



Second Opinion

Sanken Electric Co., Ltd. Green Finance Framework

Feb 10, 2022

ESG Division
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Rating and Investment Information, Inc. (R&I) has confirmed the alignment of the Green Finance Framework of Sanken Electric Co., Ltd. dated February 10, 2022 with the Green Bond Principles 2021, the Ministry of the Environment (MOE)'s Green Bond Guidelines 2020, the Green Loan Principles 2021 and the MOE's Green Loan and Sustainability Linked Loan Guidelines 2020 (hereinafter referred to as GBP, etc.). This opinion is based on the following views.

■ Overview of the Opinion

(1) Use of Proceeds

All proceeds from green bonds/green loans will be allocated to capital investment and research and development (R&D) for semiconductor products used in electric vehicles (EVs). Capital investment is made in production facilities for semiconductor products installed in EVs that are indispensable for the manufacture of EVs, and R&D is for silicon carbide (SiC) devices, which help improve EV performance (power consumption). Both activities are expected to produce environmental benefits. It has also been confirmed that Sanken Electric gives due consideration to negative environmental and social impacts by, for example, establishing and implementing strict standards for a large amount of water used in semiconductor production and chemical products. R&I has determined that the use of proceeds is reasonable.

(2) Process for Project Evaluation and Selection

Eligible projects are selected by the Finance Department and the Marketing Headquarters based mainly on the Sanken Group's materiality. Consistency of selected projects with the eligibility criteria is reported to and approved by the Executive Committee after deliberations at the Sustainability Committee. The results are reported to the Board of Directors. An organizational process is in place. The projects are positioned as initiatives for CO₂ reductions through promotion of its main business (energy savings, higher efficiency) and mitigation of the environmental impact of its business activities, which are social issues the Sanken Group should work to resolve. R&I has determined that the process for project evaluation and selection is reasonable.

(3) Management of Proceeds

The Finance Department will track and manage the proceeds using an internal management system so that the outstanding balance of the proceeds will equal the amount allocated to eligible projects on a semi-annual basis. The proceeds will be allocated to eligible projects within around three years of the issuance of green bonds. If assets to which funds were allocated are sold or become no longer eligible and this has generated unallocated funds, the funds will be reallocated to other projects that satisfy the eligible criteria as soon as possible. Until all proceeds are allocated to eligible projects and as long as unallocated funds exist, the unallocated funds will be managed in cash and cash equivalents. R&I has determined that the management of proceeds is reasonable.

(4) Reporting

The allocation of proceeds and environmental benefits (CO₂ reduction effects) will be disclosed on Sanken Electric's website annually. R&I has determined that the reporting is reasonable in light of the content, frequency and method of disclosure.

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Outline of the Issuer

- In September 1946, Sanken Electric was founded as a spin-off from Toho Power Institute for Industrial Research, a power company laboratory, and celebrated the 75th anniversary of its foundation in September 2021. At the time of its founding, the company declared its commitment “to contribute to the development of industry, economy, and culture.” This conviction has been passed down and reiterated in its management philosophy, which states, “With semiconductors as our core business, our mission is to offer optimized solutions for power electronics and their related areas and contribute to the development of the industry, economy, and culture of countries around the world.” In FY2021, the company began a fresh start as a specialized semiconductor manufacturer for products such as power modules, power devices, and sensors. Electricity and electronics are indispensable to modern life. Power semiconductors are devices needed every time electricity is used. Sanken Electric products are used in familiar things like cars, air conditioners and televisions and also in places that aren’t visible. For over 70 years, its products have supported people’s lives.
- ESG Management Promotion Organization

After it decided to introduce the SDGs in its management in FY2019, Sanken Electric established the SDGs Promotion Meeting as an organization for advancing SDG initiatives. The meeting discusses specific initiatives, reports its deliberations to management and promotes educational activities for all employees. In FY2021, the SDGs Promotion Meeting was transformed into the Sustainability Committee to promote ESG activities further.

Sanken Electric’s materiality was classified into environmental, social and governance categories, and under the Sustainability Committee, Environmental, Social and Governance Task Forces are addressing climate change and other topics in individual teams. Group-wide efforts are underway, driven by the task forces and teams consisting of members from the Sanken Group. Reporting to the Sustainability Committee is made semi-annually, and the results of deliberations are reported to the Executive Committee and the Board of Directors.



[Source: Sanken Electric’s website]

1. Use of Proceeds

(1) Eligible Projects

- The proceeds from green finance will be used to finance new expenses and refinance existing expenses for projects that satisfy the eligible criteria shown below.
- ***In the case of refinancing, eligible projects are limited to those implemented within 36 months prior to the issuance of green bonds or the execution of green loans.

[Eligible Projects]

GBP Project Category	Eligible Criteria	Examples of Eligible Products
Clean transportation	<ul style="list-style-type: none"> ● Capital investment and R&D for semiconductor products used in EVs 	<ul style="list-style-type: none"> ● Power modules for EV traction motors ● SiC devices for EVs

(2) Environmental Benefits

- In October 2020, the government declared that it aims to achieve carbon neutrality by 2050. It set out a green growth strategy in December 2020 and will take comprehensive measures to ensure that 100% of new passenger vehicles sold will be EVs by 2035, to achieve the goal of carbon neutrality throughout the lifecycle of vehicles by 2050 (“Green Growth Strategy Through Achieving Carbon Neutrality in 2050” dated June 18, 2021, the Ministry of Economy, Trade and Industry (METI)). The METI is also promoting the use of EVs by introducing subsidies for purchasing EVs, plug-in hybrid vehicles and fuel cell vehicles, seeking to create demand and reduce prices for environmentally-friendly vehicles that can act as emergency power sources in the event of disasters, toward carbon neutrality by 2050. Semiconductor products for EVs, funded by the proceeds, are vital for the diffusion of EVs the government is working on in line with international trends.
- Power semiconductors are particularly taking on more importance in the green growth strategy because of an expected increase in the functions they provide. As power control devices for EVs and wind power generation, power semiconductors are considered indispensable for carbon neutrality (“Progress and Outlook of Semiconductor Strategy,” the METI’s Fourth Semiconductor and Digital Industry Strategy Review Conference held on November 15, 2021). For future autonomous driving, it is essential to reduce energy loss in power semiconductors to improve power consumption in a lower part of a body, which affects EVs’ power consumption. The manufacture and R&D of semiconductor products for EVs, funded by the proceeds, will become even more important, in R&I’s view.
- In R&D for SiC devices, which face intense competition, Sanken Electric products continue to show high performance in major indicators such as ARon ($m\Omega\text{-cm}^2$), a measure of resistance per unit area. The proceeds will be allocated to facilities for producing metal oxide semiconductor field effect transistors on SiC wafers, among other purposes. Power modules for EV traction motors equipped with SiC devices will help reduce power loss in EVs, allowing higher mileage with the same battery capacity. In recent years, the production of EVs, which will likely be rapidly adopted, has faced a challenge of securing a sufficient amount of lithium, cobalt and other resources required for batteries. The manufacture and R&D of SiC power semiconductors with less power loss are expected to mitigate battery supply shortages. The use of proceeds has large potential.
- It is anticipated that SiC devices will be used in environmentally-friendly products (energy-saving

products) other than EVs in the future, including those for EV fast-charging stations and power conditioners for renewable energy plants.

R&I considers that the use of proceeds is expected to produce environmental benefits.

(3) Consideration for Negative Environmental and Social Impacts

- The Framework ensures that environmental laws and regulations imposed by central and local governments in locations of project implementation will be conformed to, environmental assessments will be conducted as necessary, and the Sanken Group Fundamental CSR Policy will be abided by.
- In addition, R&I confirmed the following through interviews with Sanken Electric and other means regarding how the company addresses negative environmental and social impacts:
 - The company has internal standards exceeding statutory standards for water, which is required for semiconductor production in large amounts, and thoroughly manages it so that discharged water will not pollute the environment. The company also sets out and strictly implements rules for chemical products and conducts periodic emergency drills.
 - The company appropriately manages waste materials in compliance with laws and regulations and maintains a high recycling rate of 99% or more.
 - The company educates all employees about the Sanken Group Fundamental CSR Policy, the highest policy of the company, and has a structure that allows it to conduct audit, reporting and remediation if its internal audit unit doubts that the Fundamental CSR Policy is observed.

R&I considers that the company gives due consideration to negative environmental and social impacts.

Based on the above, R&I has determined that the use of proceeds under the Framework is aligned with the GBP, etc.

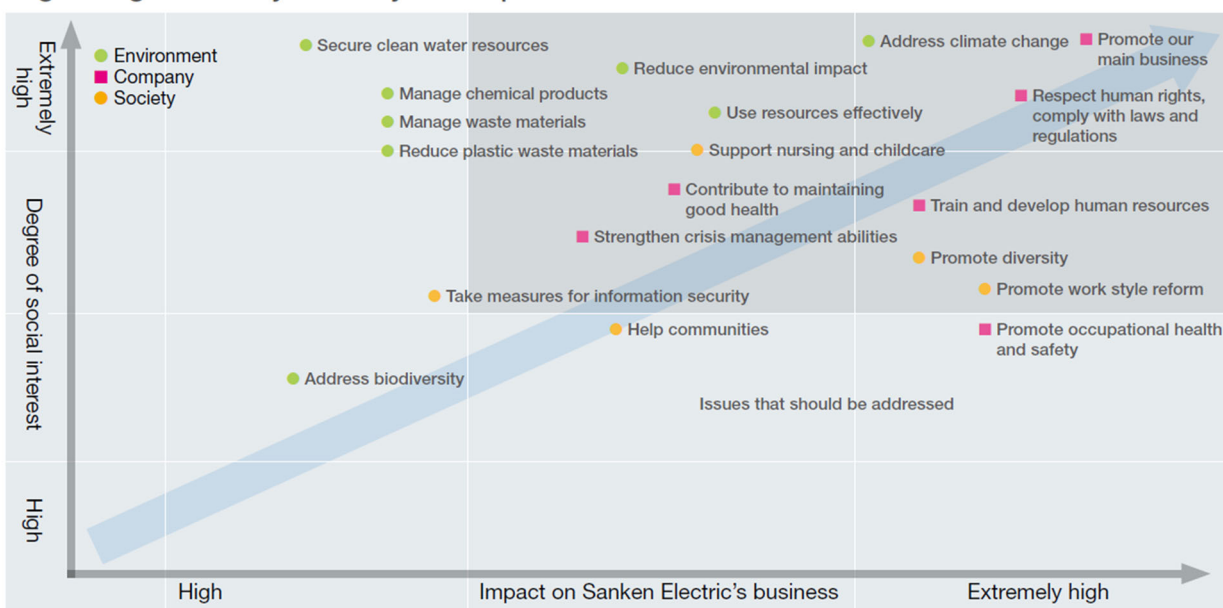
2. Process for Project Evaluation and Selection

(1) Incorporation into Comprehensive Objectives, Strategies and so on

- The Sanken Group’s management philosophy is “With semiconductors as our core business, our mission is to offer optimized solutions for power electronics and their related areas and contribute to the development of the industry, economy, and culture of countries around the world,” which expresses the company’s basic stance for addressing social issues. The management policy of Medium-Term Management Plan 2021 calls for establishing specific methods for addressing social issues with the aim of expanding sales and profits of products that meet the needs of future markets by accelerating electrification and digitalization. This approach is expressed in the slogan “Power Electronics for Your Innovation.” The management philosophy and policy are aligned with the SDGs “7. Affordable and clean energy” and “9. Industry, innovation and infrastructure,” and Sanken Electric believes that project implementation will contribute to the SDGs. It intends to reduce business risk and create new business opportunities by deeply understanding each of the SDGs and linking them to specific actions.
- Identifying materiality (key social issues to which Sanken Electric contributes)

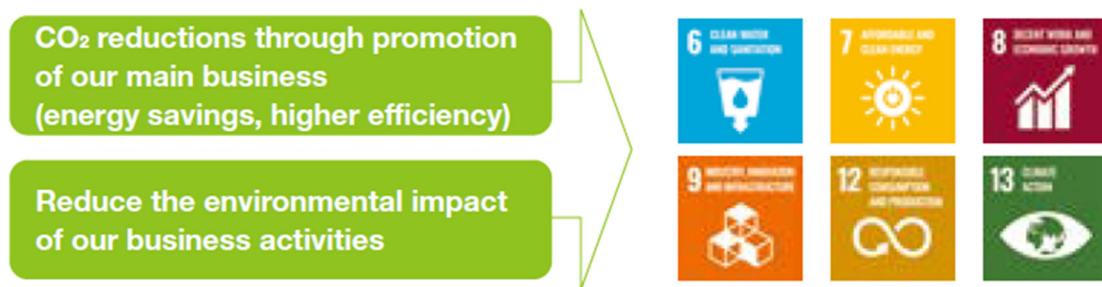
To incorporate its management philosophy and management policy and the SDGs into management initiatives, the Sanken Group examined materiality from comprehensive viewpoints, including with regard to the medium-term management plan, and analyzed the connection between divisional policies and the SDGs. The process involved mapping the degree of social interest with the impact on Sanken Electric’s business to identify the Sanken Group’s materiality (key social issues the group should work to resolve).

Organizing Materiality Priority and Impact



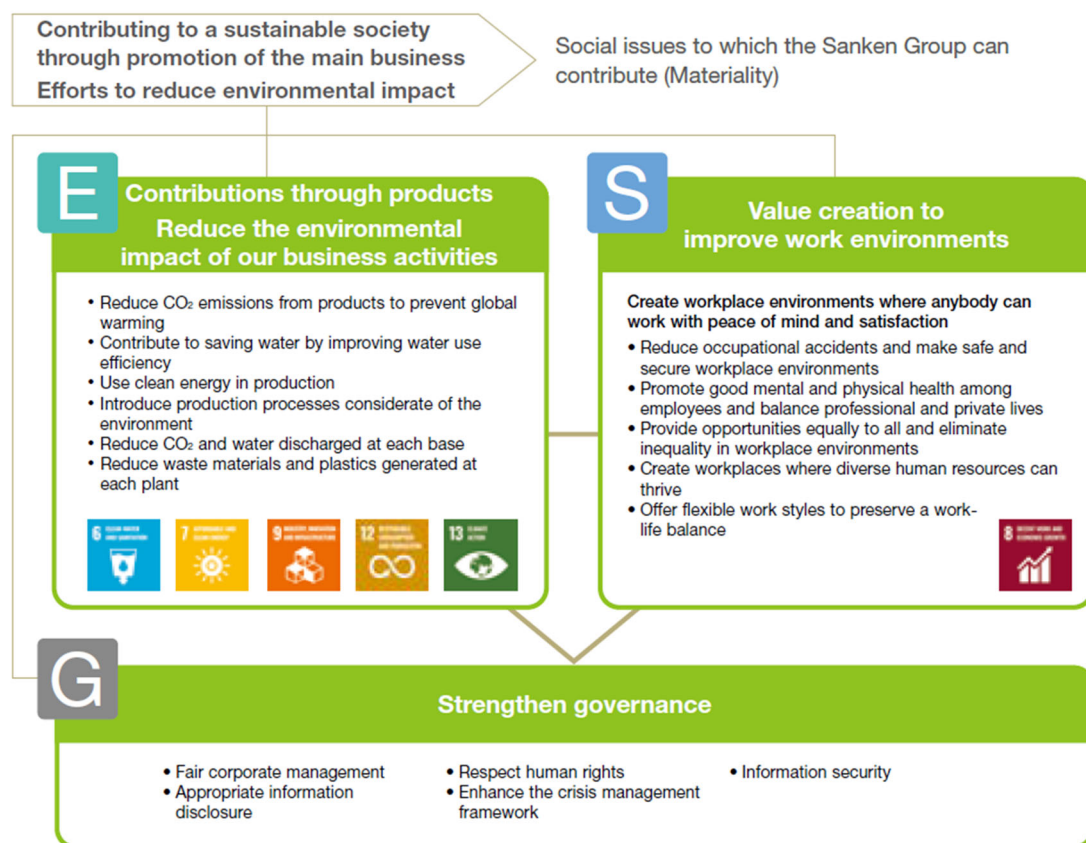
[Source: Sanken Electric’s website]

- Through the process of confirming its management philosophy and the connection between the SDGs and Sanken Electric’s various initiatives as well as analyzing its materiality, social issues the Sanken Group should work to resolve were determined to be CO₂ reductions through promotion of its main business (energy savings, higher efficiency) and mitigation of the environmental impact of its business activities.



[Source: Sanken Electric's website]

- Sanken Electric links its contribution to society with its sustainable development by incorporating identified materiality into management and aims to achieve both objectives. Based on the connection between the Sanken Group and society, it conducts ESG management by connecting to nature and society through trust.



[Source: Sanken Electric's website]

- Addressing environmental problems and saving energy on a global scale have become urgent challenges for society as a whole. With a large number of products and technologies that lead to high efficiency and energy savings, Sanken Electric has been contributing to global energy conservation through products for inverters used in household appliances such as air conditioners, washing machines and refrigerators, as well as products for low fuel consumption and increased efficiency in automobiles. To further promote its efforts to help solve environmental issues and enhance energy efficiency, it has formulated a Green Finance Framework.

(2) Criteria for Project Evaluation and Selection

- Projects are positioned as initiatives for CO₂ reductions through promotion of its main business (energy savings, higher efficiency) and mitigation of the environmental impact of its business activities, which are social issues the Sanken Group should work to resolve.
- For each eligible project, Sanken Electric confirms the following to reduce environmental and social risks.
 - A project conforms to environmental laws and regulations imposed by central and local governments in locations of project implementation, and conducts environmental assessments as necessary.
 - A project observes the Sanken Group Fundamental CSR Policy.

(3) Process for Project Evaluation and Selection

- Projects are selected by the Finance Department and the Marketing Headquarters based mainly on the Sanken Group's materiality. Consistency of selected projects with the eligibility criteria is reported to and approved by the Executive Committee after deliberations at the Sustainability Committee. The results are reported to the Board of Directors. An organizational process is in place where the Executive Committee gives a final approval with involvement by a unit specializing in sustainability.

Based on the above, R&I has determined that the process for project evaluation and selection under the Framework is aligned with the GBP, etc.

3. Management of Proceeds

- The method of proceeds management is described in the Framework and disclosed on Sanken Electric's website.
- The Finance Department will allocate the proceeds to eligible projects and manage them in accordance with the divisional rules it established.
- All proceeds will be allocated to eligible projects within around three years.
- The Finance Department will manage the proceeds using an internal management system so that the outstanding balance of the proceeds will equal the amount allocated to eligible projects on a semi-annual basis. Specifically, the proceeds will be tracked and managed in a process where a person in charge inputs data on a tracking sheet, the head of the Fund Operation Section confirms it and the head of the Finance Department makes a final approval.
- If assets to which funds were allocated are sold or become no longer eligible and this has generated unallocated funds, the funds will be reallocated to other projects that satisfy the eligible criteria as soon as possible. Until all proceeds are allocated to eligible projects and as long as unallocated funds exist, the unallocated funds will be managed in cash and cash equivalents.

Based on the above, R&I has determined that the management of proceeds under the Framework is aligned with the GBP, etc.

4. Reporting

(1) Overview of Disclosure

- Reporting will be made as shown below.

	Items	Timing	Method
Allocation of proceeds	<ul style="list-style-type: none"> The amount allocated to projects and the amount unallocated The percentage of financing and refinancing Scheduled timing of allocation of unallocated funds, if generated 	Annually until all proceeds are allocated	Website
Environmental Benefits	<ul style="list-style-type: none"> Summary of technologies and products <ul style="list-style-type: none"> In addition, the progress of R&D and expected end-products in the case of allocation to R&D The number of eligible products delivered, the number of EVs equipped with Sanken Electric products (estimate*¹), and the amount of CO₂ emissions reduction (estimate*²) 	Annually until green bonds, etc. are redeemed	Website

- If major changes or other material events occur after the allocation of all proceeds, timely disclosure will be made.

(2) Indicators to Show Environmental Benefits and Calculation Method, etc.

*¹ : The number of EVs (estimate) is calculated as follows:

$$\frac{\text{Number of eligible products (e.g., power modules for EV traction motors) delivered}}{\text{Average number of eligible products required for one EV}}$$

*² : The amount of CO₂ emissions reduction (estimate) refers to the amount of greenhouse gas reduction in CO₂ equivalent terms and calculated as follows:

Note that the difference in annual CO₂ emissions between EVs and gasoline cars (GSs) equipped with Sanken Electric products is calculated in the company's own way based on the approach of the Green Bond Guidelines. The formula differs from that for the amount of CO₂ emissions reduction that Sanken Electric discloses as an environmental goal.

The amount of CO₂ emissions reduction (estimate) =
(Number of GSs*³ × annual mileage ÷ GS average fuel economy
× GS unit calorific value × GS carbon emission coefficient × carbon CO₂ conversion
coefficient)
– (Number of EVs (estimate) × annual mileage ÷ EV power consumption ×
electricity-related CO₂ emission coefficient)

*³ : The number of GSs is the same as the number of EVs (estimate).

While the number of EVs (estimate) is based on the assumption that silicon (Si) devices are used, the proceeds will be allocated to projects that use SiC devices. Therefore, environmental benefits in addition to those indicated by reported figures will be delivered by improvement in power consumption through replacement of Si devices with SiC devices. Actual environmental benefits are considered to be greater than reported figures.

Based on the above, R&I has determined that the reporting under the Framework is aligned with the GBP, etc. in light of the content, frequency and method of disclosure.

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[Expertise and Third-Party Characteristics]

R&I has launched the R&I Green Bond Assessment business in 2016, and since then, R&I has accumulated knowledge through numerous evaluations. Since 2017, R&I has been participating as an observer in the Green Bond Principles and Social Bond Principles, which have their own secretariat at the International Capital Market Association (ICMA). It also has been registered since 2018 as an Issuance Supporter (external review entity) of the Financial Support Programme for Green Bond Issuance, a project by the Ministry of the Environment.

The R&I assessment method and results can be found on the R&I website (<https://www.r-i.co.jp/en/rating/esg/index.html>).

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