



SECOND PARTY OPINION

NYK LINE DNV TRANSITION BOND PERIODIC REVIEW #1

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Location: Kobe, Japan
Date: July 21, 2022

Ref. Nr.: PRJN-258246-2021-AST-JPN-PR01

Publication History

Date of Issue	Remarks					
July 1, 2021 Green/Transition Bond Framework & Transition Bond Second Party Opinion						
July 21 2022	Transition Bond Periodic Review #1					
July 21, 2022	(NYK's 43rd unsecured bond and NYK's 44th unsecured bond)					



Scope and Objectives

Nippon Yusen Kabushiki Kaisha (hereinafter 'NYK') has engaged DNV Business Assurance Japan (hereinafter "DNV") to conduct a periodic review of the NYK Transition Bonds (NYK 43rd Unsecured Bond and NYK 44th Unsecured Bond. Hereinafter 'the Bonds'). The purpose of the periodic review by DNV is to ensure that the Bonds comply with the Climate Transition Finance Handbook (International Capital Market Association (ICMA) 2020; hereinafter, 'CTFH'), the Basic Guidelines on Climate Transition Finance (FSA, METI and MOE 2021; hereinafter 'CTFBG'), Green Bond Principles (ICMA 2021; hereinafter 'GBP') and Green Bond Guidelines (MOE 2020; hereinafter 'GBGLs'), which are the standards described below, and to provide an independent second party opinion on the eligibility of the Bonds.

NYK issued the Bonds on July 29, 2021. The issue amount of the Bonds is 20 billion yen. DNV's review team conducted the first periodic review under the CTFH, CTFBG, GBP and GBGLs during the period between July 2021 and May 2022.

DNV confirmed that NYK's approach to climate transition has been updated as ESG Story 2022, with the 2050 target and investment plan added and changed to ensure transparency in further transition efforts. DNV also confirmed that there was no major change to disclosure element 2 and 3.

- Disclosure element 1: Fundraiser's climate transition strategy and governance: 2050 target revised upwards from 50% reduction to net zero.
 - Fuel conversion timelines enlarged from car carriers to all types of vessels.
- Disclosure element 4: Transparency of the basic investment plan:
 Disclosure of a total investment of 4.8 trillion yen for the period 2022-2050.
 - Of this, investments in zero-emission vessels amounted to 2.1 trillion yen.

This report provides a periodic review of the requirements of transition bonds with specific use of proceeds (elements -1 to -4, as described 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 NYK.

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





Standards/guidelines to be applied

No.	Standards/guidelines	Scheme owner	Applied level*1*2
1.	Climate Transition Finance Handbook (CTFH)	International Capital Market Association (ICMA), 2020	Apply
2.	Basic Guidelines on Climate Transition Finance (CTFBG)	Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021	Apply
3.	The Green Bond Principles (GBP2021)	International Capital Market Association (ICMA), 2021	Apply
4.	Green Bond Guidelines (GBGLs2020)	Ministry of Environment, 2020	Apply
5.	Climate Bonds Standard version 3.0 (CBSv3.0) (Sector criteria)	Climate Bond Initiative, 2019	Refer (applicable technical standards)
6.	Green and Social Bonds: A High-Level Mapping to the Sustainable Development Goals	International Capital Market Association (ICMA), 2020	Refer
7.	Handbook Harmonized Framework for Impact Reporting	International Capital Market Association (ICMA), 2021	Refer

^{*1:} Apply: Eligibility for all 4 elements to each handbook, principle and guideline was evaluated

^{*2:} Refer: All or part of the related content was considered based on the applicable project and execution plan



Responsibilities of NYK and DNV

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

In its work DNV has relied on the information and the 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 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 NYK's management and used as a basis for this assessment were not correct or complete.



Basis of DNV's Opinion

To provide as much flexibility for the issuer, NYK, as possible, we have adapted our green/transition bond assessment methodologies, which incorporate the requirements of the CTFH, CTFBG, GBP and GBGLs to create a NYK Green/Transition Bond Eligibility Assessment Protocol (hereinafter "Protocol"). The Protocol is applicable to CTFH, CTFBG, GBP and GBGLs based green/transition bonds.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle and guidelines behind the criteria are that a green bond should "enable capital-raising and investment for new and existing projects with environmental benefits" and that transition bonds should "provide the investment opportunities necessary for climate transition finance to be carried out transparently and credibly."

DNV conducted a periodic review applying the following four elements in relation 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 transition finance (with specific use of proceeds) must use funds raised to finance eligible activities. The eligible activities should produce clear environmental benefits.

• Principle Two: Process for Project Evaluation and Selection

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 transition finance proceeds 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 (with specific use of proceeds) 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 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.



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:

Initial (pre-issue green/transition bond) assessment *Not included in this report

- Creation of the issuer-specific Protocol for application to finance.
- Assessment of documentary evidence provided by the issuer on the Bonds and supplemented assessment by a high-level desktop research. These checks refer to current assessment best practices and standards methodology.
- Discussions with the issuer, and review of relevant documentation.
- Documentation of findings against each element of the criteria.

Periodic (annual) review * Contents of this report

- Review of evidence documentation provided by the issuer in relation to green/transition bond execution, supplemented by high-level desktop research, document review and interviews with key personnel. These checks refer to current best practices of evaluation and standard methodologies.
- Discussion with issuer management and review of relevant document controls.
- Field research and inspections (if required).
- Review of covered projects and assets at the time of periodic review.
- Documentation of periodic review observations, as detailed in this document.

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



Findings and DNV's Opinion

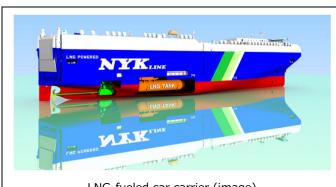
• Principle One: Use of Proceeds

DNV has confirmed that as of May 2022, the funds raised by NYK (JPY 20 billion) have been fully allocated to the following projects.

1. Part of the funds for the construction of two LNG-fueled Pure Car Carriers (PCCs) - 11.6 billion Yen allocated

An overview of the LNG-fueled vessels is as follows. DNV confirmed that one of the LNGfueled PCCs has been in service since March 2022 and is operating without any problems. DNV also confirmed that the construction of the remaining vessel is progressing as planned.

Table - 1: Overview of LNG-fueled vessels



LNG-fueled car carrier (image)

<Overview of vessel>.

Gross tonnage: approx. 73,500 tonnes

Fuel: LNG

Length overall: approx. 199.5 m

Breadth: approx. 38.00 m

Total car capacity: approx. 7,000 units

<Environmental benefits>.

Compared to conventional vessels of the same size, it is designed to significantly

reduce CO2



2. Part of the funds for the construction of two LPG-fueled Very Large Gas Carriers (VLGCs) ... 8.4 billion Yen allocated.

The following is an overview of the LPG-fueled vessels. DNV has confirmed that the construction of the two LPG-fueled VLGCs is progressing as planned.

Table - 2: Overview of LPG-fueled vessels



<Overview of vessel>.

Gross tonnage: approx. 50,700 tonnes

Fuel: LPG

Length overall: approx. 230.00 m Breadth: approx. 37.20 m Tank Capacity: 84,000 m³

<Environmental benefits>
Compared to conventional vessels of the same size, it is designed to significantly reduce CO₂

Principle Two: Process for Project Evaluation and Selection

During evaluation and selection process of the transition project by NYK, DNV confirmed that the transition project met the eligibility criteria and did not conflict with the pre-defined exclusion criteria in the Framework.

- Unfair transactions that do not comply with the laws and regulations of the country, such as bribery, corruption, blackmail, embezzlement, etc.
- Transactions that can cause social problems relate to human rights and the environment

As part of the specific evaluation and selection process, DNV confirmed that projects were evaluated and selected by the Environment Group, the Technical Group and the Finance Group based on a comprehensive analysis of the financial, technical and market environmental aspects, with the final decision made by the finance officer.

DNV also confirmed that, in the operation and implementation of the project, NYK was working on the conservation of the surrounding environment in each related department, which the company regularly monitors in the PDCA cycle.



• Principle Three: Management of Proceeds

DNV reviewed the evidence presented on how NYK managed the funds raised from the issuance of the Bonds until May 2022.

DNV confirmed that the proceeds were credited to the NYK Group's account, and then the Finance Group managed the allocation for each project using the following internal system and internal control process.

- The Finance Group registered and managed in a predetermined internal system based on the report of the allocation status to eligible projects from the business division. Allocation status was identified for each eligible project.
- As an internal control process, the Finance Group organized the allocation status annually and reported it to the Chief Financial Officer (CFO) for approval.

DNV also confirmed that the entire amount of funds raised had been completely allocated by May 2022.

As noted earlier, no assurance is provided regarding the financial performance of the Bonds, the value of any investments in the Bonds, or the long-term environmental benefits of the transaction.

Table - 3: Status of Funds allocated

Transition Project	Allocation amount	
Part of the funds for the construction	11.6 billion Yen	
of LNG-fueled PCCs	11.0 billion fen	
Part of the funds for the construction	8.4 billion Yen	
of LPG-fueled VLGCs		
Total allocation	20 billion Yen	
(Refinancing amount)	(6.9 billion Yen)	



• Principle Four: Reporting

DNV confirmed that the allocation of funds in Table-3 and the environmental benefits in Table-4 were disclosed on the NYK website. The Framework states that reporting is until the full amount of funds raised has been allocated, and as the funds were fully allocated in May 2022, there are no plans to disclose this information beyond next year. However, DNV confirmed that once the construction of all LNG- and LPG-fueled vessels to which the funds were allocated has been completed, this will be disclosed separately on the NYK website.

Table - 4 Environmental benefits

LNG-fueled vessels (2 vessels)								
GHG emissions	36,580 mt / vessel / year							
CO ₂ reduction rate	28%							
NOx reduction rate	75%							
SOx reduction rate	99%							
LPG-fueled vessels (2 vessels)								
GHG emissions	36,980 mt / vessel / year							
CO ₂ reduction rate	15%							
SOx reduction rate	99%							

Even though one of the LNG-fueled vessels was completed in March 2022 and is operating smoothly, all the above environmental effects are theoretical because sufficient data is not yet available.





DNV Statement of Opinion

On the basis of the information provided by NYK and the work undertaken, it is DNV's opinion that NYK Transition Bonds meet the criteria established in the Protocol and that it is aligned with the stated definitions or purposes of green/transition bonds within the CTFH, CTFBG, GBP and GBGLs, which are to "enable capital-raising and investment for new and existing projects with environmental benefits" and "provide an investment opportunity with transparent sustainability credentials."

DNV Business Assurance Japan K.K.

July 21, 2022

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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 checklists below (GBP-1 \sim GBP-4) are DNV assessment procedures developed for NYK green/transition bond eligibility assessments, based on Green Bond Principles 2021.

GBP-1 Use of Proceeds

Ref.	Criteria	Requirements	Work Undertaken (items checked)	DNV Findings
1a	Type of funds	The types of green bonds are classified into one of the following types defined by GBP. · (Standard) Green/transition bond · Green/transition revenue finance · Green/transition project finance · Other	Confirmed documents -Framework -NYK green/transition project document Interviews with stakeholders	Through the evaluation work, DNV confirmed that NYK green/transition bonds fall into the following category. • (Standard) Green/transition bond
1b	Green/transition project classification	The key to a green/transition bond is that the proceeds will be used for a green project, which should be properly stated in the legal documents relating to the security.	Confirmed documents -Framework -NYK green/transition project document Interviews with stakeholders	DNV confirmed that NYK green/transition bond aimed to fund a wide range of green/transition projects focused on the NYK Group's environmental goals, as described in Framework. All green/transition candidate projects were evaluated as conforming with the transition strategy, and the proceeds through the green/transition bonds were allocated to green/transition candidate projects. The specific projects to which funds were allocated are project classifications 05 'LNG Fueled Vessel' and 07 'LPG Fueled Vessel', both in the category 'Fuel Conversion'. Through the assessment, DNV concludes that the green/transition candidate projects will bring concrete and actual environmental benefits.



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Ref.	Criteria	Requirements	Work Undertaken (items checked)	DNV Findings			
1c	Environmental benefits	All green 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.	Confirmed documents -Framework -NYK green/transition project documents Interviews with stakeholders	Project classification O1 Offshore wind power O2 Green Terminal O3 Ammonia fueled vessel O4 Hydrogen fueled cell vessel O5 LNG fueled vessel O6 LNG fuel supply vessel O7 LPG fueled vessel O8 Operation efficiency & clean transportation O9 The green/transition project contributed to the goals based on the NYK Group's transition strategy and had environmental benefits such as CO2 emission reduction through low carbonization and category shown in 1b. It was confirmed that the environmental benefits were quantitatively evaluated as the amount of CO2 emission reduction and reported annually.			
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, if necessary. Therefore, it is recommended to clarify which investment or project portfolio is subject to refinancing.	Confirmed documents -Framework -NYK green/transition project documents Interviews with stakeholders	DNV confirmed that the issuer allocated all proceeds for new investment and refinancing for eligible candidate projects. Through the annual report, NYK clarified the estimated amount of the proceeds that was allocated to refinancing.			



GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements/Contents	Work Undertaken (items checked)	DNV Findings
2a	Project selection process	Green bond issuers should provide an overview of the process of qualifying projects for which green bond funding will be used. This includes (but is not limited to): • The process by which the issuer determines that the project in question is included in the business category of a qualified green project • Creation of criteria for eligibility of projects for which green bond funding will be used • Environmental sustainability goals	Confirmed documents -Framework -NYK green/transition bond selection / evaluation procedure Interviews with stakeholders	DNV confirmed that the issuer had a process of evaluating the eligibility of the projects. Green/transition projects were evaluated and selected based on the process.
2b	Issuer's environment al and social governance framework	In addition to criteria and certifications, the information published by issuers regarding the green bond process also considers the quality of performance of the issuer's framework and environmental sustainability.	Confirmed documents -Framework -NYK green/transition bond selection / evaluation procedure Interviews with stakeholders	DNV confirmed that the green/transition projects carried out by the issuer are consistent with their management and environmental policies and with the transition strategies, goals and routes. DNV also confirmed that, in the operation and implementation of the project, NYK was working on the conservation of the surrounding environment in each related department, which the company regularly monitors in the PDCA cycle.



GBP-3 Management of Proceeds

Ref.	Criteria	Criteria Requirements/Contents Work Undertaken (items checked)		DNV Findings		
3a	Tracking procedure-1	The net proceeds from green bonds should be managed in sub-accounts, included in a 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 Green Project.	Confirmed documents -Framework -Accounting management rules, accounting management system Interviews with stakeholders	The proceeds from the funds raised by the green/transition bonds were incorporated into the common account of the issuer, and the status of fund allocation on a project-by-project basis was tracked using the in-house system, forms, etc. DNV confirmed the system actually used and related documents, etc., and confirmed that the management status of the proceeds was proved based on them.		
3b	Tracking procedure-2	During the green 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.	Confirmed documents -Framework -Accounting management documents Interviews with stakeholders	DNV confirmed that the issuer periodically (annually) reviewed the balance of green/transition bonds using the inhouse system / forms described in 3a during the period from issuance to redemption of green bonds.		
3c	Temporary holding	If no investment or payment has been made in a qualified green project, the issuer should also inform the investor of the possible temporary investment method for the balance of unallocated proceeds.	Confirmed documents -Framework -Accounting management documents Interviews with stakeholders	Through the confirmation process based on the issuer's inhouse system / form and related business flow, it was confirmed that the balance of unallocated funds was recognized sequentially. DNV confirmed that the balance of unallocated funds was managed in cash or cash equivalents. DNV also confirmed that all funds were fully allocated as of May 2022. Thus, there are no unallocated funds left.		



GBP-4 Reporting

Ref.	Criteria	Require	ements/Contents		Work Undertaken (items checked)	DNV Findings			
4a	Periodic reporting 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 green bond proceeds have been allocated, taking into account the following: A list of each project should be provided. -Confidentiality and competitive considerations -Outline of each project, expected sustainable environmental and social effects		Confirmed documents -Framework -NYK green/transition project documents	DNV confirmed that the issuer carried out an annual reporting of green/transition bonds until the proceeds were allocated. DNV also confirmed that NYK disclosed information on the status of allocation of funds, the projects to which the funds have been allocated and environmental benefits <fund allocation="" status=""> -Allocation amount -Approximate amount of the portion of the proceeds allocated for refinancing <environmental benefits=""> -LNG-fueled vessels: number of vessels, GHG emissions, CO₂ reduction rate, NOx reduction rate, SOx reduction rate -LPG-fueled vessels: number of vessels, GHG emissions, CO₂ reduction rate, SOx reduction rate</environmental></fund>					
			(The recipi	Table: Green/transition project environmental benefits (The recipients of this funding allocation are highlighted in yellow. Disclosure of environmental benefits is as above)					
		No			Project classification	,	Record of equipment introduced (Capacity, cardinal number, number of vessels)	GHG, CO ₂ emission reduction amount	Sox, NOx emission reduction amount
		01 Offshore Self Elevating Platform (SE Crew Transfer Vessel (CTV					√ *1*2	_	_
		02	Green Terminal	New est	tablishment and expansion of	f Green Terminal	√ *²	_	_
		03 Ammonia fueled Ammonia-based liquefied amn					√ *3	_	-
		04	Hydrogen fueled cell vessel	Introduction fueled control	ction of ships equipped with lells	high-power hydrogen	√ *3	_	_

05 LNG fueled vessel LNG fueled vessel *excluding fossil fueled transportation



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Ref.	Criteria	Requirements/Contents			Work Undertaken (items checked)	DNV Findings			
		06 LNG fuel supply vessel LNG bunkering vessel					√ *³	√ *4	√ *5
		07	LPG fueled vessel	LPG fue	led vessel		✓ *3	✓ *4	✓ * ⁵
		08	Operation efficiency & optimization		re development, etc. that sup cy and optimization	ports operational	-	√ ∗ ⁶	√ * ⁵
		* 2 * 3 * 4 * 5	 : Number of units an generation introduce : Number and main seed of the control of t	d power go ced specification reduction sion reduction NOx emission	of vessels) and specifications generation capacity (MW) of the one of vessels built according a mount or ratio compared tion amount or ratios compared sion reduction amount or ratios.	the offshore wind power get to the project classification to the case of using heavy red to the case of using he	n oil as fuel (Including planne avy oil as fuel (Excluding No	ed values) Ox for LPG-fueled	d vessels)