
DNV·GL

Daio Paper Corporation/ Daio Paper Green Bond 2018

DNV GL GREEN BOND PERIODIC REVIEW



Oct 2020

DNV GL Business Assurance Japan K.K.

revision history

Issuance history	Contents
September 28, 2018	Green Bond Eligibility Pre-Issuance Assessment Report First Edition
October 24, 2018	Green Bond Eligibility Pre-Issuance Assessment Report Revised edition 1
October 24, 2019	Green Bond periodic review (1st)
October 23, 2020 (This report)	<p>Green bond periodic review (2nd)</p> <ul style="list-style-type: none"> -Fund allocation status: Completed allocation of all 22 billion yen raised funds as planned -Project progress: Biomass boiler; completed in July 2020 Hard-to-recycle recovered paper; Completed in April 2020 -Environmental improvement effect: Evaluate and report on the amount of difficult-to-process waste paper reused and CO2 reduction effect

Objective and Scope

Daio Paper Co., Ltd. (hereinafter called “Daio Paper” or “Issuer”) has commissioned DNV GL Business Assurance Japan Co., Ltd. (hereinafter called “DNV GL”) to conduct periodic review of “Daio Paper Green Bond 2018”. The objective of DNV GL’s periodic review is to conduct an assessment to confirm that the Daio Paper Green Bond (hereinafter called, “the BOND”) meets the identified criteria of the Green Bond Principles and the associated technical criteria, as set out below, and to provide the Issuer with independent second-party opinion on the eligibility of the BOND.

Daio Paper issued the BOND on October 25, 2018, and the amount of the BOND issued was 20.0 billion Japanese Yen. The review team of DNV GL conducted the first green bond periodic review from November 2019 through September 2020, based on the Green Bond Guidelines 2017, which was formulated by the Ministry of the Environment (Japan) (hereinafter called “GBGLs”), and the Green Bond Principles 2018 (hereinafter called “GBP”).

In this report, no assurance is provided regarding the financial performance of the BOND, the value of any investments in the BOND, or the long-term environmental benefits of the transaction.

Project description

Daio Paper embarked the Third Medium-term Business Plan from FY2018 to FY2020. The key strategies of this plan include a structural reform of manufacturing process of Pulp and Paper business segment capitalized on Daio Paper’s strength in line with “Radical cross-business structural reform of Paper and Paperboard Business and H&PC Business”, and that is based on “building the foundation of for sustainable growth”. The net proceeds from the BOND issued by Daio Paper is planned to be allocated to the following nominated green projects that are aligned with this Third Medium-term Business Plan, as well as Daio Paper group management philosophy and DAIO Global Environmental Charter:

- Recycling and productive usage of hard-to-recycle recovered paper (Project 01)
 - New facility of biomass power plant (Project 02)
- (each includes development, construction, operation and improvement/expansion)

The BOND is intended to finance investments in the specific project categories below:

- A project categorized in 'Pollution prevention and control'
- A project categorized in 'Renewable energy'

In addition, 'CO2 emission reduction' is prospected as a secondary benefit.

Total amount of the BOND is JPY 20.0 billion (JPY 15.0 billion of seven-year BOND, and JPY 5.0 billion of ten-year BOND) and Issuer has fully allocated it to the nominated green projects in February 2020 (the entire amount has been already allocated). The amount of BOND allocated is reported/disclosed in the Issuer's Integrated Report and/or its company website annually. There is no plan to refinance a part of the proceeds of the BOND to some existing projects as of today.

The progress of the nominated green projects and assets is summarized in Table-1 below.

Table-1 Progress of the green projects (as of the end of September, 2020) *Please refer to Schedule-1 for details.

	Recycling and productive usage of hard-to-recycle recovered paper (Project 01)	New facility of biomass power plant (Project 02)
Location	Mishima Mill, Daio Paper Corporation (Shikokuchuo City, Ehime Prefecture)	Mishima Mill, Daio Paper Corporation (Shikokuchuo City, Ehime Prefecture)
Commercial operation (Year and month)	Completed in April of 2020	Completed in July of 2020
Amount allocated/unallocated	Approx. JPY 9billion/approx. JPY 0 (JPY 9.0 billion, initially scheduled)	Approx. JPY 11 billion/approx. JPY 0 billion (JPY 11.0 billion, initially scheduled)

From a viewpoint of environmental improvement, Project 01 has achieved waste reduction by reusing hard-to-recycle recovered paper of about 180,000 tons/ year based on the input results in FY 2019.. Also, Project 02 has achieved the use of waste power generation and the reduction of CO2 emissions indirectly by construction and operation of about 60MW-scale biomass power generation plant. Therefore, the nominated two green projects are considered to contribute 'waste reduction', 'power generation from waste' and 'indirect (Scope 2) GHG emission reductions'. In the meantime, from a viewpoint of environmental risk, it is confirmed that the Issuer has conducted environmental surveys and evaluations related to the nominated green projects, in order to comply with the relevant laws and regulations, including environmental laws, and mitigate the adverse environmental effects.

Responsibilities of the Management of the Issuer and DNV GL

The management of the Issuer has provided the information and data used by DNV GL during the delivery of this review. Our statement represents an independent opinion and is intended to inform the Issuer's

management and other interested stakeholders in the BOND as to whether the established criteria have been met, based on the information provided to us. In our review we have relied on the information and the facts presented to us by the Issuer. DNV GL is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV GL shall not be held liable if any of the information or data provided by the Issuer's management and used as a basis for this review were not correct or complete.

Basis of DNV GL's opinion

DNV GL have adapted our GBP^{*1}, GBGLs^{*2} and Climate Bond Criteria^{*3} assessment methodologies, which incorporate the requirements of the GBP, to create the Issuer-specific Green Bond Eligibility Assessment Protocol (hereinafter called "Protocol"). Our Protocol includes a set of suitable criteria that can be used to underpin DNV GL's opinion. The overarching principle behind the criteria is that a green bond should "enable capital-raising and investment for new and existing projects with environmental benefits".

As per our Protocol, the criteria against which the BOND has been reviewed are grouped under the four Principles:

- **Principle One: Use of Proceeds.** The Use of Proceeds criteria are guided by the requirement that an issuer of a green bond must use the funds raised to finance eligible activities. The eligible activities should produce clear environmental benefits.
- **Principle Two: Process for Project Evaluation and Selection.** The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a green bond should outline the process it follows when determining eligibility of an investment using Green Bond proceeds and outline any impact objectives it will consider.
- **Principle Three: Management of Proceeds.** The Management of Proceeds criteria are guided by the requirements that a green bond should be tracked within the issuing organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.
- **Principle Four: Reporting.** The Reporting criteria are guided by the recommendation that at least Sustainability Reporting to the bond investors should be made of the use of bond proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

*1: Green Bond Principles (June 2018, International Capital Market Association)

*2: Green Bond Guidelines (2017, the Ministry of the Environment (Japan))

*3: Climate Bond Standard (version 2.1, Climate Bonds Initiative)



Figure-1 A whole view of biomass power plant after operation (Project 02)

Work undertaken

Our work constituted a high level of review of the available information, based on the understanding that this information was provided to us by the Issuer in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

Initial Assessment:

- Creation of the Issuer-specific Protocol, adapted to the purpose of the BOND, as described above and in Schedule-2 to this Assessment.
- Assessment of documentary evidence provided by the Issuer on the BOND and supplemented assessment by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Discussions with the Issuer, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

Periodic Assessment:

- Evaluation of the supporting documents provided by the Issuer related to bond issuance, high level desktop surveys, document reviews, and interviews with key personnel of the issuer. These checks refer to current assessment best practices and standard methodologies.
 - Discussion with the Issuer management and review of relevant documentation.
 - Field survey and inspection, if required.
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- Review of the nominated projects and assets as described in Schedule 2 as at the time of periodic assessment
- Review and testing where possible of reporting data;
- Documentation of findings for Periodic assessment as detailed in this document.

Our opinion as detailed below is a summary of these findings.

Findings

DNV GL's findings are listed below:

Principle One, Use of Proceed

DNV GL has confirmed that the net proceeds raised by the BOND is planned to be allocated (or has been already allocated partially) to the nominated two green projects that meet the green bond eligibility criteria below:

- 'Pollution prevention and control' (Project 01)
- 'Renewable energy' (Project 02)

Specifically, all of the net proceeds of the BOND are allocated to the installation cost of facilities and the relevant expenses that falls under representative green bond eligibility criteria shown in Schedule-1, "waste reduction", "recycling of waste" (GBP and GBGLs), and "biomass power generation" (GBG). As of the end of February 2020, approximately JPY 9 billion has been allocated to Project 01 (recycling and productive usage of hard-to-recycle recovered paper), and approximately JPY 11 billion has been allocated to Project 02 (new facility of biomass power plant), and thus a total funding raised of JPY 20 billion has been allocated accordingly.

Principle Two, Process for Project Evaluation and Selection

DNV GL has confirmed that the nominated two green projects described in the Schedule-1, were evaluated and selected through the appropriate process by the relevant department of the Issuer based on its corporate philosophy and policy of the contribution to the environment, including "DAIO Global Environment Charter". In addition, DNV GL has reviewed evidences demonstrating that the Issuer regularly assesses opportunities for improvement and devises action plans to mitigate negative environmental and social impacts from its operation.

Specifically, as for the negative impact caused by construction and operation of these green projects, DNV GL has confirmed that appropriate countermeasures and practical action plans have been and will be taken by the Issuer after the evaluation of environmental risk, such as air pollution and water pollution. Furthermore, DNV GL confirmed that CO₂ emissions caused by operation of biomass power generation plant were also considered and evaluated as adverse environmental impacts. As a result, negative impacts of CO₂ emissions that could occur incidentally were assessed sufficiently immaterial.

Principle Three, Management of Proceeds

DNV GL has reviewed and confirmed evidence showing how the Issuer has traced/managed the proceeds from the BOND, from the time of issuance to the time of disbursement. DNV GL has confirmed that the

Issuer manages the cash or cash equivalents, which equals to fund, until decision of the proceed allocation and the Issuer periodically reviews the outstanding balance of the BOND. As of the end of February 2020, DNV GL has confirmed that the total funding raised amount of 20billion has been allocated. Note that, as stated above, DNV GL provides no assurance regarding the financial performance of the BOND, the value of any investments in the BOND, or the long-term environmental benefits of the transaction.

Principle Four, Reporting

DNV GL has confirmed that the Issuer is reporting/disclosing the specific information required by the GBP periodically in the Issuer’s Integrated Report and/or its company website. These include description of the project and its progress, allocation and management of the proceeds invested, as well as the associated qualitative and quantitative environmental impacts (the amount of usage of hard-to-recycle recovered paper, biomass power generation, CO₂ emission reductions from each of the nominated green projects).

Note that, after the completion of each green project, the evaluation of environmental impact has been calculated in an appropriate manner based on the operation results, such as operation records, and finally reported. DNV GL conducts periodic reviews until all proceeds are fully allocated, and reports the quantified metrics, such as the amount of waste reductions, the amount of CO₂ emission reductions, and the output of power generation from waste, in the review report respectively.

In the green projects have already commenced operation, the results of the environmental improvement effects during this periodic review are shown below:

Table-2 Progress of environmental improvement effects

	Recycling and productive usage of hard-to-recycle recovered paper (Project 01)	New facility of biomass power plant (Project 02)
Amount of waste reductions (Reuse amount of hard-to-recycle recovered paper)	FY2019 Actual: 186,088ton/year	n.a.
Amount of CO ₂ emission reductions	FY2019 Actual * ¹ : 122,116t-CO ₂ / year	2019 plan: 253,743 t-CO ₂ / year
Electric power generation	2019 Actual* ² : 7,053 MWh / year	2019 plan* ³ : 428,832 MWh / year

*¹ Comparison with 2016 results, *² Power generation using waste-derived fuel,

*³ Biomass power generation using black liquor (assumed from actual measurements measured 2 months after completion (July and August 2020))

As a result, it is confirmed through periodic review that Recycling and productive usage of hard-to-recycle recovered paper and the construction of new facility of biomass power plant were planned and implemented according to the relevant GBP.

DNV GL's opinion

On the basis of the information provided by Daio Paper and the work undertaken, it is DNV GL's opinion that the BOND meets the criteria established in the Protocol and that it is aligned with the stated definition or purpose of green bonds within the Green Bond Principles and Green Bond Guidelines, which is to "enable capital-raising and investment for new and existing projects with environmental benefits".

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30th Sep. 2020



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About DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

1. Schedule-1 (Nominated assets & Green bond project outline)

Project	Nominated projects and assets	GBP category	GBP Sub category	Funded amount (Plan)		Remarks
01	Recycling and productive usage of hard-to-recycle recovered paper -new fabrication, partial improvement (finance and refinance)	Pollution prevention and control	- Waste prevention - Waste recycling - Greenhouse gas control -	Total JPY 20.0 billion (redemption period 7 yrs.: JPY 15.0 billion and 10 yrs.: JPY 5.0 billion)	Allocation plan: JPY 9.0 billion (Allocated as of Aug. 2019: approx. JPY 5.6 billion)	- Location: Mishima Mill, Daio Paper Corporation - Commercial operation: completed in April of 2020 *Already in operation - Amount of waste reductions: approx. 1.8k ton/y (waste type: hard-to-recycle recovered paper, (including 20 % waste including metal etc, which cannot be recycled is considered) - waste recycle product amount : 1.8k ton/y×80% - waste re-product type: corrugated paper, etc. - CO ₂ emission reductions by waste recycle, comparing with the conventional manner (waste burned by incinerator)
02	Biomass power plant facility construction -new facility construction (finance and refinance)	Renewable energy	Production (Biomass)		Allocation plan: JPY 9.0 billion (Allocated as of Aug. 2019: approx.	- Location: Mishima Mill, Daio Paper Corporation - Commercial operation: completed in July of 2020 (operated) - Biomass fuel type: Black liquor by Kraft process. *1 - Electricity output: approx.60MW - CO ₂ emission reduction (as energy source) by biomass electricity generation.

Project	Nominated projects and assets	GBP category	GBP Sub category	Funded amount (Plan)		Remarks
					JPY 5.6 billion)	-

*1 : Categorized by METI/Agency for natural resources and energy