

————— JCR Green Bond Framework Evaluation by Japan Credit Rating Agency, Ltd. —————

Japan Credit Rating Agency, Ltd. (JCR) announces the following Green Bond Framework Evaluation Results.

JCR Assigns Green 1(F) to the Green Bond Framework of Kyoto City

Issuer : Kyoto City
Subject : Green Bond Framework of Kyoto City.

<Green Bond Framework Evaluation Results>

Overall Evaluation	Green 1(F)
Greenness Evaluation (Use of proceeds)	g1(F)
Management, Operation and Transparency Evaluation	m1(F)

Chapter 1: Evaluation Overview

Kyoto City is the capital of Kyoto Prefecture and an ordinance-designated city. The population is about 1.45 million¹, which accounts for about 57% of the population of Kyoto Prefecture. Kyoto City is an inland city adjacent to part of Osaka Prefecture and Shiga Prefecture, and is located in a basin. Kamo-gawa River, Katsura-gawa River, Uji-gawa River, etc. flow into the city, and forests occupy three-fourths of the city area, which has rich natural features.

Kyoto City has promoted various approaches since the Kyoto Protocol, an international commitment on global warming countermeasures adopted in 1997. In 2017, the year of the 20th anniversary of Kyoto Protocol enactment, Kyoto Conference on the Global Environment 2017(KYOTO+20) was held in cooperation with Paris City, international organizations, etc. to share the importance of global warming countermeasures, the direction of their efforts and the implementation. In addition, the 49th Session of IPCC² was held in Kyoto City to disseminate various information on climate change countermeasures from Kyoto City.

The Kyoto City Environmental Master Plan (2016-2025), which is the specific plan for the environmental field of the Kyoto City Master Plan formulated by Kyoto City in March 2016, calls for various efforts to realize a "Sustainable Society in Harmony with the Environment" through four long-term goals and 10 basic policies for promoting

¹ Estimates based on the 2020 Population Census Results (final figures) of the Kyoto City Statistics Portal February 2022

² Intergovernmental Panel on Climate Change

decarbonization, biodiversity, natural environment, effective use of resources and energy, and environmental conservation over the 10-annual period from FY 2016 to 2025.

In the Kyoto City Program of Global Warming Countermeasures, Kyoto City clarifies "Net-Zero by 2050" which is a long-term target formulated ahead of the national government and formulates an action plan for realizing a carbon-free society. In order to achieve Net-Zero by 2050, Kyoto city has set its milestone for reducing greenhouse gas emissions from the city by 46% or more from FY 2013 levels by 2030. The plan's mitigation efforts include 20 measures in five areas of lifestyle transformation, business transformation, energy transformation, mobility transformation and forest/agricultural land sinks, to accelerate energy conservation and expand the use of renewable energy. Adaptation measures, which are measures to cope with the impacts of climate change, are intended to enhance measures in six areas where the impacts of natural disasters, health and urban livelihoods, water environment and water resources, agriculture and forestry, natural ecosystems, and climate change in cultural, tourism and local industries are of concern. Specifically, the Kyoto Climate Change Adaptation Center, established in July 2021, will identify, analyze, disseminate adaptation information, promote measures in each field, and promote new initiatives in Kyoto.

Kyoto City has established the Green Bond Framework (this Framework) which limited the use of proceeds to the above-mentioned climate change mitigation and adaptation measures, pollution prevention and management, sustainable management of natural resources and land use, and biodiversity conservation. Through this framework, it aims to achieve the target of net zero carbon dioxide emissions in 2050 and to further promote adaptation measures. Kyoto City also plans to promote green financing as a mechanism to create a virtuous cycle between the environment and the economy by issuing green bonds. JCR assesses whether the Framework complies with the Green Bond Principles³ and the Green Bond Guidelines⁴. Although these principles are voluntarily published principles or guidelines by the International Capital Markets Association (ICMA) and the Ministry of the Environment, respectively, and are not legally endorsed, JCR refers to these principles and guidelines for conducting its green bond evaluation, as those are common green bond standards domestically and internationally.

JCR evaluates that the eligibility criteria established by Kyoto City in this framework are aimed at measures in both aspects of climate change mitigation and adaptation, and greatly contribute to resolve environmental issues in Kyoto City. It also evaluates that the project selection process, the fund management system, and the post-issuance reporting system have been properly established and are highly transparent.

Based on JCR Green Finance Evaluation Methodology, JCR assigned "g1 (F)" for "Greenness Evaluation (Use of Proceeds)" and "m1 (F)" for "Management, Operation and Transparency Evaluation." As a result, it assigned "Green1 (F)" for the overall "JCR Green Bond Framework Evaluation". The Framework meets the standards for the items required in the Green Bond Principles and the Green Bond Guidelines.

³ ICMA (International Capital Market Association) Green Bond Principles 2021

<https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf>

⁴ Ministry of the Environment's Green Bond Guidelines 2022 <https://www.env.go.jp/content/000062495.pdf> (Japanese)

Chapter 2: Current Status of the Project on Each Evaluation Factor and JCR's Evaluation

Evaluation Phase 1: Greenness Evaluation

Based on the current status described below and JCR's evaluation of the subject, JCR evaluated that the use of proceeds was 100% for green projects and assigned the highest rank of "g1(F)" for Phase 1: Greenness Evaluation.

(1) JCR's Key Consideration on This Factor

In this section, JCR first confirms whether the proceeds set out in the Framework is used for green projects that have clear environmental improvement effects. Next, in cases where the use of proceeds is expected to have a negative impact on the environment, JCR confirms whether the impact is fully examined by an internal specialist department or an external third party and whether necessary measures have been taken for its avoidance and mitigation. Finally, JCR confirms the consistency with the Sustainable Development Goals (SDGs).

(2) Current Status of Evaluation Targets and JCR's Evaluation

a. Environmental Improvement Effects of the Project

<The Framework for Use of Proceeds>

Kyoto City has defined the use of proceeds as follows in this framework. All uses of funds are new investments.

Target Business	Business Segments of Green Projects	Anticipated environmental benefits
Solar panels installation business for municipal facilities	<ul style="list-style-type: none"> • Renewable Energy 	<ul style="list-style-type: none"> • Increase in renewable energy introduction
Energy-saving renovation project for municipal facilities and equipment	<ul style="list-style-type: none"> • Energy efficiency 	<ul style="list-style-type: none"> • Reducing CO₂ Emissions by Reducing Energy Consumption
Clean Center Renovation Project	<ul style="list-style-type: none"> • Energy efficiency 	<ul style="list-style-type: none"> • Reducing CO₂ Emissions
Soil pollution countermeasures	<ul style="list-style-type: none"> • Pollution prevention and control 	<ul style="list-style-type: none"> • Improving environmental pollution and reducing health risks by eliminating soil contamination
Tree-planting projects	<ul style="list-style-type: none"> • Environmentally sustainable management of living natural resources and land use • Terrestrial and aquatic biodiversity conservation • Climate change adaptation 	<ul style="list-style-type: none"> • Expansion of green areas to protect the environment and curb rainwater drainage
Forest maintenance and other projects	<ul style="list-style-type: none"> • Environmentally sustainable management of living natural resources and land use • Terrestrial and aquatic biodiversity conservation • Climate change adaptation 	<ul style="list-style-type: none"> • Increasing CO₂ removals by expanding appropriately managed forest areas and other multifaceted functions of forests

Project for Introduction of Next-Generation Automobiles and Biodiesel Vehicles	<ul style="list-style-type: none"> • Clean transportation 	<ul style="list-style-type: none"> • Reducing CO₂ Emissions by Reducing Energy Consumption
River Development Project	<ul style="list-style-type: none"> • Sustainable water wastewater management • Climate change adaptation 	<ul style="list-style-type: none"> • Prevention of flood damage
Municipal facility construction and extension business	<ul style="list-style-type: none"> • Green Building • Energy efficiency 	<ul style="list-style-type: none"> • Reducing CO₂ Emissions by Reducing Energy Consumption • Increase in renewable energy introduction • Reducing CO₂ Emissions from Carbon Storage Associated with the Use of Locally Produced Timber (<i>Miyako-somagi</i>), etc.

(Source: Kyoto City Basic Environmental Plan)

<JCR's Evaluation for the Framework>

Use of proceeds 1: Solar panels installation business for municipal facilities

Use of proceeds 1 is the cost of installing solar panels at facilities owned by Kyoto City, and the effect of environmental improvement is high. Use of proceeds 1 corresponds to "Renewable energy" in the Green Bond Principles and "Projects for renewable energy" among the use of proceeds listed in the Green Bond Guidelines.

In the Kyoto City Program of Global Warming Countermeasures covering FY 2021 to 2030, Kyoto City established the promotion policy of maximum utilization of renewable energy in the city as one of the energy transformation measures in the mitigation plan. Regarding the installation volume of solar power generation facilities, the company aims to expand from the output 136MW in FY 2018 to 250MW by FY 2030. The purpose of this fund is one of the measures to expand the introduction of renewable energy by installing solar panels in conjunction with the renovation and other construction of municipal educational facilities.

Use of proceeds 2: Energy efficiency improvement by renovation project for municipal facilities and equipment

Use of proceeds 2 relates to the renewal and renovation of facilities and equipment owned by Kyoto City. Specifically, it relates to the renewal of air-conditioning and LED of lighting. Installing LED lightings not only helps reduce the energy consumption of the entire building, but also contributes to resource conservation because frequent replacement of light bulbs is no longer necessary. The renewal of high-efficiency air conditioning also contributes to the reduction of energy consumption of the whole building, consequently, the environmental improvement effect is high. Use of proceeds 2 corresponds to "Energy efficiency" in the Green Bond Principles and "Projects for Energy efficiency" among the uses of funds illustrated in the Ministry of the Environment's Green Bond Guidelines.

Kyoto City set the goal of reducing greenhouse gas emissions by 46% in 2030 compared to FY 2013 in the Kyoto City CO₂ Reduction Initiative Plan. In this Plan, it addressed energy efficiency measure as the largest impacts for CO₂ reduction. The purpose of this proceeds is to reduce CO₂ emissions and energy consumption by more than 30% through upgrading air-conditioning of city-owned welfare facilities, cultural facilities, etc., improving LED

of lighting, and improving LED of road lighting. This is one of the measures to conserve energy at Kyoto City-owned facilities and explanations.

Use of proceeds 3: Clean center renovation project

Use of proceeds 3 is mainly equipment upgrades at Kyoto City-owned clean center. The environmental improvement effect is high, because it contributes to the reduction of energy consumption by introducing high-efficiency incinerators and upgrading equipment such as boiler renewal. Use of proceeds 3 corresponds to "Energy efficiency" in the Green Bond Principles and "Projects for Energy efficiency" among the uses of funds illustrated in the Ministry of the Environment's Green Bond Guidelines.

In July 2021, Kyoto City established the "Kyoto City Basic Plan for Promoting a Sound Material-Cycle Society" covering FY 2021 to 2030, and is aiming to realize a sustainable recycling-oriented society by responding to global issues such as food loss and plastic problems, developing a waste treatment system that can respond to crises such as the occurrence of large-scale natural disasters, and further reducing the amount of waste, etc. To date, Kyoto City has achieved a half reduction in waste volume from the peak of 820000 tons in FY 2000 to approximately 410000 tons in FY 2019. This plan sets targets to reduce the use of plastic shopping bags by 90% and reduce PET bottle emissions by half compared to FY 2000. In the future, a large-scale renovation of the Northern Clean Center is planned, and efforts will be made to build a robust and appropriate treatment system that can respond flexibly to the occurrence of natural disasters and the development of a longevity society.

Use of proceeds 4: Soil pollution countermeasures

Use of proceeds 4 is to implement soil pollution countermeasures for land designated as areas under the Soil Contamination Countermeasures Law. Use of proceeds 4 corresponds to "Pollution prevention and control" in the Green Bond Principles and "Projects for pollution prevention and control" among the uses of funds illustrated in the Ministry of the Environment's Green Bond Guidelines.

Pursuant to the Soil Contamination Countermeasures Law, the proceeds is used for soil contamination surveys in the construction of public facilities in Kyoto City and for excavation work to satisfy the requirements for building of land designated as an area under the Soil Contamination Countermeasures Law. It also disposes of the contaminated soil generated by the excavation at the purification and treatment facilities, and it is an important measure for the prevention of human health damage related to soil contamination.

Use of proceeds 5: Tree-planting projects and Forest maintenance and other projects

Use of proceeds 5 contributes to environmental conservation by expanding the green area, curbing rainwater drainage, and expanding the area of forest development. Therefore, it has a high environmental improvement effect. Use of proceeds 5 corresponds to "Environmentally sustainable management of living natural resources and land use," "Terrestrial and aquatic biodiversity conservation," and "Climate change adaptation" in the Green Bond Principles, and "Projects for the sustainable management of living natural resources and land use," "Projects for terrestrial and aquatic biodiversity conservation," and "Projects for climate change adaptation" among the uses of funds illustrated in the Ministry of the Environment's Green Bond Guidelines.

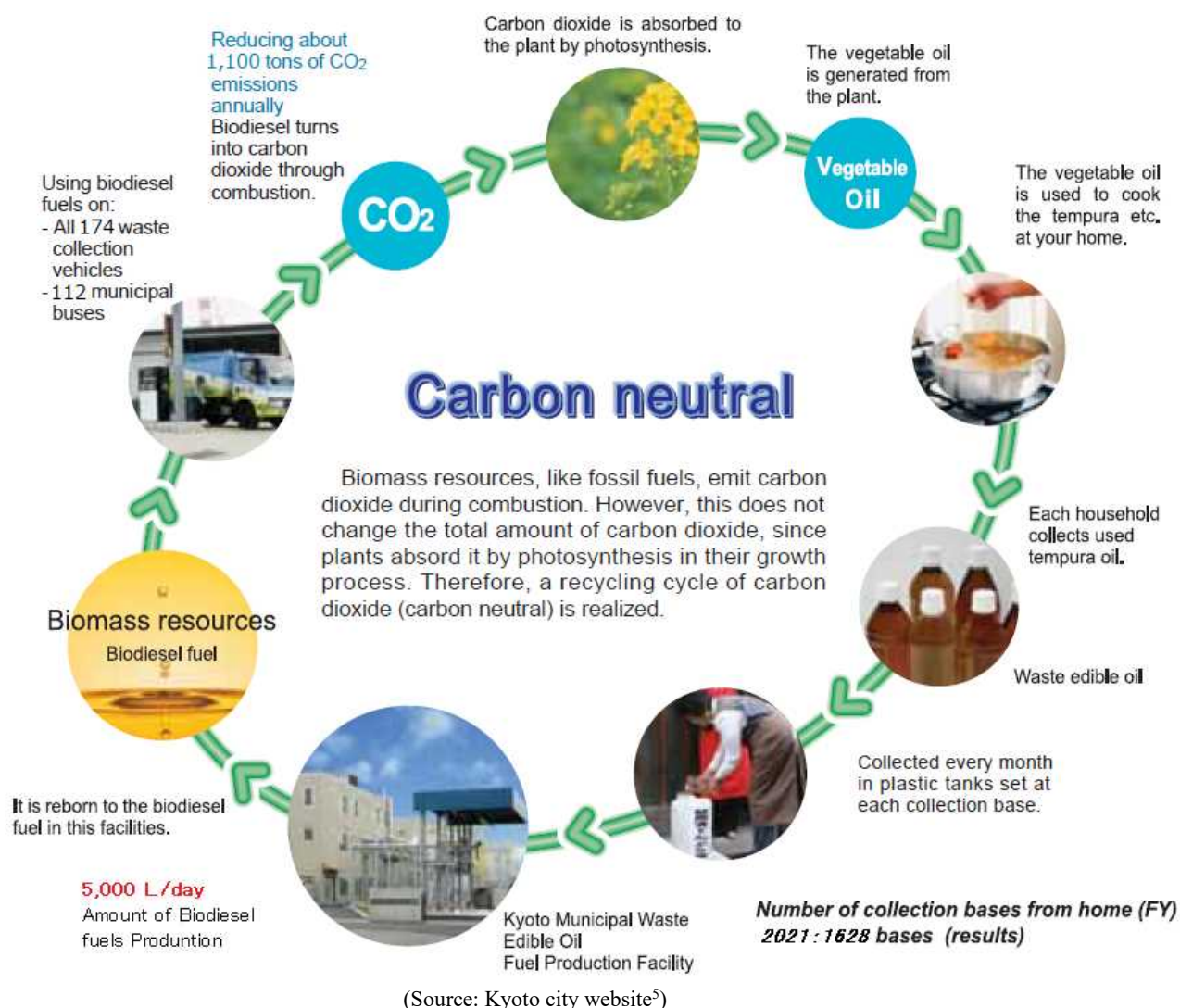
Kyoto City established the Kyoto City Biodiversity Plan in March 2021 for the period from FY 2021 to 2030. Kyoto City recognizes that the crisis of biodiversity is progressing, such as depletion of living resources, degradation of forests caused by the loss of human access, and the manifestation of impacts caused by climate change. It also states that it is necessary for each and every person to recognize the critical situation of biodiversity and take action in order to continue to inherit the rich natural environment of Kyoto and the livelihoods and traditions and culture supported by it. In this plan, as the ideal form for 2050, we established [Kyoto, a city of coexistence with nature] that is capable of preserving nature, appreciating nature, and succeeding and developing Kyoto's livelihoods, culture, and industries together with nature]. Four viewpoints are set as what should be achieved by 2050, and four objectives and measures are set up until FY2030, corresponding to those viewpoints.

Use of proceeds 6: Introduction of Next-Generation Automobiles and Biodiesel Vehicles

Fund business 6 is related to the introduction of electric vehicles, fuel-cell vehicles, hybrid vehicles, plug-in hybrid vehicles (collectively referred to as EV above) and bio-diesel vehicles, which are refuse collection vehicles. The environmental improvement effect is high, because electric vehicles and fuel cell vehicles using electric power and hydrogen as a power source are utilized, and energy efficiency improvement by fuel efficiency improvement and biodiesel are used. Use of proceeds 6 corresponds to "Clean transportation" in the Green Bond Principles and "Projects for Clean transportation" among the uses of proceeds illustrated in the Ministry of the Environment's Green Bond Guidelines.

In Kyoto City, the promotion policy of the popularization of next generation vehicles including EV is established as one of the conversion measures for mitigating climate changes in mobility sector raised in the Kyoto City Global Warming Prevention Program. Kyoto City is vigorously promoting the popularization of EV and other next-generation vehicles in order to shift to less fossil-fuel dependent lifestyles and social and economic activities. Kyoto City also collects used starch oil and manufactures biodiesel fuel in a waste edible oil fuel conversion facility. By using this biodiesel in place of diesel fuel, targeting city buses and garbage collection vehicles, the city as a whole is contributing to reducing annual 1,100t-CO₂. This use of proceeds contributes to the above municipal efforts.

Figure: Please refer the Kyoto City Website Biodiesel Fuel Production Project



Use of proceeds 7: River Development Project

Use of proceeds 7 is a project related to the expansion of river volumes and the construction of protection banks for inundation measures. It is an initiative that contributes to the reduction of damage caused by natural disasters such as heavy rainfall by expanding rivers, developing protection banks, and installing idle water ponds. Use of proceeds 7 corresponds to "Sustainable Water and Wastewater Management" and "Climate Change Adaptation" in the Green Bond Principles, and "Projects for sustainable water management" and "Projects for climate change adaptation" among the uses of proceeds illustrated in the Ministry of the Environment's Green Bond Guidelines.

Kyoto City has identified natural disasters and water environment and water resources among the six sectors in which the impacts of climate change are of concern in adaptation measures in the Kyoto City Program of Global Warming Countermeasures. In the field of natural disasters, the government has established a policy to promote disaster prevention and mitigation measures, including prevention of damage caused by climate change and flood prevention measures, aimed at improving urban resilience. The government plans to promote urban infrastructure river renovation and ordinary river renovation as comprehensive flood control measures and rain-resistant

⁵ <https://www.city.kyoto.lg.jp/kankyo/page/0000000008.html>

community development initiatives in cooperation with the national and prefectural governments. In terms of the water environment and water resources, the government has established a policy to promote good water resource management by evaluating water quality and drought risks, and by utilizing rainwater and recycled water, and is promoting initiatives to enhance a favorable water environment.

The number of rivers managed by Kyoto City is 341, and the first-class rivers are 19, the quasi-commercial rivers are 31, and the ordinary rivers are 291⁶. The purpose of this fund is to respond to areas where flood damage has occurred due to an increase in flooding caused by urbanization of basins and the progress of residential landscaping along the rivers, and to contribute to the aforementioned plan.

Use of proceeds 8: Municipal facility construction and extension business

Use of proceeds 8 relates to the construction and expansion of municipal facilities in Kyoto City. The target property targets CASBEE Kyoto⁷ S or A ranks and has a strong environmental-improvement impact. Use of proceeds 8 corresponds to "Green building" and "Energy efficiency" in the Green Bond Principles, and "Projects concerning Green Buildings," and "Projects for energy efficiency," in the Ministry of the Environment's Green Bond Guidelines.

In March 2021, Kyoto City revised the "Low-Carbon Specifications for Public Buildings in Kyoto City (formulated in March 2009)" to the "Decarbonization Specifications for Public Buildings in Kyoto City" in order to achieve the target of a 46% reduction in greenhouse gas emissions compared to FY 2013 by FY 2030. Initiatives in new construction and extension work include the following.

1. Promotion of high thermal insulation and Energy efficiency

Kyoto City aims to make existing buildings with low energy consumption by enhancing the outer skin performance during construction and improving thermal insulation.

2. Use of locally produced timber (*Miyako-somagi*)

Kyoto City aims to convert existing buildings into wooden structures in order to make maximum use of timber in public buildings. The timber to be used is made from locally produced timber (*Miyako-somagi*) and contributes not only to environmental conservation but also to the forestry promotion and the prevention of landslide disasters and flood damage.

3. Introduction of renewable energy facilities

Kyoto City aims to maximize the introduction of renewable energy-utilizing equipment and convert energy source to less carbon dioxide as much as possible.

4. Realization of "Environmentally Conscious Performance Unique to Kyoto"

Kyoto City aims to achieve environmentally conscious performance unique to Kyoto by comprehensively evaluating the quality of buildings, including consideration for indoor comfort, landscape, etc.

⁶ Kyoto City Website River Control Classification <https://www.city.kyoto.lg.jp/kensetu/page/0000006382.html>

⁷ CASBEE Kyoto is a system that comprehensively evaluates environmentally conscious buildings that should be pursued by Kyoto, based on a nationwide version of CASBEE (Comprehensive Assessment System for Building Environmental Performance), including consideration of not only environmental considerations, but also interior comfort and landscape considerations.

In the initiatives described in Item 4, for properties with a total floor area 300m² or higher, the targets are S or A ranks in CASBEE Kyoto. This use of proceeds contributes to the above measures.

b. Negative Impacts on the Environment

Kyoto City identifies possible negative impacts on the environments and responses to such risks as follows. JCR confirmed that it had a system in place to take appropriate countermeasures by interviewing Kyoto City and by relevant materials submitted by Kyoto City.

Target Business	Assumed Risks and Responses
Solar panels installation business for municipal facilities	In special specifications for construction work, Kyoto City strives to prevent pollution and use construction machinery designated in accordance with the "Regulations Concerning Designation of Low Noise, Low Vibration Construction Machinery" (Ministry of Construction Notification No. 1536, 1997) for construction work.
Energy-saving renovation project for municipal facilities and equipment	When inefficient existing air conditioners are to be discarded, they are properly collected in accordance with the Law Concerning Rationalization of Use of Fluorocarbons and Appropriate Management of Fluorocarbons.
Clean Center Renovation Project	In case of the project needs an environmental impact assessment, the City will conduct surveys, forecasts, and assessments of the impact of on the environment while listening to the opinions of residents and relevant local governments, and avoid or reduce the impact of the project on the environment.
Soil pollution countermeasures	When expansion of soil and groundwater contamination is found, appropriate measures will be taken based on the submitted contamination removal plan, etc.
Tree-planting projects	In the development of forests and forest roads, the City will comply the Kyoto City Forest Improvement Plan and Forest Road Rules, and give due consideration to the conservation of forest land and biodiversity.
Forest maintenance and other projects	The special specifications for civil engineering work stipulate items related to environmental measures and construction by-products, and work on measures against noise, exhaust gas, and construction waste.
Project for Introduction of Next-Generation Automobiles and Biodiesel Vehicles	As biodiesel vehicles have harmful substances, the City will encourage to increase the muffler filters' burn frequency and time to remove harmful substances so that there will be little impact on environment.
River Development Project	The special specifications for civil engineering work stipulate items related to environmental measures and construction by-products, and work on measures against noise, exhaust gas, and construction waste.
Municipal facility construction and extension business	In special specifications for construction work, the City strives to prevent pollution and use construction machinery designated in accordance with the "Regulations Concerning Designation of Low Noise and Vibration of Construction Machinery" (Ministry of Construction Notification No. 1536, 1997) for construction work. In addition, in the case of specific construction work as stipulated by the Noise Regulation Law and Vibration Regulation Law within the designated area, the city mayor shall be notified of such work by the date stipulated by the law. If it is found that noise in excess of the standard value would significantly impair the living environment in the vicinity of a particular construction site, we will identify the cause and change the work method. With regard to large-scale projects that are subject to the environmental impact assessment system, we conduct surveys, forecasts, and assessments of the

	<p>impact of our projects on the environment while listening to the opinions of residents and relevant local governments, thereby avoiding or reducing the impact of our projects on the environment.</p>
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c. Consistency with SDGs

JCR evaluated the use of proceeds set out in the Framework contributes to the following SDGs goals and targets in reference to ICMA's SDGs mapping.

Goal 2 : Zero Hunger



Target2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Goal 3 : Good Health and Well-being



Target3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Goal6 : Clean Water and Sanitation



Target6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

Target6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

Target6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

Target6.b Support and strengthen the participation of local communities in improving water and sanitation management

Goal7 : Affordable and Clean Energy



Target7.2 By 2030, substantially increase the share of renewable energy in the global energy mix

Target7.3 By 2030, double the global rate of improvement in energy efficiency

Target7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology



Goal8 : Decent Work and Economic Growth

Target8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors



Goal9 : Industry, Innovation and Infrastructure

Target9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

Target9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



Goal11 : Sustainable Cities and Communities

Target11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Target11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

Target11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



Goal12 : Responsible Consumption and Production

Target12.2 By 2030, achieve the sustainable management and efficient use of natural resources

Target12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

Target12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse



Goal13 : Climate Action

Target13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Target13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning



Goal15 : Life on Land

Target15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

Evaluation Phase 2: Management, Operation and Transparency Evaluation

Based on the current situation described below and JCR's evaluation of the subject, JCR evaluated that the management and operational systems have been well developed, that transparency is very high and that it can be fully expected for the project to be implemented as planned and for the proceeds to be adequately allocated. In Phase 2, JCR evaluated the management, operation and transparency to be the highest level of "m1(F)".

1. Appropriateness and Transparency Concerning Selection Standards and Processes for Use of Proceeds

(1) JCR's Key Consideration on This Factor

In this section, JCR confirms the objectives to be achieved through green financing, the appropriateness of green project selection standards and processes, and whether or not a series of processes are properly disclosed to investors and others.

(2) Current Status of Evaluation Targets and JCR's Evaluation

a. Goals

<The Framework for Green Finance Issuance Objectives >

■Kyoto City Environmental Master Plan

This is an individual plan of the "Kyoto City Master Plan" and a master plan of the environmental administration which shows long-term goals for environmental conservation and outlines (basic measures) of policies in individual fields. It also shows the direction of policies as a top plan of individual plans in the environmental field.

The "City of Harmony with the Environment and Decarbonization, Kyoto," which is rich and harmonious with the global environment, is positioned as the "Environmental Vision of Kyoto City." Toward the realization of this vision, long-term goals by three fields (1) decarbonized towns capable of sustainable development, (2) comfortable, secure, and safe towns in harmony with the natural environment rich in biodiversity, and (3) recycling-oriented towns aimed at effective use of resources and energy and reduction of environmental impact) have been established to promote policies, and cross-sectoral long-term goals (4) creating people and mechanisms to comprehensively promote environmental conservation) have been established to further accelerate the promotion of policies through the understanding of environmental conservation and the implementation of activities.

■Kyoto City Program of Global Warming Countermeasures

This plan is formulated as an action plan for the "Decade of Action," which will be extremely important, in order to realize a decarbonization society that will result in net zero carbon dioxide emissions by 2050, which is stipulated as a long-term target in the Kyoto Ordinance on Achieving CO2 Zero Emissions 2050.

In order to achieve the "Net-Zero by 2050", the interim target is to reduce greenhouse gas emissions from the city area by 40% or more from the FY 2013 (2013) by FY 2030 (2030). In September 2021, the government announced that it would aim for a 46% reduction compared to FY 2013 (2013), based on national trends and other factors.

As a way of advancing initiatives, the government will develop measures to transform the four areas of lifestyle, business, energy and mobility that serve as the foundations of these initiatives to accelerate energy conservation

and dramatically expand the use of renewable energy. In addition to measures to absorb carbon dioxide, such as forests, and mitigation measures, the government will promote adaptive measures to reduce the impact of climate change as two pillars of the plan.

With regard to adaptive measures, the Kyoto Climate Change Adaptation Center was established in July 2021 to collect, organize, and analyze information on climate change impacts and climate change adaptation, and to forecast and evaluate climate change impacts.

■Kyoto City CO₂ Reduction Initiative Plan

The Kyoto City Hall, the largest CO₂ emission entities in the city, needs to take the initiative in enhancing and strengthening its efforts in order to establish a path to a carbon-free society in the next 10 years, which will become extremely important for achieving net zero by 2050. Therefore, the Kyoto City Government Office has formulated the "Action Plan for Reducing CO₂ at Kyoto City Hall."

The 2030 target for all municipal offices is to reduce greenhouse gas emissions by 46% from the 2013 level. In addition to the maximum energy conservation and the dramatic expansion of the introduction of renewable energy, each and every staff member will take on the challenge of not only extending their lifestyles so far, such as switching to lifestyles that do not emit CO₂ in their household lives. At the same time, the content of these efforts will be disseminated to citizens and businesses, which will lead to a reduction in CO₂ emissions from within the city.

■Decarbonization Specifications for Public Buildings in Kyoto City (Revised March 2021)

In the public buildings of this city, it is necessary to promote improvement not only from the viewpoint of CO₂ reduction but also of promotion of energy conservation, introduction of renewable energy, environmental coexistence, etc., so the policy of improvement for the decarbonization of public buildings, introduction standards, etc. are determined according to the use and size of the facilities.

As the challenge in the new construction and extension construction, it is aimed at achievement of numerical target of reduction rate of exterior performance and primary energy consumption standard, use of wood produced in the city (*Miyako-somagi*), introduction of renewable energy utilization facilities, and high ranking acquisition of CASBEE Kyoto.

<JCR's Evaluation for the Framework>

JCR confirmed that Kyoto City has set clear environmental targets in the Kyoto City Environmental Master Plan and is actively implementing various measures, such as the Kyoto City Plan of Global Warming Countermeasures, in its implementation. It also confirmed that the use of proceeds set out in this framework is a project that contributes to targets for climate change mitigation and adaptive measures, and environmental elements of biodiversity conservation. Based on the above, JCR has evaluated that the businesses covered in this framework are consistent with Kyoto City's environmental planning and environmental strategies.

b. Selection criteria

In Kyoto City, the selection criteria for projects are defined as follows.

Target Business	Eligibility criteria
Solar panels installation business for municipal facilities	Introduction of solar power generation facilities based on floor area as stipulated in Kyoto City Public Buildings Decarbonization Specification
Energy-saving renovation project for municipal facilities and equipment	Introduction of high-efficient lighting equipment (LED) and upgrading to high-efficient air conditioning (Energy efficiency of 30% or more)
Clean Center Renovation Project	Installation of Energy efficient equipment
Soil pollution countermeasures	Measures for Cancellation of Area Designation
Tree-planting projects	Improvement of green coverage ratio
Forest maintenance and other projects	Appropriate afforestation, daycare and thinning, and maintenance of forest roads, etc. in order to realize the multiple functions of forests
Project for Introduction of Next-Generation Automobiles and Biodiesel Vehicles	Introduction of EV, FCV, HV・PH(E) V (CO ₂ Emissions 50g-CO ₂ /km and People or Less) and Bio-Diesel Vehicles
River Development Project	Renovation and maintenance of rivers and waterways for flooding measures, and improvement and renewal of drainage machines
Municipal facility construction and extension business	S-rank or A-rank new construction and expansion in CASBEE Kyoto

JCR assesses the selection criteria above as being for projects that are significant as climate-change mitigation and adaptive measures.

c. Processes

<The Framework for Processes >

■Process of evaluating and selecting target businesses

The Global Environment Policy Office of the Environmental Policy Bureau and the Financial room of the Administration and Finance Bureau conduct hearings to each bureau, evaluate eligibility in light of eligibility criteria, and select target business candidates for Kyoto City Green Bonds to be issued in the relevant fiscal year based on the results.

<JCR's Evaluation for the Framework>

In the process of selecting Green Projects in Kyoto City, the Global Environment Policy Office of the Environmental Policy Bureau and the Financial room of the Administration and Finance Bureau, which compile the entire process, conduct hearings to the departments in charge of each bureau on the details of the planned bond issuance project and the project content of the environmental improvement effect, and confirm the environmental benefits. Subsequently, the Global Environment Policy Office of the Environmental Policy Bureau and the Financial room of the Administration and Finance Bureau discuss businesses that have a large impact in line with this framework, and then the Financial room decides on them. Therefore, JCR assesses that appropriate selection processes have been established.

Based on the above, the goals, selection criteria, and processes of Kyoto City established in this framework have been properly established. In addition, when implementing Green Bonds based on this framework, Kyoto City plans to disclose the aforementioned standards and processes to investors, etc. through the website, in addition to this assessment report, which is provided by JCR, and it is considered that transparency is ensured.

2. Appropriateness and Transparency of Management of the Proceeds

(1) JCR's Key Consideration on This Factor

It is usually assumed that the management of the proceeds varies widely depending on issuers/borrowers. JCR confirms whether the proceeds are surely appropriated to the green project and whether a mechanism and internal system are in place to enable easy tracking and management of the appropriation of funds.

JCR also attaches importance to whether the proceeds are scheduled to be used for a green project at an early stage and to the management and operation methods for unallocated funds.

(2) Current Status of Evaluation Targets and JCR's Evaluation

<The Framework for Management of the Proceeds>

■ Management of Proceeds

Since the expenditure in each fiscal year of a local government needs to be allocated with the revenue for that fiscal year, the proceeds of Kyoto City Green Bonds will, in principle, be allocated to the eligible projects during that fiscal year. The Office of Finance shall manage the execution administration so that the allocation status can be tracked as necessary, and disclose them based on "Reporting".

<JCR's Evaluation for the Framework>

The use of Green Bonds as defined in this Framework represents new investments in green eligible projects as defined in this Framework and is not expected to be used for any other purposes.

The proceeds shall be allocated to the project stipulated in this framework in the year in which the bond is issued as a new investment. In addition, since the person in charge in the Office of Finance manages the books of the amount of proceeds by using the debt flotation management system and the Director of the Office of Finance confirms them at the end of the fiscal year, an internal control system has also been properly established. Although there is no mechanism for auditing local governments, the revenue and expenditure settlement of local governments, including the amount of bond issuance, will be approved by the Congress following procedures under Article 233 of the Local Government Act. The history of the bond flotation management system is recorded semi-permanently and the City Bond Issuance Decisions and Contracts are also kept over the redemption period.

Based on the above, JCR evaluates that the capital management of Kyoto City is reasonable and transparent.

3. Reporting

(1) JCR's Key Consideration on This Factor

In this section, JCR evaluates whether the disclosure system for investors before and after the issuance of green finance, which is implemented with reference to the Framework, is planned in detail and in an effective manner.

(2) Current Status of Evaluation Targets and JCR's Evaluation

<The Framework for Reporting>

<p>■Reporting</p> <p>In addition to the allocation status of the proceeds from the Kyoto City Green Bond, an environmental improvement effect of the status projects, in principle, the impact reporting shown below will be disclosed on the City's website in the following fiscal year after the bond issue.</p>	
<p>■Contents of impact reporting for each business</p>	
Target Business	Reporting indicators
Solar panels installation business for municipal facilities	Amount of power generated from photovoltaic power generation facilities
Energy-saving renovation project for municipal facilities and equipment	Number of installations of LED lighting and air-conditioning facilities, and reduced CO ₂ emissions due to reduced energy consumption
Clean Center Renovation Project	Reduced CO ₂ Emissions
Soil pollution countermeasures	Target parcel number, type of measures taken, and area where the designation of the area has been lifted
Tree-planting projects	Name of site and area of improvement
Forest maintenance and other projects	Name of site and area of improvement
Project for Introduction of Next-Generation Automobiles and Biodiesel Vehicles	Reduced CO ₂ Emissions by Reducing Energy Consumption
River Development Project	Number of rivers implementing projects, number of rivers implementing projects, number of routes implementing projects, name of wastewater machine sites implementing projects, and number of wastewater machine sites implementing projects
Municipal facility construction and extension business	<p>Following matters based on CASBEE Kyoto</p> <ul style="list-style-type: none"> • Outline of the building • CASBEE Kyoto Acquisition Status and Ranking • Reduced CO₂ Emissions • Reduction rate of envelope performance and primary energy consumption standards • Amount of introduction of photovoltaic power generation facilities and solar heat utilization facilities • Usage of timber produced in the city (<i>Miyako-somagi</i>), etc.

<JCR's Evaluation for the Framework>

a. Reporting on the allocation status of the proceeds

The allocation status and use of the proceeds will be announced to investors on the Kyoto City website, etc. In addition, as confirmed in the previous section, the proceeds will be allocated to all the eligible projects within

the same fiscal year after the issuance, and therefore, reporting of unallocated funds during the fiscal year is not currently assumed. When unallocated funds arise due to the loss of target assets, etc., the City will disclose the fact on the Kyoto City website, etc. timely.

b. Reporting on environmental improvement effects

For municipal properties subject to green building, the assessment results of CASBEE Kyoto are disclosed, and transparency is high. As Kyoto City plans to disclose the quantitative environmental benefits of its projects on the Kyoto City website, JCR evaluates that transparency is assured. In July 2021, Kyoto City established the Kyoto Climate Change Adaptation Center in collaboration with Kyoto Prefecture and the Research Institute for Humanity and Nature to gather and disclosure scientific knowledge on climate change adaptation, and JCR confirmed that it will further strengthen its response to adaptation plans in the future.

JCR evaluates that the reporting will be appropriately disclosed to investors and others regarding both the allocation status of the proceeds and the environmental impact indicators.

4. Organization's Environmental Initiatives

(1) JCR's Key Consideration on This Factor

In this section, JCR evaluates whether the management of the issuer/borrower regards environmental issues as a matter of high priority for management and whether the green finance policy, process and selection criteria for green projects are clearly positioned through the establishment of a department specializing in environmental issues or in collaboration with external organizations.

(2) Current Status of Evaluation Targets and JCR's Evaluation

Since Kyoto Protocol in 1997, an international commitment on global warming countermeasures, Kyoto City has promoted various approaches to the climate. Kyoto City has formulated the Kyoto City Master Plan "Miyako Plan 2025" in order to realize the Master concept of Kyoto City, which is an ideal concept to show the policy of urban development in Kyoto in the 21st century based on the Declaration of Global Cultural and Freedom Cities. The current third Kyoto City Basic Plan covers the five-year period from FY 2021 to 2025. Focusing on the four changes in the socio-economic situation: full-scale population decline, acceleration of global warming, progress of globalization, change in industrial structure and severe Kyoto City finance, the philosophy of urban management is to "pioneer the future through participation and collaboration with consumers as the base." Among the six future images of Kyoto, the first is "Kyoto, a town of harmonious coexistence with the environment and decarbonization," which is richly in harmony with the global environment. The city is making efforts with priority.

In the Kyoto City Environmental Master Plan (2016-2025), which is an individual plan for the environmental field of the Kyoto Basic Plan formulated by Kyoto City in March 2016, various initiatives have been promoted to realize a "sustainable society in harmony with the environment" through the four long-term targets and 10 basic measures for promoting carbon de-carbon, biodiversity, natural environment, resource and energy effective utilization, and environmental conservation for the 10 years from FY 2016 to 2025. The administrative and fiscal reform program formulated in August 2021 also promotes initiatives related to sustainable finance, such as by aiming to become a city where diverse human resources and corporates can gather and attract investment and support by realizing the goals and values shared by the international community, including carbon de-carbon and SDGs, from Kyoto City through the issuance of green bonds, etc. as a city growth strategy.

In the Kyoto City Program of Global Warming Countermeasures, Kyoto City has formulated an action plan for realizing a decarbonization society that will become "2050 Year Net Zero CO₂ Emissions" specified as a long-term target in the Kyoto City Global Warming Prevention Regulation. In order to achieve net zero CO₂ emissions by 2050, the City has set a milestone of reducing greenhouse gas emissions from the municipalities by 46% or more from FY 2013 levels by 2030. 20 mitigation measures will be deployed in five fields: lifestyle conversion, business conversion, energy conversion, mobility conversion, and absorption source measures such as forests and agricultural land, to accelerate energy conservation and expand the use of renewable energy. In addition, the plan aims to promote green finances by expanding the use of ESG finance and green bonds as a means of creating a virtuous cycle between the environment and the economy. Adaptation measures, which are measures to cope with the damages from climate change, are intended to enhance measures in six areas where the impacts of natural disasters, health and urban livelihoods, water environment and water resources, agriculture and forestry, natural ecosystems, and climate change in cultural, tourism and local industries are of concern. Specifically, the Kyoto Climate Change Adaptation Center, established in July 2021, will identify, analyze, disseminate adaptation information, promote measures in each field, and promote new initiatives in Kyoto.

In November 2021, Kyoto City made the "A list", the highest rating in CDP Cities for evaluating urban climate-change measures. Being in the A list requires more than a certain level of evaluation in the four items of disclosure,

recognize, management, and leadership. This program has been comprehensively evaluated for its efforts to disclose greenhouse gas emissions, formulate climate action plans and climate adaptation plans, and set targets for the reduction of greenhouse gas emissions and the introduction of renewable energy. In addition, it has demonstrated leadership through coordinated and effective action in the field of climate change countermeasures. It can be said that the program is relatively advanced compared to other cities.

Based on the above, JCR confirmed that Kyoto City has been implementing various initiatives together with various stakeholders under a strong initiative toward achieving net zero CO₂ emission by 2050. They also confirmed that they are planning and implementing environmental policies that will be used to fund green bonds, such as decarbonization strategies and adaptive plans. JCR evaluates that Kyoto City regards environmental issues as a high-priority issue in its municipal administration.

■Evaluation result

Based on its JCR Green Finance Evaluation Methodology, JCR assigned "g1 (F)" for the "Greenness Evaluation (Uses of Proceeds)" and "m1 (F)" for the "Management, Operation and Transparency Evaluation." As a result, it assigned "Green 1 (F)" for the "JCR Green Bond Framework Evaluation". The Framework meets the standards for the items required in the Green Bond Principles, and the Green Bond Guidelines.

[JCR Green Bond Framework Evaluation Matrix]

		Management, Operation, and Transparency Evaluation				
		m1(F)	m2(F)	m3(F)	m4(F)	m5(F)
Greenness Evaluation	g1(F)	Green 1(F)	Green 2(F)	Green 3(F)	Green 4(F)	Green 5(F)
	g2(F)	Green 2(F)	Green 2(F)	Green 3(F)	Green 4(F)	Green 5(F)
	g3(F)	Green 3(F)	Green 3(F)	Green 4(F)	Green 5(F)	Not qualified
	g4(F)	Green 4(F)	Green 4(F)	Green 5(F)	Not qualified	Not qualified
	g5(F)	Green 5(F)	Green 5(F)	Not qualified	Not qualified	Not qualified

(Responsible analysts for this evaluation) Atsuko Kajiwara and Haruna Goto

Important explanations of this Evaluation

1. Assumptions, Significance and Limitations of JCR Green Bond Framework Evaluation

JCR Green Bond Framework Evaluation, which is determined and provided by Japan Credit Rating Agency, Ltd. (JCR), covers the policies set out in the Green Bond Framework, and expresses JCR's comprehensive opinion at this time regarding the appropriateness of the Green Project as defined by JCR and the extent of management, operation and transparency initiatives related to the use of proceeds and other matters. Therefore, it is not intended to evaluate the effects of specific environmental improvements and the management, operation and transparency of individual bonds and borrowings, etc. to be implemented based on these policies. In the event an individual bond or individual borrowing based on this Framework is subject to a green finance evaluation, it is necessary to conduct a separate evaluation. JCR Green Bond Framework Evaluation does not prove the environmental improvement effects of individual bonds or borrowings implemented under this Framework, and does not assume responsibility for their environmental improvement effects. JCR confirms the environmental improvement effects of funds procured under the Green Bond Framework measured quantitatively and qualitatively by the issuer or by a third party nominated by the issuer, but in principle it does not directly measure such effects.

2. Method used to conduct this evaluation

The methodologies used in this assessment are described in "JCR Green Finance Evaluation" on the "Sustainable Finance ESG" section of the JCR website (<https://www.jcr.co.jp/en>).

3. Relationship with Acts Concerning Credit Rating Business

JCR Green Finance Evaluation is determined and provided by JCR as a related business, which is different from its activities related to the credit rating business.

4. Relationship with Credit Ratings

The Evaluation is different from the Credit Rating and does not promise to provide or make available for inspection a predetermined credit rating.

5. Third-Party Evaluation of JCR Green Bond Framework Evaluation

There are no capital and/or personnel relationships that may result in a conflict of interest between the subject of this evaluation and JCR.

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■ Glossary

JCR Green Bond Framework Evaluation: This evaluates the extent to which the funds procured through green finance are appropriated for green projects as defined by JCR and the degree to which the management, operation and transparency of the green finance are ensured. Evaluations based on a 5-point scale are given from top to bottom using the Green1 (F), Green2 (F), Green3 (F), Green4 (F), and Green5 (F) symbols.

■ Status of Registration as an External Evaluator of Green Finance

- Registered as an External Reviewer of Green Bonds by the Ministry of the Environment
- ICMA (registered as an observer with the Institute of International Capital Markets)

■ Status of registration as a credit rating agency, etc.

- Credit Rating Agency: the Commissioner of the Financial Services Agency (Rating) No.1
- EU Certified Credit Rating Agency
- NRSRO: JCR has registered with the following four of the five credit rating classes of the U.S. Securities and Exchange Commission's Nationally Recognized Statistical Rating Organization (NRSRO): (1) financial institutions, broker-dealers, (2) insurance companies, (3) general business corporations and (4) governments and municipalities. If the disclosure is subject to Section 17g-7 (a) of the Securities and Exchange Commission Rule, such disclosures are attached to the news releases appearing on the JCR website (<https://www.jcr.co.jp/en/>).

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