

Daio Paper Corporation/ Daio Paper Green Projects 2018

Green bond eligibility pre-issue assessment report

DNV GL second party opinion



Oct. 2018 (Rev.1)

DNV GL Business Assurance Japan K.K.

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Revision	Issued date	Remarks
Initial issue	28 th . Sep. 2018	Initial issue
Revision 1	24 th . Oct. 2018	Additional information of total amount of proceeds and fund plan to each green projects are described. (Chapter II and VI)

Daio Paper Green Bond project 2018

DNV GL Second Party Opinion

I Introduction (About issuer and green bond)

Daio Paper Corporation (hereafter "Daio Paper") is full-range paper manufacturer company and was established through a merger of 14 paper companies such as Shikoku Paper Corporation. Daio Paper engages following enterprise.

1. Manufacturing, converting and sales of paper, paperboard, pulp and their by-products.
2. Manufacturing, converting and sales of commodities and miscellaneous goods.
3. Manufacturing, converting and sales of function added film, adhesive sheet and synthetic resin material including adhesives.
4. Design, installation and buying/selling of plants related to each of the previous items, and technical instruction
5. Buying/selling of raw materials and fuel for manufacturing and converting paper, paperboard and pulp
6. Sales and reforestation of forest lands and timber resources, sawing and processing of wood, and landscape gardening and etc.

Daio Paper sets its corporate philosophy "Shaping an abundant and affable future for the world". In order to realize its philosophy, Daio Paper focuses on the four pillars constituting the philosophy including 'Contribution to the global environment'. 'Contribution to the global environment' contributes to achieve sustainable circulation society which harmonizes with those activities such as "Recycling and productive utilization of hard-to-recycle recovered paper" and "Biomass power" utilization and energy efficiency, etc. activity through its business.

Daio Paper also defined their code of conduct as "Daio group code of conduct" which is basic concept for CO₂ emission reduction activities. Moreover, based on "DAIO Global Environmental Charter" established 1993 declares to achieve recycling and productive utilization of hard-to-Recycle recovered paper, energy efficiency and biodiversity which contribute to achieve sustainable circulation society.

Daio Paper embarked the Third Medium-term Business Plan from FY2018 to FY2020. The key strategies of this plan include (1) structural reform of manufacturing process of Pulp and Paper business segment capitalized on Daio Paper's strength, (2) building the foundation of for sustainable growth.

The net proceeds from Daio Paper's green bond which will be issued by Daio Paper will be allocated to "Recycling and productive utilization of hard-to-recycle recovered paper" project and "Biomass power" project. These green projects are aligned with Daio Paper group management philosophy and DAIO Global Environmental Charter, including followings.

-1- Recycling and productive usage of hard-to-recycle recovered paper

-2- Biomass power plant facility

(each includes development, construction, operation and improvement/expansion)

In this paper, no assurance is provided regarding the financial performance of the BOND, the value of any investments in the BONDS, or the long term environmental benefits of the transaction. DNV GL Business Assurance Japan K.K.(henceforth referred to as DNV GL) 's objective has been to provide an assessment that the BOND has met the criteria of the Green Bond Principle and the associated Technical Criteria on the basis set out below.

II Scope and Objectives

Daio Paper intends to finance investments in specific project categories, including:

- The projects is categorized in 'Pollution prevention and control' and 'Renewable energy'
- As some secondary benefit, including 'CO₂ emission reduction' is prospected.
- Total amount of Daio Paper's green bond will be 20 billion JPY (redemption period: 7 years : 15 billion JPY, 10 years : 5 billion JPY) and fully allocated to green activities. The amount of fund will be defined in the legal documentation. The amount allocated to each Green Project and if the proceeds is used to existing projects as refinance, refinance amount and/or share will be reported/disclosed in Corporate report and/or its company website(homepage) annually.
- Projects contribute to reduce the waste by hard-to-recycle recovered paper which is estimated approx.140kt/year and to mitigate electric generation by approx. 60MW biomass power plant construction and operation. Projects can achieve/meet to the 'Waste reduction', 'Waste recycle' and CO₂ emission reduction from energy source.
- In this green bond projects, environmental impact was evaluated by the issuer and satisfied the relevant laws, such as environmental investigation and estimation in order to mitigate detrimental effects.
- Schedule-1 shows the nominated projects and assets outline.

DNV GL holds no other engagements with Daio Paper including its direct shareholders, for which we foresee conflict of interest to carry out the Scope of Work as defined in the Request for Proposal.

Daio Paper intends to distribute any unallocated proceeds in line with the Use of Proceeds and Management of Proceeds sections set out in the Daio Paper Green Bond Framework.

DNV GL conducted an independent assessment of the Green Bond Framework and proposed issuance against the Green Bond Principles 2018.

In this paper, no assurance is provided regarding the financial performance of the BOND, the value of any investments in the BONDS, or the long term environmental benefits of the transaction. Our objective has been to provide an assessment that the BOND has met the criteria established on the basis set out below.

The scope of this DNV GL opinion is limited to the Green Bond Principles 2018 (GBP2018). DNV GL also considered the requirements of the Green Bond Guidelines (MOE, Japan 2017) and Climate Bond Standard Version 2.1 during its assessment, however at the time of review, no Technical Criteria for - 'Pollution prevention and control' (Waste management) is available for Issuer use. Technical Criteria for 'Renewable energy' (Bioenergy) is only applicable to this BOND. No opinion of conformance with the Standard is provided here and no Certification has been applied for at this time. Any future application for Certification under the Climate Bond Standard would be at the discretion of the Issuer, Daio Paper .

III Responsibilities of the Directors of Issuer(Daio Paper) and the assurance providers

The management of Daio Paper 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 Daio Paper 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 work we have relied on the information and the facts presented to us by Daio Paper. 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 Daio Paper's management and used as a basis for this assessment were not correct or complete.

IV Basis of DNV GL's opinion

To provide as much flexibility for the issuer, Daio Paper as possible, we have adapted our Green Bond Principles*¹, Green Bond Guidelines*² and Climate Bond Standard*³ assessment methodologies, which incorporates the requirements of the GBP, to create a Daio Paper-specific Green Bond Eligibility Assessment Protocol (henceforth referred to as "Protocol").

Daio Paper-specific Protocol has the capacity for potential application of the Bond under the Green Bond Guidelines and Climate Bond Standard should Technical Criteria under the Standard become available. 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 principle (June 2018, International Capital Market Association)

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

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

V Work undertaken

Our work constituted a high level review of the available information, based on the understanding that this information was provided to us by Daio Paper 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:

- Creation of an Daio Paper-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 Daio Paper on the BOND and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Discussions with Daio Paper management, and review of relevant documentation;
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

VI Findings and DNV GL's opinion (eligibility against for GB criteria)

1. Principle One, Use of Proceed

DNV GL has confirmed that the proceeds from the bond issued by Daio Paper will be allocated to the two projects which meet the green bond criteria below;

Eligibility Criteria of Green Bond:

Pollution prevention and control (Project 01)

Renewable energy (Project 02)

All the proceeds will be allocated to construction and related to "waste reduction", "waste recycling" (GBP2018, GBG2017) and "biomass power" (GBG2017) projects which are proposed in the Schedule-1 (two projects; "Recycling and productive usage of hard-to-recycle recovered paper" and "Biomass power plant facility"). The outline of the projects is as follows;

Project 01 : Recycling and productive usage of hard-to-recycle recovered paper
(funded amount plan : balance of project 02)

Daio Paper will install the facilities which contribute recycling and productive usage of hard-to-recycle recovered paper which used to be disposed by burning. Daio Paper will also apply the technology of selection and pulping from hard-to-recycle paper which has been developed by Daio Paper and as its core competence. Implementation of this project 01 contributes to achieve both waste reduction and waste recycling at the same time.

Project 02 : Biomass power plant facility

(funded amount plan : more than 50% of total proceeds)

Daio Paper will construct the biomass boiler and power generation facility whose energy source is the black liquor (lignin : resin extracted from tree) derived from crafting process. Black liquor is officially categorized in biomass from paper/pulp mill process. Daio Paper utilizes its own black liquor as biomass fuel for biomass energy. Electricity will be distributed to its paper/pulp manufacturing facilities and existing electricity grid. Implementation of this project 02 contributes to energy source CO₂ emission reduction.

2. Principle Two, Process for Project Evaluation and Selection

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

Specifically, as for the negative impact caused by construction and operation of these projects, appropriate countermeasures and practical action plans have been and will be taken after the evaluation (e.g. effluent gas quality/amount and water quality). Negative effect such as secondary CO₂ emission by operation of biomass energy facilities was also considered/evaluated by Daio paper. DNV GL confirmed that the amount of these secondary CO₂ emissions was estimated to be immaterial compared to the estimated reduction benefit of CO₂ emission by operation of the biomass energy facilities.

3. Principle Three, Management of Proceeds

DNV GL has reviewed and confirmed Daio Paper's plans to trace/manage the proceeds from the Bond, from the time of issuance to the time of disbursement, as well as the appropriateness and clarity of their plan to manage total amount of the proceeds. Daio Paper will manage the cash or cash equivalents which equals to fund, until decision of the proceed allocation. DNV GL has confirmed that Daio Paper will periodically review the outstanding balance of the Bond. Total amount of fund has not been defined in this document, then will be disclosed in the legal documentation. The amount allocated to each Green Project and if the proceeds is used to existing projects as refinance, refinance amount and/or share will be reported/disclosed in Corporate report and/or its company website(homepage) annually.

Allocation amount and if the proceeds is used to existing projects as refinance, refinance amount and/or share will be reported/disclosed in corporate report and/or its company

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 effects of the transaction.

4. Principle Four, Reporting

DNV GL has confirmed that Daio Paper has plans to report/disclose the specific information required by the Green Bond in Corporate report and/or its company website(homepage) annually. These will include description of the project and its progress, allocation and management of the proceeds invested, as well as the associated qualitative or quantitative environmental impacts (amount of waste recycle and reduction of CO₂ emission). Refinance amount and/or share will be reported/disclosed in corporate report and/or its company website(homepage) annually.

As for evaluation of waste reduction and CO₂ emission reduction, DNV GL has confirmed that Daio Paper plans to evaluate/calculate in the appropriate method based on the operation performance of each project (such as operation record). DNV GL will conduct periodic ongoing reviews and state that quantified waste reduction and CO₂ emission reduction will be reported in those reviews until almost full proceeds allocation is completed.

Considering all of the above assessments, DNV GL has confirmed that the nominated green projects of Daio Paper are designed and are planned to be executed in accordance with related criteria of the green bond (Green Bond Principles 2018 and Green Bond Guidelines by Ministry of the Environment).

DNV GL Business Assurance Japan K.K.

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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.

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

Project	Nominated projects and assets	GBP category	GBP Sub category	Funded amount (Plan) total 20 billion JPY		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 - Green house gas control	Total 20 billion JPY (redemption period 7 years : 15 billion JPY and 10 years : 5 billion JPY)	balance of project 02	- waste reduction amount : approx 140kt/y (waste type : hard-to-recycle recovered paper, (including 20 % waste including metal etc, which can not be recycled is considered) - waste recycle product amount : 140k t/y × 80% - waste re-product type : corrugated paper, etc. - CO ₂ emission reduction by waste recycle (Comparison of waste burning by incinerator)
02	Biomass power plant facility construction -new facility construction (finance and refinance)	Renewable energy	-Production (Biomass)		more than 50% of total proceeds	- Biomass fuel type : Black liquor by Kraft process. *1 - Electricity output : approx.60MW - CO ₂ emission reduction (as energy source) by biomass electricity generation.

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

