Creating New Value through Decarbonization

The Group has actively worked toward minimizing its negative impacts on the environment.
We are now advancing our ZERO CO_2 2050 initiative to leap further ahead in cutting CO_2 emissions to net-zero by 2050.

The history of our environmental management

Our company has long placed importance on addressing environmental issues. Since 1986, we have led the industry in reducing CO_2 emissions through means that include transitioning from heavy oil to gas as fuel and introducing wood biomass boilers and high-temperature, high-pressure recovery boilers.

Our environment-related investments, which total about ¥50 billion to date, have raised our zero CO_2 energy rate from about 49% in 2005 to 71% in FY2024 as we steadily reduce CO_2 emissions. We are now studying plans to accelerate our GX initiatives and significantly advance our deadline for zero CO_2 emissions from 2050 to 2040.

● **Characteristics of our initiatives**

1. Introduction of high-temperature and high-pressure recovery boilers

Black liquor is a biomass fuel created as a by-product of pulp production. High-temperature, high-pressure recovery boilers at our Niigata Mill and Kishu Mill efficiently generate electricity using black liquor as fuel.

2. Introduction of wood biomass boilers

The Niigata Mill, Kanto Mill (Katsuta), and Kishu Mill generate power from wood biomass boilers using wood biomass fuel derived from construction waste and other materials.

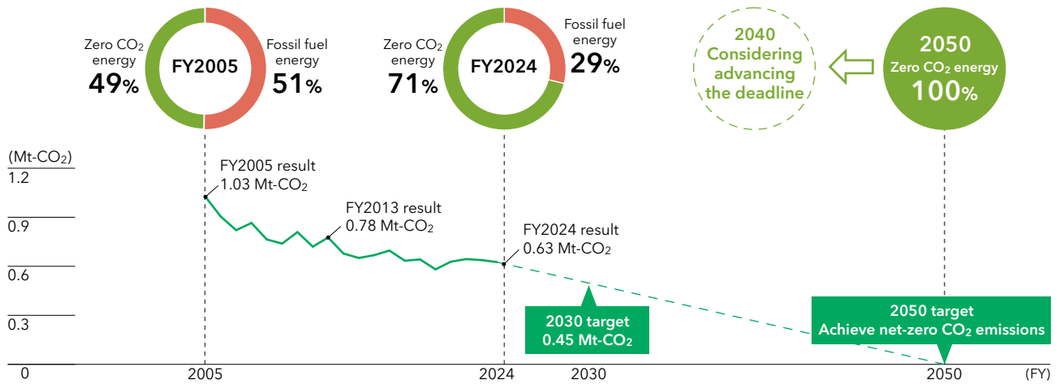
3. Fuel conversion from heavy oil to gas

Gas is a clean fuel that generates little CO_2.
We initially began operating our urban Kanto Mill (Ichikawa) using gas and electricity alone, and now do so at the Nagaoka Mill and Osaka Mill as well.

4. Introduction of solar power generation

We have installed mega-solar power generation equipment at the Niigata Mill and Kanto Mill (Katsuta). This contributes to expanding the use of renewable energy as a means of combating global warming.

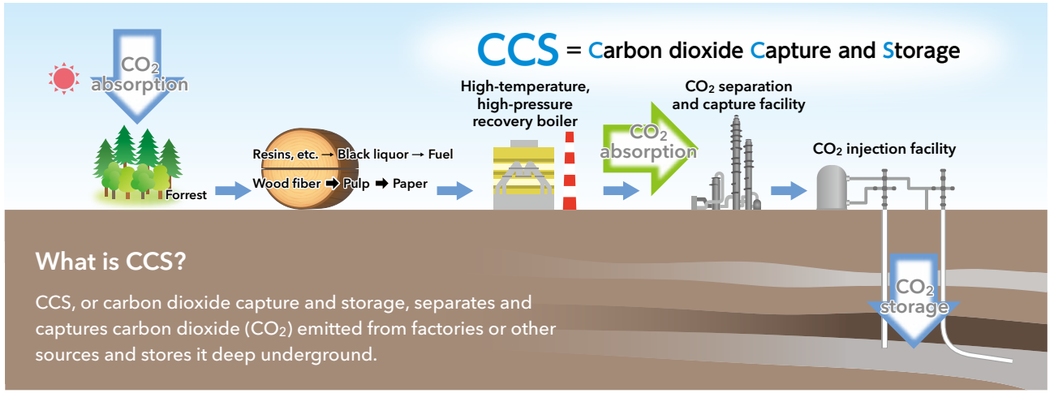
● **Energy composition ratio and CO_2 emissions (non-consolidated)**



GX initiative: Study of CCS commercialization

Around the world, CCS is viewed as a keystone measure for combating global warming. Along with the reduction of emissions through conversion to renewable energy sources, negative emissions technology that eliminates CO_2 from the atmosphere is viewed as essential to achieving net-zero CO_2 emissions.

As a new initiative to reduce greenhouse gas emissions, in Japan and overseas we are actively studying a carbon capture and storage (CCS) project to separate and recover carbon-neutral CO_2 derived from biomass fuel emitted during the pulp production process and store it in appropriate nearby locations. Through this, we seek to achieve negative emissions that will counter global warming by reducing atmospheric CO_2.



CO_2 separation and capture demonstration project

A technology demonstration project to separate and collect CO_2 emitted from a soda recovery boiler began at the Niigata Mill in November 2024. Following the installation of compact CO_2 collection equipment (CO_2 MPACT™ Mobile) from Mitsubishi Heavy Industries, Ltd., carbon-neutral CO_2 contained in soda recovery boiler exhaust gas will be separated and collected.

Through this demonstration project, we will verify the future potential for negative emissions and will contribute to the realization of a carbon-neutral society.

Recognition for highest levels of leadership in three areas in CDP 2024

The Company was recognized for high levels of leadership in CDP* 2024, receiving the highest-level "A" rating in the area of "Forest" and "A-" in "Climate Change" and in "Water Security." Looking ahead, we will actively and positively advance sustainability activities aimed at solving social issues and achieving growth for the Company.

* A leading ESG evaluation organization that evaluates the sustainability initiatives of companies and cities worldwide. Using independent methods and an eight-level "A" to "D-" score, it rates targets on the basis of information concerning comprehensiveness of information disclosure, risk management, the setting of high targets, leadership, and more. In 2024, the number of companies disclosing data through CDP increased to 24,800.

Forest A | **Climate Change A-** | **Water Security A-**