# NEWS RELEASE

July 10, 2020

## 【R&I Green Bond Assessment】
## Seiko Epson Corporation Green Bond
## : GA1 (Formal)

Rating and Investment Information, Inc. (R&I) has announced the following R&I Green Bond Assessment GA1 (Formal). R&I announced a preliminary assessment for this instrument on December 11, 2019. The preliminary assessment has now been converted to a formal assessment.

【DESCRIPTION OF INSTRUMENT】

| | |
|---|---|
| INSTRUMENT NAME | Unsec. Str. Bonds No.20 Green Bond<br>Unsec. Str. Bonds No.21 Green Bond<br>Unsec. Str. Bonds No.22 Green Bond |
| ISSUER | Seiko Epson Corporation |
| ISSUE AMOUNT (mn) | No.20: 10,000JPY<br>No.21: 40,000JPY<br>No.22: 20,000JPY |
| R&I GREEN BOND ASSESSMENT | GA1 (Formal) |
| ISSUE DATE | Jul 16,2020 |
| MATURITY DATE | No.20: Jul 14.2023<br>No.21: Jul 16.2025<br>No.22: Jul 16.2030 |

R&I has confirmed that the green bonds are in conformity to the green bonds framework developed by Seiko Epson Corporation (Epson)from the perspectives of the fixed issue amount, term, etc. and assigned GA1(Formal) to the green bonds.

Following the issuance of the bonds, Epson selected the following eight eligible projects from 10 candidates for the use of proceeds.

| No | Eligible projects | <New financing/refinancing> | Category |
|---|---|---|---|
| (1) | Construction costs for the new building (the 9th building) of the Hirooka Office | Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (2) | Construction costs for a new building (Building B of Innovation Center) of the Hirooka Office | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (3) | Construction of and additional factory of a manufacturing subsidiary in the Philippines | Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |



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| | | | |
|---|---|---|---|
| (4) | Costs of R&D and production facilities for high-speed line inkjet multifunction printer for offices | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (5) | Costs of R&D and production facilities for commercial and industrial printers | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (6) | Costs of R&D and production facilities for inkjet printers and the application of IJ head | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (7) | Costs of R&D and production facilities for PaperLab and the application of dry fiber technology | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (8) | Costs of purchasing renewable energy | New financing/ Refinancing | Renewable energy |

Details are provided in the attached press release dated December 11, 2019 regarding R&I Green Bond Assessment (GA1 (Preliminary), Second Opinion).

In addition to this assessment, R&I has assigned a credit rating to Seiko Epson Corporation Green Bond. For details, please refer to https://www.r-i.co.jp/en/index.html/.

【R&I Green Bond Assessment】

R&I has judged, in accordance with R&I Green Bond Assessment Methodology, that the proceeds from the green bond would be invested into projects with significant environmental benefits, and assigned GA1 (preliminary) to the green bond. Comprehensively R&I is confident that the Seiko Epson Green Bond issued under this framework is in line with the Green Bond Principles 2018 and Green Bond Guidelines 2017 by the Ministry of the Environment of Japan. This is a preliminary assessment and will be reassessed after the final confirmation of bond issuance details.



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# NEWS RELEASE

Dec 11, 2019

## 【R&I Green Bond Assessment】

## Seiko Epson Corporation Green Bond

## : GA1　Preliminary

Rating and Investment Information, Inc. (R&I) has announced the following R&I Green Bond Assessment (GA1 (Preliminary)).

【DESCRIPTION OF INSTRUMENT】

| | |
|---|---|
| INSTRUMENT NAME | Seiko Epson Green Bond |
| ISSUER | Seiko Epson Corporation |
| ISSUE AMOUNT (mn) | TBD |
| R&I GREEN BOND ASSESSMENT | GA1 (Preliminary) |
| ISSUE DATE | TBD |
| MATURITY DATE | TBD |

【Summary】

Seiko Epson Corp. (hereinafter “Epson”) is a manufacturer of information-related equipment and precision machinery based in Suwa city, Nagano Prefecture. The company’s business extends to three segments including the printing solutions business centered on mainstay inkjet printers.

Epson plans to issue a green bond to use the proceeds to finance potential 10 eligible projects that fall into social issues recognized by Epson, “Climate change and resource depletion” and “Heightened expectations for sustainable practices.” Prior to the issuance, Epson formulated a green bond framework that coincides with four requirements (use of proceeds, process for project evaluation and selection, management of proceeds, and reporting) specified by the Green Bond Principles.

【R&I Green Bond Assessment】

R&I has judged, in accordance with R&I Green Bond Assessment Methodology, that the proceeds from the green bond would be invested into projects with significant environmental benefits, and assigned GA1 (preliminary) to the green bond. Comprehensively R&I is confident that the Seiko Epson Green Bond issued under this framework is in line with the Green Bond Principles 2018 and Green Bond Guidelines 2017 by the Ministry of the Environment of Japan. This is a preliminary assessment and will be reassessed after the final confirmation of bond issuance details.



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【Rationale】

- The proceeds will be used to finance 10 eligible projects including a factory to manufacture inkjet printers (hereinafter “IJP”) which provide energy-saving features in principle.
- R&I checked whether or not 1) sufficient environment improvement effect are expected from the eligible assets to which funds are invested, and 2) due consideration is paid to potentially negative environmental and social impacts. R&I has judged that the extent to which the proceeds are used to invest in projects with environmental benefits is excellent.
- Project evaluation and selection is based on the concept of Epson's Environmental Policy, Vision, and Key CSR Themes, in conformity to the process that secures a counter-checking and confirmation functions as well as expertise. R&I deems that it is clear and reasonable, and especially excellent.
- The proceeds are tied to predetermined individual projects in advance. The allocation status per project is managed by Corporate Management and Financial Management Dept. of Epson using systems, etc. R&I also confirmed that unallocated funds are managed in cash or cash equivalents. The method of management of proceeds is appropriate and excellent.
- Reporting on the fund allocation status (proceeds management status) of eligible assets and impact reporting (environmental improvement effects) will be disclosed. It is considered an appropriate reporting.
- Epson has established a CSR promotion system that facilitates the implementation of action plans based on relevant priority issues. In specific, the Company has set a GHG reduction target approved by the SBT (Science Based Targets) Initiative, and has developed products that won the Minister of Economy, Trade and Industry Award of the 1st Eco Pro Award, including PaperLab, a dry office papermaking machine. R&I deems that the Company’s involvement in environmental contribution activities is excellent.

R&I Green Bond Assessment is not the Credit Rating Business, but one of the Ancillary Businesses (businesses excluding Credit Rating Service but are ancillary to Credit Rating Activities) as set forth in Article 299, paragraph (1), item (xxviii) of the Cabinet Office Ordinance on Financial Instruments Business, etc. With respect to such business, relevant laws and regulations require measures to be implemented so that activities pertaining to such business would not unreasonably affect the Credit Rating Activities, as well as measures to prevent such business from being misperceived as the Credit Rating Business.



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## ■ Outline of the Issuer（Seiko Epson Corporation）

Seiko Epson Corp. (hereinafter “Epson”) is a manufacturer of information-related equipment and precision machinery based in Suwa city, Nagano Prefecture. Epson takes advantage of its ultrafine and precision processing technology cultivated through the manufacturing of mechanical watches, and has built a vertically integrated business model which enables the development of core devices, as well as product planning, designing, manufacturing and marketing internally. Epson operates in three business segments: the printing solutions business centered on mainstay inkjet printers (hereinafter “IJP”); the visual communication business focused on 3LCD projectors; and the wearable and industrial products business, including microdevices, robotics and watches.

Aiming to become "an indispensable company" as stated in the its management philosophy leads to the realization of a sustainable society through business activities. Epson has established Environmental Vision 2050 toward 2050 and the Epson 25 Corporate Vision as a long-term vision for 2025 as a road map, toward the achievement of value creation in an aim to realize "an indispensable company" and "a sustainable society". The vision statement of the Epson 25 Corporate Vision is “Creating a new connected age of people, things and information with efficient, compact and precision technologies." This is what Epson has nurtured in its spirit since founding, representing the value creation by pursuing "energy efficiency", making products with equivalent performance to be “smaller”, and achieving even higher "precision". It is expressed by inputting through various corporate assets including efficient, compact and precision technologies such as Micro Piezo[1] and a dry fiber technology[2], and by outputting through a value creation strategy.

To clarify social issues to be addressed, Epson assesses and specifies 29 Key CSR Themes from internal and social perspectives while referring to ISO26000 and other standards. Of these, the Company sets and reviews business activities on the most important 16 Themes every fiscal year.

[1] Epson’s core technology of IJP. Technology related to piezoelectric elements where a mechanical pressure is created in response to an applied voltage.

[2] Core technology of the PaperLab, a dry office papermaking machine.



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Management Philosophy

Epson aspires to be an indispensable company,
trusted throughout the world for our commitment to openness,
customer satisfaction and sustainability.
We respect individuality while promoting teamwork,
and are committed to delivering unique value
through innovative and creative solutions.

EXCEED YOUR VISION

As Epson employees,
we always strive to exceed our own vision,
and to produce results that bring surprise and delight
to our customers.

EPSON
EXCEED YOUR VISION

April 1, 2017

【The 16 most important CSR themes】

Business operations aligned with global social trends
Creating new products and services with leading technology
Productivity improvement utilizing ICT
Products competitiveness
Strategic marketing
Contributing to the environment through products and services
Effective use of energy and resources
Climate change and global warming
Product quality and communications
Consumer health and safety
Supply chain management
Respecting human rights
Diversity
Human resources development, hiring, and retention
Information security
Compliance

【Source：ESPON Sustainability Report 2019】



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From the environmental perspective, Epson has maintained a strong commitment to both local and global environmental conservation, starting with a pledge to keep Lake Suwa clean and later exemplified by Epson becoming the first company in the world to declare that it would eliminate ozone-depleting CFCs, which it did across the Epson Group in 1993. Environmental Vision 2050 which was formulated as a long-term environmental guideline, is casted back in an environmental statement of the interim target formulated as Epson 25. It provides not only the improvement of environmental performance and the reduction of environmental impact in business activities, but also the reduction of environmental impact on customers' operational process through the provision of products and services.



【Source：Epson HP】

To realize these visions, Epson has established specific greenhouse gas (hereinafter "GHG") reduction targets. The targets are the global common long-term target (2-degree target) as required by the Paris Agreement (2015) and the medium- to long-term targets of the value chain for the realization of Epson's Vision. These targets have been approved by the SBT Initiative[3] as a target conforming to impact reduction scenarios based on climate science. In addition, for the reduction of environmental impact, the Company has established reduction targets for various emissions including water consumption and the quantity of emissions of chemical substances which may be hazardous to human health and ecosystems, and has disclosed the achievement.

Epson reviewed the eligibility criteria to use the proceeds in accordance with these environmental policies, and formulated a green bond framework with an intention to issue a green bond.

[3] Science Based Targets initiative: A joint initiative of the United Nations Global Compact, CDP, the World Resources Institute, and the World Wildlife Fund. As of October 21, 2019, reduction targets were approved for 282 companies around the world, of which 53 companies are Japanese companies.



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## ■Overview of the Green Bond Framework

Epson has developed a green bond framework, which addresses the four key pillars of the Green Bond Principles (GBP): use of proceeds, project evaluation and selection process, management of proceeds, and reporting, under which it intends to issue a green bond. The summary of this Framework is as follows:

## 1. Use of Proceeds

Summary of Use of Proceeds and Eligible projects

| Social issues (Epson's key social issues to be addressed) | Materiality | Eligible projects | Eligible green bond-project categories | Project description |
|---|---|---|---|---|
| Climate change and resource depletion<br><br>Heightened expectations for sustainable practices | Industrial structural innovation | Construction costs for a new building (9th building) of the Hirooka Office <refinancing> | ● Highly eco-efficient products, environmentally friendly products, and environmentally conscious production technologies and processes | ・Triples the production capacity of core parts for inkjet multifunction devices and printers, and establishes R&D functions within the factory |
| | | Construction costs for a new building (Building B of Innovation Center) of the Hirooka Office <new financing/refinancing> | | ・Put in place a test laboratory function of prototyping, mass production, and digital printing for large commercial and industrial printing machines. Strengthens R&D and production infrastructure |
| | | Construction of an additional factory of a manufacturing subsidiary in the Philippines <refinancing> | | ・Install a mega solar power generation facility with a maximum output of approximately 3,000 kW on the roof of the building |
| | | Costs of R&D and production facilities for office high-speed line inkjet multifunction printers <new financing/refinancing> | | ・Develop the office-purpose market by enhancing the lineup of inkjet multifunction printers which operate with significantly low power consumption compared to popular office-use laser printers |
| | | Costs of R&D and production facilities for commercial and industrial printers <new financing/refinancing> | | ・Inkjet digital printers require no plate which is necessary for analog printing, eliminating processes that consume energy, water and raw materials. Market dissemination by strengthening the lineup of digital printers<br>・Due to the dissemination of digital garment printers which are suitable for small-lot, multi-product production, inventory losses of materials, work in process, and finished products etc. are minimized. |
| | | Costs of R&D and production facilities for inkjet printers and the application of IJ heads <new financing/refinancing> | | ・Market dissemination by strengthening the lineup of inkjet printers which provide life-cycle environmental impact reduction effects by pursuing "compact and lightweight" "eco-friendliness" and "circulation and long life" |
| | Driver of a cyclical economy | Costs of R&D and production facilities for PaperLab and the application of dry fiber technology <new financing/refinancing> | | ・Market dissemination through the technological development of PaperLab that allows for the production of new paper without using water*, reducing the quantity of paper purchased and transportation $CO_2$ associated with disposal and recovery<br>* A small amount of water is used to maintain the internal humidity. |
| | | Purchase costs of renewable | ● Renewable | ・Expand the use of renewable energy |



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| | | | | |
|---|---|---|---|---|
| | | energy<br><new financing/refinancing> | energy | (green power) by 2025, with the opening of the Hirooka Office 9th Building<br>・Additional costs and costs for switching from existing power sources |
| | | Installation and maintenance costs for water treatment systems<br><new financing/refinancing> | ● Sustainable water resources and wastewater management | ・Reduction of contaminated water, water quality conservation through wastewater utilization, water source management |
| | | Operational costs for recycling systems (ink cartridge and cartridge body)<br><New financing/refinancing> | ● Pollution prevention and control | ・Recovery and recycling systems for finished products and cartridges are in operation globally. By FY2018, 220,000 tons of finished products and 52,000 tons of ink and toner cartridges had been recovered and recycled. |

## 2. Process for Project Evaluation and Selection

・ Eligible projects are selected in accordance with the eligible criteria by relevant internal divisions within the Corporate Management and Financial Management Division, CS Quality & Environmental Planning Division, and CSR/CSV Promotion Division, and discussed at the Management Strategy Meeting. Final decisions are made by Chief Financial Officer.

## 3. Management of Proceeds

・ Corporate Management and Financial Management Division tracks orders and investment projects, as well as the amount of allocated/unallocated proceeds using internal system on a quarterly basis.
・ Proceeds is held and managed in cash or cash equivalents until allocation of proceeds is decided.

## 4. Reporting

・ Allocation status reporting and impact reporting will be available on the Company's website on an annual basis until the green bond matures.



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## ■Evaluation of the Green Bond

In line with the assessment methodology of R&I Green Bond Assessment, R&I evaluated the extent to which the proceeds from the Seiko Epson green bond under the framework made by Epson are used to invest in businesses with environmental benefits.

## 1. Use of Proceeds

For green bond proceeds to be used to invest in projects with environmental benefits, the eligible projects in which the funds are invested must be identified as being environmentally beneficial.

### Main basis of the evaluation

- Details of the framework
- Confirmation of priority of the eligible projects for Epson and details of individual matters

### Evaluation

The eligible projects are potential 10 eligible projects that coincide with the social issues recognized by Epson, “Climate change and resource depletion” and “Heightened expectations for sustainable practices.” Eligible projects and their categories are shown in the following table: R&I checked and comprehensively assessed whether: [1] sufficient environmental improvement effects can be expected from the eligible projects; and [2] consideration was given to potentially negative environmental and social effects.

| No | Eligible projects | <New financing/refinancing> | Category |
|---|---|---|---|
| (1) | Construction costs for the new building (the 9th building) of the Hirooka Office | Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (2) | Construction costs for a new building (Building B of Innovation Center) of the Hirooka Office | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (3) | Construction of and additional factory of a manufacturing subsidiary in the Philippines | Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (4) | Costs of R&D and production facilities for high-speed line inkjet multifunction printer for offices | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (5) | Costs of R&D and production facilities for | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, |



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| | | | |
|---|---|---|---|
| | commercial and industrial printers | | production technologies and processes |
| (6) | Costs of R&D and production facilities for inkjet printers and the application of IJ head | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (7) | Costs of R&D and production facilities for PaperLab and the application of dry fiber technology | New financing/ Refinancing | eco-efficient and/or circular economy adapted products, production technologies and processes |
| (8) | Costs of purchasing renewable energy | New financing/ Refinancing | Renewable energy |
| (9) | Installation and maintenance costs for water treatment systems | New financing/ Refinancing | sustainable water and wastewater management |
| (10) | Operational costs for recycling systems (ink cartridge and cartridge body) | New financing/ Refinancing | Pollution prevention and control |

Priority of the eligible projects for Epson

Toward the realization of a sustainable society, Epson aims to provide environmental improvement effects on customers by providing IJPs and IJ mutifunction printers, etc. with superior environmental performance centered on Micro Piezo technology. The Company has achieved the recycling of copy papers using dry fiber technology and developed a recycling system of used cartridges, etc., thereby realizing resource circulation in offices where printing demand is extremely high. Moreover, the Company has taken appropriate actions to address growing energy consumption and wastewater treatment caused by expanded production. The mapping of eligible projects under the framework is shown in the figure below:



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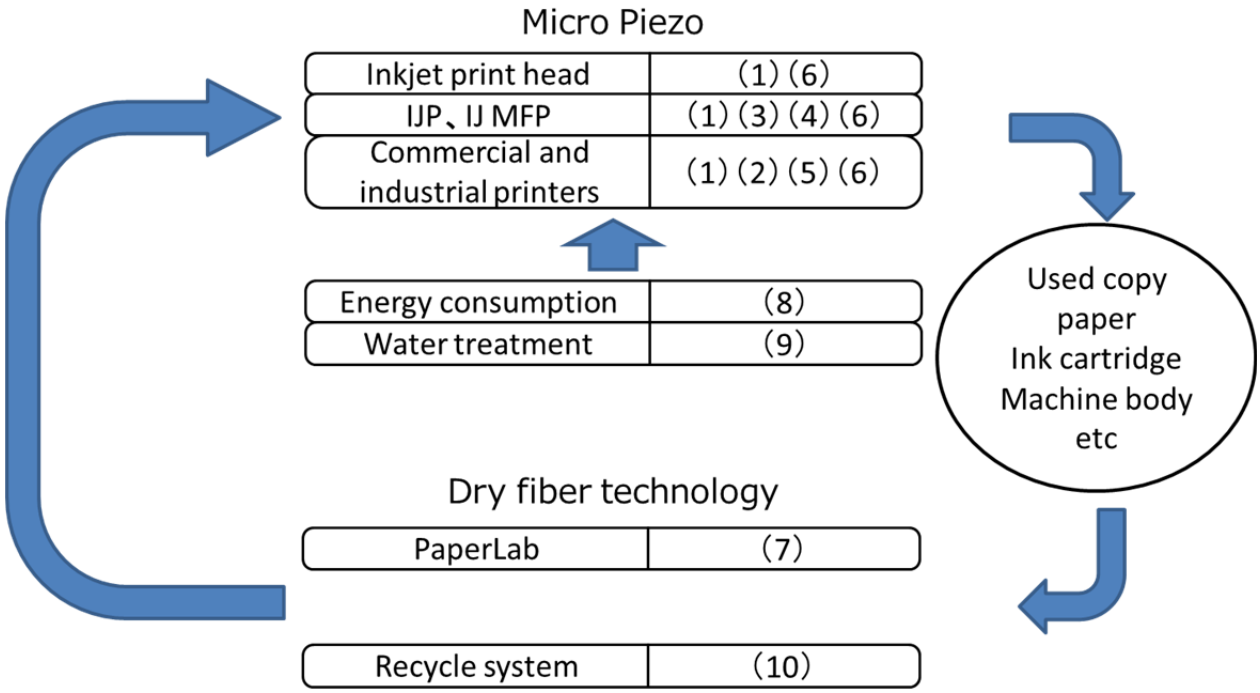


【Source：Prepared by R&I from Framework】

[1] Are the environmental improvement effects from eligible projects sufficient?

R&I assessed eligible projects according to the four categories as follows:

1) Eco-efficient and/or circular economy adapted products, production technologies and processes:

Applicable to (1), (2), (3), (4), (5), (6) and (7)

a. IJ print head

This refers to PrecisionCore Print Head, an IJ print head using Micro Piezo technology. It is applicable to (1) and (6). (1) is the construction costs for a new factory to manufacture the print heads, completed on June 30, 2018. The proceeds will be used to finance (6), R&D and production facilities that use the Head.

Its uniqueness is the fundamental difference from other printing techniques. In the IJ method, printing completes only by ejecting ink. However, in the laser method, there are several steps to follow, including warming up, charging, exposure, development, transferring, and fixing. Transferring requires a contacting face, and fixing requires heat and pressure. In the thermal IJ method, the ink-ejection process requires heat. The Piezo IJ method requires no heat and pressure, which suggests eco-friendliness in theory.

[Printing process comparison between the IJ method and the laser method]



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The IJ method: ink ejection => printing completed

The laser method: warming up => charging => exposure => development => transferring => fixing => printing completed

[Ink ejection process comparison between the Piezo IJ method and the thermal IJ method]

The Piezo IJ method: Piezo displacement => ejection

The thermal IJ method: heating => foaming => ejecting => cooling down

R&I has judged that (1) and (6), eligible projects related to the manufacturing of the eco-friendly heads and R&D using the heads, are projects related to highly eco-efficient products.

b. IJPs and IJ multifunction printers

Refer to IJPs and IJ multifunction printers using above-mentioned IJ print heads. These are applicable to (1), (3), (4) and (6). (3) is the construction costs for a new factory to manufacture IJPs and projectors, completed in July 2017. (4) is the costs of R&D and production facilities for IJ multifunction printers for offices.

IJPs are for households and small offices. Mainly include printers with a large capacity ink tank. The difference from the conventional IJPs is that they have ink bottles but no cartridge. Due to the decrease in resource consumption, the $CO_2$ emissions of consumables have been decreased to about one-fifth. According to the comparison using the TEC values[4] from a laser method with a similar performance, the power consumption is reduced to about one-tenth.

IJ multifunction printers are for offices. Laser printers are dominant in most office. Taking into account the nature of TEC value (the faster the print speed, the faster the feeding speed), the $CO_2$ emissions reduction per product unit in cases where an Epson IJ multifunction printer replaces competitors' laser multifunction printer under appropriate conditions is estimated to be 5 to 50 (Kg-$CO_2$/year/unit).

Dissemination of eco-friendly IJPs and IJ multifunction printers contributes to achieving the GHG reduction target, Scope 3, Category 11[5]. Dissemination of IJPs and IJ multifunction printers is beneficial in that these machines are superior from the aspect of not only environmental performance but also printing performance. R&D of IJPs and IJ multifunction printers will contribute to achieving the target. The current high-speed line IJ multifunction printers have achieved a printing speed higher than that of laser method printers. In particular, LX-10000F series high-speed line inkjet complex machine was highly valued for its superior eco-friendliness and low frequency of exchanging consumable supplies, awarded Director-General of the Agency for Natural Resources and Energy Award of the 2018 Eco-Friendly Award (products and business models part) hosted by Energy Conservation Center, Japan.

The maintenance period of the projector manufactured at the factory referred to in (3) will also be largely extended compared to that of conventional lamp types. Moreover, laser is less diffusible and more easily concentrated than lamps. Therefore, mirrors, liquid crystal panels and other major optical engine parts can be made lighter and smaller, and beneficial for waste reduction.

[4]TEC value refers to a value used as a standard of power consumption under the International ENERGY STAR Program.
[5]Indirect emissions from the Company's entire value chain originated from the products sold



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For the reasons stated above, R&I has judged that (1), (3), (4) and (6), eligible projects related to the manufacturing and R&D of IJPs, IJ multifunction printers and projectors, are projects related to highly eco-efficient products.

c. Commercial and industrial printers

Eligible printers are large-scale commercial and industrial printers which are digital printers mainly for signage (signboard and decoration) and labelling (package printing), and digital printers for cloth printing. These are applicable to (1), (2), (5) and (6). (2) is the construction costs for a new building with prototyping and mass production factory of large-scale commercial and industrial printings, a test lab area for digital printing and related departments' office area, scheduled to start operation at the end of FY2019. (5) is the costs of R&D and production facilities for commercial and industrial printers.

Compared with conventional analog printers, digital printers are free from a prepress process including a plate processing, eliminating the use of developers and films. Their stable feeding requires no test printing, reducing paper and printer ink usage, which provides a printing process with low environmental load.

Analog printing requires printing plates which generate water pollution associated with cleaning and costs for making printing plates as well as wastes of unnecessary printing plates. Digital printers do not use printing plates, avoiding water contamination due to plate cleaning, which is resource saving. It shortens the printing process, which is energy saving. Moreover, it eliminates the costs of plate making, which allows for a small-lot production and a reduction of inventory losses. Digital printers could address challenges facing analog printers.

The R&D efforts involve improving the environmental performance of the printers and processes other than printing.

For the reasons stated above, R&I has judged that (1), (2), (5) and (6), eligible projects related to the manufacturing and R&D of commercial and industrial printers, are projects related to highly eco-efficient products.

d. PaperLab

PaperLab is the world's first dry office papermaking machine that immediately reproduces new papers using used copy papers. It is applicable to (7). It is said to consume one cup of water to make a sheet of A4 paper in general. PaperLab only needs moisture to maintain the internal humidity at an appropriate level. This represents a 90% reduction in water resources from the water usage through the process of making recycled paper (70% recycled paper) excluding water necessary for forest growth. Although it is difficult to make a simple comparison between different energy sources, but an assessment based on the quantity of $CO_2$ emissions without considering a distribution phase indicates a reduction of 7%.

Among the benefits of the use of PaperLab are: [1] the prevention of water pollution related to paper recycling; [2] the development of an office paper recycling system that facilitates the cyclic use of captured carbon and the reduction of energy consumption in transportation and production of copy paper; and [3] the prevention of confidential information leakage in the office. The dry fiber technology used in PaperLab is a used copy paper recycling technology. Such research and development represents the very kind of environmentally conscious technology development.

For the reasons stated above, R&I has judged that (7), eligible projects related to PaperLab and the application of dry fiber technology, are projects related to highly eco-efficient products.



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2) Energy consumption: falls into (8)

The expansion of product manufacturing is accompanied with energy consumption. This will increase the ratio of renewable energy to electricity used for business. The use of proceeds is an increased cost and a switching cost from existing power operators.

Epson has set a reduction target of 19%, by combining the GHG reduction target scope 1[6] and 2[7], from the base year of 2017 to 2025. In FY2018, the Company achieved a 15% reduction, 70% of which was achieved by concluding an agreement on a long-term procurement of domestic low-carbon power such as hydroelectric power, among other things. The use of renewable energy has been raised to about 12%. R&I has judged that the issuance of the Green Bond contributes to the achievement of the scope 2 reduction target, and falls into recycling energy.

3) Water treatment: falls into (9)

Epson's products that could heavily affect water treatment are mainly semiconductors and printer inks. Semiconductor manufacturing produces wastewater containing inorganic substances, and printer inks produce wastewater containing organic substances. The Company introduced and maintains water treatment systems for a sustainable water resource and wastewater management. Epson is committed to the conservation of water resources by avoiding the excess contamination and consumption of water, and recycling the water used. According to the actual FY2018 result, the Company's usage was 8,351 thousand $m^3$ against the emission of 7,455 thousand $m^3$, recycling 1,548 thousand $m^3$ of water.

4) Recycling system: falls into (10)

Costs of recovery of printer bodies and cartridges and operational costs for recycling systems on a global basis. By FY2018, 220,000 tons of finished products and 52,000 tons of printer inks and toner cartridges were recovered. In accordance with the laws and regulations of individual countries around the world, recovery and recycling systems have been established using a variety of methods, including a system for product recovery and recycling, mailing cartridges, recovery boxes, and requested recovery. Both of finished printer bodies and cartridges are recycled in 12 countries including Japan and the U.S. The activity contributes to the prevention and control of pollution by recovering and recycling waste materials and wastes.

[2] Is consideration paid to potentially negative environmental or social effects?

Potentially negative effects from the implementation of the 10 eligible projects include an increase in energy consumption, pollution of water resources, generation of wastes due to product penetration, and a shutdown in the event of a disaster.

An increase in energy consumption falls into (1) to (7). (8) is an example of the countermeasures, by covering the entire electricity demand of Hirooka Office 9th Building, the use of proceeds (1), with renewable energy. A factory of a Philippines-based manufacturing subsidiary, which falls into (3), has installed on its rooftop a mega solar power generation equipment with a maximum output of about 3,000kW. The power consumption reduction has been 13t$CO_2$/month on average, which is equivalent

[6] Direct emissions from businesses through the use of fuels
[7] Indirect emissions originated from energy generation by power operators



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to 5.1% of the entire power consumption. The factory also adopted an eco-friendly design. The Hirooka Office 9th Building is a factory with clean rooms. In general, a ratio of the clean area and the energy area is about 4:5. However, the factory has achieved as high as 7:3 with its various energy efficiency efforts by adopting a steric piping design in the energy area, covering the entire turbo-refrigerators and other cooling machines with insulating materials, etc. Moreover, the factory was constructed in an eco-friendly manner by adopting a so-called prefabrication method to shorten the construction period. Eco-friendly consideration has been given to the factory under construction and on operation.

Water resource contamination falls into (1) to (7). The countermeasures are included in (9). Epson addresses its water resource pollution by controlling both wastewater and rainwater from the factory, and properly monitoring and treating them. The Company has established a wastewater treatment system that eliminates manual recovery work for performing safe, centralized control. The Company has implemented a comprehensive rainwater management since 15 years ago, monitoring rainwater by oil sheen and pH levels. If the standard is below certain level it is discharged and if it is applicable, it is discharged after appropriate treatment.

An increase in wastes associated with product penetration falls into (1) to (7). The countermeasures include (10). (7) provides a solution to the copy paper used by customers. Used paper which is recycled in (7) do not inhibit the recycling processes of PaperLab and other general methods. No toxic gas shall be generated when incinerated. In addition, an in-house tool for planning and evaluating environmentally conscious design is applied at the product design stage, which provides due environmental consideration.

Shut-down in the event of a disaster falls into (1) to (7). The Hirooka Office 9th Building, an eligible asset of (1), is designed using malfunctioning records in the event of past disasters. Its accelerated control design prevents a damage of important equipment by adopting a seismic control design based on data of the Great East Japan Earthquake. Even in an event of blackout, emergency power sources are prepared per application as a backup system, making utmost efforts to avoid the suspension of operations in a disaster event and to resume operations as soon as possible in such a circumstance.

R&I has judged that due consideration is paid to potentially negative environmental and social impacts from the eligible projects.

For the reasons stated above, R&I has judged that the 10 eligible projects fall into either of the categories “eco-efficient and/or circular economy adapted products, production technologies and processes,” “renewable energy,” “sustainable water and wastewater management,” or “pollution prevention and control,” and are deemed to provide solutions to environmental problems to a high extent.



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## 2. Process for Project Evaluation and Selection

For green bond proceeds to be used to invest in projects with environmental benefits, the issuer's rationale and process regarding the selection of eligible projects must be clear and reasonable.

Main basis of the evaluation

- Details of the framework
- Confirmation of Epson's Environmental Policy, Vision, Environmental Targets, and overall environmental activities

Evaluation

- Selection of eligible projects is based on the concept of Epson's Environmental Policy, Vision, and Key CSR themes. It uses specific GHG reduction targets, etc. certified by the SBT initiative, which is extremely clear and reasonable in selecting projects having environmental contributions.
- In addition, an unified standard related to the environmental pollution prevention is applied to negative impacts provided by a green project, which contributes to an appropriate risk measurement and control.
- Project eligibility is determined based on an assessment by the CSR organization including CSR Executive Council, an advisory body to the president, and CSR Management Committee which is made up of general managers from functional supervisory departments, as well as external directors and experts. It secures a counter-checking and confirmation functions as well as expertise.
- Selection and evaluation of eligible projects is made in conformity with a process that secures counter-checking and confirmation functions as well as expertise.
- R&I confirmed that the projects were selected in accordance with the framework established by the issuer.
- R&I has determined that the process for project evaluation and selection is especially excellent in its clarity and rationality.



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## 3. Management of Proceeds

For the green bond proceeds to be used to invest in projects with environmental benefits, the proceeds must be allocated to eligible projects, and must not be invested in projects other than eligible projects.

Main basis of the evaluation

- Details of the framework

Evaluation

- The proceeds from the issuance of the green bond are tied to predetermined individual projects in advance. The allocation status per project is individually managed by Corporate Management and Financial Management Dept. of Epson using systems, etc.
- Unallocated funds are managed in cash or cash equivalents until they are allocated.
- R&I confirmed that the proceeds will be managed in line with the framework established by the issuer.
- R&I has determined that the method for managing the green bond proceeds is properly prepared and considered to be excellent.

## 4. Reporting

To ensure that green bond proceeds are used to invest in projects with environmental benefits, the issuer is expected to provide details on the eligible projects, the timing of investments, and the environmental benefits yielded by the projects.

Main basis of the evaluation

- Details of the framework

Evaluation

- The reporting at the time of issuance will disclose the framework with specific eligible projects and a proceeds allocation schedule.
- Reporting during the period will disclose: [1] confirmation of the allocation status, and environmental improvement effects of eligible assets of the green bond; and [2] confirmation that the outstanding amount of proceeds of the green bond does not exceed the latest outstanding amount of eligible assets, the outstanding amount of eligible assets and their environmental improvement effects, on an annual basis.
- Reporting includes the green bond proceeds allocation status, and environmental improvement effects. R&I deems that the information provided is adequate.



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## 5. Issuer's environmental contribution activities

The extent the proceeds from a green bond is used to invest in businesses with environmental benefits is considered to be affected by issuer's attitude toward environmental activities and track records of such activities. This is because an issuer with higher interest in and more track records of environmental activities are more likely to allocate proceeds from a green bond to businesses with environmental benefits and get those businesses done.

- Epson has developed a CSR organization represented by CSR Management Office, CSR Executive Council, and CSR Management Committee, which executes the company's activity plan based on priority.
- In addition to the GHG reduction target approved by the SBT Initiative, the Company proactively applies the concept of carbon pricing to its investment decisions, and has engaged in innovative initiatives that provide environmental solutions, including the development of PaperLab that won the Minister of Economy, Trade and Industry Award of the 1st Eco Pro Award.
- R&I deems that the issuer's involvement in environmental contribution activities is excellent.



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## ＜Comprehensive Evaluation＞

R&I evaluated the green bond in line with R&I Green Bond Assessment. In accordance with the comprehensive evaluation based on individual evaluation result by item, R&I has judged that the proceeds from the green bond subject to evaluation is highly likely to be used to invest in businesses with environmental benefits and assigned GA1 (preliminary) to the bond. Individual evaluation result by item is as follows:

【Assessment of each item】

Each item has been assessed on a scale of one to five, with 🍃🍃🍃🍃🍃being the highest and 🍃being the lowest.

| Item | Assessment | Summary |
|---|---|---|
| Use of proceeds | 🍃🍃🍃🍃 | The eligible asset is expected to bring sufficient environmental benefits and paid due consideration for potentially negative environmental impacts. R&I deems that the extent to which the asset is used to invest in projects with environmental benefits is excellent. |
| Process for project evaluation and selection | 🍃🍃🍃🍃🍃 | R&I has determined that the process for evaluating and selecting the green bond project is especially excellent in its clarity and rationality. |
| Management of proceeds | 🍃🍃🍃🍃 | R&I has determined that the method for managing the green bond proceeds is properly prepared and considered to be excellent. |
| Reporting | 🍃🍃🍃🍃 | R&I has judged that the reporting policy for the green bond is excellent in content and frequency. |
| Issuer's environmental contribution activities | 🍃🍃🍃🍃 | The Company promotes its business and environmental conservation initiatives under the environmental policy and organization, in line with targets and action plans based on its Vision. R&I has judged that the Issuer's involvement in environmental contribution activities is excellent. |

The methodology for R&I Green Bond Assessment is disclosed on R&I's website.
https://www.r-i.co.jp/en/rating/products/esg/index.html



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R&I Green Bond Assessment is R&I's opinion regarding the extent to which the proceeds from the issuance of green bonds are used to invest in projects with environmental benefits. In R&I Green Bond Assessment, R&I may also provide a second opinion on a green bond framework. R&I Green Bond Assessment does not certify the environmental benefits and other qualities of the eligible projects. Hence, R&I will not be held responsible for the effectiveness of the projects, including their environmental benefits. R&I Green Bond Assessment is not the Credit Rating Business, but one of the Ancillary Businesses (businesses excluding Credit Rating Service but are ancillary to Credit Rating Activities) as set forth in Article 299, paragraph (1), item (xxviii) of the Cabinet Office Ordinance on Financial Instruments Business, etc. With respect to such business, relevant laws and regulations require measures to be implemented so that activities pertaining to such business would not unreasonably affect the Credit Rating Activities, as well as measures to prevent such business from being misperceived as the Credit Rating Business.
R&I Green Bond Assessment is not, in any sense, statements of current, future, or historical fact and should not be interpreted as such, and R&I Green Bond Assessment is not a recommendation to purchase, sell, or hold any particular securities and does not constitute any form of advice regarding investment decisions or financial matters. R&I Green Bond Assessment does not address the suitability of an investment for any particular investor. R&I issues R&I Green Bond Assessment based on the assumption that each investor will investigate and evaluate the securities which they plan to purchase, sell, or hold for themselves. All investment decisions shall be made at the responsibility of the individual investor.
The information used when R&I issues R&I Green Bond Assessment is information that R&I has determined, at its own discretion, to be reliable. However, R&I does not undertake any independent verification of the accuracy or other aspects of that information. R&I makes no representation or warranty, express or implied, as to the accuracy, timeliness, adequacy, completeness, merchantability, fitness for any particular purpose, or any other matter with respect to any such information.
R&I may suspend or withdraw R&I Green Bond Assessment at its discretion due to insufficient data or information, or other circumstances.
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The Assessment Methodologies R&I uses in connection with evaluation are R&I's opinions prepared based on R&I's own analysis and research, and R&I makes no representation or warranty, express or implied, as to the accuracy, timeliness, adequacy, completeness, merchantability, fitness for any particular purpose, or any other matter with respect to the Assessment Methodologies. Further, disclosure of the Assessment Methodologies by R&I does not constitute any form of advice regarding investment decisions or financial matters or comment on the suitability of any investment for any party. R&I is not liable in any way for any damage arising in respect of a user or other third party in relation to the content or the use of the Assessment Methodologies, regardless of the reason for the claim, and irrespective of negligence or fault of R&I. All rights and interests (including patent rights, copyrights, other intellectual property rights, and know-how) regarding the Assessment Methodologies belong to R&I. Use of the Assessment Methodologies, in whole or in part, for purposes beyond personal use (including reproducing, amending, sending, distributing, transferring, lending, translating, or adapting the information), and storing the Assessment Methodologies for subsequent use, is prohibited without R&I's prior written permission.
【Japanese is the official language of this material and if there are any inconsistencies or discrepancies between the information written in Japanese and the information written in languages other than Japanese the information written in Japanese will take precedence.】



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# Green Bond / Green Bond Programme

# Independent External Review Form

## Section 1. Basic Information

**Issuer name:Seiko Epson Corporation**

**Green Bond ISIN or Issuer Green Bond Framework Name, if applicable*:* Unsec. Str. Bonds No.20 Green Bond, Unsec. Str. Bonds No.21 Green Bond, Unsec. Str. Bonds No.22 Green Bond,**

**Independent External Review provider's name: Rating and Investment Information, Inc.**

**Completion date of this form: 2020/7/10**

**Publication date of review publication: 2020/7/10**

## Section 2. Review overview

### SCOPE OF REVIEW

*The following may be used or adapted, where appropriate, to summarise the scope of the review.*

The review assessed the following elements and confirmed their alignment with the GBPs:

- ☒ Use of Proceeds
- ☒ Process for Project Evaluation and Selection
- ☒ Management of Proceeds
- ☒ Reporting

### ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- ☐ Second Party Opinion
- ☐ Certification
- ☐ Verification
- ☒ Scoring/Rating
- ☐ Other *(please specify)*:

*Note: In case of multiple reviews / different providers, please provide separate forms for each review.*

### EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

R&I has confirmed that the green bonds are in conformity to the green bonds framework developed by Seiko Epson Corporation (Epson)from the perspectives of the fixed issue amount, term, etc. and assigned GA1(Formal) to the green bonds.

Link to full review : https://www.r-i.co.jp/en/rating/esg/greenfinance/index.html

## Section 3. Detailed review

*Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.*

### 1. USE OF PROCEEDS

**Overall comment on section** *(if applicable)*:
The proceeds will be used to finance 10 eligible projects including a factory to manufacture inkjet printers (hereinafter "IJP") which provide energy-saving features in principle.
Following the issuance of the bonds, Epson selected the following eight eligible projects from 10 candidates for the use of proceeds.
R&I checked whether or not 1) sufficient environment improvement effect are expected from the eligible assets to which funds are invested, and 2) due consideration is paid to potentially negative environmental and social impacts. R&I has judged that the extent to which the proceeds are used to invest in projects with environmental benefits is excellent.

**Use of proceeds categories as per GBP:**

| | | | |
|---|---|---|---|
| ☒ | Renewable energy | ☐ | Energy efficiency |
| ☐ | Pollution prevention and control | ☐ | Environmentally sustainable management of living natural resources and land use |
| ☐ | Terrestrial and aquatic biodiversity conservation | ☐ | Clean transportation |
| ☐ | Sustainable water and wastewater management | ☐ | Climate change adaptation |
| ☒ | Eco-efficient and/or circular economy adapted products, production technologies and processes | ☐ | Green buildings |
| ☐ | Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | ☐ | Other *(please specify)*: |

If applicable please specify the environmental taxonomy, if other than GBPs:

### 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

**Overall comment on section** *(if applicable)*:
Project evaluation and selection is based on the concept of Epson's Environmental Policy, Vision, and Key CSR Themes, in conformity to the process that secures a counter-checking and confirmation functions as well as expertise. R&I deems that it is clear and reasonable, and especially excellent.

**Evaluation and selection**

- ☒ Credentials on the issuer's environmental sustainability objectives
- ☒ Defined and transparent criteria for projects eligible for Green Bond proceeds
- ☒ Summary criteria for project evaluation and selection publicly available
- ☒ Documented process to determine that projects fit within defined categories
- ☒ Documented process to identify and manage potential ESG risks associated with the project
- ☐ Other *(please specify):*

**Information on Responsibilities and Accountability**

- ☐ Evaluation / Selection criteria subject to external advice or verification
- ☐ Other *(please specify)*:
- ☒ In-house assessment

## 3. MANAGEMENT OF PROCEEDS

**Overall comment on section** *(if applicable)***:**
The proceeds are tied to predetermined individual projects in advance. The allocation status per project is managed by Corporate Management and Financial Management Dept. of Epson using systems, etc. R&I also confirmed that unallocated funds are managed in cash or cash equivalents. The method of management of proceeds is appropriate and excellent.

**Tracking of proceeds:**

- ☒ Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
- ☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds
- ☐ Other *(please specify)*:

**Additional disclosure:**

- ☐ Allocations to future investments only
- ☒ Allocation to individual disbursements
- ☐ Disclosure of portfolio balance of unallocated proceeds
- ☒ Allocations to both existing and future investments
- ☐ Allocation to a portfolio of disbursements
- ☐ Other *(please specify)*:

## 4. REPORTING

**Overall comment on section** *(if applicable)***:**
Reporting on the fund allocation status (proceeds management status) of eligible assets and impact reporting (environmental improvement effects) will be disclosed. It is considered an appropriate reporting.

**Use of proceeds reporting:**

☒ Project-by-project

☐ On a project portfolio basis

☐ Linkage to individual bond(s)

☐ Other *(please specify):*

***Information reported:***

☒Allocated amounts

☐ Green Bond financed share of total investment

☐ Other *(please specify):*

***Frequency:***

☒Annual

☐ Semi-annual

☐ Other *(please specify):*

**Impact reporting:**

☒ Project-by-project

☐ On a project portfolio basis

☐ Linkage to individual bond(s)

☐ Other *(please specify):*

***Frequency:***

☒Annual

☐ Semi-annual

☐ Other *(please specify):*

***Information reported (expected or ex-post):***

☒GHG Emissions / Savings

☐ Energy Savings

☐ Decrease in water use

☐ Other ESG indicators *(please specify):*

**Means of Disclosure**

☐ Information published in financial report

☒ Information published in sustainability report

☐ Information published in ad hoc documents

☐ Other *(please specify):*

☐ Reporting reviewed *(if yes, please specify which parts of the reporting are subject to external review):*

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** *(e.g. to review provider methodology or credentials, to issuer's documentation, etc.)*

https://www.r-i.co.jp/en/rating/products/esg/index.html

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**
**Type(s) of Review provided:**

| | | | |
|---|---|---|---|
| ☒ | Second Party Opinion | ☐ | Certification |
| ☐ | Verification | ☐ | Scoring/Rating |
| ☐ | Other *(please specify):* | | |

**Review provider(s):** Sustainalytics **Date of publication:** 11 Dec 2019

## ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

1. **Second Party Opinion**: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
2. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
3. **Certification**: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
4. **Green Bond Scoring/Rating**: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.