stock	46×4 Cars	3,769.52	112.09
Electrical and Mechanic Works <sup>4</sup>	South Green Line: Bearing to Kheha <ul style="list-style-type: none"> <li>• 13 km</li> <li>• 9 stations</li> </ul>	1,422.28	42.29
	North Green Line: Mo Chit to Khu Khot <ul style="list-style-type: none"> <li>• 19 km</li> <li>• 16 stations</li> </ul>	5,008.20	148.92
<b>Total</b>		<b>10,200.00</b>	<b>303.31</b>

<sup>3</sup> Currency exchange rate, as per Morningstar on 30 September 2021

<sup>4</sup> Procurement and installation of electrical and mechanical systems which includes rolling stocks, signaling system, fixed communication system, power supply, platform screen door, automatic fare collection, control room facilities, depot and workshop facilities.

## Schedule 2A: Pre-Issuance General Requirements

Sustainalytics has conducted this verification using the following Pre-Issuance Requirements under Climate Bonds Standard Version 3.0:

<p>1. Use of Proceeds</p>	<p>1.1 The Issuer shall document the Nominated Projects &amp; Assets which are proposed to be associated with the Bond and which have been assessed as likely to be Eligible Projects &amp; Assets. The Issuer shall establish a list of Nominated Projects &amp; Assets which can be kept up-to-date during the term of the Bond.</p> <p>1.2 The expected Net Proceeds of the Bond shall be no greater than the Issuer’s total investment exposure to the proposed Nominated Projects &amp; Assets, or the relevant proportion of the total Market Value of the proposed Nominated Projects &amp; Assets which are owned or funded by the Issuer.</p> <p>1.3 Nominated Projects &amp; Assets shall not be nominated to other Certified Climate Bonds, Certified Climate Loans, Certified Climate Debt Instruments, green bonds, green loans or other labelled instruments (such as social bonds or SDG bonds) unless it is demonstrated by the Issuer that:</p> <p>1.3.1 distinct portions of the Nominated Projects &amp; Assets are being funded by different Certified Climate Bonds, Certified Climate Loans, Certified Climate Debt Instruments, green bonds , green loans or other labelled instruments; or,</p> <p>1.3.2 the existing Certified Climate Bond, Certified Climate Loan or Certified Climate Debt Instrument is being refinanced via another Certified Climate Bond, Certified Climate Loan or Certified Climate Debt Instrument.</p>
<p>2. Process for Evaluation and Selection of Projects &amp; Assets</p>	<p>2.1 The Issuer shall establish, document and maintain a decision-making process which it uses to determine the eligibility of the Nominated Projects &amp; Assets. The decision-making process shall include, without limitation:</p> <p>2.1.1 A statement on the climate-related objectives of the Bond;</p> <p>2.1.2 How the climate-related objectives of the Bond are positioned within the context of the Issuer’s overarching objectives, strategy, policy and/or processes relating to environmental sustainability;</p> <p>2.1.3 The Issuer’s rationale for issuing the Bond;</p> <p>2.1.4 A process to determine whether the Nominated Projects &amp; Assets meet the eligibility requirements specified in Part C of the Climate Bonds Standard.</p> <p><i>Note to 2.1: A wide variety of climate-related objectives are possible. These can vary from increasing the installed capacity of low carbon assets, such as solar power facilities, to having a specific objective focused on the operations or indirect effects of the projects &amp; assets, such as emissions reductions.</i></p> <p><i>The climate-related objectives of the Bond, as stated by the Issuer, have implications for the reporting requirements under the Climate Bonds Standard. See Clauses 2.3, 5.2, 5.8, 6.1.1 and 8.4.</i></p> <p>2.2 The Issuer should include under Clause 2.1 further aspects of the decision-</p>

	<p>making process, including:</p> <p>2.2.1 related eligibility criteria, including, if applicable, exclusion criteria or any other process, applied to identify and manage potentially material environmental, social or governance risks associated with the Nominated Projects &amp; Assets;</p> <p>2.2.2 any green standards or certifications referenced in the selection of Nominated Projects &amp; Assets.</p> <p>2.3 The Issuer shall assess that all proposed Nominated Projects &amp; Assets to be associated with the Bond meet the documented objectives as stated under Clause 2.1.1 and are likely to conform to the relevant eligibility requirements under Part C of the Climate Bonds Standard.</p>
<p>3. Management of Proceeds</p>	<p>3.1 The systems, policies and processes to be used for management of the Net Proceeds shall be documented by the Issuer and disclosed to the Verifier, and shall include arrangements for the following activities:</p> <p>3.1.1 Tracking of proceeds: The Net Proceeds of the Bond can be credited to a sub-account, moved to a sub-portfolio, or otherwise tracked by the Issuer in an appropriate manner and documented.</p> <p>3.1.2 Managing unallocated proceeds: The balance of unallocated Net Proceeds can be managed as per the requirements in Clause 7.3.</p> <p>3.1.3 Earmarking funds to Nominated Projects &amp; Assets: An earmarking process can be used to manage and account for funding to the Nominated Projects &amp; Assets and enables estimation of the share of the Net Proceeds being used for financing and refinancing.</p>
<p>4. Reporting</p>	<p>4.1 The Issuer shall prepare a Green Bond Framework and make it publicly available prior to Issuance or at the time of Issuance. The Green Bond Framework shall include, without limitation:</p> <p>4.1.1 Confirmation that the Bonds issued under the Green Bond Framework are aligned with the Climate Bonds Standard. This may include statements of alignment with other applicable standards, such as the EU Green Bond Standard, the ASEAN Green Bond Standard, Chinese domestic regulations, Japanese Green Bond Guidelines, etc.;</p> <p>4.1.2 A summary of the expected use of proceeds, as defined under Clause 1.1, and the expected contribution of the relevant sectors or sub-sectors to the rapid transition required to achieve the goals of the Paris Climate Agreement;</p> <p>4.1.3 A description of the decision-making process, as defined under Clause 2.1, with particular reference to the requirements in Clause 2.1.2;</p> <p>4.1.4 Information on the methodology and assumptions to be used for: confirming, where required by relevant Sector Eligibility Criteria, the characteristics or performance of Nominated Projects &amp; Assets required to conform to the relevant eligibility requirements under Part C of the Climate Bonds Standard; and any other additional impact metrics that the issuer will define.</p> <p>4.1.5 A summary of the approach to the management of unallocated Net Proceeds in accordance with Clause 3.1;</p> <p>4.1.6 The intended approach to providing Update Reports to reaffirm conformance with the Climate Bonds Standard while the Bond remains outstanding;</p> <p>4.1.7 The list of proposed Nominated Projects &amp; Assets associated with the Bond and the investment areas, as provided in Clause 9.1, into which the Nominated Projects &amp; Assets fall. Where there are limits on the amount of detail that can be made available about specific Nominated</p>

	<p>Projects &amp; Assets, information shall be presented on the investment areas which the Nominated Projects &amp; Assets fall into, as provided in Clause 9.1, and the Issuer shall provide an explanation of why detail on Nominated Projects &amp; Assets is limited;</p> <p>4.1.8 Where a proportion of the Net Proceeds are used for refinancing, an estimate of the share of the Net Proceeds used for financing and refinancing, and the relevant Nominated Projects &amp; Assets or investment areas which may be refinanced. This may also include the expected look-back period for refinanced Nominated Projects &amp; Assets.</p> <p><i>Note: Issuers are encouraged to disclose as much information as possible with respect to Nominated Projects &amp; Assets. However, in many cases it is not possible for the Issuer to disclose detailed information about specific projects &amp; assets prior to the issuance of the Bond. This limitation may be due to confidentiality arrangements with owners of projects &amp; assets, the dynamic nature of the project portfolio, competitive considerations, or other legal provisions which limit the disclosure of detailed information.</i></p> <p>4.2 The Issuer shall include in the Disclosure Documentation:</p> <p>4.2.1 The investment areas, as provided in Clause 9.1, into which the Nominated Projects &amp; Assets fall;</p> <p>4.2.2 The intended types of temporary investment instruments for the management of unallocated Net Proceeds in accordance with Clause 7.3;</p> <p>4.2.3 The Verifier engaged by the Issuer for the mandatory verification engagements;</p> <p>4.2.4 The intended approach to providing Update Reports to reaffirm conformance with the Climate Bonds Standard while the Bond remains outstanding, including the location of the published documents;</p> <p>4.2.5 The Climate Bonds Initiative Disclaimer provided in the Certification Agreement.</p> <p><i>Note to 4.2.4: Issuers are encouraged to provide their Update Reports through existing reporting channels for the bond markets, such as the Electronic Municipal Market Access (EMMA) website for the US Municipality sector.</i></p>
--	--

## Schedule 2B: Conformance to the Pre-Issuance Requirements

Details of BTSC’s internal processes and controls as per the Pre-Issuance Requirements are provided below:

Procedure Performed	Factual Findings	Error or Exceptions Identified
1. Use of Proceeds	<p>1.1 BTSC has developed a list of proposed Nominated Projects &amp; Assets which comply with the Low Carbon Transportation sector criteria of the Climate Bonds Standard. BTSC intends to keep this list updated with all the financed projects that fall within the scope of BTSC’s green bond program under BTSG Green Bond Framework. The proposed Nominated Projects and Assets include:</p> <ul style="list-style-type: none"> <li>• Rolling Stock</li> <li>• Electrical and Mechanical Systems</li> </ul> <p>1.2 BTSC’s management confirms that the net proceeds of the future bond will not be greater than the total investment exposure to the proposed Nominated Projects &amp; Assets.</p> <p>1.3 BTSC’s management confirms that the Nominated Projects &amp; Assets will not be nominated to other Certified Climate Bonds, Certified Climate Loans, Certified Climate Debt Instrument, green bonds, green loans or other labelled instruments unless it is demonstrated by BTSC that distinct portions of the Nominated Projects &amp; Assets are being funded by different instruments or that the existing instrument is being refinanced via another labelled instrument.</p>	None
2. Process for Evaluation and Selection of Projects & Assets	<p>2.1.1. The BTSG Green Bond Framework states that the intention of the green bonds is to reduce CO<sub>2</sub> and GHG emissions associated with global transportation sector, as well as to reduce overall energy consumption.</p> <p>2.1.2. BTSG and affiliate’s environmental objectives are summarized in the BTSG Green Bond Framework.</p> <p>2.1.3. BTSC’s rationale for issuing green bonds is to align itself its corporate sustainability strategy and objectives while also contributing to Thailand’s National Determined Contribution.</p> <p>2.1.4. The BTSG Green Bond Framework includes a process for project evaluation and selection in which BTSG or affiliates has established a Green Bond Working Group (GBWG), will review proposed projects against the eligibility criteria and present Eligible Green Assets to BTSC’s Executive Committee for final approval.</p> <p>2.2.1. BTSG and affiliates has adequate measures in place to manage and mitigate environmental and social risks that are commonly associated with the eligible category.</p> <p>2.2.2. N/A</p> <p>2.2.3. BTSC has established a Green Bond Working Group (GBWG), which will comprise of representatives from Treasury Department, Corporate Communication</p>	None

	<p>Department, Safety and Security Department, Service Planning and MIS Department and Finance team of the project(s). The GBWG will verify that all proposed Nominated Projects &amp; Assets conform to the Climate Bonds Taxonomy and Low Carbon Transportation sector criteria.</p>	
3. Management of Proceeds	<p>3.1.1 The BTSG Green Bond Framework outlines a process by which proceeds will be tracked.</p> <p>3.1.2 Issuer will manage unallocated net proceeds in cash or cash equivalents, short-term and liquid marketable securities and/or be used to repay existing debts.</p> <p>3.1.3 The BTSG Green Bond Framework details the process BTSG or affiliates will use to allocate and manage green bonds proceeds. This will enable the estimation of the share of the Net Proceeds being used for financing and refinancing.</p>	None
Reporting Prior to Issuance	<p>4.1.1. Bonds issued under the BTSG Green Bond Framework are intended to align with the Climate Bonds Standard.</p> <p>4.1.2. The BTSG Green Bond Framework indicates that green bond proceeds will be used, as defined under Clause 1.1, and the expected contribution of the relevant sectors or sub-sectors to the rapid transition required to achieve the goals of the Paris Climate Agreement.</p> <p>4.1.3. The BTSG Green Bond Framework provides detail on its decision-making process, in which BTSG or affiliates will engage its Executive Committee and Board of Directors during the process to ensure alignment with the eligibility criteria.</p> <p>4.1.4. BTSG or affiliates' Nominated Projects &amp; Assets will conform with the Low Carbon Transportation sector criteria. BTSG or affiliates may report on the following impact metrics: numbers of passengers using electric transportation and/or amount of CO<sub>2</sub> emissions reductions per year.</p> <p>4.1.5. BTSG or affiliates will manage unallocated net proceeds in accordance with Clause 3.1.2</p> <p>4.1.6. BTSG or affiliates will provide allocation reporting after a year from the Green Bond issuance to be renewed annually until full allocation of the green bond net proceeds.</p> <p>4.1.7. BTSG or affiliates's Nominated Projects &amp; Assets fall under Low Carbon Transportation sector criteria. BTSG or affiliates will report on the investment areas which the Nominated Projects &amp; Assets fall into by the distribution of eligible asset categories financed as well as description of the selected projects financed following a portfolio approach. Specific examples will be provided in report when feasible.</p> <p>4.1.8. BTSG or affiliates commits on a best effort basis to allocate the Green Bond Proceeds to Eligible Green Assets pre-financed during the 30 months prior to the bond issue.</p> <p>4.2.1. BTSG or affiliates's Nominated Projects &amp; Assets will conform with the Low Carbon Transportation sector criteria.</p> <p>4.2.2. The intended types of temporary investment instruments for the management of unallocated Net Proceeds are in</p>	None



---

	<p>accordance with Clause 7.3 of the Climate Bonds Standard.</p> <p>4.2.3. The BTSG or affiliates has confirmed that an approved third party verifier will conduct periodic assurance within a year to reaffirm conformance of the bond with the Low Carbon Transportation criteria of the Climate Bonds Standard.</p> <p>4.2.4. BTSG or affiliates will publish a green bond Annual report available on BTSG's website. The Report will include information on the allocation of proceeds and relevant impact metrics.</p> <p>4.2.5. Sustainalytics notes that under the terms of its certification, BTSG or affiliates must include the CBI Disclaimer provided in the Certification Agreement in disclosure documentation.</p>	
--	---	--

---

## Disclaimer

**Copyright ©2021 Sustainalytics. All rights reserved.**

The information, methodologies and opinions contained or reflected herein are proprietary of Sustainalytics and/or its third party suppliers (Third Party Data), and may be made available to third parties only in the form and format disclosed by Sustainalytics, or provided that appropriate citation and acknowledgement is ensured. They are provided for informational purposes only and (1) do not constitute an endorsement of any product or project; (2) do not constitute investment advice, financial advice or a prospectus; (3) cannot be interpreted as an offer or indication to buy or sell securities, to select a project or make any kind of business transactions; (4) do not represent an assessment of the issuer's economic performance, financial obligations nor of its creditworthiness; and/or (5) have not and cannot be incorporated into any offering disclosure.

These are based on information made available by the issuer and therefore are not warranted as to their merchantability, completeness, accuracy, up-to-dateness or fitness for a particular purpose. The information and data are provided "as is" and reflect Sustainalytics' opinion at the date of their elaboration and publication. Sustainalytics accepts no liability for damage arising from the use of the information, data or opinions contained herein, in any manner whatsoever, except where explicitly required by law. Any reference to third party names or Third Party Data is for appropriate acknowledgement of their ownership and does not constitute a sponsorship or endorsement by such owner. A list of our third-party data providers and their respective terms of use is available on our website. For more information, visit <http://www.sustainalytics.com/legal-disclaimers>.

The issuer is fully responsible for certifying and ensuring the compliance with its commitments, for their implementation and monitoring.

In case of discrepancies between the English language and translated versions, the English language version shall prevail.

## About Sustainalytics, a Morningstar Company

Sustainalytics, a Morningstar Company, is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. The firm works with hundreds of the world’s leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. The world’s foremost issuers, from multinational corporations to financial institutions to governments, also rely on Sustainalytics for credible second-party opinions on green, social and sustainable bond frameworks. In 2020, Climate Bonds Initiative named Sustainalytics the “Largest Approved Verifier for Certified Climate Bonds” for the third consecutive year. The firm was also recognized by Environmental Finance as the “Largest External Reviewer” in 2020 for the second consecutive year. For more information, visit [www.sustainalytics.com](http://www.sustainalytics.com).

