

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bonds Framework

Tokyo Metropolitan Government (TMG)
3 September 2021

VERIFICATION PARAMETERS

Type(s) of instruments contemplated	<ul style="list-style-type: none">• Green Bond
Relevant standards	<ul style="list-style-type: none">• Green Bonds Principles, as administered by ICMA• Tokyo Green Bonds Framework (March 2021)
Scope of verification	<ul style="list-style-type: none">• Tokyo Metropolitan Government Green Bond Portfolio (as of 25.05.2021)
Lifecycle	<ul style="list-style-type: none">• Pre-issuance verification
Validity	<ul style="list-style-type: none">• As long as the Tokyo Green Bonds Framework (March 2021) remains unchanged.

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Scope of work

Tokyo Metropolitan Government (TMG) commissioned ISS ESG to assist with its fifth Green Bond by assessing three core elements to determine the sustainability quality of the Framework:

1. Green Bonds link to TMG's sustainability strategy – drawing on TMG's overall sustainability profile and issuance-specific Use of Proceeds categories.
2. TMG's Green Bond Framework (March 2021 version) – benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBPs).
3. The asset pool – whether the projects contribute positively to the UN SDGs and perform against ISS ESG's issue-specific key performance indicators (KPIs) (See Annex 2).

ISS ESG ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION ¹
<p>Part 1:</p> <p>Green Bonds link to issuer's sustainability strategy</p>	<p>ISS ESG finds that the Use of Proceeds financed through this bond are consistent with the issuer's sustainability strategy and material ESG topics for the issuer. The rationale for issuing green bonds is clearly described by the issuer.</p>	<p>Consistent with issuer's sustainability strategy</p>
<p>Part 2:</p> <p>Alignment with GBPs</p>	<p>The issuer has defined a formal concept for its Green Bonds regarding use of proceeds, processes for project evaluation and selection, management of proceeds and reporting. This concept is in line with the ICMA Green Bonds Principles.</p>	<p>Aligned</p>
<p>Part 3:</p> <p>Sustainability quality of the Selection Criteria</p>	<p>The overall sustainability quality of the Selection Criteria in terms of sustainability benefits, risk avoidance and minimisation is good, based upon the ISS ESG assessment. The Green Bonds will finance eligible asset categories which include: renewable energy, green buildings, energy efficiency, pollution prevention and control, clean transportation, sustainable wastewater management, environmentally sustainable management of land use, and climate change adaptation.</p> <p>Those use of proceeds categories will make a positive contribution to SDGs 3 "Good Health and Well-being", 6 "Clean Water and Sanitation", 7 "Affordable and Clean Energy", 11 "Sustainable Cities and Communities", 13 "Climate Action". The environmental and social risks associated with those use of proceeds categories have been well managed.</p>	<p>Positive</p>

¹ ISS ESG's evaluation is based on the Tokyo Green Bonds Framework (March 2021), and on the ISS ESG Country Rating applicable at the SPO delivery date. ISS ESG underwent a controversy screening of the asset pool on 25.06.2021.

ISS ESG SPO ASSESSMENT

PART I: GREEN BONDS LINK TO TOKYO METROPOLITAN GOVERNMENT'S SUSTAINABILITY STRATEGY

A. ASSESSMENT OF JAPAN'S ESG PERFORMANCE

The ISS ESG Country Rating comprises a rating scale from A+ (excellent) to D- (poor).

COUNTRY	STATUS	RATING	DECILE RANK
JAPAN	PRIME	B -	3

This means that the country performed well in terms of sustainability, compared against other countries of the ISS ESG universe. In ISS ESG's view, the securities issued by the country therefore meet the basic requirements for sustainable investments.

As of 23.06.2021, this Rating places Japan 33rd out of 121 countries rated by ISS ESG.

The ISS ESG Country Rating evaluates the following eight areas in order to determine the sustainability performance of a country:

Social and Governance Performance

- Social Rating
- Political System and Governance
- Human Rights and Fundamental Freedoms
- Social Conditions

Environmental Performance

- Environmental rating
- Natural Resources
- Climate Change and Energy
- Production and Consumption

In the social part of the rating, Japan achieved a rating that was above average compared to other rated countries.

In the environmental part, the country shows a below average performance compared to other rated countries, apart from the "Production and Consumption" area, where it slightly outperforms the other countries.

Further details on the rating of Japan can be found in Annex 1.

B. CONSISTENCY OF GREEN BONDS WITH TOKYO METROPOLITAN GOVERNMENT'S SUSTAINABILITY STRATEGY

Key sustainability objectives and priorities defined by the issuer

TMG is the local government for the city of Tokyo, which has a population of over 13 million². In 2019, it announced its 2050 net zero target and its Zero Emissions Tokyo Strategy. The Strategy focuses on supporting the Paris Agreement and contains various plans to reduce the city's GHG emissions and improve climate adaptation measures. In addition to these climate change priorities, in March 2021, TMG established the "Future Tokyo: Tokyo's Long-Term Strategy" that clarifies its vision for Tokyo's bright future and the strategies for realizing this vision. This strategy reaffirms the government's commitment to improving the city population's social wellbeing, including by promoting healthy and sustainable lifestyles. It also includes commitments to improving several environmental aspects of the city, such as enhancing Tokyo's green infrastructure and resilience towards flooding.

Rationale for issuance

TMG first began issuing green bonds in October 2017. Since then, it has issued green bonds every year, to attract financing to support its goals and actions as mentioned in its Action Plan for 2020 and climate change strategy. In the "Future Tokyo: Tokyo's Long-Term Strategy", the issuance of green bonds is positioned as an initiative for achieving a Zero Emission Tokyo, which also helps to contribute to the world's achievement of net-zero carbon emissions by 2050. The extra financing will enable TMG to implement additional measures, as well as raising awareness amongst the financial community, other bond issuers and the Tokyo population about TMG's climate change and sustainability measures as well as the use of green bonds in enabling such works.

Contribution of Use of Proceeds categories to sustainability objectives and priorities

ISS ESG mapped the Use of Proceeds categories to be financed under this Green Bond with the sustainability objectives defined by the issuer, and with the key ESG challenges relevant for sovereign and sub-sovereign issuers as defined in the ISS ESG Country Rating methodology. From this mapping, ISS ESG derived a level of contribution to the strategy of each Use of Proceeds categories.

USE OF PROCEEDS CATEGORY	SUSTAINABILITY OBJECTIVES FOR THE ISSUER	KEY ESG CHALLENGES	CONTRIBUTION
Smart Energy & Urban Development			
Reduce greenhouse gas emitted by office buildings	✓	✓	Contribution to a material objective
Promote the conservation of energy and energy management	✓	✓	Contribution to a material objective

² <https://www.metro.tokyo.lg.jp/ENGLISH/ABOUT/HISTORY/history03.htm>

Promote advanced transportation technology and the use of bicycles	✓	✓	Contribution to a material objective
Increase the utilization of renewable energy, i.e., solar, geothermal, hydrogen, sewerage heat.	✓	✓	Contribution to a material objective
Natural Environment Conservation			
Grow and conserve plants through the development of parks, greening in urban areas, the development of forests, etc.	✓	✓	Contribution to a material objective
Improvement of Living Environment			
Improve water quality and groundwater conservation	✓	✓	Contribution to a material objective
Improve air quality	✓	✓	Contribution to a material objective
Road improvement (heat insulation and water absorption)	✓	✓	Contribution to a material objective
Adaptation for Climate Change			
Measures to prevent flooding and prepare for other natural disasters	✓	✓	Contribution to a material objective

Opinion: ISS ESG finds that the Use of Proceeds financed through this bond are consistent with the issuer's sustainability strategy and material ESG topics for the issuer. The rationale for issuing green bonds is clearly described by the issuer.

PART II: ALIGNMENT WITH ICMA GREEN BOND PRINCIPLES

1. Use of Proceeds

TMG has selected the below project categories to be financed by the green bond issued under this Framework. The categories are based on the Tokyo Environmental Master Plan. TMG's intended allocation of the proceeds share for the proceeds, are also in the table.

TMG ENVIRONMENTAL CATEGORY ³		SHARE
Smart Energy & Urban Development		15.9%
1	Reduce greenhouse gases emitted by office buildings	4.9%
2	Promote the conservation of energy and energy management	5.8%
3	Promote advanced transportation technology and the use of bicycles	0.4%
4	Increase the utilisation of renewable energy, i.e., solar, geothermal, hydrogen, sewerage heat	4.9%
Sustainable Resource & Waste Management		0.0%
5	Reduce resource loss and increase the use of environmentally friendly materials	0.0%
6	The 3Rs (reduce, reuse and recycle), promote recycling of waste	0.0%
7	Increase the utilisation of materials reducing environmental burdens	0.0%
8	Promote the treatment of harmful waste	0.0%
Natural Environment Conservation		23.3%
9	Grow and conserve plants through the development of parks, greening in urban areas, the development of forests, etc.	23.3%
10	Conserve biological diversity (development of tideland in marine park, etc.)	0.0%
Improvements of Living Environment		16.8%
11	Improve water quality and groundwater conservation	7.5%
12	Improve air quality	6.8%
13	Promote measures to prevent/remediate soil contamination	0.0%
14	Road improvement (heat insulation and water absorption)	2.5%
Adaptation for Climate Change		44.0%

³ Categories and percentages are reported as given by TMG.

15	Measures addressing rising temperatures in urban areas	0.00%
16	Measures to prevent flooding and prepare for other natural disasters	44.0%
Total		100%

Opinion: ISS ESG considers the Use of Proceeds description provided by TMG to be well aligned with the ICMA GBPs’ project categories. The breakdown of the proceeds allocation by project category is best market practice. ISS ESG recommends the inclusion in the Framework of more detail around each project if possible, although this detail may also be found in TMG’s green bond reporting.

2. Process for Project Evaluation and Selection

The projects that are eligible for Tokyo Green Bond funding in a fiscal year will be selected based on an evaluation using the Environmental, Social and Governance eligibility criteria in the table below. The environmental aspects in section E-1 are given priority.

NO.	EVALUATION ASPECTS	EVALUATION ITEMS	PERSPECTIVE
E-1	Eligibility of Environmental Aspects	Clarity of positive impact	Environmental effects of projects can be measured quantitatively, or projects have clear positive impact from an environmental perspective.
E-2	Eligibility of Environmental Aspects	Reduction of negative impact	Efforts to reduce negative environmental impacts are planned or underway.
S-1	Eligibility of Social Aspects	Clarity of positive impact	Social effects of projects can be clarified.
S-2	Eligibility of Social Aspects	Reduction of negative impact	Efforts to reduce negative impacts are planned or underway.
G-1	Eligibility of Governance	Policy & regulatory compliance	Project plans comply with the “Future Tokyo: Tokyo’s Long-Term Strategy”, the Japanese Local Government Finance Act, etc.
G-2	Eligibility of Governance	Feasibility /urgency	Special consideration regarding significant feasibility or urgency of projects

G-3	Eligibility of Governance	Effect sustainability	Effects generated by environmental & social aspects of projects will be sustainable.
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The process for selecting projects to be financed by the Green Bonds is described below and in the following chart.

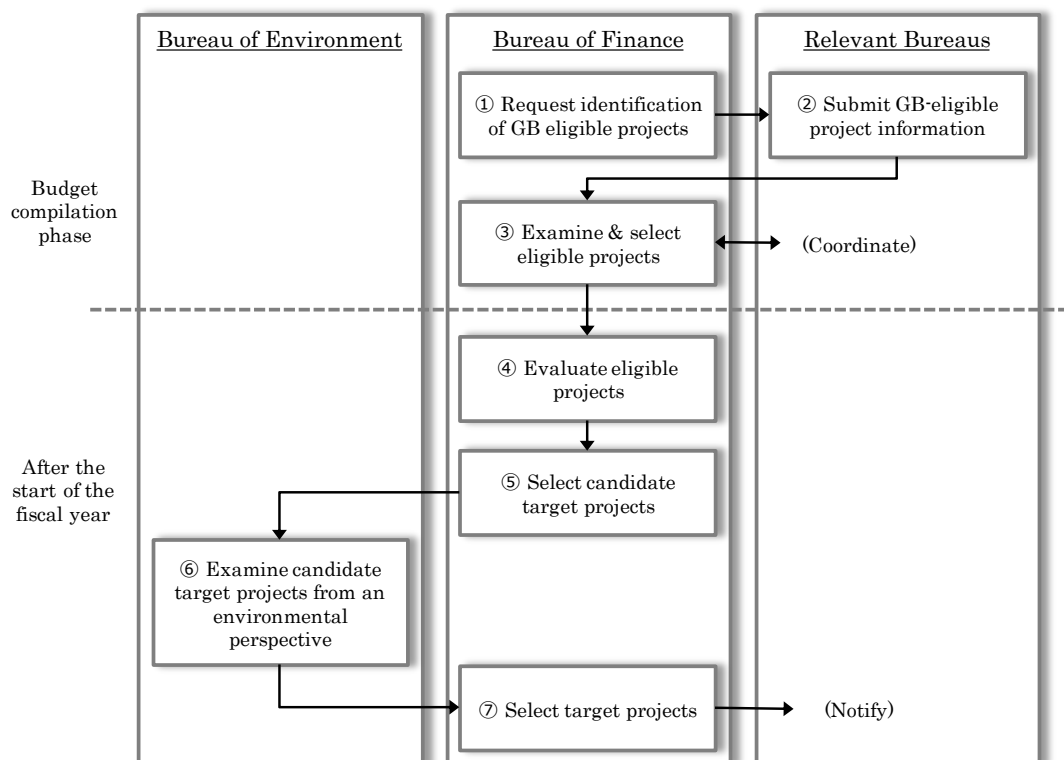
Budget compilation phase

1. The Bureau of Finance requests that bureaus involved identify any projects eligible for Tokyo Green Bonds funds.
2. The bureaus list the projects that are potentially eligible for Tokyo Green Bonds funds and then submit information about the projects that may be eligible to the Bureau of Finance.
3. The Bureau of Finance examines the content of the projects and selects eligible projects.

After the start of the fiscal year

- The Bureau of Finance evaluates the eligible projects. In the evaluation, it is confirmed that each project is within the scope of the TMG environmental project categories and the projects are evaluated using the ESG eligibility criteria, etc., based on the information submitted by the involved bureaus.
- The Bureau of Finance selects candidate target projects.
- The Bureau of Environment examines the candidate target projects from an environmental perspective
- The Bureau of Finance selects target projects. (Notifies the bureaus of their decision)

Chart: Target Project Evaluation & Selection Procedure



Opinion: ISS ESG finds that the process for project evaluation and selection is well aligned with the ICMA GBPs and includes elements of best market practice. There are clear eligibility criteria which considers a range of environmental, social and governance aspects. There is a documented process, which describes structured steps involving different government departments and their contributions. Furthermore, an approximate timeline is provided, which is good market practice.

3. Management of Proceeds

Local governments must be able to correlate expenditures in each fiscal year to their annual revenue. Therefore, in principle, Tokyo Green Bonds funds are appropriated for target projects within the fiscal year. The Bureau of Finance manages allocation of the bond proceeds to the appropriate project.

After Tokyo Green Bonds are issued, the appropriation of Tokyo Green Bonds funds will be clarified by classifying the funds into accounting categories based on the TMG’s budget rules.

At the end of each fiscal year, for all revenue and expenditures related to projects funded by Tokyo Green Bonds, the results of execution and settlement-related documents will be created and submitted to the Tokyo Metropolitan Audit and Inspection Commissioners for inspection. The documents will be submitted together with the comments of the commissioners to the Tokyo Metropolitan Assembly for certification.

Opinion: ISS ESG considers that the process described for the Management of Proceeds is well aligned with the GBPs. The reviews by the Audit and Inspection Commissioners are robust and

exemplary. ISS ESG recommends the issuer consider segregating the bond proceeds away from their main bank accounts in order to ensure the segregation of the proceeds, if possible.

4. Reporting

The allocation of the bond proceeds will be disclosed one year after the issuance (or at the first fiscal-year-end following the fiscal year of the issuance). The process below will be used to compile and prepare the information for disclosure on the TMG website.

1. The Bureau of Finance confirms target project expenditures status with the bureaus.
2. The Bureau of Finance determines the breakdown of the appropriated Tokyo Green Bond funds.
3. The results of the appropriation are compiled and disclosed on the TMG website.
4. If Tokyo Green Bond funds are to be appropriated to a single project over multiple years, it must be stated.

The reporting will include the following information and be made available on the TMG website, at the schedule indicated.

CONTENT	TIMING
Tokyo Green Bonds Framework	At all times
Decision on target projects <ul style="list-style-type: none"> ▪ Project name ▪ Tokyo Green Bond environmental category ▪ Amount appropriated (millions of yen) ▪ Expected environmental impact 	Before issuance
Results of the appropriation <ul style="list-style-type: none"> ▪ Project name ▪ Tokyo Green Bond environmental category ▪ Results of appropriation (millions of yen) ▪ Expected environmental impact 	Fiscal year following issuance
Change of target projects, etc.	If necessary

Opinion: *ISS ESG considers that the commitments for Reporting are well in line with the GBPs. The process for compiling the information for disclosure is documented. There is transparency around the frequency and the details which will be included in the reporting, including allocation and impact reporting, as well as where the reporting will be made available. The amount of detail to be included in the reporting, such as the project name, is welcome and*

best market practice. ISS ESG recommends inclusion of details on the environmental impact indicators that would be used in the reporting, if possible.

External review

Before issuing Green Bonds, TMG will consider whether it's necessary to conduct an external review.

PART III: SUSTAINABILITY QUALITY OF THE GREEN BOND ASSET POOL















A. CONTRIBUTION OF THE GREEN BOND TO THE UN SDGs

Based on the assessment of the sustainability quality of the Green Bonds Selection Criteria and using a proprietary methodology, ISS ESG assessed the contribution of TMG’s Green Bonds to the Sustainable Development Goals defined by the United Nations (UN SDGs).

This assessment is displayed on 5-point scale (see Annex 2 for methodology):

Significant Obstruction	Limited Obstruction	No Net Impact	Limited Contribution	Significant Contribution
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Each of the Green Bonds’ Use of Proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
Improved energy and resource efficiency in green real estate	Limited Contribution	  
Sustainable plantings in green real estate	Limited Contribution	
Solar power	Significant Contribution	 
Hydropower (micro hydropower systems in water supply infrastructure)	Significant contribution	 
Wastewater treatment facility	Significant Contribution	
Public transport vehicles (diesel buses)	Significant Contribution	
Flood prevention (excluding dams)	Limited Contribution	  
Heat insulation on roads and pedestrian and cycling paths	Limited Contribution	

B. MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS ASSOCIATED WITH THE SELECTION CRITERIA

Relevant ISS ESG KPI sets for TMG's Green Bond Use of Proceeds categories

ISS ESG assessed the ESG risk management in place at an asset level for the project categories of this Green Bond. To conduct the assessment, ISS ESG defined ESG KPI sets capturing the key ESG challenges faced by those project categories.

ISS ESG PROJECT CATEGORIES		TMG ENVIRONMENTAL CATEGORIES ⁴
A	Green real estate development	
A.1	Improved energy and resource efficiency in green real estate	1 & 2
A.2	Sustainable plantings in green real estate	9
B	Renewable energy	
B.1	Solar power	4
B.2	Hydro power (micro-hydro systems in water supply infrastructures)	2 & 4
C	Pollution prevention and control	
C.1.	Wastewater treatment facility	11
D	Public transport	
D.1.	Public transport vehicles (diesel buses)	12
E.	Adaptation to climate change	
E.1.	Flood prevention (excluding dams)	11 & 16
F	Sustainable road development	
F.1.	Heat insulation on roads and pedestrian and cycling paths	3 & 14

(A) Green real estate development

(A.1) Improved energy and resource efficiency in green real estate

The table below presents the findings of an ISS ESG assessment of the project categories against ISS ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

⁴ See pp. 8 and 9 for details.

Percentage improvement of energy and resource efficiency

- ✓ The LEDs in the relevant projects reduce energy consumption by over 50%.

Working conditions at building sites

- All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
- ✓

Social standards in the supply chain

- All of the projects comply with the Industrial Safety and Health Act, Japan. Additionally, TMG has been selecting manufacturers with high labour and health and safety standards for suppliers. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
- ✓

Environmental aspects of installed electronic equipment

- Regarding take-back and recycling of electronic equipment at end-of-life stage, all of the projects follow the "Waste Management and Public Cleansing Act", which aims to reduce the discharge of waste and promote the proper sorting, storage, collection, transport, recycling.
- All of the projects comply with the national law "Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof", and "J-Moss", which restricts the use of certain hazardous substances such as lead and cadmium in electrical and electronic equipment.
- ✓

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Energy consumption reduced in 4 out of 5 projects: 4,382,386 kWh/year
- GHG emissions avoided in 1 out of 5 projects: 33,000 tonnes of CO₂ (sum till the end of FY2025)

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(A.2) Sustainable plantings in green real estate

ASSESSMENT AGAINST ISS ESG KPI

Environmental aspects of plantings

- ✓ The growers of the plants comply with the Forest Act of Japan, which prevents the use of plants that cause negative climate impacts or degrade soil quality. When planting, existing water supplies are used to avoid the need for new irrigation systems. All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)" which requires that native species should be used.
- However, no information is available on whether a high capacity of CO2 absorption and storage are taken into consideration.

Working conditions at building sites

- ✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors.

Environmental aspects in the supply chain

- TMG has its own selection criteria for greening plants, which emphasizes the importance of promoting using greening plants produced in Tokyo and the producing center should be confirmed by "place of origin confirmation document" or other measures.
- ✓ The use of materials which can cause negative environmental impact in its produced area is restricted by a TMG standard "Tokyo Metropolitan Green Procurement Principle (public construction)". TMG has a Chemical Fertilizer Standard to reduce the use of chemical fertilizer, the Soil Diagnose Standard to maintain soil quality. The plants for the project are not the trigger of deforestation because the producers have to follow the Forest Act of Japan.
- There is no information on the amount of planting which uses genetically modified organisms. Generally, the "Tokyo Metropolitan Green Procurement Principle (public construction)" limits planting to only use native species. The "Act on the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms" limits the use of GMO plants and the "Guideline for GMO plants handling in Tokyo" regulates the use of GMO plants.
- - ✓ The use of materials which can cause negative environmental impact in its produced area is restricted by a TMG standard "Tokyo Metropolitan Green Procurement Principle (public construction)".

Social standards in the supply chain

- ✓ All of the projects comply with the Industrial Safety and Health Act. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
- ✓ According to TMG, when developing and construction of parks, TMG holds an information and explanatory meeting to the surrounding communities.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Area of development in 3 projects: 64,153m²

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(B) Renewable Energy

(B.1) Solar Power

ASSESSMENT AGAINST ISS ESG KPI

Site Selection

- ✓ All of the Projects are roof based solar PV systems.

Supply chain standards

- ✓ TMG has selected manufacturers with high levels of labour and health and safety standards in the supply chain of solar modules. All of the Projects are to be executed based on Industrial Safety and Health Act, Japan. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of solar power plants

- ✓ 97.1% of the projects have a conversion efficiency of at least 15%.
- ✓ Regarding take-back and recycling of electronic equipment at end-of-life stage, all of the projects follow the "Waste Management and Public Cleansing Act", which aims to reduce the discharge of waste and promote the proper sorting, storage, collection, transport, recycling.
- ✓ All of the projects are required to follow "Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof" (Japanese law to combat chemicals), and J-Moss for restriction of the use of certain hazardous substances.

Working conditions during construction and maintenance work

- ✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Increase renewable energy use for 3 projects: 549,483kWh

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(B.2) Hydropower (micro-hydro systems in water supply infrastructures)

ASSESSMENT AGAINST ISS ESG KPI

Consideration of environmental aspects during planning and construction

- ✓ The projects consist of expansions of existing micro hydropower facilities. The construction projects comply with the "Tokyo Metropolitan Green Procurement Principle (public construction)" which aims to minimise the environmental burden caused by the construction. They also comply with the Noise Regulation Act and the "Tokyo Metropolitan Construction Recycling Guidelines", which minimizes noise and the environmental impacts of construction works.

Working conditions during construction and maintenance work

- ✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of micro-hydro systems in water supply infrastructures

- ✓ The rate of leakage of Tokyo's water facilities is 3%. The projects will aim for similar rates of minimal leakage.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Energy production for 1 projects: 386,000 kWh / year
- Energy consumption reduced in 2 projects: 943,000 kWh / year

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(C) Pollution prevention and control

(C.1) Wastewater treatment facility

ASSESSMENT AGAINST ISS ESG KPI

Site Selection

- ✓ All the project locations are in Tokyo and not within protected areas.
- ✓ Environmental impact assessments (EIA) were not conducted for the projects because the local regulations do not require them.

Community dialogue

- ✓ The local communities are consulted in the planning of the projects. TMG's conditions with the construction workers oblige them to avoid conflicts with the local community and enact measures to minimize their impact. There are also grievance mechanisms and compensation schemes in place, if necessary.

Environmental aspects of construction and operation

- ✓ The rate of leakage of Tokyo's water facilities is 3%. The projects will aim for similar rates of minimal leakage.
- ✓ Treated water will not be introduced into waterways, landfill nor used for agriculture. Sludge residues will be reduced. Separately, TMG plans to use sludge in thermal power plants.
- ✓ The projects will improve water quality. They will comply with the "Water Pollution Prevention Act" to maintain the quality of the treated water.

Working conditions during construction and operation

- ✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Water stored for 1 project: 1.75 million m³ (until the end of FY2025)

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(D) Public transport

(D.1) Public transport vehicles (diesel buses)

ASSESSMENT AGAINST ISS ESG KPI

Productions standards

- ✓ The “Tokyo Metropolitan Green Procurement Principle (public construction)” ensure that all of the buses will have low emissions and high fuel efficiency.
- ✓ According to TMG, the bus manufacturer from which TMG is procuring its buses has high labour policies and health and safety standards. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of buses

- ✓ The bus manufacturers have calculated comprehensive life cycle assessments of the environmental impacts of the vehicles.
- ✓ The new buses can reduce CO2 emissions compared to the older buses.

Social aspects of buses

- ✓ There are various safety policies concerning the bus operators and passengers. These include limits on the bus operators’ working hours as well as clarifying their safety responsibilities.
- ✓ There is robust monitoring of passenger incidents and measures to reduce any incidents. There are national regulations regarding the noise caused by the bus operations and also disabled passenger accessibility.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Percentage of NOx (Nitrogen oxide) emissions reduced for 1 project: 82%/year
- Percentage of PM (Particulate matter) emissions reduced for 1 project: 69%/year (reduction by replacing old buses).

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(E) Adaptation to climate change

(E.1) Flood prevention (excluding dams)

ASSESSMENT AGAINST ISS ESG KPI

Consideration of environmental aspects during planning and construction

All of the projects follow the “Tokyo Metropolitan Green Procurement Principle (public construction)”, and the “Tokyo Metropolitan Construction Recycling Guidelines”.

- ✓ In accordance with the River Act, TMG submits the plans to river experts for approval. These plans include watershed and water flow modelling, as well as impacts on local ecosystems. One of the projects, based on an island, involves extra consideration for zoning and environmental impacts.
- ✓ The construction projects comply with the Noise Regulation Act and the “Tokyo Metropolitan Construction Recycling Guidelines”, which minimizes noise and the environmental impacts of construction works.

Working conditions during construction and operation

All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Modelling on natural state of water bodies, scientific monitoring, structural quality mapping

All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)", which ensure the construction works be appropriate to the specific local conditions and consider biodiversity impacts. The projects will also follow the relevant national government guidelines about the scope of the works used to achieve the project aims.

- ✓ One of the projects will not change the natural water flow because it expands the existing pipe network.

For two of the projects, scientific monitoring and modelling of the natural water flow was conducted in the planning phase. These studies were used in recommending the proposed works.

One of the projects also modelled potential storm, tidal and tsunami damage during the planning phase. This assessment involved the Tokyo Committee on Disaster Prevention.

Community dialogue

- ✓ The local communities are consulted in the planning for all of the projects. TMG’s conditions with the construction workers oblige them to avoid any conflicts with the local community and enact measures to minimize their impact, such as through transparent communications and

timely responses to community complaints. There are also grievance mechanisms and compensation schemes in place, if necessary.

One of the projects, located on an island, involves extra consideration for zoning and environmental impacts.

Social standards in the supply chain

All of the Projects are to be executed based on Industrial Safety and Health Act, Japan.

- ✓ TMG selects contractors which mainly procure the cement from a corporation, which has strict human rights and labour standards and refer to the ILO core conventions.

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Avoidance rate from flooding caused by 50mm/h rain in 1 out of 6 projects: 73% (by the end of FY2025)
- Percentage of rivers with countermeasures in 1 out of 6 projects: 68.3%
- Water storage amount in 1 out of 6 projects: 1,056,500m³ (by the end of FY2025)
- Length of development in 1 out of 6 projects: 0.06 km (seawall and shore protection)
- Development size in 2 out of 6 projects: 106.3 km (seawall, internal shore protection, and offshore breakwater (by the end of FY2021))
- Development number in 1 out of 6 projects: 15 water gates and 4 drainage pump stations (by the end of FY2021))

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

(F) Sustainable road development

(F.1) Heat insulation on roads and pedestrian and cycling paths

ASSESSMENT AGAINST ISS ESG KPI

Site selection

- ✓ The project sites are not located in key biodiversity areas.

Environmental aspects of construction

- ✓ All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)" which reduces the environmental burden of the construction. The construction projects also need to follow the Noise Regulation Act and the "Tokyo Metropolitan Construction Recycling Guidelines", which minimizes noise and the environmental impacts of construction works.

Sustainable materials

- ✓ The projects will use recycled materials, as required under the “Tokyo Metropolitan Green Procurement Principle (public construction)”.

Working conditions during construction and maintenance work

- All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
- ✓

Controversy assessment

The controversy assessment did not reveal any controversial activities or practices that could be attributed to the issuer.

Impact indicators for the projects within this project category according to TMG*

- Length of development in 1 project: 11.5km of cycling paths (by the end of FY2024)
- Development area of heat insulating pavement in 1 out of 2 projects: 8.933km

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

DISCLAIMER

1. Validity of the SPO: As long as the Tokyo Green Bonds Framework (March 2021) remains unchanged.
2. ISS ESG uses a scientifically based rating concept to analyse and evaluate the environmental and social performance of companies and countries. In doing so, we adhere to the highest quality standards which are customary in responsibility research worldwide. In addition, we create a Second Party Opinion (SPO) on bonds based on data from the issuer.
3. We would, however, point out that we do not warrant that the information presented in this SPO is complete, accurate or up to date. Any liability on the part of ISS ESG in connection with the use of these SPO, the information provided in them and the use thereof shall be excluded. In particular, we point out that the verification of the compliance with the selection criteria is based solely on random samples and documents submitted by the issuer.
4. All statements of opinion and value judgements given by us do not in any way constitute purchase or investment recommendations. In particular, the SPO is no assessment of the economic profitability and credit worthiness of a bond but refers exclusively to the social and environmental criteria mentioned above.
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ANNEX 1: ASSESSMENT OF JAPAN'S ESG PERFORMANCE

Methodological note:

The ISS ESG Country Rating provides material and forward-looking environmental, social and governance (ESG) data and performance assessments, related to national governments.

The ISS ESG Country Rating does not address specifically sub-sovereign entities such as Tokyo Metropolitan Government. It is provided to offer an overview on the context and the sustainability commitments of the Country where the sub-sovereign entity is located. It has no impact on the overall evaluation of the sustainability credentials of the bond issuance of Tokyo Metropolitan Government and is provided below for information purposes only. The Opinions below have been modified slightly from the original Country Rating, for relevance.

This assessment is an independent analysis and opinion by ISS ESG and does not necessarily correspond to the official position of the national government of Japan or TMG.

Governance Opinion

Japan is a constitutional democracy with a bicameral parliament. Elections are free and fair, although history has not seen a great variance in governments due to the Liberal Democratic Party (LDP) being almost continuously in power since 1955. Last elections were held in October 2017 and the LDP won 61% of seats in the House of Representatives. Yoshihide Suga became the party's leader as well as Prime Minister in September 2020.

Japan's institutions are functioning well, the rule of law is respected, and judicial independence is ensured. Also, Japan effectively safeguards human rights.

Social Opinion

Japan is a welfare state with very good access to healthcare, resulting in the world's highest life expectancy. The country's social security system comprises a comprehensive scope of branches (age, health, disability, etc.) but is only partially effective in reducing the population's vulnerability to poverty. High life expectancy, low levels of allowed immigration and low birth rates have led to very high population dependency rates, meaning those depending on the able-bodied population. In recent years, laws were passed that allow for an increasing in immigration, which could ease the labour markets shortages of skilled employees. Labour rights are effectively warranted in Japan and working conditions are generally good, although the traditional lifetime employment in Japan is declining to some degree, too. Japan's traditional culture of harmony is reflected in its relatively low levels of inequality, especially with regard to the wealth distribution.

Environmental Opinion

Japan's energy mix is still heavily reliant on coal, which has a share of more than 25% of total primary energy supply. Also, the share of nuclear energy is increasing again, after the Fukushima disaster in 2011 urged the power companies to suspend these capacities. Although total energy consumption and greenhouse gas emissions are, relative to the population and high economic output, at a medium level, Japan has not yet adopted a strategy compatible with the well-below-2° trajectory.

Sustainability Summary

Japan has not yet progressed into a greener economy, as the dependence on fossil fuels is still great, and the country's climate record is correspondingly poor. However, economic efficiency is high, and the welfare state delivers a high level of social justice, good access to healthcare and favorable working conditions. Yet, the rising share of old people in the society, low levels of immigration and birthrates are challenging that model of society already today. The country has strong institutions, uncritical levels of corruption and a clean human rights record, although societal discrimination is prevailing on some grounds.

Breaches of international norms and ESG controversies

Japan's climate policy is considered average, when compared to other countries. This does not just result in high greenhouse gas emissions but also might lead to transition risks in the future. Whilst many European countries have announced a phase-out of coal power generation, Japan has not yet issued such a statement.

ANNEX 2: Methodology

ISS ESG Green KPIs

The ISS ESG Green Bond KPIs serve as a structure for evaluating the sustainability quality – i.e. the social and environmental added value – of the use of proceeds of Tokyo Metropolitan Government's Green Bonds.

It comprises firstly the definition of the use of proceeds category offering added social and/or environmental value, and secondly the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the assets can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the assets and which can also be used for reporting. If a majority of assets fulfill the requirement of an indicator, this indicator is then assessed positively. Those indicators may be tailor-made to capture the context-specific environmental and social risks.

To review the KPIs used in this SPO, please contact Federico Pezzolato (details below) who will send them directly to you.

Environmental and social risks assessment methodology

ISS ESG evaluates whether the assets included in the asset pool match the eligible project category and criteria listed in the Green Bond KPIs.

All percentages refer to the amount of assets within one category (e.g. wind power). Additionally, the assessment "no or limited information is available" either indicates that no information was made available to ISS ESG or that the information provided did not fulfil the requirements of the ISS ESG Green Bond KPIs.

The evaluation was carried out using information and documents provided to ISS ESG on a confidential basis by Tokyo Metropolitan Government (e.g. Due Diligence Reports). Further, national legislation and standards, depending on the asset location, were drawn on to complement the information provided by the issuer.

Assessment of the contribution and association to the SDG

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary method, ISS ESG identifies the extent to which Tokyo Metropolitan Government's Green Bonds contributes to related SDGs.

ANNEX 3: ISS ESG Country Rating Methodology

Methodology - Overview

The ESG Country Rating methodology was originally developed by Institutional Shareholder Services Germany (formerly oekom research) and has been consistently updated for many years.

ESG Country Rating – The ESG Country Rating universe comprises 58 countries, as well as Hong Kong and the European Union, representing 96 per cent of global outstanding sovereign debt (as of June 2018). The assessment of a country's sustainability performance is based on approximately 100 environmental, social and governance criteria with equal weight assigned to the social and environmental dimension. All criteria are individually weighted and evaluated and the results are aggregated to yield an overall score (rating). The selection of criteria is derived from ISS ESG's understanding of sustainability and reflects various global challenges that are embodied in the Sustainable Development Goals. Criteria are selected according to their relevance (materiality) and the quality of data regarding availability, up-to-dateness and consistency for all the countries rated.

Country controversies – In addition to the rating, ISS ESG conducts a comprehensive analysis of relevant controversies. Thereby, our clients have the possibility to consider, either separately or in addition to the rating, circumstances in areas they view as especially critical. The country controversy assessment is either directly derived from information provided by credible and acknowledged external sources, such as indices or blacklists, or it is based on the country's performance in the respective rating section. In the latter cases, underperformance in a specific set of indicators constitutes a controversy. Some controversy issues are delineated on different levels of severity.

Country leaders - List (in alphabetical order) of the top three countries from the ESG Country Rating universe at the time of generation of this report.

Criteria design – The rating comprises both qualitative and quantitative criteria. For instance, the safeguarding of fundamental freedoms by a country's government is mostly assessed in qualitative terms, while a country's consumption of resources is quantified. Qualitative criteria are evaluated against absolute targets and/or best practices, the assessment of quantitative indicators is based on thresholds. Those either reflect normative considerations and/or relative performance in a given area. In order to ensure their validity, some quantitative indicators are normalized against eligible denominators. To assess the quality of government policy in a specific area, we use indicators measuring input, such as spending on education as a proportion of GDP, as well as criteria measuring output, such as female participation in education.

Decile Rank - The Decile Rank indicates in which decile (tenth part of total) the individual Country Rating ranks from 1 (best – country's rating is in the first decile within the country universe) to 10 (lowest – country's rating is in the tenth decile within the country universe). The Decile Rank is determined based on the underlying numerical score of the rating. If the total number of countries cannot be evenly divided by ten, the surplus countries are distributed from the top (1. decile) to the bottom. If there are Country Ratings with identical absolute scores that would span a division in decile ranks, all ratings with an equal decile score are classified in the higher decile, resulting in a smaller number of Country Ratings in the decile below.

Distribution of Ratings - Overview of the distribution of the ratings of all countries that are included in the ESG Country Rating universe (country portrayed in this report: dark blue).

Rating Scale – countries are rated on a twelve-point scale from A+ to D-:

A+: the country shows excellent performance

D-: the country shows poor performance

Overview of the range of scores achieved in the ESG Country Rating universe (light blue) and indication of the grade of the country evaluated in this report (dark blue).

Sources of Information - The sources we draw on include international institutions such as the World Bank, the International Energy Agency (IEA) and the World Health Organisation (WHO), as well as respected non-governmental organisations such as Amnesty International, Transparency International and the Stockholm International Peace Research Institute (SIPRI). A selection of sources used for this report is illustrated in the annex.

Status & Prime Threshold – Countries are categorised as Prime if they achieve/exceed the minimum sustainability performance requirements (Prime threshold) defined by ISS ESG for the Country Rating.

Update cycle - The vast majority of rating criteria is updated annually, only single indicators receive event-driven updates. The exact timing is determined by the publication dates of major sources of information.

ANNEX 4: Quality management processes

SCOPE

Tokyo Metropolitan Government commissioned ISS ESG to compile a Green Bond SPO. The Second Party Opinion process includes verifying whether the Green Bond Framework aligns with the ICMA Green Bonds Principles and to assess the sustainability credentials of its Green Bonds, as well as the issuer's sustainability strategy.

CRITERIA

Relevant Standards for this Second Party Opinion

- ICMA Green Bond Principles
- ISS ESG KPI sets: Green Real Estate, Solar Power, Hydropower, Wastewater Treatment, Public transport vehicles, Flood prevention, Pedestrian and Cycling paths

ISSUER'S RESPONSIBILITY

Tokyo Metropolitan Government's responsibility was to provide information and documentation on:

- Framework
- Asset pool / Eligibility criteria
- Documentation of ESG risks management at the asset level

ISS ESG'S VERIFICATION PROCESS

ISS ESG is one of the world's leading independent environmental, social and governance (ESG) research, analysis and rating houses. The company has been actively involved in the sustainable capital markets for over 25 years. Since 2014, ISS ESG has built up a reputation as a highly-reputed thought leader in the green and social bond market and has become one of the first CBI approved verifiers.

ISS ESG has conducted this independent Second Party Opinion of the Green Bonds to be issued by Tokyo Metropolitan Government based on ISS ESG methodology and in line with the ICMA Green Bonds Principles.

The engagement with Tokyo Metropolitan Government took place in June 2021.

ISS ESG'S BUSINESS PRACTICES

ISS has conducted this verification in strict compliance with the ISS Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behaviour and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

About ISS ESG SPO

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries regarding their environmental and social performance.

As part of our Sustainable (Green & Social) Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria.

We assess alignment with external principles (e.g. the ICMA Green / Social Bond Principles), analyse the sustainability quality of the assets and review the sustainability performance of the issuer themselves. Following these three steps, we draw up an independent SPO so that investors are as well informed as possible about the quality of the bond / loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

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