



# NEWS RELEASE

Sep 6, 2019

## 【R&I Green Bond Assessment】

### KANEKA CORPORATION Green Bond : GA1 Formal

Rating and Investment Information, Inc. (R&I) has announced the following R&I Green Bond Assessment (GA1 (Formal)). R&I announced a preliminary assessment for this instrument on August 22, 2019. The preliminary assessment has now been converted to a formal assessment.

#### 【DESCRIPTION OF INSTRUMENT】

INSTRUMENT NAME	KANEKA CORPORATION Unsec. Str. Bonds No.7 (Green Bond)
ISSUER	KANEKA CORPORATION
ISSUE AMOUNT (mn)	JPY 5,000
R&I GREEN BOND ASSESSMENT	GA1 (Formal)
ISSUE DATE	September 12, 2019
MATURITY DATE	September 12, 2024

R&I has confirmed that the green bond is in conformity to the green bond framework developed by KANEKA CORPORATION from the perspectives of the fixed issue amount, term, etc. and assigned GA1 (Formal) to the green bond.

Details are provided in the attached press release dated August 22, 2019 regarding R&I Green Bond Assessment (GA1 (Preliminary), Second Opinion).

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

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



# NEWS RELEASE

Aug 22, 2019

## 【R&I Green Bond Assessment】

### KANEKA CORPORATION Green Bond

: GA1 (Preliminary)

: Second Opinion

(The second opinion is an opinion regarding the alignment with Green Bond Principles, etc.)

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

## 【DESCRIPTION OF INSTRUMENT】

INSTRUMENT NAME	KANEKA CORPORATION Unsec. Str. Bonds No.7 (Green Bond)
ISSUER	KANEKA CORPORATION
ISSUE AMOUNT (mn)	JPY 5,000 scheduled
R&I GREEN BOND ASSESSMENT	GA1 (Preliminary)
ISSUE DATE	September 2019 scheduled
MATURITY DATE	September 2024 scheduled

## 【Summary】

Kaneka is a comprehensive Japanese chemical manufacturer engaged in a wide range of businesses, including chemical products, functional resins, foamed resin products, foods, life sciences, electronics, and synthetic fibers. Under the policy of "Eco-friendly management," Kaneka has been promoting environmental initiatives since fiscal 2017, by defining "Products that can contribute to reducing global environmental impacts at the stages of customer use, disposal, and recycling compared to conventional products" as "Eco-friendly products" and aiming to enhance and expand them.

This time, Kaneka is planning to issue a Green Bond for the purpose of financing the construction and research & development costs of manufacturing facilities for "Kaneka Biodegradable Polymer PHBH" (hereinafter PHBH) among eco-friendly products. In its preparation, Kaneka has formulated the Green Bond Framework, which is the issuer's response policy for the four criteria of the Green Bond Principles: Use of proceeds; process for project evaluation and selection; management of proceeds; and reporting.

## 【R&I Green Bond Assessment】

R&I has judged, in accordance with R&I Green Bond Assessment Methodology, that the proceeds from the green bond would be invested into projects with significant environmental benefits, and assigned GA1 (preliminary) to the green bond. This is a preliminary assessment and will be reassessed after the final confirmation of bond issuance details.



# NEWS RELEASE

【Second Opinion on the alignment with Green Bond Principles, etc.】

R&I has also provided a second opinion that the green bond framework is aligned with Green Bond Principles 2018 and Green Bond Guidelines 2017 by Ministry of the Environment of Japan.

Note that R&I has confirmed that the green bond scheduled to be issued is going to be in conformity to the said framework from the perspectives of issue amount and term, details of eligible projects, assets and investment schedule, etc.

【Rationale】

- The use of proceeds will be for the construction fees of manufacturing facilities and research & development of PHBH. Part of proceeds will be used to refinance those raised until two years ago for the same purpose.
- R&I has confirmed through interviews and documents whether: (1) sufficient impacts of environmental improvement can be expected from target projects; and (2) due consideration is given to potentially material environmental and social impacts. R&I deems that regarding (1), sufficient impacts of environmental improvement can be expected primarily owing to high marine biodegradability and impacts of CO2 reduction shown by the target project, and regarding (2), due consideration is given to potentially material environmental and social impacts because the handling of raw materials is taken due care. R&I has accordingly determined that the use of proceeds is appropriate as that of the green bond issuance.
- Regarding the process for project evaluation and selection, R&I has confirmed the contents of this framework. 1) Regarding the establishment of eligibility criteria, the company's Corporate Planning Department, ESG Department, Global CSV (Quality Environment) Center, New Business Development Department as well as the Finance Department confirms whether the project is in line with the eligible business. The final approval is made by the president. Since the multiple departments are involved, R&I evaluated that the process secures a check-and-check function and professionalism in the selection of target businesses. 2) Moreover, PHBH is clearly positioned as "Eco-friendly products" advocated in "Eco-friendly management". The process for project evaluation and selection is appropriate.
- The proceeds will be allocated within three years of the procurement. The allocation of proceeds is controlled by Kaneka's internal process, with the Finance Department compiling the unallocated proceeds at the end of each quarter and managing them. If there are unallocated proceeds, they will be managed in cash and cash equivalents. In addition, the financial director will confirm the status of proceeds allocation before it is disclosed. R&I deems that proceeds will be managed appropriately.
- Regarding reporting, the status of proceeds allocation and effects of environmental improvement will be disclosed annually on Kaneka's website or in the Integrated Report. Moreover, as the impacts of environmental improvement, Kaneka will show the status of business development such as the status of various certifications and case studies. Based on the frequency and content of disclosure, R&I deems that reporting will be conducted appropriately.
- With the Corporate Philosophy that "With people and technology growing together into creative fusion, we will break fresh ground for the future and tie in to explore New Values. We are also committed to challenging the environmental issues of our planet and contribute to upgrading the quality of life," Kaneka seeks to create new values and contribute to the development of society through the resolution of social issues and corporate growth. In 2018, Kaneka formulated the "ESG Charter" as a guideline for putting the Corporate Philosophy into practice in order to make progress toward ESG management. With regard to environmental issues, based on the "ESG Charter," Kaneka is working to protect the global environment at each stage of the product life cycle, aiming to achieve a prosperous society with sustainable development by conserving resources and reducing environmental impacts.

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R&I Green Bond Assessment is R&I's opinion regarding the extent to which the proceeds from the issuance of green bonds are used to invest in projects with environmental benefits and is not statements of fact. R&I Green Bond Assessment does not certify the environmental benefits and other qualities of the eligible projects. Hence, R&I will not be held responsible for the effectiveness of the projects, including their environmental benefits. R&I Green Bond Assessment is not the Credit Rating Business, but one of the Ancillary Businesses (businesses excluding Credit Rating Service but are ancillary to Credit Rating Activities) as set forth in Article 299, paragraph (1), item (xxviii) of the Cabinet Office Ordinance on Financial Instruments Business, etc. With respect to such business, relevant laws and regulations require measures to be implemented so that activities pertaining to such business would not unreasonably affect the Credit Rating Activities, as well as measures to prevent such business from being misperceived as the Credit Rating Business. Further, R&I does not give advice regarding investment decisions or financial matters, or endorse the merits of any investment. R&I does not undertake any independent verification of the accuracy or other aspects of the related information when issuing R&I Green Bond Assessment and makes no related representations or warranties. R&I is not liable in any way for any damage arising in relation to R&I Green Bond Assessment (including amendment or withdrawal thereof). As a general rule, R&I issues R&I Green Bond Assessment for a fee paid by the applicant. For details, please refer to <https://www.r-i.co.jp/en/docs/policy/site.html>.



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## ■ Outline of the Issuer (KANEKA CORPORATION)

Kaneka is a comprehensive Japanese chemical manufacturer engaged in a wide range of businesses, including chemical products, functional resins, foamed resin products, foods, life sciences, electronics, and synthetic fibers. Since its foundation in 1949, the company has grown through the creative fusion of people and technology, overcoming the changing times and environment.

Kaneka aspires to be a company that provides solutions to social issues through the creation of new value through technological innovation. For each solution, Kaneka operates in 4 domains: "Material Solutions Unit" to support the advancement of life and the environment by drawing out the richness by of the materials; "Quality of Life Solutions Unit" to produce the leading edge of the enhancement of the quality of life through the power of materials; "Health Care Solutions Unit" to create a world in where advanced medical means are available to as many people as possible; and "Nutrition Solutions Unit" to re-innovate food and health.

### Significance of issuing green bonds

Advocating the policy of "Eco-friendly management" since fiscal 2017, Kaneka has defined "Products that can contribute to reducing global environmental impacts at the stages of customer use, disposal, and recycling compared to conventional products" as "Eco-friendly products" aiming to enhance and expand them.

There are growing concerns that microplastics floating in the sea could affect ecosystems and human health. In order to pass a beautiful global environment on to the next generation, Kaneka developed a new material to contribute to the solution of environmental pollution caused by disposable plastics. Since 2009, as one of its eco-friendly products, Kaneka has dealt with PHBH, which is 100% plant-derived, and succeeded in putting it into practical use for the first time in the world.

With demand growing, particularly in Europe, where environmental awareness is high, the company decided last year to increase production capacity at its PHBH production facility (Takasago Manufacturing Site). The production capacity is about 5,000 t/year, and it is scheduled to start operation in December 2019. As the next step, construction of a large commercial plant is under consideration, with a target of 100,000 t/year in the future.

Through such proactive investment with funds procured through green bonds, it will contribute to the realization of a sustainable society.

## ■ Overview of the Green Bond Framework

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

### 1. Use of Proceeds

- Green bond proceeds will be used for new investment or refinancing of projects that meet the following eligibility criteria:

Project Category	Project Name
<ul style="list-style-type: none"> <li>Eco-efficient and/or circular economy adapted products, production technologies and processes</li> <li>Pollution prevention and control</li> </ul>	Construction costs of manufacturing equipment and research & development costs for "Kaneka Biodegradable Polymer PHBH"

\*1 The target of the refinance is the fund of the project carried out in the past two years.

\*2 Research & development cost does not include labor cost.

- PHBH is a polymer produced by microbial fermentation processes from biomass, such as vegetable oil. Many naturally occurring microorganisms degrade it in soil and seawater to carbon dioxide (CO<sub>2</sub>) and water eventually.
- Since PHBH exhibits excellent biodegradability, its use in a wide range of applications, including food packaging materials, agricultural and civil engineering materials, and marine materials, is expected to contribute to solving environmental pollution problems caused by disposable plastics such as microplastics.
- PHBH is characterized by the fact that more than 90% of it is decomposed into water and carbon dioxide in seawater at 30°C within 6 months. In addition to "OK Biodegradable MARINE" in Europe, PHBH has been certified as biodegradable in the United States and Japan.
- Regarding food contact, it is registered with the US Food and Drug Administration (FDA) as a Food Contact Substance and also included in the positive list of the EU regulation on food contact materials and articles.
- In the research and manufacturing of PHBH, it has established a system to reduce environmental and social risks, paying attention to the possibility of environmental and social impacts. Whereas palm oil is used as the raw material for PHBH at present, with an eye to expanding PHBH production in the future, development of PHBH made from waste edible oil, non-edible oil, etc. is being carried out, whose research & development projects will be included in the use of the proceeds.



[Examples of PHBH applications]



Checkout bag



Tableware



Straw

## 2. Process for Project Evaluation and Selection

Kaneka's Corporate Planning Department, ESG Department, Global CSV (Quality Environment) Center, New Business Development Department as well as Finance Department confirm whether the project selected for the allocation of proceeds is in line with the eligible business. The final approval of the project selection is made by the president.

## 3. Management of Proceeds

- Funds procured through green bonds will be allocated within three years of procurement to refinance projects undertaken up to the last two years and to finance new projects.
- Kaneka's Finance Department manages proceeds. The Finance Department compiles the status of allocation at the end of each quarter and manages the balance of unallocated proceeds.
- Unallocated proceeds will be managed in cash and cash equivalents. The proceeds will be allocated within three years of the procurement, and thereafter, no unallocated funds will be generated in principle; however, if unallocated proceeds are to be generated, they will be managed in cash and cash equivalents.

## 4. Reporting

- For the period from one year after the issuance of the green bonds to the redemption date, the allocation of proceeds from the issuance of the green bonds and the environmental improvement effects are reported annually, which will then be reviewed by an external organization. If there is a significant change in the plan for allocating proceeds or if there are any significant changes in the development after the allocation of proceeds, it will be disclosed in a timely manner.
- The contents of reporting and the results of external reviews will be disclosed on Kaneka's website or in the Integrated Report to be issued annually. The environmental improvement effect of the target project shows the status of business development, such as the status of acquisition of various certifications and examples of application for use.

## ■ Evaluation Result on the Green Bond (Second Opinion)

In line with R&I Green Bond Assessment Methodology, R&I evaluated if the green bond framework prepared by KANEKA CORPORATION is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

### 1. Use of Proceeds

In order for green bond proceeds to be invested in projects that contribute to the solution of environmental issues, the target projects for proceeds allocation should be those that contribute to the solution of environmental issues in the first place.

#### Main basis of the evaluation

- Confirmation of the Framework
- Confirmation of the contents of the target project

#### Evaluation

- R&I confirmed whether (1) sufficient environmental improvement effects can be expected from the target project, and (2) potential environmental and social impacts are addressed.
- Regarding (1), R&I deems the project will have sufficient environmental improvement effects. The main reasons are that: (I) PHBH is one of the few products with high marine degradation performance that have been certified as "OK Biodegradable MARINE" and is an advanced technology product that is expected to solve the problem of marine plastic waste; and (II) since PHBH is 100% plant-derived plastic, it is expected to reduce CO2 emissions compared with fossil-derived plastic from a carbon-neutral standpoint.
- Regarding (2), R&I deems that appropriate measures have been taken to address potential environmental and social impacts, such as consideration for the environment during research and manufacturing as well as measures for palm oil as a raw material.

#### (1) Whether sufficient environmental improvement effects can be expected from the target project

##### ( I ) High marine degradation performance

- Currently, it is estimated that more than several million tons of plastic waste are discharged into the ocean annually worldwide. Contamination by plastic waste is widespread on a global scale, and it has been reported that plastic has been observed in the Arctic and Antarctic. As international developments (G7/G20), since the G7 Elmau Summit in June 2015 raised the issue of marine waste, especially plastic waste, as a global issue for the first time, discussions on marine waste continued at the G7 Ise-Shima Summit in May 2016, the G20 Hamburg Summit in July 2017, and the G7 Charlevoix Summit in June 2018. It was recognized at the G20 Summit held in Osaka in 2019 that the urgency of addressing the marine plastic waste issue on a global

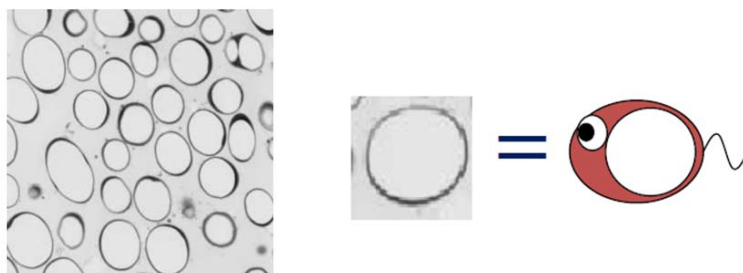


scale had increased. In this international trend, Japan intends to lead the world by implementing effective measures against plastic waste at sea ahead of the rest of the world, and disseminating and sharing Japan's best practices (experience, knowledge and technology) internationally. Specifically, Japan has established the "Plastic resource recycling strategy" including measures against marine plastic waste, and in its priority strategy, it has set forth a policy to promote innovation, such as the development of materials that have little impact on the sea (marine degradable plastics, paper, etc.) and conversion to such materials. The PHBH, for which proceeds this time will be used, is introduced as an example of innovation in the Environmental White Paper (Annual Report), and is consistent with Japan's policy of meeting global expectations for the solution of the issue of marine plastic waste.

[Plastic waste floating in the ocean]



- On the other hand, Kaneka began research & development of biodegradable polymers about 30 years ago when the problem of plastic waste disposal became a social issue. The research & development were conducted from various viewpoints, and what is noteworthy among them is that the Company discovered the appropriate microorganisms based on the discovery in the 1920s that microorganisms store biodegradable polymers from vegetable oils, etc. in their body; and that subsequently, it continued improving bacteria for 20 years to greatly increase the internal content of biodegradable polymers. This is a proprietary technology of the Company, and it's not easy for other companies to copy it.



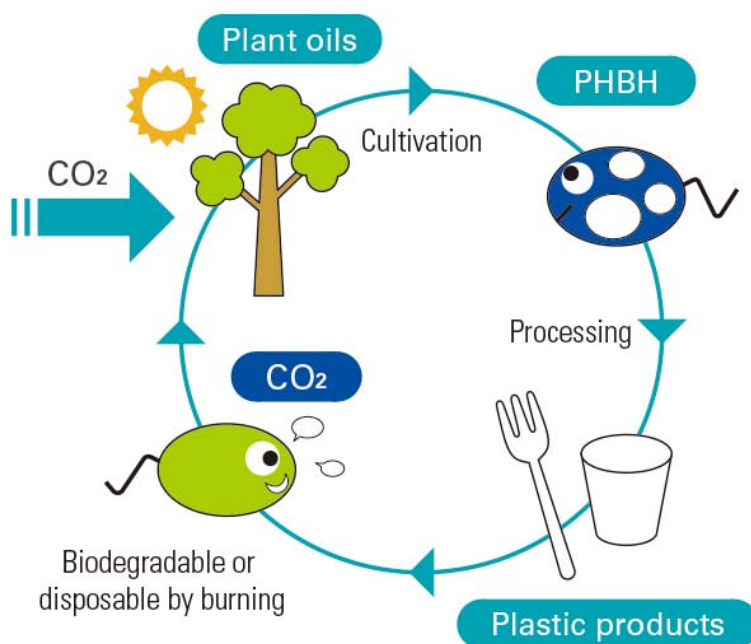
The electron micrograph picture above shows accumulated biopolymers (=PHBH) in the bodies of microorganisms.

- After putting PHBH into practical use for the first time in the world in 2009, Kaneka continued increasing the productivity by improving technologies such as separating polymers from bacteria. At the end of 2019, the Company will increase its current production capacity of 1,000 t/year to 5,000 t/year. Part of the proceeds this time will be used to increase the production capacity of the facility.
- PHBH is one of the few materials that was certified "OK Biodegradable MARINE" (See Table 1: PHBH Material Certification Acquisition) by a European certification body in November 2017.
- R&I assesses that the PHBH, for which the proceeds this time will be used, is expected to have an excellent environmental improvement effect, showing the world's highest level of marine degradability.

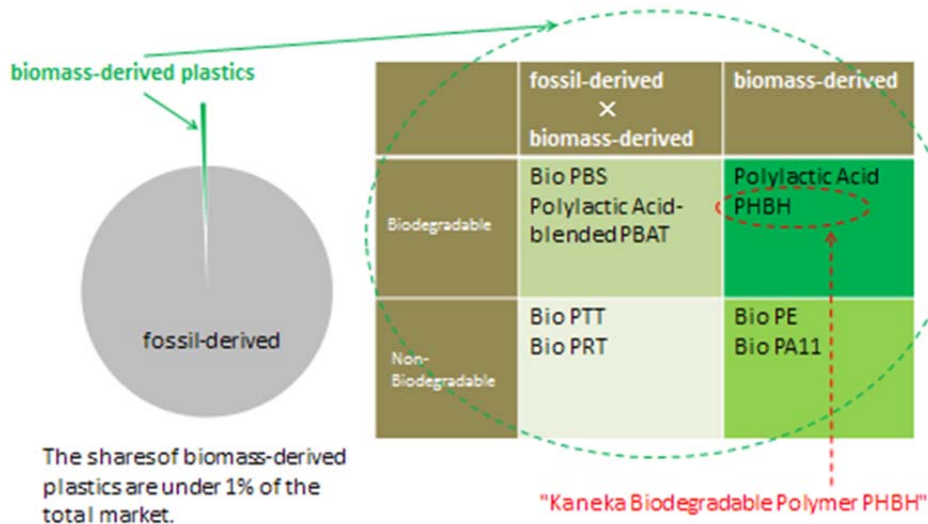
## (Ⅱ) CO2 reduction effect due to 100% plant-derived

- Because PHBH is 100% plant-derived, it is expected to reduce CO2 emissions compared with fossil-derived plastics from a carbon-neutral standpoint (Image below).

Lifecycle of biopolymer PHBH











- While plastics, said to be produced 300 million tons a year, are either fossil-derived or biomass-derived (or a mixture thereof), biomass plastics currently account for only less than 1% of the total (see the diagram below). Biomass plastics are referred to as bioplastics, even if 100% of the material is not derived from biomass; accordingly, the proportion is even lower for the 100% plant-derived such as PHBH. Furthermore, PHBH is a highly rare material because of its biodegradability and high marine degradability.



(Source: Prepared by R&I with reference to materials published by the Japan BioPlastics Association)

Table 1: PHBH Material Certification Acquisition

Certification	Country	Main requirements for acquisition, etc.	Notes
	Austria	Demonstrate degradation performance of 90% or more within 6 months in seawater at 30°C (General conditions).	Among Japanese companies, only PHBH obtained the certification.
	Austria	Demonstrate degradation performance 90% or more within 2 years in soil at 25°C.	—
	Austria	Demonstrate degradation performance of 90% or more within 6 months in a composting environment containing enzyme at 58°C.	—
	Austria	Demonstrate degradation performance of 90% or more within 6 months in a composting environment containing enzyme at 28°C.	—
	Austria	Must be at least 80% bio-derived.	Four stars is the highest rank
	United States	Certificate of compostable status	The San Francisco International Airport in the U.S. has reportedly approved the sale of PET bottles subject to the certification.
"Food Contact Notification system (FCN system)" of the U.S. Food and Drug Administration (FDA)	United States	Demonstrate safety of food	Notifications have been submitted for all categories except for certain uses, such as foods with alcoholic contents of 8% or more.
European Commission's "European Regulation on Food Contact Materials and Products"	Europe	Demonstrate safety of food	—

	Japan	Bioplastic content $\geq$ 25 wt	The bioplastic content of this product is 100 wt. It greatly exceeds the standard.
	Japan	Biodegradable plastic + natural organic material $\geq$ 50 wt	Biodegradable plastic and natural organic material of this product is 100 wt. It greatly exceeds the standard.

- The PHBH, for which proceeds this time will be used, is expected to have an excellent environmental improvement effect because of the CO2 reduction effect of the 100% plant-derived product and the contents for various certifications obtained (see Table 1). R&I deems that the degree of contribution to solving environmental issues is particularly excellent.

## (2) Response to potential environmental and social impacts

- Efforts to reduce environmental and social risks in PHBH research and manufacturing
  - By conducting ESG safety/quality inspections and ESG compliance audits, the Company is building a system to reduce environmental and social risks, paying attention to the possibility of adverse effects on the surrounding environment.
- Response to the handling of palm oil
  - As the basic policy for procurement of palm oil and other products, the Company stipulates and works on improvement of mutual corporate value with counter-parties, green procurement to reduce the burden on the global environment, equal and fair transactional opportunities, and compliance with relevant statutory regulations.
  - Kaneka is a full member of the RSPO (Roundtable on Sustainable Palm Oil). RSPO certified plantation area is expanding to 2.5 million ha (as of the end of April 2017)<sup>1</sup>, which is more than 10% of the total, while demand for RSPO certified products is beginning to increase. In the business environment where companies in all business fields are required to pay more attention to the environment from various viewpoints, the Company is responding to customers' expectations for RSPO certified products.
  - With an eye to expanding PHBH production in the future, development of PHBH made from waste edible oil, non-edible oil, etc. is being carried out, whose research projects will be included in the use of the proceeds.
- Based on the above, R&I assesses that the Company is responding to potential environmental and social impacts.

<sup>1</sup> See World Wide Fund for Nature "Sustainable palm oil procurement and RSPO 2nd edition".





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For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

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## 2. Process for Project Evaluation and Selection

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

### Main basis of the evaluation

- Confirmation of the Framework
- Confirmation of Kaneka's environmental policy

### Evaluation

- For the establishment of the eligibility criteria and others, Kaneka's Corporate Planning Department, ESG Department, Global CSV (Quality Environment) Center, New Business Development Department as well as Finance Department confirm whether the project is in line with the eligible business. The final approval of the project selection is made by the president. R&I assesses that because multiple departments are involved in the process leading up to the decision, the checks and balances, confirmation functions, and expertise related to the selection of projects are ensured.
- Moreover, PHBH is positioned as the "Eco-friendly products" listed in "Eco-friendly management," and therefore, is clearly positioned in Kaneka's management policy. The eligibility criteria are in line with Kaneka's environmental policies.

For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

## 3. Management of Proceeds

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

### Main basis of the evaluation

- Confirmation of the Framework

### Evaluation

- The allocation of proceeds is controlled by Kaneka's internal process, with the Finance Department compiling the unallocated proceeds at the end of each quarter and managing them.
- The proceeds will be allocated within three years of the procurement; however, if unallocated proceeds are generated, they will be managed in cash and cash equivalents.
- The financial director confirms the allocation of funds before it is disclosed.
- R&I deems that proceeds will be managed appropriately.

For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

## 4. Reporting

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

### Main basis of the evaluation

- Details of the framework

### Evaluation

- Regarding reporting, the status of proceeds allocation and effects of environmental improvement will be disclosed annually on Kaneka's website or in the Integrated Report.
- For the environmental improvement effect, the status of business development will be disclosed, including the status of acquisition of various PHBH certifications and examples of application for use.
- Based on the frequency and content of disclosure, R&I deems that reporting will be conducted appropriately.

For the reasons stated above, R&I concluded that the reporting in this framework is in line with the Green Bond Principles 2018 and the Ministry of the Environment's Green Bond Guidelines 2017.

## <Comprehensive Evaluation>

In line with the assessment methodology of R&I green bond assessment, R&I has judged that the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

This second opinion shall be applied to the green bond to be issued this time. For subsequent issues, R&I will review the status and then release its second opinion again.

## ■ Evaluation of the Green Bond

In line with the assessment methodology of R&I Green Bond Assessment, R&I confirmed if the amount and term of the green bond to be issued, as well as details of eligible projects and the allocation schedule, etc. thereof, are in conformity to the provisions of the framework. Also, in accordance with the details of the framework and specific measures to be taken for the green bond, R&I evaluated the extent the proceeds from the green bond are used to invest in businesses with environmental benefits.

### 1. Use of Proceeds

- R&I confirmed that the proceeds of the green bonds will be used for assets that meet the eligibility criteria set forth in the Framework, which are appropriate in light of the amount and duration of green bonds issued.
- For the reasons above, R&I concluded that the extent to which the green bond proceeds are used to invest in projects with environmental benefits is excellent.

### 2. Process for Project Evaluation and Selection

- R&I confirmed that the projects are selected based on the framework established by the issuer.
- R&I has determined that the process for project evaluation and selection is clear and reasonable. Therefore, R&I deems the process is excellent.

### 3. Management of Proceeds

- For the green bonds, R&I confirmed that proceeds will be managed under the framework established by the issuer.
- R&I has determined that the method of managing the proceeds from the green bond is properly established by the issuer and is excellent.

### 4. Reporting

- For the green bonds, R&I confirmed that reporting will take place based on the framework established by the issuer.
- R&I has determined that the reporting policy of the green bond is excellent in content and frequency.

## 5. Environmental activities of the issuer

The extent to which green bond proceeds are invested in projects that contribute to solving environmental problems is deemed to be affected by the issuer's stance and achievements in environmental activities. This is because issuers with a high level of interest in and experience in environmental activities are deemed to be more likely to use the proceeds for projects that contribute to solving environmental problems and implement them.



- With the Corporate Philosophy that "With people and technology growing together into creative fusion, we will break fresh ground for the future and tie in to explore New Values. We are also committed to challenging the environmental issues of our planet and contribute to upgrading the quality of life," Kaneka seeks to create new values and contribute to the development of society through the resolution of social issues and corporate growth.
- To tackle the evolution of ESG management, Kaneka formulated the "ESG Charter" in 2018, based on which it is working to protect the global environment at each stage of the product life cycle, aiming to achieve a prosperous society with sustainable development by conserving resources and reducing environmental impacts.
- While the ESG Committee makes decisions on important issues related to the protection of the global environment, the management meeting and the plant management meeting also share issues and deepen discussions. In the Medium-Term Management Plan, the Company strives to further enhance ESG management by strengthening initiatives on important issues.
- Advocating the policy of "Eco-friendly management" since fiscal 2017, Kaneka has defined "Products that can contribute to reducing global environmental impacts at the stages of customer use, disposal, and recycling compared to conventional products" as "Eco-friendly products" aiming to enhance and expand them.
- By confirming the above efforts and others, R&I deems that the Company's approach to environmental activities is excellent.






## <Comprehensive evaluation>

For the reasons stated above, R&I has judged that the green bond will be issued under the framework established by the issuer and is in conformity to the Green Bond Principles 2018 and the four requirements of the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

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

### 【Assessment of each item】

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

Items	Evaluation	Summary
Use of proceeds		The target projects are expected to have sufficient environmental improvement effects, while responding to potential environmental and social impacts. R&I deems that the degree of contribution to the solution of environmental issues is especially excellent.
Process for project evaluation and selection		R&I has determined that the process for evaluating and selecting the green bond project is clear and reasonable.
Management of proceeds		R&I has determined that the method for managing the green bond proceeds is properly prepared and considered to be especially excellent.
Reporting		R&I has determined that the policy for the green bond project reporting is excellent in content and frequency.
Issuer's environmental contribution activities		Advocating the management paying due attention to the ESG Charter and the environment, the Company is promoting initiatives for its business in line with such policy. R&I deems that the issuer's approach to the environmental activity is excellent.

The methodology for R&I Green Bond Assessment is disclosed on R&I's website.  
[https://www.r-i.co.jp/en/rating/products/green\\_bond/assessment.html](https://www.r-i.co.jp/en/rating/products/green_bond/assessment.html)

R&I Green Bond Assessment is R&I's opinion regarding the extent to which the proceeds from the issuance of green bonds are used to invest in projects with environmental benefits. In R&I Green Bond Assessment, R&I may also provide a second opinion on a green bond framework. R&I Green Bond Assessment does not certify the environmental benefits and other qualities of the eligible projects. Hence, R&I will not be held responsible for the effectiveness of the projects, including their environmental benefits. R&I Green Bond Assessment is not the Credit Rating Business, but one of the Ancillary Businesses (businesses excluding Credit Rating Service but are ancillary to Credit Rating Activities) as set forth in Article 299, paragraph (1), item (xxviii) of the Cabinet Office Ordinance on Financial Instruments Business, etc. With respect to such business, relevant laws and regulations require measures to be implemented so that activities pertaining to such business would not unreasonably affect the Credit Rating Activities, as well as measures to prevent such business from being misperceived as the Credit Rating Business.

R&I Green Bond Assessment is not, in any sense, statements of current, future, or historical fact and should not be interpreted as such, and R&I Green Bond Assessment is not a recommendation to purchase, sell, or hold any particular securities and does not constitute any form of advice regarding investment decisions or financial matters. R&I Green Bond Assessment does not address the suitability of an investment for any particular investor. R&I issues R&I Green Bond Assessment based on the assumption that each investor will investigate and evaluate the securities which they plan to purchase, sell, or hold for themselves. All investment decisions shall be made at the responsibility of the individual investor.

The information used when R&I issues R&I Green Bond Assessment is information that R&I has determined, at its own discretion, to be reliable. However, R&I does not undertake any independent verification of the accuracy or other aspects of that information. R&I makes no representation or warranty, express or implied, as to the accuracy, timeliness, adequacy, completeness, merchantability, fitness for any particular purpose, or any other matter with respect to any such information.

R&I may suspend or withdraw R&I Green Bond Assessment at its discretion due to insufficient data or information, or other circumstances.

R&I is not responsible or liable in any way to any party, for all or any damage, loss, or expenses arising out of or in relation to errors, omissions, inappropriateness of, or insufficiencies in the information used when issuing R&I Green Bond Assessment, R&I Green Bond Assessment or other opinions, or arising out of or in relation to the use of such information or R&I Green Bond Assessment, or amendment, suspension, or withdrawal of R&I Green Bond Assessment (regardless of the nature of the damage, including direct, indirect, ordinary, special, consequential, compensatory, or incidental damage, lost profits, non-monetary damage, and any other damage, and including expenses for attorneys and other specialists), whether in contract, tort, for unreasonable profit or otherwise, irrespective of negligence or fault of R&I. As a general rule, R&I issues R&I Green Bond Assessment for a fee paid by the applicant.

The Assessment Methodologies R&I uses in connection with evaluation are R&I's opinions prepared based on R&I's own analysis and research, and R&I makes no representation or warranty, express or implied, as to the accuracy, timeliness, adequacy, completeness, merchantability, fitness for any particular purpose, or any other matter with respect to the Assessment Methodologies. Further, disclosure of the Assessment Methodologies by R&I does not constitute any form of advice regarding investment decisions or financial matters or comment on the suitability of any investment for any party. R&I is not liable in any way for any damage arising in respect of a user or other third party in relation to the content or the use of the Assessment Methodologies, regardless of the reason for the claim, and irrespective of negligence or fault of R&I. All rights and interests (including patent rights, copyrights, other intellectual property rights, and know-how) regarding the Assessment Methodologies belong to R&I. Use of the Assessment Methodologies, in whole or in part, for purposes beyond personal use (including reproducing, amending, sending, distributing, transferring, lending, translating, or adapting the information), and storing the Assessment Methodologies for subsequent use, is prohibited without R&I's prior written permission.

【Japanese is the official language of this material and if there are any inconsistencies or discrepancies between the information written in Japanese and the information written in languages other than Japanese the information written in Japanese will take precedence.】



## Green Bond / Green Bond Programme

### Independent External Review Form

#### Section 1. Basic Information

Issuer name: KANEKA CORPORATION

Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:

Independent External Review provider's name: Rating and Investment Information, Inc. (R&I)

Completion date of this form: September 6, 2019

Publication date of review publication: September 6, 2019

#### Section 2. Review overview

##### SCOPE OF REVIEW

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

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

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

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

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification             |
| <input type="checkbox"/> Verification                    | <input checked="" type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other (please specify):         |  |

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

Latest update: June 2018

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R&I Green Bond Assessment is R&I's opinion regarding the extent to which the proceeds from the issuance of green bonds are used to invest in projects with environmental benefits and is not statements of fact. R&I Green Bond Assessment does not certify the environmental benefits and other qualities of the eligible projects. Hence, R&I will not be held responsible for the effectiveness of the projects, including their environmental benefits. R&I Green Bond Assessment is not the Credit Rating Business, but one of the Ancillary Businesses (businesses excluding Credit Rating Service but are ancillary to Credit Rating Activities) as set forth in Article 299, paragraph (1), item (xxviii) of the Cabinet Office Ordinance on Financial Instruments Business, etc. With respect to such business, relevant laws and regulations require measures to be implemented so that activities pertaining to such business would not unreasonably affect the Credit Rating Activities, as well as measures to prevent such business from being misperceived as the Credit Rating Business. Further, R&I does not give advice regarding investment decisions or financial matters, or endorse the merits of any investment. R&I does not undertake any independent verification of the accuracy or other aspects of the related information when issuing R&I Green Bond Assessment and makes no related representations or warranties. R&I is not liable in any way for any damage arising in relation to R&I Green Bond Assessment (including amendment or withdrawal thereof). As a general rule, R&I issues R&I Green Bond Assessment for a fee paid by the applicant. For details, please refer to <https://www.r-i.co.jp/en/docs/policy/site.html>.

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

[R&I Green Bond Assessment]

R&I has judged, in accordance with R&I Green Bond Assessment Methodology, that the proceeds from the green bond would be invested into projects with significant environmental benefits, and has therefore assigned GA1 (Formal) to the green bond.

[Second Opinion on the alignment with the Green Bond Principles, etc.]

R&I has also provided a second opinion that the green bond framework is aligned with Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

For details, please refer to R&I Green bond assessment report above.

## Section 3. Detailed review

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

### 1. USE OF PROCEEDS

**Overall comment on section (if applicable):**

< Evaluation on the Green Bond Framework >

R&I confirmed whether (1) sufficient environmental improvement effects can be expected from the target project, and (2) potential environmental and social impacts are addressed.

Regarding (1), R&I deems the project will have sufficient environmental improvement effects. The main reasons are that: (I) PHBH is one of the few products with high marine degradation performance that have been certified as "OK Biodegradable MARINE" and is an advanced technology product that is expected to solve the problem of marine plastic waste; and (II) since PHBH is 100% plant-derived plastic, it is expected to reduce CO2 emissions compared with fossil-derived plastic from a carbon-neutral standpoint.

Regarding (2), R&I deems that appropriate measures have been taken to address potential environmental and social impacts, such as consideration for the environment during research and manufacturing as well as measures for palm oil as a raw material.

(1) Whether sufficient environmental improvement effects can be expected from the target project

( I ) High marine degradation performance

Currently, it is estimated that more than several million tons of plastic waste are discharged into the ocean annually worldwide. Contamination by plastic waste is widespread on a global scale, and it has been reported that plastic has been observed in the Arctic and Antarctic. As international developments (G7/G20), since the G7 Elmau Summit in June 2015 raised the issue of marine waste, especially plastic waste, as a global issue for the first time, discussions on marine waste continued at the G7 Ise-Shima Summit in May 2016, the G20 Hamburg Summit in July 2017, and the G7 Charlevoix Summit in June 2018. It was recognized at the G20 Summit held in Osaka in 2019 that the urgency of addressing the marine plastic waste issue on a global scale had increased. In this international trend, Japan intends to lead the world by implementing effective measures against plastic waste at sea ahead of the rest of the world, and disseminating and sharing Japan's best practices (experience, knowledge and technology) internationally. Specifically, Japan has established the "Plastic resource recycling

strategy" including measures against marine plastic waste, and in its priority strategy, it has set forth a policy to promote innovation, such as the development of materials that have little impact on the sea (marine degradable plastics, paper, etc.) and conversion to such materials. The PHBH, for which proceeds this time will be used, is introduced as an example of innovation in the Environmental White Paper (Annual Report), and is consistent with Japan's policy of meeting global expectations for the solution of the issue of marine plastic waste.

On the other hand, Kaneka began research & development of biodegradable polymers about 30 years ago when the problem of plastic waste disposal became a social issue. The research & development were conducted from various viewpoints, and what is noteworthy among them is that the Company discovered the appropriate microorganisms based on the discovery in the 1920s that microorganisms store biodegradable polymers from vegetable oils, etc. in their body; and that subsequently, it continued improving bacteria for 20 years to greatly increase the internal content of biodegradable polymers. This is a proprietary technology of the Company, and it's not easy for other companies to copy it.

After putting PHBH into practical use for the first time in the world in 2009, Kaneka continued increasing the productivity by improving technologies such as separating polymers from bacteria. At the end of 2019, the Company will increase its current production capacity of 1,000 t/year to 5,000 t/year. Part of the proceeds this time will be used to increase the production capacity of the facility.

PHBH is one of the few materials that was certified "OK Biodegradable MARINE" by a European certification body in November 2017.

R&I assesses that the PHBH, for which the proceeds this time will be used, is expected to have an excellent environmental improvement effect, showing the world's highest level of marine degradability.

## ( II ) CO2 reduction effect due to 100% plant-derived

Because PHBH is 100% plant-derived, it is expected to reduce CO2 emissions compared with fossil-derived plastics from a carbon-neutral standpoint.

While plastics, said to be produced 300 million tons a year, are either fossil-derived or biomass-derived (or a mixture thereof), biomass plastics currently account for only less than 1% of the total. Biomass plastics are referred to as bioplastics, even if 100% of the material is not derived from biomass; accordingly, the proportion is even lower for the 100% plant-derived such as PHBH. Furthermore, PHBH is a highly rare material because of its biodegradability and high marine degradability.

The PHBH, for which proceeds this time will be used, is expected to have an excellent environmental improvement effect because of the CO2 reduction effect of the 100% plant-derived product and the contents for various certifications obtained. R&I deems that the degree of contribution to solving environmental issues is particularly excellent.

## (2)Response to potential environmental and social impacts

Efforts to reduce environmental and social risks in PHBH research and manufacturing

-By conducting ESG safety/quality inspections and ESG compliance audits, the Company is building a system to reduce environmental and social risks, paying attention to the possibility of adverse effects on the surrounding environment.

Response to the handling of palm oil

-As the basic policy for procurement of palm oil and other products, the Company stipulates and works on improvement of mutual corporate value with counter-parties, green procurement to reduce the burden on the

global environment, equal and fair transactional opportunities, and compliance with relevant statutory regulations.

-Kaneka is a full member of the RSPO (Roundtable on Sustainable Palm Oil). RSPO certified plantation area is expanding to 2.5 million ha (as of the end of April 2017)<sup>1</sup>, which is more than 10% of the total, while demand for RSPO certified products is beginning to increase. In the business environment where companies in all business fields are required to pay more attention to the environment from various viewpoints, the Company is responding to customers' expectations for RSPO certified products.

-With an eye to expanding PHBH production in the future, development of PHBH made from waste edible oil, non-edible oil, etc. is being carried out, whose research projects will be included in the use of the proceeds.

Based on the above, R&I assesses that the Company is responding to potential environmental and social impacts.

For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

#### < Evaluation on the Green Bond >

R&I confirmed that the proceeds of the green bonds will be used for assets that meet the eligibility criteria set forth in the Framework, which are appropriate in light of the amount and duration of green bonds issued.

For the reasons above, R&I concluded that the extent to which the green bond proceeds are used to invest in projects with environmental benefits is excellent.

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

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

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

## 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

### Overall comment on section (if applicable):

#### < Evaluation on the Green Bond Framework >

• For the establishment of the eligibility criteria and others, Kaneka's Corporate Planning Department, ESG Department, Global CSV (Quality Environment) Center, New Business Development Department as well as Finance Department confirm whether the project is in line with the eligible business. The final approval of the project selection is made by the president. R&I assesses that because multiple departments are involved in the process leading up to the decision, the checks and balances, confirmation functions, and expertise related to the selection of projects are ensured.

• Moreover, PHBH is positioned as the "Eco-friendly products" listed in "Eco-friendly management," and therefore, is clearly positioned in Kaneka's management policy. The eligibility criteria are in line with Kaneka's environmental policies.

For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

#### < Evaluation on the Green Bond >

R&I confirmed that the projects were selected in accordance with the framework established by the issuer.

R&I has determined that the process for project evaluation and selection is clear and reasonable.

### Evaluation and selection

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives            | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories               |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available       | <input type="checkbox"/> Other (please specify):  |

### Information on Responsibilities and Accountability

- |   |   |
|---|---|
| <input type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (please specify):  |   |

### 3. MANAGEMENT OF PROCEEDS

#### Overall comment on section (if applicable):

##### < Evaluation on the Green Bond Framework >

- The allocation of proceeds is controlled by Kaneka's internal process, with the Finance Department compiling the unallocated proceeds at the end of each quarter and managing them.
- The proceeds will be allocated within three years of the procurement; however, if unallocated proceeds are generated, they will be managed in cash and cash equivalents.
- The financial director confirms the allocation of funds before it is disclosed.
- R&I deems that proceeds will be managed appropriately.

For the reasons stated above, R&I has judged the use of proceeds under the framework is in conformity to the Green Bond Principles 2018 and the Green Bond Guidelines 2017 by the Ministry of the Environment of Japan.

##### < Evaluation on the Green Bond >

R&I confirmed that the proceeds will be managed in accordance with the framework established by the issuer. R&I has determined that the method of managing the proceeds from the green bond is properly established by the issuer and is excellent.

#### Tracking of proceeds:

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

#### Additional disclosure:

- |  |  |
|--|--|
| <input type="checkbox"/> Allocations to future investments only                  | <input checked="" type="checkbox"/> Allocations to both existing and future investments              |
| <input type="checkbox"/> Allocation to individual disbursements                  | <input type="checkbox"/> Allocation to a portfolio of disbursements                                  |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other (please specify): The proceeds are fully allocated as refinance funds |



## 4. REPORTING

### Overall comment on section (if applicable):

#### < Evaluation on the Green Bond Framework >

- Regarding reporting, the status of proceeds allocation and effects of environmental improvement will be disclosed annually on Kaneka's website or in the Integrated Report.
- For the environmental improvement effect, the status of business development will be disclosed, including the status of acquisition of various PHBH certifications and examples of application for use.
- Based on the frequency and content of disclosure, R&I deems that reporting will be conducted appropriately.

For the reasons stated above, R&I concluded that the reporting in this framework is in line with the Green Bond Principles 2018 and the Ministry of the Environment's Green Bond Guidelines 2017.

#### < Evaluation on the Green Bond >

R&I confirmed that reporting of the green bond will be made available in accordance with framework established by the issuer.

R&I has determined that the reporting policy of the green bond is excellent in content and frequency.

### Use of proceeds reporting:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify):      |

#### Information reported:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Allocated amounts   | <input type="checkbox"/> Green Bond financed share of total investment |
| <input type="checkbox"/> Other (please specify): The proceeds will be fully allocated immediately after issuance, and there will be no unallocated proceeds |  |

#### Frequency:

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual  | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): Only report on issue (Reported that the proceeds will be fully allocated immediately after issuance in external review report) |                                      |

**Impact reporting:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis  |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other ( <i>please specify</i> ): Based on the Scope of Data Calculation in ESG Report |

**Frequency:**

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual                | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |                                      |

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

- |  |   |
|--|---|
| <input type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings   |
| <input type="checkbox"/> Decrease in water use   | <input checked="" type="checkbox"/> Other ESG indicators ( <i>please specify</i> ): Energy Consumption, Water Consumption, Total weight of wastes, and Recycling Rate |

**Means of Disclosure**

- |  |   |
|--|---|
| <input type="checkbox"/> Information published in financial report   | <input type="checkbox"/> Information published in sustainability report               |
| <input type="checkbox"/> Information published in ad hoc documents   | <input checked="" type="checkbox"/> Other ( <i>please specify</i> ): Issuer's website |
| <input type="checkbox"/> Reporting reviewed ( <i>if yes, please specify which parts of the reporting are subject to external review</i> ): |   |

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

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

The methodology for R&I Green Bond Assessment

[https://www.r-i.co.jp/en/rating/products/green\\_bond/assessment.html](https://www.r-i.co.jp/en/rating/products/green_bond/assessment.html)

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

- |   |   |
|---|---|
| <input type="checkbox"/> Second Party Opinion             | <input type="checkbox"/> Certification  |
| <input type="checkbox"/> Verification                     | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |   |

**Review provider(s):****Date of publication:****Rating and Investment Information, Inc.**

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

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