



Jun. 16, 2021

## Harima Announces Greenhouse Gas Reduction Policy

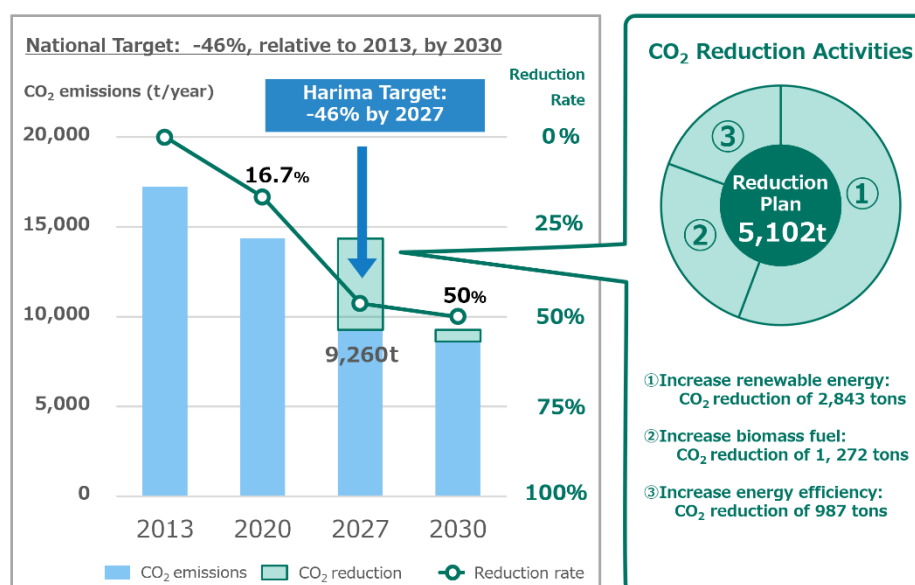
HARIMA CHEMICALS GROUP, INC.

Harima has announced its latest environmental protection policy which stipulates a reduction of 46% in the quantity of its greenhouse gas (GHG) emissions by 2027, and of 50% by 2030. This is 3 years ahead of the national target that requires enterprises to mitigate emissions by 46%, relative to 2013 levels, by 2030.

Harima has long been involved in emission reduction, through its wide portfolio of environmentally-friendly products that use rosin obtained from pine trees, together with opening a biomass power facility at our Kakogawa Plant (Japan)\*1 in 2005 and a solar-power generation facility with a capacity of 1,129kW at Iho (Takasago city, Japan) in 2014.

With a view to achieving a carbon dioxide-free production system by 2050, Harima will continue to reduce GHG, from a level of 17,236 tons in 2013\*2, to 9,260 tons by 2027 and 8,618 tons by 2030, as described in the chart below. Initiatives include enhancing product portfolio, reducing energy by 16.7% (cutting carbon dioxide emissions to 14,362 tons) relative to 2013 levels by fiscal 2020, together with fully utilizing our crude tall oil fractionation plant and biomass power facility at Kakogawa.

**Chart 1. Harima GHG reduction roadmap (CO<sub>2</sub> emissions)**



Also, in order to meet international carbon-neutral standards, Harima will also expand these undertakings to its subsidiaries outside Japan.

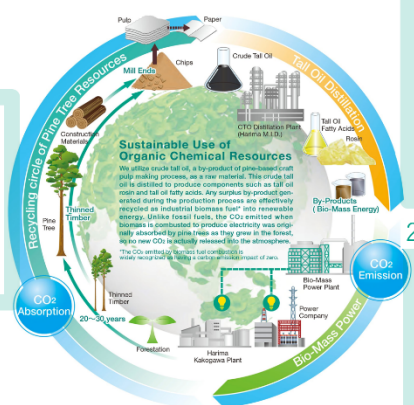
\*1 Our biomass power facility at Kakogawa utilizes tall oil pitch and heads obtained as byproducts during the fractionation of crude tall oil, when such components as rosin and fatty acids are produced. The pitch and heads are the principal fuel of the biomass power facility turbines that generate steam to produce electricity. The electricity, which can currently reach a maximum of 4,000kW, is then used in the production processes at the Kakogawa Plant, while the surplus is supplied to a local electric power company.

\*2 The level of GHG emitted at our facilities in Japan was 64,000 tons in 2013, however with an offset of 47,000 tons at our biomass facility at Kakogawa, the actual amount is approx. 17, 000 tons.

**Harima Chemicals Group Sustainable Use of Natural Resource**

Harima utilizes natural resources obtained from pine trees to manufacture products that enhance the lives of people all over the world.

3 Biomass is a carbon-neutral energy source, with carbon emitted and carbon removed from the atmosphere being essentially balanced.

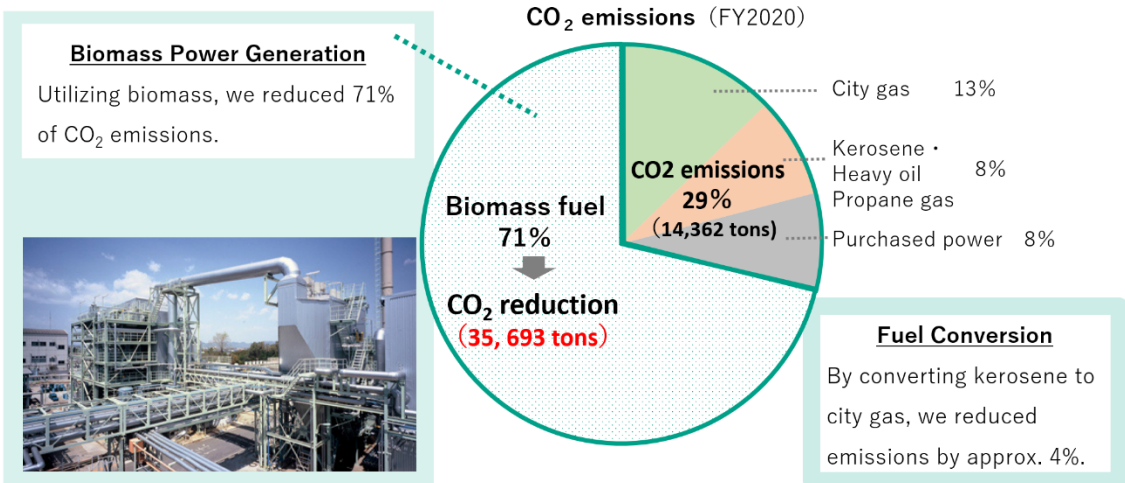


1 Crude tall oil, a byproduct of pine wood pulping, is fractionated to obtain such components as rosin and fatty acids, the core raw materials of our products.

2 Pitch and heads, byproducts of crude tall oil fractionation, are used as the core fuel for our biomass power facility at Kakogawa.

**Fiscal 2020 GHG emissions**

Through assertive operations, in fiscal 2020, our facilities in Japan have achieved the following GHG reductions:



**Biomass Power Generation**  
Utilizing biomass, we reduced 71% of CO<sub>2</sub> emissions.

**Fuel Conversion**  
By converting kerosene to city gas, we reduced emissions by approx. 4%.

**Contact**  
Public Relations, Harima Chemicals Group, Inc.  
URL: <https://www.harima.co.jp/en/inquiry.php>