December 5, 2025

Mitsubishi Heavy Industries, Ltd. 44th Series Unsecured Bond (The 3rd Series of Mitsubishi Heavy Industries Transition Bonds) Reporting (FY2024)

Introduction

Mitsubishi Heavy Industries (MHI) Group has developed “Mitsubishi Heavy Industries, Ltd. Green/Transition Finance Framework” *1 with the aim of further promoting the initiatives* 2 set forth in its 2040 Carbon Neutrality Declaration and Roadmap to Achieve Carbon Neutrality. We are working on " Decarbonize existing infrastructure," " Build a hydrogen solutions ecosystem," and " Build a CO_2 solutions ecosystem," which are Eligible businesses and/or projects of Transition Projects defined in the framework.

*1：https://www.mhi.com/finance/stock/esg/transitionbond/pdf/fw2408.pdf
*2：https://www.mhi.com/company/aboutmhi/carbon-neutral

The proceeds from Mitsubishi Heavy Industries, Ltd. 44th Series Unsecured Bond (The 3rd Series of Mitsubishi Heavy Industries Transition Bonds) issued on September 5, 2024, have been allocated to new investments and refinancing of existing investments in Hydrogen gas turbine classified as “Decarbonize existing infrastructure” and Hydrogen production (blue or turquoise, etc.) classified as “Build a hydrogen solutions ecosystem,” which are Eligible businesses and/or projects of Transition Projects. Both projects are proceeding as planned in terms of the allocation and the development and demonstration of technologies.
MHI group's energy transition initiatives to achieve a Carbon Neutral society are progressing as planned. We will continue our efforts to achieve Net Zero by 2040 and realize a Carbon Neutral society.

1. Allocation Reporting (As of March,31 2025)

The following table shows the allocation of the net proceeds from the ¥10 billion raised by the 3rd Series of Mitsubishi Heavy Industries Transition Bond, excluding issuance costs.
The unallocated balance is managed in cash or cash equivalents, and the allocation is scheduled to be completed in FY2025.

(Unit: million Yen)

Section			Amount
Proceeds raised (Amount Excluding Issuance Costs from the Issue Amount of the Bonds)			9,952
Proceeds used			7,646
	Hydrogen gas turbine– (1)	New investment	3,790
		Refinancing	1,575
	Hydrogen production (blue or turquoise, etc.) – (2)	New investment	1,274
		Refinancing	1,007
Proceeds to be used			2,306

2. Impact Reporting

(1) Hydrogen gas turbine

Development of Hydrogen GTCC

・Project overview

Development of hydrogen co-firing, single-fuel hydrogen firing gas turbines, consideration of operation in actual pressure combustion test facility and power generation demonstration facility

・Period

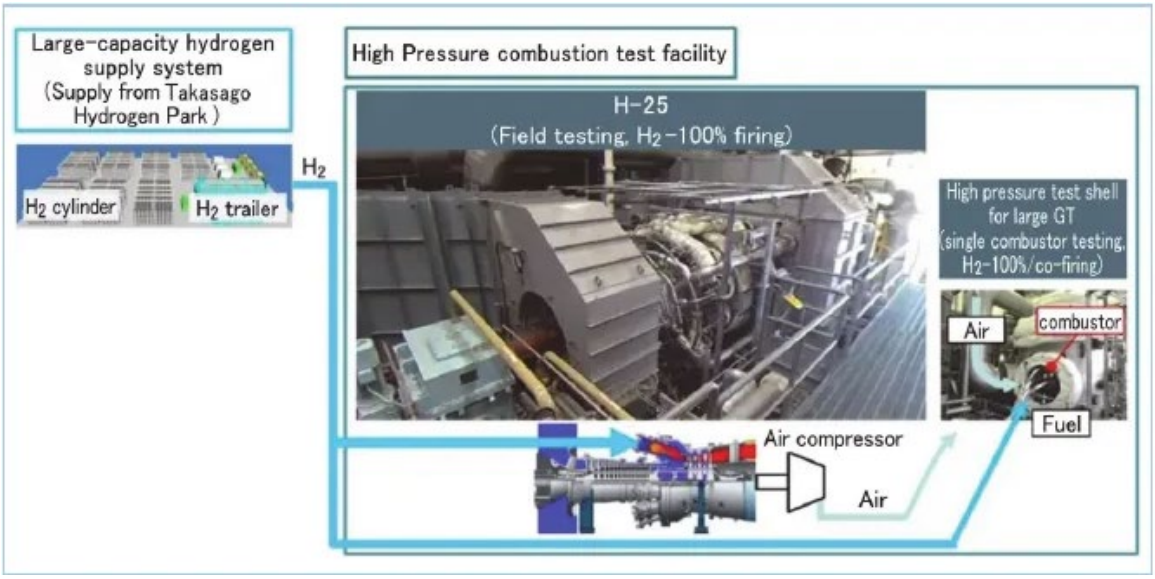
-FY2023 (planned)

・Progress

MHI is expanding its carbon-free power generation system lineup, having started the development of large-capacity, high-efficiency gas turbines co-firing hydrogen in the mid-2010s, and in recent years has progressed to the stage of actual equipment verification.

Regarding hydrogen-natural gas co-fired gas turbines, in FY2022, MHI has completed the development of a gas turbine combustor capable of mixing natural gas with hydrogen at a ratio of 30% by volume (hereinafter, "30% hydrogen co-firing") in large gas turbines. In FY2023, the verification of 30% hydrogen co-firing using the latest JAC gas turbine has been conducted at the demonstration power generation facility within the Takasago Hydrogen Park. Also, from FY2024 onward, the development toward hydrogen co-firing continues to advance at a co-firing ratio of 50%.

Regarding hydrogen single-fired gas turbines, in FY 2024, we conducted actual-equipment verification using a small and medium-sized H-25 gas turbine at the Takasago Hydrogen Park and confirmed hydrogen single-firing operation. We are leveraging the insights and developing hydrogen single-fired combustors for large gas turbines.



MHI H-25 gas turbine actual-pressure combustion test facility for hydrogen single-firing verification

[Relevant information]

Mitsubishi Heavy Industries, Ltd. technical Review Vol. 62 No. 3 (2025) Energy Systems Development and Verification of Power Generation Gas Turbine Combustors for A) Hydrogen fired and B) Ammonia fired

https://www.mhi.com/technology/review/sites/g/files/jwhtju2326/files/2025-09/e623020_1.pdf

(2) Hydrogen production (blue or turquoise, etc.)

Hydrogen Power Generation Demonstration Facility "Takasago Hydrogen Park"

・Project overview

Development of the Takasago Hydrogen Park (located at MHI's Takasago Machinery Works in Takasago City, Hyogo Prefecture), an integrated validation facility for technologies from hydrogen production to power generation aimed at the early commercialization of hydrogen gas turbines

・Period

FY2021-2026 (planned)

・Progress

The Takasago Hydrogen Park, which is the world's first integrated verification facility for technologies ranging from hydrogen production to power generation, has been established at the Takasago Machinery Works, where hydrogen gas turbines are developed and manufactured.

In FY2024, MHI has started operation of a test module of the Solid Oxide Electrolysis Cell (SOEC), a next-generation high-efficiency hydrogen production technology, at Takasago Hydrogen Park. SOEC is based on technology for the previously developed Solid Oxide Fuel Cell (SOFC). In addition to its advantage of high efficiency, the use of MHI's proprietary tubular cell stack supports development as a technology capable of operating at high pressures, setting it apart from competing systems. The test module with a capacity of 400 kW was designed and manufactured based on the technology adopted for the SOFC, following development of core technologies at the Nagasaki Carbon Neutral Park (Nagasaki City). The system was installed at the Takasago Hydrogen Park, and started operation. The results of this research will be utilized to support even higher output and greater capacity.

400kW class SOEC test module (Takasago Hydrogen Park)

[Relevant information] April 25, 2024, News release
MHI Begins Operation of SOEC Test Module the Next-Generation High-Efficiency Hydrogen Production Technology at Takasago Hydrogen Park-- The Path to Higher Output and Greater Capacity --
https://www.mhi.com/news/240425.html

3. MHI Group's Transition Initiative

Realizing a Carbon Neutral Society is a global issue, and we believe that as a technology leader, with a proven track record in the field of decarbonization, it is MHI's responsibility to help lead the fight against climate change.
The steady execution of its Energy Transition Strategy will contribute to the realization of the Government of Japan's goal of carbon neutrality by 2050.
MHI considers the execution of Green/ Transition Finance as the funding for our initiatives toward achieving MHI group's Net Zero in 2040, and believe that dialogue with stakeholders through the framework of green and transition finance, annual reports, integrated reports, etc. will serve as an opportunity to disseminate our company's Initiatives. MHI's long-term strategy will be reviewed when government policies or other assumptions change.

4. External Review

MHI has received an annual review of the performance up to March 2025 from DNV Business Assurance Japan K.K. and has posted the review results on our website.

5. (Relevant information) The 1st Series of Mitsubishi Heavy Industries Transition Bonds Reporting

・The 1st Series of Mitsubishi Heavy Industries Transition Bonds Reporting (FY2022)
https://www.mhi.com/finance/stock/esg/transitionbond/pdf/40tb_reporting2022.pdf

・The 1st Series of Mitsubishi Heavy Industries Transition Bonds Reporting (FY2023)
https://www.mhi.com/finance/stock/esg/transitionbond/pdf/40tb_reporting2023.pdf