



SECOND PARTY OPINION

HITACHI ZOSEN CORPORATION 2ND GREEN BOND PERIODIC REVIEW (#2)

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Location: Kobe, Japan

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Publication history

Date of issue	Contents
28 th October 2022	Hitachi Zosen Corporation 2nd Green Bond Periodic Review (#1)
29 th September 2023	Hitachi Zosen Corporation 2nd Green Bond Periodic Review (#2)

Scope and Objectives

Hitachi Zosen Corporation (hereinafter "Hitz") has commissioned DNV Business Assurance Japan (hereinafter "DNV") to conduct a periodic review of the 2nd Hitachi Zosen Corporation Green Bond (hereinafter "the Bond"). The objective of the periodic review at DNV is to implement an assessment to confirm that the Bond meets the identified criteria of the Green Bond Principles (ICMA, 2021, hereinafter "GBP"), Green Bond Guidelines (Ministry of the Environment, 2020, hereinafter "GBGLs") and to provide the issuer with independent second-party opinion on the eligibility of the Bond.

After issuing its first green bond on 21st September 2018, Hitz issued its 2nd green bond, the subject of this review, on 28th October 2021. The issue amount of the Bond is JPY 10 billion. DNV's review team conducted the first periodic review for the period from October 2021 to March 2022 based on the GBP and GBGLs, and has now conducted the second periodic review for the period from April 2022 to March 2023.

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

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

Table-1: The Bond covered by this review

Name of the bond	Hitachi Zosen Corporation 27th Series Unsecured Straight Bonds (Green Bonds) with inter-bond pari passu clause.
Date of issue	28 th October 2021
Maturity Date	5 years
Total amount of issue	10 billion yen
Number of periodic reviews	2nd

Standards/guidelines to be applied or referred

No.	Standards/guidelines	Scheme owner	Applied* ¹ or Referred* ²
1.	Green Bond Principles (GBP)	International Capital Markets Association (ICMA), 2021	Applied
2.	Green Bond Guidelines (GBGLs)	Ministry of the Environment, 2020	Applied
3.	Climate Bonds Standard Version 3.0 (CBSv3.0) (Sector criteria)	Climate Bond Initiative, 2019	Referred (applicable technical criteria)* ³
4.	Green and Social Bonds: A High-Level Mapping to the Sustainable Development Goals	International Capital Markets Association (ICMA), 2020	Referred
5.	Handbook Harmonized Framework for Impact Reporting	International Capital Markets Association (ICMA), 2021	Referred

*1 Applied Eligibility for all four core common elements to each principle or guideline was assessed.

*2 Referred: Based on the green projects and implementation plans, relevant contents were partially considered.

*3 Referable technical criteria are; Wind Energy

Responsibilities of the Issuer and DNV

Hitz 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 Hitz and other interested stakeholders in the Bond as to whether the established criteria have been met, based on the information provided.

In its work, DNV has relied on the information and the facts presented by Hitz. DNV is not responsible for any aspect of the candidate projects or 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 Hitz and used as a basis for this assessment were not correct or complete.

Basis of DNV's opinion

To provide as much flexibility as possible for Hitz, DNV has applied our green bond assessment methodologies, which incorporates the requirements of GBP and GBGLs, to create Hitz-specific Green Bond Eligibility Assessment Protocol (hereinafter "DNV's Protocol"). The DNV's Protocol can be applied to the green bond under GBP and GBGLs.

DNV's 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 green bond should "enable capital-raising and investment for new and existing projects with environmental and social benefits".

As per DNV's Protocol, the criteria against which the green bond has been reviewed are grouped under the four Principles:

- **Principle One: Use of Proceeds.**

The Use of Proceeds criteria are guided by the requirement that an issuer of a green bond must use the funds raised to bond eligible activities. The eligible activities should produce clear environmental benefits.

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

The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a green bond should outline the process it follows when determining eligibility of an investment using green bond proceeds, and outline how the issuer consider impacts to objectives.

- **Principle Three: Management of Proceeds.**

The Management of Proceeds criteria are guided by the requirements that a green bond should be tracked within the issuer, that separate portfolios should be created when necessary and that a disclosure 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 on the use of bond proceeds and by using quantitative and/or qualitative performance indicators, where feasible.

Work Undertaken

DNV work constitutes a comprehensive review of the available information, based on the understanding that this information was provided by Hitz in good faith. DNV has not performed an audit or other tests to check the veracity of the information provided. The work undertaken to form DNV's opinion included:

Initial (Pre-Issuance) Assessment: *Not included in this report

- Creation of the Hitz-specific Protocol, adapted to the purpose of the Bond, as described above and in Schedule-2 to this Assessment;
- Assessment of documentary evidence provided by Hitz on the Bond and supplemented assessment by a comprehensive desktop research. These checks refer to current best assessment practices and standard assessment methodology;
- Discussions with Hitz, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

Periodic (annual) review * Contents of this report

- Evaluation of the supporting documents provided by Hitz related to the Bond, high-level desktop surveys, document reviews, and interviews with key personnel of the issuer. These checks refer to current best assessment practices and standard assessment methodologies;
- Interview with key personnel of the issuer and review of relevant documents;
- Field survey and inspection, if necessary;
- Review of the nominated projects and assets as at the time of periodic review;
- Documentation of findings for periodic review as detailed in this document.

The DNV's opinion statement (see below for details) summarises these.

Findings and DNV’s opinion

Principle One: Use of Proceeds.

DNV has confirmed that, as at the end of March 2023, part of the proceeds raised by Hitz (10 billion yen) had been allocated to the following project.

Mutsu Ogawara Onshore Wind Farm Project - 825 million yen allocated

Details of the Mutsu Ogawara onshore wind farm project are shown in Table-2. The project is carried by a joint venture between Hitachi Zosen Corporation, ITOCHU Corporation, with Hitachi Zosen as the construction contractor and the operation and maintenance management company after operation starts. DNV has confirmed that the project is progressing smoothly and that no significant delays are envisaged at this stage.

Table-2: Overview of Mutsu Ogawara onshore wind farm projects

Location	Rokkasho Village, Kamikita District, Aomori Prefecture
Targeted tasks	Design, construction and post-construction operation of onshore wind power facilities
Number of wind turbines	4.3 MW turbines × 15 units
Maximum output	57,000 kW
Completion of construction	Scheduled for April 2026
Status quo	Received an order for construction work and long-term operation and management services from Mutsu Ogawara Wind Power LLC. Ordered and manufactured various equipment and started foundation work.

Principle Two: Process for Project Evaluation and Selection.

DNV confirmed that the following project evaluation and selection process had been established within Hitz, and that it had been applied to the Bond, based on the evidence from the minutes of board meeting and other sources.

In evaluating and selecting the green projects, each responsible department implementing each eligible project and the Finance Department of Hitz confirmed that the project were eligible projects. Final approval for project selection was given by the Board of Directors, the highest decision-making body in business execution.

In addition, DNV confirmed that Hitz had targeted projects that met the following requirements.

- The environmental impact assessment by the country of residence or local government is carried out appropriately, if it's required.
- The overview of the projects is explained to the residents around the projects location and efforts are made to get the understanding of the projects from local residents.
- Making efforts in the equipment manufacturing process to decrease the environmental risks through management of emissions by setting voluntary standards and target values that are stricter than the law on the emission of pollutants to the environment.
- Strict adherence to work standards and reliable implementation of equipment inspection and maintenance so as to preventing the occurrence of environmental problems in business activities and minimizing environmental risks.
- Establishing response procedures to minimize pollution in the event of an environmental accident and conducting regular drills for the event of an abnormality or emergency.

Principle Three: Management of Proceeds.

DNV reviewed the evidence presented on how Hitz has managed the proceeds raised from the bond issuance to 31st March 2023.

DNV confirmed that the Finance Department of Hitz managed the proceeds by the number assigned to each eligible project and tracked the budget and actual expenditure in the internal control system in accordance with the stipulated cash management flow. DNV also confirmed that the allocation of proceeds was as shown in Table-3 and that unallocated proceeds were managed in cash or cash equivalents and that the allocation is expected to be completed by the end of FY2024.

As mentioned above, no assurance is provided regarding the financial performance of the green bond, the value of any investments, or the long-term environmental benefits of the transaction.

Table-3: Allocation status (as of 31st March 2023)

Green bond allocated amount	10,000 million yen
Allocated to investments in special purpose companies	825 million yen
Capital construction costs of power generation facilities	0 million yen
Unallocated balance	9,175 million yen

Principle Four: Reporting.

DNV has confirmed that Hitz plans to disclose the allocation status in Table-3 and the environmental benefits in Table-4 on the Hitz website. As the Mutsu Ogawara onshore wind farm project has not yet started operation, the environmental benefits are stated in the form of the planned maximum output, rather than CO₂ emission reductions.

Table-4: Environmental benefits

Mutsu Ogawara onshore wind farm project (Awaiting construction orders)	
Maximum output	57,000 kW (4.3 MW turbines × 15 units)

Assessment Conclusion

On the basis of the information provided by Hitz and the work undertaken, it is DNV's opinion that the Hitz green bond meets the criteria established in the Protocol and that it is aligned with the stated definition or purpose of green bond within the GBP and GBGLs, which is to "enable capital-raising and investment for new and existing projects with environmental benefits".

DNV Business Assurance Japan K.K.

29th September 2023



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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 Hitz Green Bond Allocated Project

Of the project categories listed in Schedule-1 under the Hitz Green Bond Framework, the proceeds have been allocated to onshore wind power project in the 2nd Hitz Green Bond. (No money was allocated to the greyed out areas.)

Project		Category	Project overview and Activities to be allocated		Contribution to SDGs
01	Energy-from-Waste	Pollution prevention and control	Energy-from-Waste facilities and equipment of energy-saving and emission saving type	Activities to be allocated : Capital investment and costs related to facility / equipment development, manufacturing, construction, installation, operation, and maintenance	 
02	Methane fermentation systems		Equipment that extracts biogas from solid organic waste such as food waste and pruned branches and converts it into energy (business example) Hitz Kompogas system, WTM system		 
03	Onshore and offshore wind power	Renewable energy	onshore and offshore wind power facilities.		 
04	Land aquaculture system	Environmentally sustainable management of living natural resources and land use	Land-aquaculture facilities and equipment that are implemented in consideration of reducing the environmental impact of marine-aquaculture while supplementing the sustainable use of natural resources.		 
05	Flap-Gate	Climate change adaptation	Flood disaster countermeasure equipment that requires no electricity or manual operation, using of the		  

			<p>power of nature itself such as tsunamis and storm surges. (Business example): neo RiSe, Seabed-type Movable Flap-Gate type Breakwater system</p>		
06	Hydrogen Generation System	<p>Circular economy adapted products, production technologies and processes</p>	<p>Equipment that generates hydrogen from electricity and water, and requires a sufficiently low amount of electricity and CO₂ emissions. (Business example): On-site type water electro-chlorination hydrogen generator Hydrospring</p>		