

## Kirin Brewery, Mitsubishi Corporation, MCKB, Takasago Thermal Engineering, and Miura Collaborate On Energy Conversion From Fossil Fuels To Green Hydrogen

**TOKYO - February 7, 2025** - Kirin Brewery Company, Limited (Kirin Brewery), along with Mitsubishi Corporation, MCKB Energy Service Co. (MCKB), Ltd. which is sponsored and operated by Mitsubishi Corporation Clean Energy, Takasago Thermal Engineering Co., Ltd. (Takasago Thermal Engineering), and Miura Co., Ltd. (Miura), are collaborating on a demonstration project. The project aims to convert part of the fuel used for the steam boiler at the Chitose Brewery of Kirin Brewery Hokkaido from fossil fuel to green hydrogen and to utilize green hydrogen-derived steam in the beer production process. The demonstration is set to commence in June 2026.

In the beer production process, a large amount of steam is used to produce the unique aroma and bitterness of beer. In this demonstration, part of the fuel for the boiler that produces the steam is switched from city gas to green hydrogen. This is expected to replace up to approximately 23% of the annual heat demand with hydrogen and reduce GHG<sup>\*1</sup> emissions by 464 tons per year.

1 Greenhouse gases

Scheme of the Demonstration Project



The roles of the companies are as follows.

- Kirin Brewery: Working with other companies to use hydrogen-derived steam in breweries.
- Mitsubishi Corporation: Coordination of commercial aspects and business structuring related to hydrogen supply.
- Takasago Thermal Engineering: Delivery and installation of hydrogen production equipment, design and construction of photovoltaic and hydrogen supply facilities, and maintenance of hydrogen facilities after completion of construction.
- MT Green Energy LLC. <sup>\*2</sup>: Operates, maintains and manages hydrogen production facilities and produces and supplies hydrogen.
- MCKB: Production and supply of hydrogen-derived steam using Miura hydrogen-fired boilers.
- Miura: Design, manufacture, delivery and maintenance of hydrogen-fired boilers.

2 MT Green Energy LLC. : a joint venture company funded by Mitsubishi Corporation and Takasago Thermal Engineering

Construction is scheduled to start in April 2025 and the facility will be operational from June 2026. The demonstration period is planned to last approximately 10 years, during which time the effectiveness of the GHG emission reductions and technical issues in the energy conversion to green hydrogen will be verified.

By increasing the technical knowledge of energy conversion to reduce GHG emissions, the companies will accelerate their efforts to achieve their GHG emission reduction targets.

### Kirin Brewery Hokkaido Chitose

Established: Construction completed in 1975 as a soft drink factory,

Began operations as a brewery in 1986.

Site Area: 231,000m<sup>2</sup>

Number of Employees: Approx. 85

Products Produced: 6 standard brands and 2 seasonal brands.



### Company Profiles

- Kirin Brewery Company Limited.

Main business activities: Kirin Brewery specializes in producing and selling a wide range of beverages, both alcoholic and non-alcoholic, such as beer, RTD<sup>\*3</sup> beverages, and whisky. Kirin Brewery focuses on being "customer-oriented" and "quality-oriented" to bring people together and strengthen its relationships with consumers and stakeholders. As part of the Kirin Group, Kirin Brewery is committed to achieving net-zero greenhouse gas emissions across our entire value chain by 2050, in line with the [\*Kirin Group's Environmental Vision 2050\*](#).

<sup>3</sup> Abbreviation for Ready to Drink, a canned cocktail.

- Mitsubishi Corporation

Main business activities: The Mitsubishi Group has eight groups: global environmental energy, material solutions, metal resources, social infrastructure, mobility, food industry, S.L.C. (Smart-Life Creation) and power solutions, and is developing diversified businesses across a wide range of industries. Mitsubishi Corporation targets to achieve net-zero GHG emissions in 2050, while aiming for both a stable energy supply and low/carbon emissions.

- Mitsubishi Corporation Clean Energy Co., Ltd.

Main business activities: In light of the global trend towards carbon neutrality, we support customers in achieving their sustainability goals through the development of renewable energy sources, the supply of renewable energy power and environmental value. We also promote low-carbonization and decarbonization of thermal power generation in order to contribute to Japan's goal of realizing a decarbonized society.

- MCKB Energy Services Co. (a subsidiary of Mitsubishi Corporation Clean Energy Ltd.)

In 2005, we started an on-site power generation project at each Kirin Group factory by converting fuel from heavy oil to gas, and since then we have continued to reduce the Kirin Group's GHG emissions by installing solar power generation and heat pumps. We have implemented various measures towards this goal. Through this hydrogen supply initiative, we will contribute to the Kirin Group's "CSV management" and further strengthen our collaboration with the Kirin Group.

- Takasago Thermal Engineering Co., Ltd.

Main business activities: The Group's core business is the design and construction of air-conditioning systems, with services covering the entire lifecycle of a building. Under our Group Purpose, "With our revolutionary environmental innovations, we activate the Earth's future," the Group is expanding its business domain in

environmental creation as an "Environment-Creator™" and is working to create technologies and services that will contribute to achieving a decarbonized and sustainable society.

- Miura Co., Ltd.

Main business activities; As "The Best Partner of Energy, Water and Environment," the company develops total solutions for plants that improve the efficiency of various equipment and facilities at production sites, with a focus on boilers, including the development of products and technologies related to hydrogen and other new fuels to achieve carbon neutrality by 2050. With the expansion of its line-up, The company is working on upgrading its solutions and expanding its business areas.

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