



SECOND PARTY OPINION

MITSUBISHI HEAVY INDUSTRIES, LTD. TRANSITION BOND (#1, 2) PERIODIC REVIEW

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Revision History

Revision number	Date of issue	Remarks
0	18 March 2022	Initial
1	8 September 2023	Transition Bond Post-Issuance Periodic Review (#1) (Mitsubishi Heavy Industries, Ltd. 40th Series Unsecured Bond (1st Mitsubishi Heavy Industries Transition Bond))
2	30 August 2024 (This report)	Transition Bond Post-Issuance Periodic Review (#1, 2) (Mitsubishi Heavy Industries, Ltd. 40th Series Unsecured Bond (1st Mitsubishi Heavy Industries Transition Bond)) (Mitsubishi Heavy Industries, Ltd. 42nd Series Unsecured Bond (The 2nd Series of Mitsubishi Heavy Industries Transition Bonds))

Disclaimer

Our assessment relies on the premise that the data and information provided by Issuer to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per Scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct¹ during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the Framework except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

¹ DNV Code of Conduct is available from DNV website (www.DNV.com)

I . Scope and Objectives

Mitsubishi Heavy Industries, Ltd. (hereinafter, “MHI” (including MHI Group) or the “Issuer”) has engaged DNV Business Assurance Japan K.K. (hereinafter, “DNV”) to provide a periodic review on Mitsubishi Heavy Industries, Ltd. Transition Bond (1st and 2nd Series of Mitsubishi Heavy Industries Transition Bonds). The purpose of the periodic review of DNV is to conduct an assessment on whether the 1st and 2nd Series of Mitsubishi Heavy Industries Transition Bonds meet the Climate Transition Finance Handbook 2020 (hereinafter, “CTFH”), the Basic Guidelines on Climate Transition Finance (Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021; hereinafter, “CTFBG”), and the four core elements of transition (applicable standards at the time of issuance), and is consistent with the Green Bond Principles 2021 (hereinafter, “GBP”) and the Green Bond Guidelines (Ministry of the Environment, 2020; hereinafter, “GBGL”) as a bond with specific use of proceeds, and provide a second party opinion on the eligibility of the 1st and 2nd Mitsubishi Heavy Industries Transition Bonds.

MHI issued the 1st Mitsubishi Heavy Industries Transition Bond (Mitsubishi Heavy Industries, Ltd. 40th Series Unsecured Bond) with 10 billion yen on 8 September 2022, and the 2nd Series of Mitsubishi Heavy Industries Transition Bonds (Mitsubishi Heavy Industries, Ltd. 42nd Series Unsecured Bond) with 10 billion yen on 31 August 2023. DNV's review team conducted the periodic review for the period from July 2023 to March 2024 for the 1st Transition Bond and from September 2023 to March 2024 for the 2nd Transition Bond based on the CTFH/CTFBG and the GBP/GBGL.

This report provides a post-issuance periodic review of the requirements of the Transition Bond with specific use of proceeds (Principles 1 to 4 below).

DNV, as an independent external reviewer, has identified no real or perceived conflict of interest associated with the delivery of this second party opinion for MHI.

In this paper, no assurance is provided regarding the financial performance of the Transition Bond, the value of any investments, or the long-term environmental benefits of the transaction.

Standards/guidelines to be applied

No.	Standards/guidelines	Scheme owner
1.	Climate Transition Finance Handbook (CTFH) ^{*1}	International Capital Market Association (ICMA), 2020
2.	Basic Guidelines on Climate Transition Finance (CTFBG) ^{*1}	Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021
3.	Green Bond Principles (GBP) ^{*2*3}	International Capital Market Association (ICMA), 2021

4.	Green Bond Guidelines (GBGL) ^{*2*3}	Ministry of the Environment, 2020
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- *1 Climate transition: The concept of climate transition focuses principally on the credibility of an issuer's climate change-related commitments and practices. (quoted from CTFH and CTFBG)
- *2 It confirms compliance with the four core elements (use of proceeds, process for project evaluation and selection, management of proceeds, and reporting) that must be met when implementing as a bond/loan that meets the four elements of transition and has a specific use of proceeds (quoted from CTFBG).

II. Responsibilities of MHI and DNV

MHI's management has provided the information and data used by DNV during the delivery of this review.

DNV's statement represents an independent opinion and is intended to inform MHI and other interested stakeholders in the Transition Bonds as to whether the established criteria have been met, based on the information provided to us.

In our work, we have relied on the information and the facts presented to us by MHI. DNV is not responsible for any aspect of the nominated transition projects and assets referred to in this opinion.

Thus, DNV shall not be held liable if any of the information or data provided by MHI's management and used as a basis for this review were not correct or complete.



III. Basis of DNV's Opinion

To provide an issuer-specific Transition Bond Eligibility Assessment Protocol (hereinafter, the "Protocol"), we have adapted our Transition Bond assessment methodologies, which incorporates the requirements of the CTFH/CTFBG and the GBP/GBGL that are required for the management of transition bonds with specific use of proceeds. Please refer to Schedule-1. The Protocol is applicable to transition bonds with specific use of proceeds under the CTFH/CTFBG and the GBP/GBGL.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle behind the criteria is that a transition bond should "provide an investment opportunity with transparent sustainability credentials."

DNV conducted the periodic review by applying the following four core elements related to the operation and management of transition finance (with specific use of proceeds).

- **Principle One: Use of Proceeds**

The Use of Proceeds criteria are guided by the requirement that a fundraiser of a transition finance with specific use of proceeds must use the proceeds from eligible transition finance. The eligible activities should produce clear environmental benefits.

- **Principle Two: Process for Project Evaluation and Selection**

The Process for Project Evaluation and Selection criteria are guided by the requirements that a fundraiser of a transition finance (with specific use of proceeds) should outline the process it follows when determining eligibility of an investment using the proceeds from transition finance and outline any impact objectives it will consider.

- **Principle Three: Management of Proceeds**

The Management of Proceeds criteria are guided by the requirements that a transition finance should be tracked within the fundraiser organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.

- **Principle Four: Reporting**

The Reporting criteria are guided by the recommendation that at least Sustainability Reporting to the bond investors should be made of the allocation status of proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

IV. Work Undertaken

Our work constituted a comprehensive review of the available information, based on the understanding that this information was provided to us by the Issuer in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

i. Pre-issuance assessment of transition bond (not included in this report*)**

- Creation of MHI-specific Protocol to be adapted to the Transition Bond with regard to the above and Schedule-1 contributing to this assessment;
- Assessment of documentary evidence provided by MHI on the Transition Bond and supplemented assessment by a comprehensive desktop research. These checks refer to current assessment best practice and standards methodologies;
- Discussions with MHI, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

ii. Post-issuance assessment of transition bond **This report*

- Assessment of documentary evidence provided by MHI related to the implementation of the Transition Bond, a high-level desktop research, documentation review, and supplemented documentary evidence by interviews with MHI's major persons in charge. These checks refer to current assessment best practice and standards methodologies;
- Discussions with MHI, and review of relevant documentation;
- Field research and inspection (if necessary);
- Review of nominated projects and assets at the time of the periodic assessment;
- Document creation of observation results through the periodic review described in this report.

V. Findings and DNV's Opinion

DNV's findings and opinions are as described below.

Principle One: Use of Proceeds

DNV has confirmed that MHI has allocated or plans to allocate the proceeds from the 1st and 2nd Series of Mitsubishi Heavy Industries Transition Bonds (10 billion yen each) to the following projects as of 31 March 2024.

<1st Mitsubishi Heavy Industries Transition Bond>

1-1. Project: Hydrogen gas turbine (co-firing) ・ ・ ・ 6.2 billion yen allocated (refinancing 1.6 billion yen)

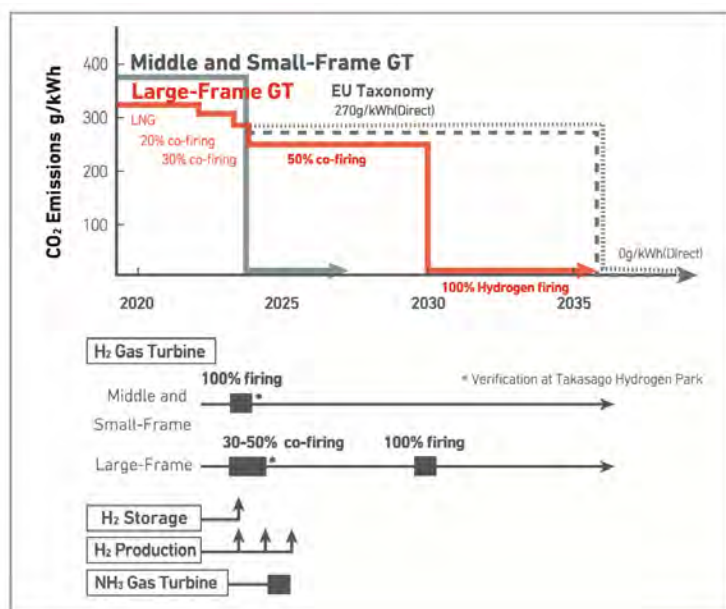
This project is categorized as decarbonize existing infrastructure, which aims to reduce emissions from other companies in the "MHI Green/Transition Finance Framework," and is consistent with the Agency for Natural Resources and Energy's Transition Roadmap for Power Sector and will contribute to achieving its goals.

The overview of the project is the development of 100% hydrogen firing and hydrogen co-firing gas turbines that complies with the EU Taxonomy, the world's most stringent CO₂ emission regulations (including operation of an actual pressure combustion testing facility and a power generation demonstration facility).

The project is developing large, medium, and small gas turbines. The large gas turbines are expected to be commercially available with 100% hydrogen firing from 2030 onwards, while the medium and small gas turbines are expected to be commercially available with 100% hydrogen firing from 2025 onwards. In November 2023, MHI carried out the world's first power generation demonstration operation using a large gas turbine with natural gas mixed with hydrogen (hydrogen produced and stored at the Takasago Hydrogen Park, which is located on the same premises) at a ratio of 30% by volume and connected to the local power grid.

In 2024, a demonstration operation is planned for small and medium gas turbines in the Takasago Hydrogen Park, which will be 100% hydrogen firing, while preparations are underway for a demonstration operation of a large gas turbine with 50% hydrogen co-firing, including the reinforcement of hydrogen storage facilities. It is expected to make a significant contribution to the implementation of hydrogen power generation in society by improving product reliability and accelerating commercialization.

EU CO₂ Emissions Regulations and Gas Turbines Development Schedule



1-2. Project: Hydrogen production (blue or turquoise, etc.) …3.6 billion yen allocated (refinancing 0.8 billion yen)

This project is categorized as build a hydrogen solutions ecosystem, which aims to establish a hydrogen value chain etc. in the "MHI Green/Transition Finance Framework," and is consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap in Chemical Sector and will contribute to achieving its goals.

Specifically, the projects are as follows:

i). Hydrogen Power Generation Demonstration Facility "Takasago Hydrogen Park"

The project overview is a development, design, manufacturing, and establishment of a demonstration base for the early commercialization of 100% hydrogen firing in hydrogen gas turbines.

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, and started full operation in September 2023. At the same time, an alkaline water electrolyzer manufactured by HydrogenPro AS of Norway, which has one of the world's largest hydrogen production capacities, started operation and the hydrogen produced at the facility is being stored in a hydrogen storage facility with a total capacity of 39,000 Nm³ installed in the storage area.

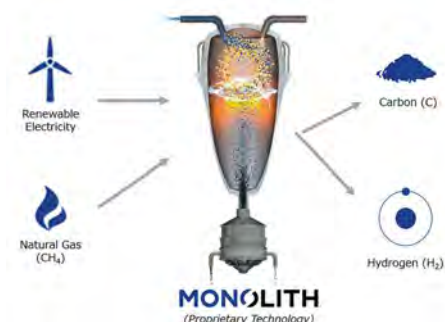
As described above, the "Takasago Hydrogen Park" has three functions in the same area: production, storage, and utilization of hydrogen, and thus is a project with a short verification cycle and economic advantages.



ii). Investment in Monolith Materials, Inc.

The project overview is an investment in Monolith Materials, Inc. through Mitsubishi Heavy Industries America, Inc. Monolith Materials, Inc. has an innovative technology to produce solid carbon with high value that is used for carbon black in addition to so-called "turquoise hydrogen." "Turquoise hydrogen" is produced without emitting CO₂ in the hydrogen production process by extracting hydrogen (H₂) and solid carbon (C) from methane (CH₄), which is abundant in natural gas, through plasma pyrolysis using renewable energy-derived electricity as a heat source.

By investing in Monolith Materials, Inc., MHI looks to strengthen and diversify innovative alternative technologies in the energy transition (transition to energy with lower environmental impact) business and the hydrogen value chain. MHI is working to advance innovative technologies to decarbonize entire industries, such as power generation systems, fertilizer production facilities, and steel mills that utilize the hydrogen produced.



Monolith Process



Commercial-scale facility in Nebraska, U.S.

iii). Investment in C-Zero Inc.

The project overview is an investment in C-Zero Inc. through Mitsubishi Heavy Industries America, Inc. C-Zero Inc. has an advanced technology to produce so-called "turquoise hydrogen," which is produced without emitting CO₂ in the hydrogen production process by extracting hydrogen (H₂) and solid carbon (C) from methane (CH₄), which is abundant in natural gas, using innovative thermal catalyst.

By investing in C-Zero Inc., MHI looks to strengthen and diversify innovative alternative technologies in the energy transition (transition to energy with lower environmental impact) business and the hydrogen value chain. MHI is working to advance innovative technologies to decarbonize power generation systems that utilize the hydrogen produced and entire industries utilizing hydrogen, to contribute to the realization of a decarbonized society.



<2nd Series of Mitsubishi Heavy Industries Transition Bonds>

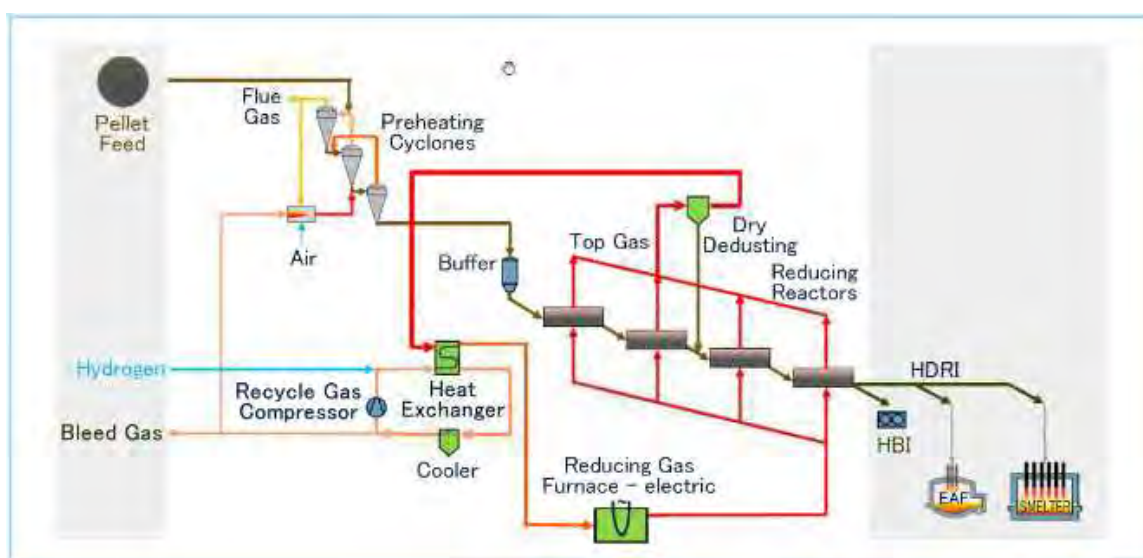
2-1. Project: Metals machinery (hydrogen-reduced ironmaking, etc.) …0.6 billion yen allocated (refinancing 0.6 billion yen)

This project is categorized as build a hydrogen solutions ecosystem, which aims to establish a hydrogen value chain etc. in the “MHI Green/Transition Finance Framework,” (categorized as decarbonize existing infrastructure in the “Green/Transition Finance Framework” updated in August 2024) and is consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Iron and Steel Sector and will contribute to achieving its goals.

The project overview is the development and design for the demonstration of HYFOR (Hydrogen-based Fine Ore Reduction) process, which is a direct reduction of fine ore generated during iron ore beneficiation with 100% hydrogen (hydrogen mixing ratio can be increased in stages) and does not require sintering or pelletizing process due to the fluidized bed (planned for FY2021-2025: development and design associated with pilot plant implementation and prototype plant demonstration).

The pilot plant for HYFOR completed trial run in the first half of 2021 at the Donawitz Steel Plant of voestalpine in Austria, and started testing various iron ores since 2022 to verify the commercial feasibility of this technology.

A schematic flow sheet for a commercial-scale prototype plant, the next step of the pilot plant, is shown in the figure below.

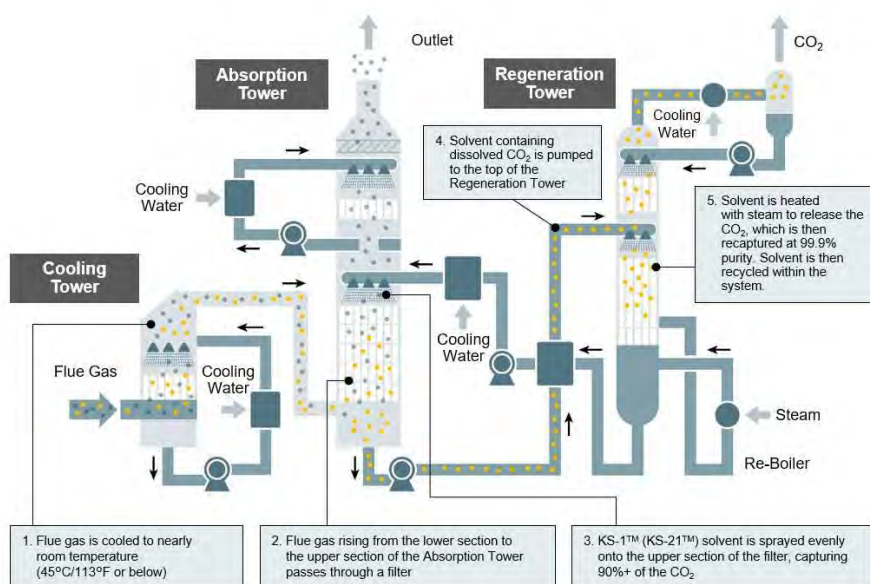


2-2. Project: CO₂ capture and storage …3.6 billion yen allocated (refinancing 1.3 billion yen)

This project is categorized as build a CO₂ solutions ecosystem, which aims to establish a CO₂ value chain etc. in the “MHI Green/Transition Finance Framework,” and is consistent with the Ministry of Economy, Trade and Industry's Transition Roadmap for Power Sector

and other roadmaps for various industry sectors and will contribute to achieving its goals. The project overview is the development and improvement of process technologies and absorbents for the separation and capture of CO₂ contained in exhaust gas from power plants, factories, etc., and optimization of technologies and expansion of product lineup for industrial exhaust gases towards expansion of application of these technologies.

MHI and THE KANSAI ELECTRIC POWER CO., INC. have jointly developed a new absorption solution "KS-21™," and a new CO₂ recovery process "Advanced KM CDR Process™" using KS-21™. MHI conducted testing at the world's largest CO₂ capture technology center (TCM: Technology Centre Mongstad) in 2021, setting the CO₂ capture rate for exhaust gas emitted from gas turbines at 95-98%, which is higher than the industry standard (approximately 90%), and showed superior energy-saving performance and reduced operating costs and environmental impact compared to common amine absorption solution (MEA: monoethanolamine). In 2022, MHI agreed to an alliance with ExxonMobil and started the development of next-generation CO₂ capture technology that aims to reduce the costs required for CO₂ capture and expand the scope of its application by combining engineering, operating experience, and core technologies. Furthermore, in addition to thermal power plants and chemical plants, MHI is working to optimize of CO₂ capture technologies, expand its lineup, and expand partnerships to build a value chain to meet emission reduction needs in a wide variety of industries and capture scales, including biomass power plants, waste incineration facilities, gas engines, ships, cement plants, steel plants, ceramic furnaces, and LNG production facilities.





Principle Two: Process for Project Evaluation and Selection

In evaluating and selecting the transition project, DNV has confirmed that MHI meets the eligibility criteria and that MHI has confirmed that the transition project does not conflict with any of the following internal policies, etc.

- CSR Action Guidelines
- MHI Group Global Code of Conduct
- MHI Group Human Rights Policy
- Basic Policy on Environmental Matters and Action Guidelines
- Privacy Policy
- Policy of Safety and Health
- Procurement Policy
- MHI Group Supply Chain CSR Promotion Guidelines Basic Policy Concerning Conflict Minerals
- MHI Group's Declaration on Biodiversity

As a specific evaluation and selection process, DNV has confirmed that the Finance Department confirmed that the projects selected by the business divisions met the eligibility criteria, and the Chief Financial Officer made the final decision.

Principle Three: Management of Proceeds

DNV has reviewed the evidence presented on how MHI has managed the proceeds from the issuance of the 1st and 2nd Series of Mitsubishi Heavy Industries Transition Bonds through March 2024. The allocation status of the proceeds is shown in Table-1 and 2.

DNV has confirmed that 9.9 billion yen as net proceeds out of the 10 billion yen raised from the 1st Mitsubishi Heavy Industries Transition Bond and 9.9 billion yen as net proceeds out of the 10 billion yen raised from the 2nd Series of Mitsubishi Heavy Industries Transition Bonds were deposited into MHI's common account, and that the allocation was subsequently managed by the finance department on a project-by-project basis using an internal management system etc.

In addition, the proceeds from the 1st Mitsubishi Heavy Industries Transition Bond had been fully allocated within FY2023 as shown in Table-1. DNV has confirmed that unallocated 5.5 billion yen out of the proceeds from the 2nd Series of Mitsubishi Heavy Industries Transition Bonds was managed in cash or cash equivalents and will be fully allocated within FY2024.

As described above, no assurance is provided regarding the financial performance of the Transition Bond, the value of any investments, or the long-term environmental benefits of the transaction.

Table-1: 1st Mitsubishi Heavy Industries Transition Bond Allocation status of proceeds (as of March 2024) (Unit: billion yen)

Item		Amount
Amount of proceeds (bond issuance amount excluding issuance costs)		9.9
Allocated amount (transition projects)		9.9
Hydrogen gas turbine (co-firing)	New investment	4.5
	Refinancing	1.6
Hydrogen production (blue or turquoise, etc.)	New investment	2.7
	Refinancing	0.8
Unallocated balance		-

*All amounts are rounded down to the nearest 100 million yen.

Table-2: 2nd Series of Mitsubishi Heavy Industries Transition Bonds Allocation status of proceeds (as of March 2024) (Unit: billion yen)

Item		Amount
Amount of proceeds (bond issuance amount excluding issuance costs)		9.9
Allocated amount (transition projects)		4.3
Metals machinery (hydrogen-reduced ironmaking, etc.)	New investment	0
	Refinancing	0.6
CO ₂ capture and storage	New investment	2.3
	Refinancing	1.3
Unallocated balance		5.5

*All amounts are rounded down to the nearest 100 million yen.

Principle Four: Reporting

DNV has confirmed that MHI will disclose the allocation status of proceeds and the environmental benefits on its website. DNV has also confirmed that the Framework states that reporting will continue until the full amount of proceeds (net proceeds) has been allocated, and that MHI will continue to disclose information in the next year since there is an unallocated balance of 5.5 billion yen for the 2nd Series of Mitsubishi Heavy Industries Transition Bonds as of March 2024.

Similarly, as for the environmental benefits, DNV has confirmed that MHI will report annually on an outline and the environmental benefits of the projects until the proceeds are fully allocated.

The allocation and management of proceeds and the environmental benefits are as follows:

(1) Allocation and management of proceeds

As shown in Table-1 and 2 of the Principle Three: Management of Proceeds, DNV has confirmed that 9.9 billion yen (the 1st Mitsubishi Heavy Industries Transition Bond) and 4.3 billion yen (the 2nd Series of Mitsubishi Heavy Industries Transition Bonds) as net proceeds out of 9.9 billion yen of each Transition Bond were managed by the finance department on a project-by-project basis using an internal management system etc. DNV has also confirmed that the unallocated proceeds of 5.5 billion yen (the 2nd Series of Mitsubishi Heavy Industries Transition Bonds) were managed in cash or cash equivalents and will be fully allocated within FY2024. The proceeds from the 1st Mitsubishi Heavy Industries Transition Bond have been fully allocated within FY2023.

(2) Environmental benefits

1st Mitsubishi Heavy Industries Transition Bond (40th Series Unsecured Bond)

Table-3: Environmental benefits (project overview and progress)

Project name		Project overview and progress
Expenditures related to Decarbonize existing infrastructure / Build a hydrogen solutions ecosystem		
Hydrogen gas turbine (co-firing)	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 (planned by FY2030)
	Progress	In November 2023, MHI conducted the world's first power generation demonstration operation using a large gas turbine with 30% hydrogen (produced in-house) co-firing. In 2024, a demonstration operation is planned for small and medium gas turbines, which will be 100%

		hydrogen firing, while preparations are underway for a demonstration operation of a large gas turbine with 50% hydrogen co-firing, including the reinforcement of hydrogen storage facilities. The development of gas turbines for both 100% firing and co-firing is progressing as planned.
Hydrogen production (blue or turquoise, etc.)	Project overview	i). Hydrogen Power Generation Demonstration Facility "Takasago Hydrogen Park": Development, verification, and manufacturing of 100% hydrogen firing hydrogen gas turbine for early commercialization
	Progress	The "Takasago Hydrogen Park," which is the world's first integrated verification facility for technologies ranging from hydrogen production to power generation, started full operation in September 2023. At the same time, one of the world's largest alkaline water electrolyzers was installed and started operation and a co-firing test at the power generation demonstration facility was carried out in November 2023 using the hydrogen produced at the Takasago Hydrogen Park. The "Takasago Hydrogen Park" is operating as planned.
	Project overview	ii). Investment in Monolith Materials, Inc.: MHI invested in Monolith Materials, Inc. that has an innovative technology to extract hydrogen (H ₂) and solid carbon (C) from methane (CH ₄), which is abundant in natural gas, through plasma pyrolysis.
	Progress	MHI is entering the field of hydrogen production and supply through plasma pyrolysis technology that uses Monolith Materials, Inc.'s renewable energy-derived electricity as a heat source and is also working to advance innovative technologies to decarbonize entire industries, such as power generation systems, fertilizer production facilities, and steel plants that utilize the hydrogen produced.
	Project overview	iii). Investment in C-Zero Inc.: MHI invested in C-Zero Inc. that has an advanced technology to extract hydrogen (H ₂) and solid carbon (C) from methane (CH ₄), which is abundant in natural gas, using innovative thermal catalyst.
	Progress	MHI is considering the possibilities of using C-Zero Inc.'s technology in the field of hydrogen production and supply and is working to advance innovative technologies to decarbonize power generation systems that utilize the hydrogen produced and entire industries utilizing hydrogen, to contribute to the realization of a decarbonized society.

The 2nd Series of Mitsubishi Heavy Industries Transition Bonds (42nd Series Unsecured Bond)

Table-4: Environmental benefits (project overview and progress)

Project name	Project overview and progress	
Expenditures related to Build a hydrogen solutions ecosystem / Build a CO ₂ solutions ecosystem		
Metals machinery (hydrogen-reduced ironmaking, etc.)	Project overview	The project overview is the development and design in conjunction with the demonstration of the HYFOR (Hydrogen-based Fine Ore Reduction) process for direct reduction of fine ore.
	Progress	Research and development related to hydrogen reduction ironmaking technology is progressing as planned, including the development and design to verify commercial feasibility in a prototype plant after obtaining trial run results at a pilot plant.
CO ₂ capture and storage	Project overview	The project overview is the development and improvement of process technologies and absorbents for the separation and capture of CO ₂ contained in exhaust gas from power plants, factories, etc., and optimization of technologies and expansion of product lineup for industrial exhaust gases towards expansion of application of these technologies.
	Progress	The improvement of the performance of CO ₂ capture technology and expansion of application are progressing as planned, including the development and confirmation of the superiority of the new absorbent "KS-21™," the development of next-generation CO ₂ capture technology, and the optimization of technology and expansion of product lineup for a wide variety of industrial exhaust gases.



VI. Assessment Conclusion

On the basis of the information provided by MHI and the work undertaken, it is DNV's opinion that the 1st and 2nd Series of Transition Bonds issued by MHI meet the criteria established in the Protocol, and that they are aligned with the definition or purpose of transition bond that is to "enable capital-raising and investment for new and existing projects with environmental benefits" and "provide an investment opportunity with transparent sustainability credentials" within the CTFH/CTFBG and the GBP/GBGL.

DNV Business Assurance Japan K.K.

30 August 2024

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About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight.

With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

Disclaimer

Responsibilities of the Management of the Issuer and the Second-Party Opinion Providers, DNV: The management of Issuer has provided the information and data used by DNV during the delivery of this review. Our statement represents an independent opinion and is intended to inform the Issuer management and other interested stakeholders in the Bond as to whether the established criteria have been met, based on the information provided to us. In our work we have relied on the information and the facts presented to us by the Issuer. DNV is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV shall not be held liable if any of the information or data provided by the Issuer's management and used as a basis for this assessment were not correct or complete.



Schedule-1 Green Bond Eligibility Assessment Protocol

The following GBP-1 to 4 are DNV's Eligibility Assessment Protocol created for MHI Transition Bond with specific use of proceeds based on the requirements of GBP (2021).

GBP-1 Use of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1a	Types of funds	<p>The types of transition bonds are classified into one of the following types defined by GBP.</p> <ul style="list-style-type: none"> • (Standard) Transition Bond • Transition Revenue Bond • Transition Project Bond • Other 	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework <p>Interviews with stakeholders</p>	<p><Pre-issuance assessment result></p> <p>Through the evaluation work, DNV has confirmed that the Transition Finance (1st and 2nd Series of Mitsubishi Heavy Industries Transition Bonds) falls into the following categories.</p> <p>•(Standard) Transition Bond</p>
1b	Green/transition Project Classification	<p>The key to a transition bond is that the proceeds will be used for a green/transition project, which should be properly stated in the legal documents relating to the security.</p>	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Pre-issuance assessment result></p> <p>DNV has confirmed that the MHI Transition Bond is intended to fund a wide range of transition projects focused on MHI's environmental goals as described in the Framework.</p> <p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that the nominated transition projects have been evaluated to meet the Transition Strategy, and the proceeds from the transition bond were allocated to one or more of the nominated transition projects. Specific allocated projects are as follows:</p> <p>1st Mitsubishi Heavy Industries Transition Bond:</p> <ul style="list-style-type: none"> - Hydrogen gas turbine (co-firing) - Hydrogen production (blue or turquoise, etc.)

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings								
				<ul style="list-style-type: none">• Hydrogen Power Generation Demonstration Facility "Takasago Hydrogen Park"• Investment in Monolith Materials, Inc.• Investment in C-Zero Inc. <p>The 2nd Series of Mitsubishi Heavy Industries Transition Bonds:</p> <ul style="list-style-type: none">• Metals machinery (hydrogen-reduced ironmaking, etc.)• CO₂ capture and storage <p>Through the assessment, DNV concludes that the nominated transition projects will provide tangible and true environmental benefits.</p> <p>Table: MHI Transition Finance Eligible Project Category (Allocated projects for this time are highlighted in yellow.)</p> <table><tr><th>Project</th><th>Eligibility Criteria</th></tr><tr><td>Decarbonize existing infrastructure</td><td><ul style="list-style-type: none">• Hydrogen gas turbine (co-firing)• Ammonia gas turbine (co-firing)• LNG-fuelled high-efficiency gas turbine• Steam power (conversion to 100% ammonia firing)• Gas engine for power generation (hydrogen co-firing)• Material handling (high efficiency and fuel cell powered)</td></tr><tr><td>Build a hydrogen solutions ecosystem</td><td><ul style="list-style-type: none">• Hydrogen production (blue or turquoise, etc.)• Ammonia production (blue or turquoise, etc.)• Hydrogen compressors (for hydrogen production, transport, storage, etc.)• Metals machinery (hydrogen-reduced ironmaking, etc.)</td></tr><tr><td>Build a CO₂ solutions ecosystem</td><td><ul style="list-style-type: none">• CO₂ capture and storage• CO₂ transport (liquefied CO₂carries, etc.)</td></tr></table>	Project	Eligibility Criteria	Decarbonize existing infrastructure	<ul style="list-style-type: none">• Hydrogen gas turbine (co-firing)• Ammonia gas turbine (co-firing)• LNG-fuelled high-efficiency gas turbine• Steam power (conversion to 100% ammonia firing)• Gas engine for power generation (hydrogen co-firing)• Material handling (high efficiency and fuel cell powered)	Build a hydrogen solutions ecosystem	<ul style="list-style-type: none">• Hydrogen production (blue or turquoise, etc.)• Ammonia production (blue or turquoise, etc.)• Hydrogen compressors (for hydrogen production, transport, storage, etc.)• Metals machinery (hydrogen-reduced ironmaking, etc.)	Build a CO ₂ solutions ecosystem	<ul style="list-style-type: none">• CO₂ capture and storage• CO₂ transport (liquefied CO₂carries, etc.)
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Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1c	Environmental Benefits	All transition projects to which the funds are used should have clear environmental benefits, the effects of which should be assessed by the issuer and, where possible, quantitatively demonstrated.	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Post-issuance assessment result (this time)></p> <p>Transition projects will have environmental benefits, including CO₂ emission reduction through low carbonization or decarbonization, that contributes to MHI's Transition Strategy-based goals and is classified under the project categories and eligibility criteria shown in 1b. DNV has confirmed as for the environmental benefits that quantified evaluation in terms of CO₂ emission reductions, the project summary, and progress, taking into account the specific characteristics of each project will be reported annually, to the extent practicable.</p>
1d	Refinancing rate	If all or part of the proceeds are used or may be used for refinancing, the issuer will indicate the estimated ratio of the initial investment to the refinancing and, if necessary. Therefore, it is recommended to clarify which investment or project portfolio is subject to refinancing.	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Pre-issuance assessment result></p> <p>DNV has confirmed that MHI plans to allocate all proceeds to make new investments, refinance, or both in one or more of the nominated eligible projects.</p> <p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that MHI disclosed the estimated amount of the proceeds that was allocated to refinancing through reporting (annual report).</p> <p>1st Mitsubishi Heavy Industries Transition Bond Allocation status of proceeds (as of March 2024) (Unit: billion yen)</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings																																												
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GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2a	Project selection process	<p>Transition bond issuers should provide an overview of the process of qualifying projects for which transition bond funding will be used. This includes (but is not limited to):</p> <ul style="list-style-type: none"> • The process by which the issuer determines that the project in question is included in the business category of a qualified transition project. • Creation of criteria for eligibility of projects for which transition bond funding will be used • Environmental sustainability goals 	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Pre-issuance assessment result></p> <p>DNV has confirmed that MHI has a process and structure that determine the eligibility of the project for which the transition finance proceeds are to be allocated and that it is clearly outlined in the Framework.</p> <p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that the projects were selected by MHI as its priority projects at this time from the perspective of systematically promoting its energy transition, taking into consideration the allocation plan of proceeds and the progress of the projects. DNV has also confirmed that the other nominated projects are also being promoted in a planned manner.</p>
2b	Issuer's Environmental and Social Governance Framework	<p>In addition to criteria and certifications, the information published by issuers regarding the transition bond process also considers the quality of performance of the issuer's framework and environmental sustainability.</p>	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Process for Project Evaluation and Selection <p>Interviews with stakeholders</p>	<p><Pre-issuance assessment result></p> <p>When selecting transition projects, MHI considers compliance with environmental laws, ordinances, and regulations, as well as clear environmental benefits such as CO₂ reductions throughout the life cycle or in each process.</p> <p>In operating and implementing its projects, MHI is committed to preserving the surrounding environment in all relevant departments.</p> <p>DNV has confirmed that the transition projects implemented by MHI are consistent with its management and environmental policies, as well as with the transition strategy, goals, and pathways.</p>

GBP-3 Management of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3a	Tracking procedure-1	The net proceeds from transition bonds should be managed in sub-accounts, included in sub-portfolio, or otherwise tracked. It should also be certified by the issuer in a formal internal process related to the issuer's investment and financing operations for the transition project.	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that the tracking control of the proceeds was evidenced by MHI by confirming that the allocated and unallocated proceeds out of the net proceeds were managed in accordance with MHI's internal management system and documents prepared exclusively for collaboration with the departments.</p>
3b	Tracking procedure-2	During the transition bond redemption period, the balance of funds raised that is being tracked should be adjusted at regular intervals to match the amount allocated to eligible projects undertaken during that period.	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that MHI reviewed the balance of the transition finance once a year since the implementation of the transition finance through the internal control system described in 3a.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3c	Temporary holding	If no investment or payment has been made in a qualified transition project, the issuer should also inform the investor of the possible temporary investment method for the balance of unallocated proceeds.	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that the confirmation process through MHI's internal management system and specific documents created is a mechanism that allows for the sequential recognition of unallocated balances.</p> <p>DNV has confirmed that the balance of unallocated proceeds was managed in cash or cash equivalents. DNV has also confirmed that the unallocated proceeds will be continuously allocated to two projects, metals machinery (hydrogen-reduced ironmaking, etc.) and CO₂ capture and storage, and that the allocation will be completed within FY2024.</p>

GBP-4 Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
4a	Periodical Reporting	<p>In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, the issuer will consider each project at least once a year for projects to which the transition bond proceeds have been allocated, taking into account the following: A list of each project should be provided.</p> <ul style="list-style-type: none"> - Confidentiality and competitive considerations - Outline of each project, expected sustainable environmental and social effects 	<p>Confirmed documents</p> <ul style="list-style-type: none"> - Framework - Supplement Shelf Registration Statement - Information related to each project - Transition Bond issuance plan - Reporting (draft) <p>Interviews with stakeholders</p>	<p><Post-issuance assessment result (this time)></p> <p>DNV has confirmed that MHI will conduct transition finance reporting (annual reporting) until the proceeds are allocated, disclosing information on the allocation status of proceeds, the projects to which the proceeds have been allocated, and the environmental benefits.</p> <p>In addition, DNV has confirmed that even after the allocation is completed, any changes in the transition strategy or pathway, or any major changes in the allocation plan or project implementation status (e.g., suspension of a project that has initiated allocation, significant deferral on an annual basis, sale or retirement, etc.) will be reported in a timely manner or in the reporting, which will be published on the website.</p> <p><Allocation status></p> <ul style="list-style-type: none"> ♦ Amount and status of allocation to eligible projects ♦ Amount of unallocated proceeds and the method to manage unallocated proceeds ♦ Amount of new financing and refinancing <p><Environmental benefits></p> <ul style="list-style-type: none"> ♦ Disclose the overview (including progress of research and development, operation, etc.) of the project within the scope of confidentiality and to the extent practicable and taking into account the characteristics of the project.