

Daio Paper Corporation Green Bond Report (FY2020)

1. Overview of green bonds issued by Daio Paper Corporation

	Unsecured Straight Bond No. 21 (Issued in Japan)	Unsecured Straight Bond No. 22 (Issued in Japan)
Term	7 years	10 years
Amount issued	15 billion yen	5 billion yen
Issue date	October 25, 2018	October 25, 2018
Maturity date	October 24, 2025	October 25, 2028
Use of proceeds (Green projects)	Facilities for utilization of hard-to-recycle waste paper Black liquor-fueled biomass boiler power generation systems	
Lead managers	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. Daiwa Securities Co., Ltd.	
Second-party opinion	Obtained from DNV GL Business Assurance Japan K.K.	

Reference URL: Daio Paper website's [Credit Rating and Bond Information](#) page. (Information and materials on green bonds are available in the bottom section of the page)

2. Use of proceeds

1) Status on the use of the proceeds from the green bonds

The allocation of the proceeds was completed in February 2020.

3. Status of projects

1) Facilities for utilization of hard-to-recycle waste paper

(1) Overview of facilities

This project involves the construction of a new facility and the renovation of an existing one to enable the processing of hard-to-recycle waste paper, which has usually been disposed of, for reuse as raw material for paper by utilizing our waste paper processing technologies.

➡ Click [here](#) for information on our initiatives for recycling hard-to-recycle waste paper.

(2) Use of proceeds

Total amount invested: 21.1 billion yen

Financed by the proceeds from green bonds: 9.0 billion yen

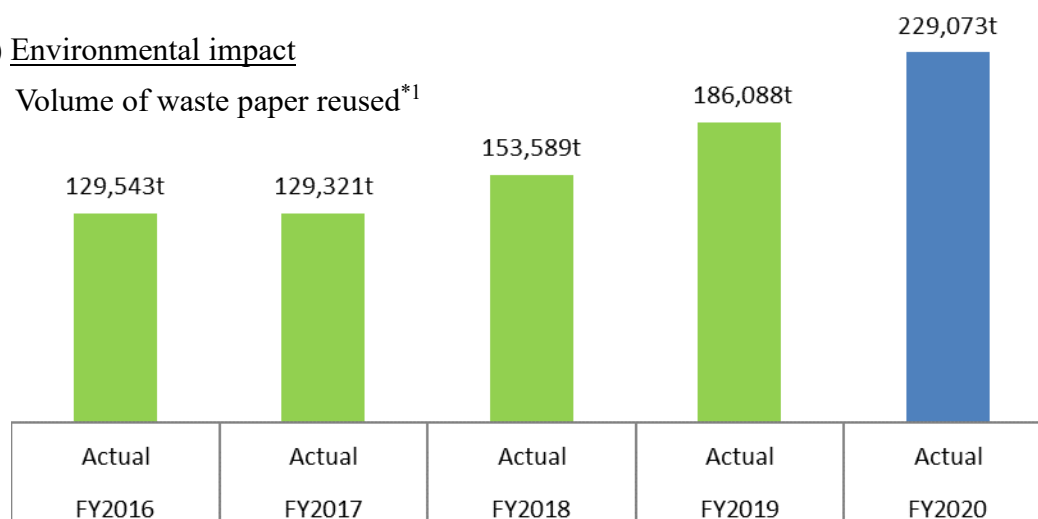
(Total amount to be financed by the proceeds from green bonds: 9.0 billion yen)

(3) Status of progress on the project

The project proceeded as initially planned and all the facilities were brought into operation in April 2020.

(4) Environmental impact

➤ Volume of waste paper reused*¹



Year after year, we have been stepping up our efforts to utilize hard-to-recycle waste paper.

In FY2020 (April 2020-March 2021), we reused **229,073t** of hard-to-recycle waste paper.

We will continue to strive to further utilize hard-to-recycle waste paper.

➤ Electricity generated by thermal recycling of plastics, etc. screened out in the process of processing hard-to-recycle waste paper: **7,628MWh/year***²

➤ CO₂ emissions reduced through the entire process of utilizing hard-to-recycle waste paper: **218,494t-CO₂/year***³

2) Black liquor-fueled biomass boiler power generation systems

(1) Overview of facilities

This project involves the construction of biomass boilers fueled by black liquor, which is obtained by concentrating resin-containing waste liquor generated in the process of pulping wood chips.

(2) Use of proceeds

Total amount invested: 21.9 billion yen*⁴

Financed by the proceeds from green bonds: 11.0 billion yen
(Total amount to be financed by the proceeds from green bonds: 11.0 billion yen)

(3) Status of progress on the project

The project proceeded as initially planned and the biomass power generation systems were brought into operation in July 2020.



(4) Environmental impact

CO2 emissions are expected to be reduced as shown below, compared to fossil fuel-fired power generation.

- FIT-eligible boiler's power output: **370,929MWh/year**^{*5}
- Actual CO2 emission reductions based on the above power output: **192,138t-CO₂/year**^{*6}

(Notes)

- *1: This represents the total volume of hard-to-recycle waste paper reused in the green bonds-financed facilities of Daio Paper Corporation (Mishima Mill) and its subsidiary, Iwaki Daio Paper Corporation.
- *2: Plastics and other organic substances screened out in the process of processing hard-to-recycle waste paper are thermal recycled, i.e., incinerated to generate heat, which is used for power generation and in the course of paper making (for drying, etc.).
- *3: In computing the CO2 emission reduction effect, the GHG emission coefficients for FY2020 published by Shikoku Electric Power Co., Ltd. and Tohoku Electric Power Co., Ltd., respectively serving the areas in which Daio Paper Corporation's Mishima Mill and Iwaki Daio Paper Corporation are located, are used for reference. The reported CO2 emission reduction effect is adjusted for the impact of the following factors contributing to CO2 emissions (aggravating factors):
 - 1) CO2 emissions generated during the transportation of hard-to-recycle waste paper
 - 2) Inorganic substances that are screened out in the process of processing hard-to-recycle waste paper and cannot be thermal recycled (inorganic substances screened out in the process of processing paper peeled off from gypsum boards)
 - 3) CO2 emissions generated in the process of thermal recyclingThe CO2 emission reduction effect represents the degree of improvement, i.e., a decrease in CO2 emissions, compared to our base year of FY2016, which was designated as the reference year at the time of issuance of the green bonds.
- *4: Out of the amount invested, 9.0 billion yen was financed by the proceeds from the euro yen-denominated convertible bonds with subscription warrants issued in September 2015.
- *5: Power output since the commencement of commercial operation on July 3, 2020, not including power generated during the test operation.
- *6: In computing the CO2 emission reduction effect, the GHG emission coefficient (for FY2020 and FY2018, the year in which our green bonds were issued) published by Shikoku Electric Power Co., a utility serving the area in which our Mishima Mill is located, was used for reference. The reported CO2 emission reduction effect is adjusted for the impact of the following factors contributing to CO2 emissions (aggravating factors):
 - 1) CO2 emissions arising from the use of Type A heavy oil in activating and deactivating the facilities
 - 2) CO2 emissions based on the amount of electricity that needs to be generated for operating the biomass boilers