

**Mitsubishi Heavy Industries, Ltd. 38th Unsecured Corporate Bond  
(2nd series MHI Green Bond) Reporting (FY2023)**

**1. Allocation Reporting (As of March 31, 2024)**

MHI Group has been engaged in renewable energy/clean energy business (wind, hydrogen, and geothermal power generation facilities/businesses) defined by qualified criteria for the realization of a decarbonized society. All of the funds raised by the 38th unsecured corporate bond of Mitsubishi Heavy Industries, Ltd. (2nd series MHI Green Bond) issued on September 1, 2021, were used for the renewable energy business (a part of the refinancing of the investment in offshore wind power generation facilities) and the clean energy business (a part of the refinancing of the investment in hydrogen power generation facilities/businesses). And there is no unallocated balance (Date of allocation: September 1, 2021).

(Unit: million Yen)

Section	Amount
Proceeds raised (Amount Excluding Issuance Costs from the Issue Amount of the Bonds)	14,931
Proceeds used	14,931
The renewable energy business (a part of the refinancing of the investment in offshore wind power generation facilities)	13,931
The clean energy business (a part of the refinancing of the investment in hydrogen power generation facilities/businesses)	1,000
Proceeds to be used	0

**2. Impact Reporting**

The various indicators of environmental improvement effects in businesses and projects funded by this green bond are as follows.

**[Renewable energy business]**

**(1) Indicators based on MHI Vestas Offshore Wind A/S deliveries**

Figures are based on the delivery record of MHI Vestas Offshore Wind A/S, a joint venture established in 2014 with Vestas Wind Systems A/S (Vestas) of Denmark exclusively for offshore wind power generation equipment. (Our company's stake: 50%)

Section	FY2016	FY2017	FY2018	FY2019	FY2020
Deliveries (MW) (Installed power generation capacity)	365	816	864	785	804
Annual power generation (MWh) *1	981,602	3,176,087	5,499,659	7,610,776	9,772,989
Upper row: Single Fiscal Year Lower row: Cumulative Amount	981,602	4,157,689	9,657,348	17,268,124	27,041,113

Annual CO <sub>2</sub> reduction (million tons) *2	0.49	1.60	2.77	3.84	4.93
Upper row: Single Fiscal Year	0.49	2.09	4.86	8.70	13.63
Lower row: Cumulative Amount					

\*1 Calculated using the average operation rate published by the International Renewable Energy Agency (IRENA)

\*2 Calculated using the average emission coefficient published by the International Finance Corporation (IFC) and the average operation rate published by the International Renewable Energy Agency (IRENA)

## (2) Indicators based on Vestas deliveries

In December 2020, Mitsubishi Heavy Industries, Ltd. (MHI) transferred its total shareholding in the MHI Vestas Offshore Wind (MVOW) joint venture with Vestas Wind Systems A/S (Vestas), equal to 50% shareholding ratio, to Vestas. The transfer was carried out through MHI Holding Denmark ApS, an MHI subsidiary. Simultaneously MHI newly acquired approximately 5 million shares in Vestas, equivalent to about 2.5% ownership.

Accordingly, the various indicators from fiscal 2021 use figures based on Vestas' delivery record. (Our company's stake: about 2.5%)

Section	FY2021	FY2022	FY2023
Deliveries (MW) (Installed power generation capacity)	16,594	13,328	12,685
Annual power generation (MWh) *1	55,819,561	94,362,019	133,992,198
Upper row: Single Fiscal Year	55,819,561	150,181,580	284,173,778
Lower row: Cumulative Amount			
Annual CO <sub>2</sub> reduction (million tons) *2	28.13	47.56	67.53
Upper row: Single Fiscal Year	28.13	75.69	143.22
Lower row: Cumulative Amount			

\*1 Calculated using the average operation rate published by the International Renewable Energy Agency (IRENA)

\*2 Calculated using the average emission coefficient published by the International Finance Corporation (IFC) and the average operation rate published by the International Renewable Energy Agency (IRENA)

[Relevant news]

October 29, 2020, Notice

**Notice of Share Transfer of Joint Venture with Vestas and Commencement of New Business Alliance**

[https://www.mhi.com/notice/notice\\_20102901.html](https://www.mhi.com/notice/notice_20102901.html)

December 14, 2020, Notice

**MHI Transfers Shareholding in Offshore Wind Turbine JV to Vestas, Acquires Vestas Shares**

[https://www.mhi.com/notice/notice\\_201214.html](https://www.mhi.com/notice/notice_201214.html)

## **[Clean energy business]**

MHI has made a financial investment in HydrogenPro ASA of Norway, a company engaged in the development and manufacture of electrolyzers, devices that produce hydrogen by the process of water electrolysis in 2020. MHI used a portion of the proceeds from the Green Bonds to refinance a part of this investment.

MHI subscribed to newly issued shares placed by HydrogenPro in an initial public offering (IPO) undertaken to fund expansion of its business operations. MHI already provides various decarbonization technologies that allow for a realistic path towards net-zero and will form the strategic partnership with HydrogenPro to further expand its portfolio and provide green hydrogen production plants to the market going forward.

## **Key Achievement of HydrogenPro**

Referenced from: HydrogenPro ASA, "Integrated Annual Report 2023"

### **Production capacity expanded by more than 60%**

At our production facility in China, HydrogenPro has increased the capacity from 300 to 500 MW, demonstrating the ability to supply high-quality products globally. The increased production capacity complements our strategic partnership with ANDRITZ and the planned units in the US and Europe and positions HydrogenPro even better for addressing the increasing international demand for electrolyzers and green hydrogen.

### **Production at world-leading validation centre**

Mid 2023, HydrogenPro delivered a 5.5 MW electrolyzer to Mitsubishi Heavy Industries' Takasago Hydrogen Park, the pioneering validation centre for hydrogen technology. The electrolyzer started hydrogen production in August and was built at HydrogenPro's new production line in China. In advance of the delivery, HydrogenPro obtained the necessary certification according to the KHK (core references for high-pressure gas safety) standard that Japan requires.

### **40 electrolyzers to the world's largest storage hub**

End 2023, HydrogenPro finalized a complete fleet of 40 electrolyzers ordered for the Advanced Clean Energy Storage Hub in Delta, Utah, followed by on-site work with final completion in late 2024. ACES Delta intends to use excess renewable energy to power the large-scale electrolyzers that will produce lower carbon intensity hydrogen and oxygen. The project journey began in February 2022 when HydrogenPro was awarded one of the largest electrolyzer systems ever contracted.

## **[Relevant news]**

October 14, 2020, News release

### **MHI Group Undertakes Investment in HydrogenPro of Norway, Leading Producer of Advanced Electrolyzers**

<https://www.mhi.com/news/201014.html>

April 19, 2022, News release of HydrogenPro

**HydrogenPro received Purchase Order for Takasago Hydrogen Park in Japan from Mitsubishi Heavy Industries**

HydrogenPro AS (OSE: HYPRO) announced today that it has received a purchase order for a large electrolyser from Mitsubishi Heavy Industries Ltd. (MHI).

<https://hydrogenpro.com/2022/04/19/hydrogenpro-received-purchase-order-for-takasago-hydrogen-park-in-japan-from-mitsubishi-heavy-industries/>

June 30, 2022, News release of HydrogenPro

**\$504 million loan guarantee granted world's largest renewable hydrogen energy project**

The Department of Energy (DOE) has granted a \$504.4 million loan guarantee for a project for the storage of clean energy for which HydrogenPro will be delivering 220 MW electrolyser systems.

<https://hydrogenpro.com/2022/06/30/504-million-loan-guarantee-granted-worlds-largest-renewable-hydrogen-energy-project/>

April 19, 2023, News release of HydrogenPro

**HydrogenPro enters partnership with ANDRITZ for green hydrogen solutions in Europe**

<https://hydrogenpro.com/2023/04/19/hydrogenpro-enters-partnership-with-andritz-for-green-hydrogen-solutions-in-europe/>

May 16, 2023, News release of HydrogenPro

**Certificated for delivering to Japan**

<https://hydrogenpro.com/2023/05/16/certificated-for-delivering-to-japan/>

July 25, 2023, News release of HydrogenPro

**HydrogenPro expands production capacity by 66 percent**

<https://hydrogenpro.com/2023/07/25/hydrogenpro-expands-production-capacity-by-66-percent/>

September 21, 2023, News release of HydrogenPro

**Our unique electrolyser technology validated and producing at world leading validation center**

<https://hydrogenpro.com/2023/09/21/electrolyser-start-producing/>

November 8, 2023, News release of HydrogenPro

**Electrolyzer operates at full load and in real-world conditions**

<https://hydrogenpro.com/2023/11/14/operates-at-full-load-and-real-world-conditions/>

### 3. External Review

MHI has received an annual review from Sustainalytics and has posted the review results on our website.