



ANNEX - SECOND PARTY OPINION

NYK LINE

NYK GREEN BOND (#2)

Prepared by: DNV Business Assurance Japan K.K.

Location: Kobe, Japan

Date: 29 March 2024

Ref. Nr.: PRJN-716481-2024-ANX-GB2-JPN-1

This opinion is prepared based on the NYK Green/Transition Finance Framework Second Party Opinion (hereinafter, "Master SPO") (Ref. Nr.: PRJN-258246-2021-AST-JPN-Rev.1 *25 January 2024), which was assessed against to the NYK Green/Transition Finance Framework (hereinafter, "Framework").

*For more information on the ANNEX - Second Party Opinion, see following DNV website

<https://www.dnv.jp/news/page-227965> Release of a new evaluation service (Master SPO+ANNEX).

Executive Summary

DNV Business Assurance Japan K.K. (hereinafter, "DNV") confirmed that the NYK Green Bond (#2) issued by Nippon Yusen Kabushiki Kaisha, also known as NYK Line (hereinafter, "NYK"), meets the various principles and guidelines requirements for such bond issuance and is planned to be issued and managed through appropriate internal processes based on the Framework^{*1}, which has been assessed its eligibility^{*2}.

*1: NYK Green/Transition Finance Framework

*2: NYK Green/Transition Finance Framework Second Party Opinion

Table-1 shows an outline of the NYK Green Bond (#2) and ANNEX - Second Party Opinion. The additional items to be assessed in the ANNEX - Second Party Opinion are Principle-1 (Use of Proceeds) and Principle-4 (Reporting) which are under the bonds with specific use of proceeds (response to the four principles), as well as opinion against the technical criteria of Climate Bonds Initiative (CBI). The conformity of the other principles to the criteria has already been assessed its eligibility in accordance with the Framework.

Table-1 NYK Green Bond (#2) ANNEX - Second Party Opinion

Target finance	NYK Green Bond (#2)	
Target organization	NYK Line	
Target framework	NYK Green/Transition Finance Framework	
Targeted external review	NYK Green/Transition Finance Framework Second Party Opinion Ref. Nr.: PRJN-258246-2021-AST-JPN-Rev.1 Issued on 25 January, 2024	
Target criteria	Criteria for the use of proceeds bond - Green Bond Principles (ICMA, 2021) - Green Bond Guidelines (MoE, 2022) - Shipping Criteria version 1b (CBI, 2020)	
Bonds with specific use of proceeds (response to the four elements)	Principle-1 (Use of proceeds)	- Confirmed reliance on Framework. Additional assessment was implemented as follows: - Ammonia-fuelled ammonia carriers
	Principle-2 (Process for project evaluation and selection)	- Confirmed reliance on Framework
	Principle-3 (Management of proceeds)	- Confirmed reliance on Framework
	Principle-4 (Reporting)	- Confirmed reliance on Framework. Additional assessment was implemented as follows. - Status of fund allocation: allocated, unallocated and refinanced amounts



- Environmental benefits: Number and specifications of ammonia-fuelled vessels

As an external reviewer, DNV assessed the NYK Green Bond (#2) in terms of the use of proceeds and reporting eligibility, based on an evaluation of the Framework and other relevant documents provided by NYK. DNV also confirmed that the other items are in accordance with the Framework.



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Revision history

Date of issue	Remarks
29 March 2024	Prepared and issued as NYK Green Bond (#2) ANNEX - Second Party Opinion

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

DNV has been commissioned by NYK to conduct a pre-issuance assessment of the NYK Green Bond (#2) to evaluate whether NYK meets the criteria for bonds with specified use of proceeds as defined in the GBP/GBGLs and to provide ANNEX - Second Party Opinion regarding the eligibility of the Green Bond.

As an independent external reviewer, DNV declares that it has no factual or perceived conflict of interest in providing ANNEX - Second Party Opinion for NYK.

Furthermore, this report does not provide any assurances regarding the financial performance, value of any investments, or the long-term environmental benefits of any Green Bonds issued under this Framework.

(1) Scope of review *

The review assessed the following elements and confirmed their alignment with four core elements in GBP.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Use of proceeds | <input type="checkbox"/> Process for Project Evaluation and Selection |
| <input type="checkbox"/> Management of proceeds | <input checked="" type="checkbox"/> Reporting |

* DNV has already reviewed "Process for Project Evaluation and Selection" and "Management of Proceeds" of GBP/GBGLs and has delivered our opinion below.

"NYK Green/Transition Finance Framework Second Party Opinion"

Ref. Nr.: PRJN-258246-2021-AST-JPN-Rev.1 Issued 25 January, 2024

(2) Role(s) of review provider

- | | |
|---|--|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Ratings |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

(3) Standards/guidelines to be applied

No.	Standards/guidelines	Scheme owner
1.	Green Bond Principles (GBP)	International Capital Market Association (ICMA), 2021
2.	Green Bond Guidelines (GBGLs)	Ministry of the Environment, 2022
3.	Shipping Criteria version 1b (sector technical criteria)	Climate Bonds Initiative (CBI), 2020



II. Responsibilities of NYK and DNV

NYK has provided the information and data used by DNV in this review. DNV's ANNEX - Second Party Opinion represents an independent opinion and is intended to inform NYK and its stakeholders as to whether the NYK Green Bond (#2) meets the established criteria, based on the information provided to us. In our work we have relied on the information and facts presented to us by NYK. DNV is not responsible for any aspect of the nominated projects and assets referred to in this opinion and assumes no responsibility for any inaccuracies in any facts, findings, opinions or conclusions. Thus, DNV shall not be held liable if any of the information or data provided by NYK and used as a basis for this assessment was not accurate or complete.



III. Basis of DNV's Opinion

To provide a more flexible ANNEX - Second Party Opinion for the issuer, NYK, DNV identified the key assessment targets and carried out assessments in accordance with its procedures.

DNV, as an independent external reviewer, provides ANNEX - Second Party Opinion according to the protocol.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle behind the Green Bond with a use of proceeds bond as the basis for the opinion are as follows:

"enable capital-raising and investment for new and existing projects with environmental benefits"

As per our Protocol, the criteria against which the NYK Green Bond (#2) has been grouped into the four common elements of GBP/GBGLs, as shown below.

The additional assessment for this ANNEX - Second Party Opinion covers Principle 1 and 4 out of the four common elements of GBP/GBGLs.

Principle 2 and 3 have already been assessed for eligibility. Detailed results of the eligibility assessment can be found in the "NYK Green/Transition Finance Framework Second Party Opinion" (Ref. Nr.: PRJN-258246-2021-AST-JPN-Rev.1 25 January, 2024).

(1) Four elements of GBP/GBGLs

Principle One: Use of proceeds **Subject to additional assessment of ANNEX – Second Party Opinion*

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: Proceeds 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 the proceeds from green bond, 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 green bond should be tracked within the issuing 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 **Subject to additional assessment of ANNEX - Second Party Opinion*

The Reporting criteria are guided by the recommendation that at least Sustainability Reporting to the bond investors should be made of the use of bond 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 (ANNEX - Second Party Opinion)

- Assessment of additional documentary evidence provided by NYK on this Bond and supplemented assessment by a comprehensive desktop research. These checks refer to current assessment best practices and standards methodologies;
- Discussions with NYK, and review of relevant documentation;
- Documentation of findings against each element of the criteria to be additionally assessed.

ii. Post-issuance assessment (periodic review) (not included in this report*)**

- Interviews with NYK managers and review of relevant documentation;
- Site surveys and inspections (if required);
- Documentation of post-issuance assessment results.



V. Findings and DNV's Opinion

DNV's findings and opinion are as described below. Please see Schedule-1 for details.

GBP•GBGLs-1. Use of Proceeds

NYK has defined the criteria applied to eligible projects as green projects which meet relevant frameworks (GBP and GLGLs) and technical criteria such as CBI.

The proceeds of the NYK Green Bond (#2) will be used for the R&D and construction of ammonia-fuelled ammonia carriers. Please see Schedule-1 for details.

The R&D and construction of ammonia-fuelled ammonia carriers as a use of green bond proceeds is a green eligible project that is aligned with the NYK Green/Transition Finance Framework and the NYK Group ESG Story 2023, and is expected to meet the CBI technical criteria.

The maximum amount of proceeds of the NYK Green Bond (#2) is expected to total JPY 10 billion. DNV confirmed at the time of this assessment that the proceeds will be used for new investments and partly as refinancing. The actual allocation results will be reported on an annual basis in accordance with GBP/GBGLs-4.Reporting.

Project: Partial funding for the R&D and construction of ammonia-fuelled ammonia carriers

- The R&D and construction of ammonia-fuelled ammonia carriers is a green project that is essential to achieving the 2050 Net Zero target set out in the "NYK Group ESG Story 2023." The NYK Group ESG Story sets a plan to accelerate initiatives to reduce GHG emissions from 2030 onwards with alternative fuels (see Figure-1). The development, construction, and operation of ammonia-fuelled vessels are essential to accelerating GHG emissions reduction with alternative fuels (see Figure-2).

Scope 1+2

Gradually Evolving Initiatives Based on Two Tactics

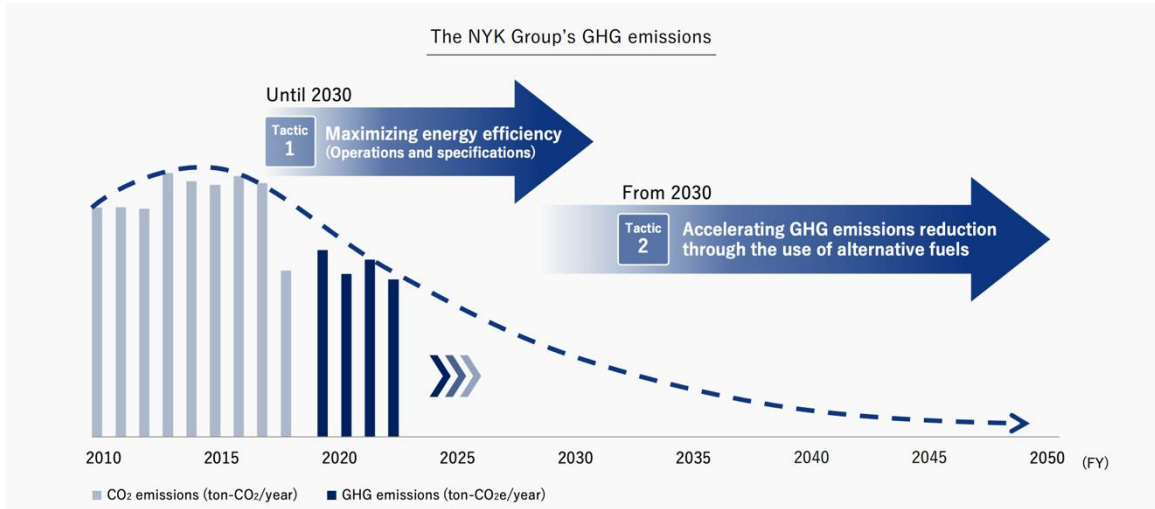


Figure-1 Two tactics to reduce GHG emissions

(Source: NYK Group ESG Story 2023)

Scope 1+2

Tactic 2: Accelerating GHG Emissions Reduction through the Use of Alternative Fuels

From 2030, build a resilient fleet portfolio by steadily introducing alternatively fueled vessels that also mitigate environmental impacts other than GHG emissions

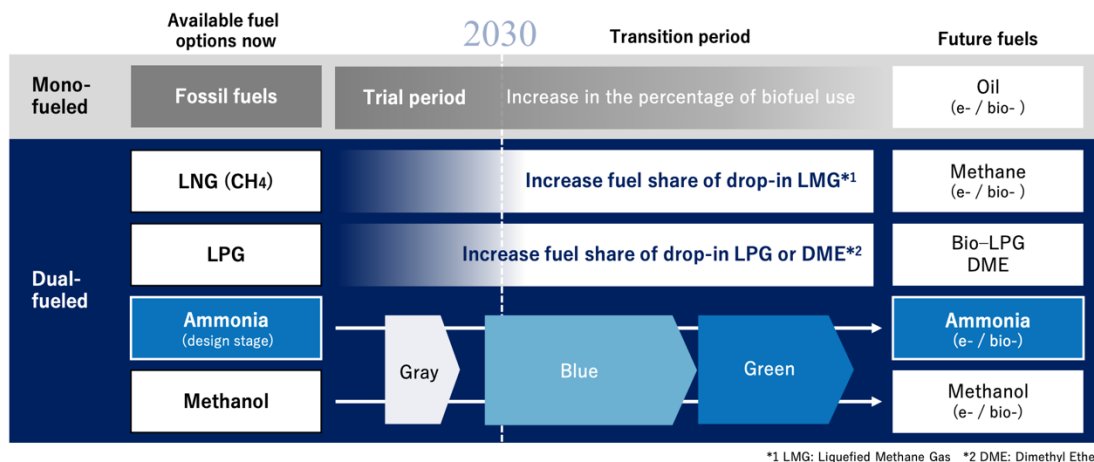


Figure-2 Accelerating GHG emissions reduction through the use of alternative fuels

(Source: NYK Group ESG Story 2023)



Figure-3 Ammonia-fuelled ammonia carrier (image)

- The ammonia-fuelled ammonia carrier is expected to be completed by the end of November 2026, while the project period, including the establishment of related technology, is scheduled from January 2022 to around March 2028.

Table-2 Summary ammonia-fuelled ammonia carriers

Project Name:	Ammonia-fuelled ammonia carriers (AFMGC*¹)
Estimated allocation:	Approx. JPY 10 billion
Total length:	180.00 m
Mould width:	32.00 m
Mould depth:	18.45 m
Loading capacity:	Approx. 40,000 m ³
Gross tonnage:	Approx. 30,000 tonnes
Scheduled completion:	End of November 2026
Estimated environmental benefits:	Main engine: Maximum 95% co-firing rate Auxiliary engine: At least 80% co-firing rate Aim for a GHG reduction rate of at least 80% for the vessel as a whole.

*1 AFMGC: Ammonia-fuelled Medium Gas Carrier



- Ammonia-fuelled ammonia carriers are currently in the research and development phase towards realization, a summary of which is given in Table-2. Based on the testing of the main and auxiliary engines using demonstration equipment or actual equipment, DNV has confirmed that the required technical criteria are likely to be met throughout the term of this Bond by the CBI technical criteria (Shipping Criteria version 1b). Furthermore, considering that ammonia-fuelled ammonia carriers are currently in the development phase of the planned ammonia co-firing technology, further GHG emission reductions could be achieved through further technological developments.
- The target project is dual-fuelled vessels (fuel oil and ammonia), and is designed to allow for future conversion of fuel oil to biofuel and ammonia to blue or green ammonia etc. DNV has confirmed that the vessel is planned to consistently meet the CBI technical criteria throughout the expected operational life of vessels.

Based on the information provided by NYK, DNV has confirmed that the target project meets GBP, GBGLs, and the relevant CBI technical criteria.

GBP•GBGLs-4. Reporting

DNV confirmed that NYK will report (annual reporting) on the Green Bond (#2) until the proceeds are fully allocated, and disclose information on the status of the allocation, the projects to which the proceeds have been allocated or the environmental benefits on the issuer’s website.

DNV confirmed that, even after allocation have been completed, NYK plans to report any major changes in the allocation plan or project implementation status, in a timely manner in NYK’s reporting.

<Allocation status>

- Allocated amount
- Balance of unallocated amount
- Approximate amount of the proceeds allocated for refinancing

<Environmental benefits> * Any or all of the following will be disclosed

Project		Reporting item
01	Offshore Wind Power	<ul style="list-style-type: none"> • Introduction record (number of vessels) and specifications of SEP and CTV • Location, cardinal numbers and capacity (kW) of introduced offshore wind power generation
02	Green Terminal	<ul style="list-style-type: none"> • Cardinal numbers and capacity (kW) of introduced wind power generation • Capacity of Solar PVs (kW)
03	Ammonia fuelled vessel	<ul style="list-style-type: none"> • Numbers and main specifications of ammonia fuelled vessels
04	Hydrogen fuelled cell vessel	<ul style="list-style-type: none"> • Numbers and main specifications of Hydrogen fuelled cell vessels
05	LNG fuelled vessel	<ul style="list-style-type: none"> • Number and main specifications of LNG fuelled vessels • GHG emissions (mt/vessel/year) • GHG • CO₂ • SO_x • NO_x emission reduction amount or ratio compared to the case of using HFO (heavy fuel oil)
06	LNG fuel supply vessel	<ul style="list-style-type: none"> • Number and main specifications of LNG fuel supply vessels • GHG emissions (mt/vessel/year) • GHG • CO₂ • SO_x • NO_x emission reduction amount or ratio compared to the case of using HFO (heavy fuel oil)
07	LPG fuelled vessel	<ul style="list-style-type: none"> • Number of LPG fuelled vessels • Main specifications • GHG emissions (mt/vessel/year) • GHG • CO₂ • SO_x • emission reduction amount or ratio compared to the case of using HFO (heavy fuel oil)
08	Operation efficiency & optimization	<ul style="list-style-type: none"> • GHG / CO₂ / SO_x / NO_x emission reductions or ratios before and after the introduction of equipment and systems compared to standard operations

Use of Proceeds reporting:

- | | | | |
|-------------------------------------|-------------------------------|--------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | Project-by-project | <input type="checkbox"/> | On a project portfolio basis |
| <input type="checkbox"/> | Linkage to individual bond(s) | <input type="checkbox"/> | Other (<i>please specify</i>): |

Information reported:

- | | | | |
|-------------------------------------|----------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | Allocated amounts | <input type="checkbox"/> | GB refinanced share of total investment |
| <input type="checkbox"/> | Other (<i>please specify</i>): | | |

Frequency:

- | | | | |
|-------------------------------------|----------------------------------|--------------------------|-------------|
| <input checked="" type="checkbox"/> | Annual | <input type="checkbox"/> | Semi-annual |
| <input type="checkbox"/> | Other (<i>please specify</i>): | | |

Impact reporting (Environmental Impact):

- | | | | |
|-------------------------------------|-------------------------------|--------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | Project-by-project | <input type="checkbox"/> | On a project portfolio basis |
| <input type="checkbox"/> | Linkage to individual bond(s) | <input type="checkbox"/> | Other (<i>please specify</i>): |

Frequency:

- | | | | |
|-------------------------------------|----------------------------------|--------------------------|-------------|
| <input checked="" type="checkbox"/> | Annual | <input type="checkbox"/> | Semi-annual |
| <input type="checkbox"/> | Other (<i>please specify</i>): | | |

Information reported (expected or ex-post):

- | | | | |
|-------------------------------------|---|--------------------------|--|
| <input checked="" type="checkbox"/> | GHG Emissions / Savings | <input type="checkbox"/> | Energy savings |
| <input checked="" type="checkbox"/> | Other ESG indicators (<i>please specify</i>): | | Number and specifications of ammonia-fuelled vessels |

Means of Disclosure:

- | | | | |
|--------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | Information published in financial report (Integrated Report) | <input type="checkbox"/> | Information published in sustainability report |
| <input type="checkbox"/> | Information published in ad hoc documents | <input checked="" type="checkbox"/> | Other (please specify): on NYK website |
| <input type="checkbox"/> | Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review) | | |



VI. Assessment Conclusion

On the basis of the information provided by NYK and the work undertaken, it is DNV's opinion that the NYK Green Bond (#2) meets the criteria established in the Protocol, and that is aligned with the following stated definition or purpose of Green Bonds that specify the use of proceeds within the GBP/GBGLs:

"enable capital-raising and investment for new and existing projects with environmental benefits"

DNV Business Assurance Japan K.K.

29 March 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 NYK Green Bond (#2) Eligible Projects

Category ^{*1}	Project ^{*1}	Project Name	Project Overview				Expected Environmental Benefits
			Target for Allocation	Total length / Mould width / Mould depth	Loading capacity / Gross tonnage	Scheduled Completion	
Ammonia-fuelled vessel	Expenditure on ammonia gas carriers mainly fuelled by ammonia (incl. capital investment, research and development, business development and operations, working capital)	Ammonia-fuelled ammonia carriers (AFMGC)	Partial funding for the R&D and construction	180.00 m / 32.00 m / 18.45 m	Approx. 40,000 m ³ / Approx. 30,000 mt	Scheduled for the end of November 2026	Main engine: Maximum 95% co-firing rate Auxiliary engine: At least 80% co-firing rate Aim for a GHG reduction rate of at least 80% for the vessel as a whole.
							

*1: Excerpted from the NYK Green/Transition Finance Framework