HYUNDAI HEAVY INDUSTRIES

Hyundai Heavy Industries

Green Bond Allocation and Impact Report

March 2023

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1. Background of Hyundai Heavy Industries

Hyundai Heavy Industries Co. Ltd. (Hereinafter called the "HHI") is the world's number one shipbuilder, leading the global shipbuilding industry.

HHI has a global business network in each of its key business units: Shipbuilding, Offshore and Engine & Machinery.

- **Shipbuilding** – With over 40 years of experience and know-how in building vessels, diverse product lines, and strong business relationships with world-class shipping companies, HHI has a long maintained reputation as an unparalleled leader in this industry, benefitting from advanced technologies in the fields of eco-friendly ships and smart ships. The Hyundai Heavy Industries shipyard stretches over four kilometers along the coast of Mipo Bay in Ulsan, Korea. The Shipbuilding Division is capable of building all types of ships to meet various demands from its clients. It has ten large-scale drydocks with nine huge 'Goliath Cranes'. Since the shipyard's groundbreaking in 1972, HHI's Shipbuilding Division has garnered many awards and set many records within the shipbuilding industry. The Business Unit reached the 100 million Dead Weight Tonnage (DWT) production mark in 2005 and 200 million DWT in 2017. It had delivered more than 2,300 ships to 324 shipowners in 52 countries until 2022.
- **Offshore Engineering –** HHI designs, purchases, manufactures, transports, installs and test-runs marine facilities and offshore installations. Since 1991, Offshore Division of Shipbuilding & Offshore Business Unit has become a world leading EPCIC contractor providing integrated services such as Engineering, Procurement, Construction, Transportation, Installation, Offshore Hook-up and Commissioning, and Project Management. Offshore Division of Shipbuilding & Offshore Business Unit has successfully completed more than 170 projects including over 100 EPCIC projects in turn-key basis and has been recognized as one of the most experienced and advanced offshore yards in the world. The range of products and services covers FPSOs, FLNGs, FPUs, semisubmersibles, jack-ups, TLPs, fixed platforms, subsea pipelines, and land-based LNG and processing modules.
- **Engine & Machinery –** HHI manufactures large/mid-sized engines for vessels and mid-sized engines for power generation, with a share of 36% in the global market for large engines and 28% for mid-sized engines, which combine to place HHI in first place in global market dominance. HHI is the only Korean engine maker with its own original technology to manufacture mid-sized engines and plans to expand its eco-friendly equipment business such as gas engines, in active response to International Maritime Organization (IMO)'s tightened environmental regulations. HHI-EMD has also developed its own engine brand HiMSEN, which is specially designed as part of the ongoing efforts to provide the most practical and highest quality engines to our customers. The business activities of HHI-EMD have been further expanded into diverse fields of marine machinery such as marine pumps & turbines, ballast water treatment system and LNG gas solutions

2. Hyundai Heavy Industries Sustainable Finance Framework[1]

In March 2022, Hyundai Heavy Industries set up a Sustainable Finance Framework, under which the issuer can issue Green Bonds, Loans and other debt instruments ("Green Financing Instruments").

The Sustainable Finance Framework is aligned with the green finance principles listed below:

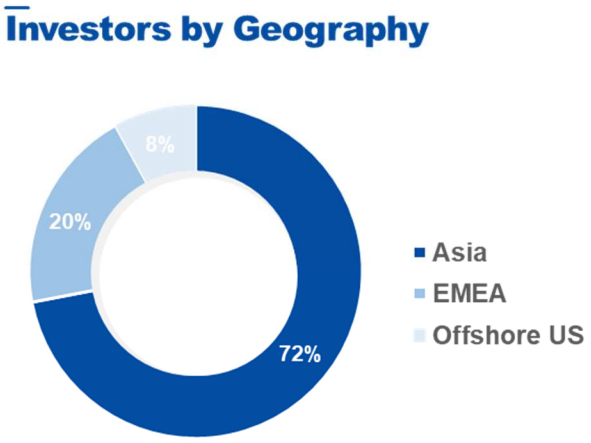
- International Capital Market Association ("ICMA") Green Bond Principles ("GBP") 2018[2],
- ASEAN Green Bond Standards ("GBS"), issued by the ASEAN Capital Markets Forum (ACMF) in October 2018[3], and/or
- Loan Market Association ("LMA") Green Loan Principles ("GLP") 2021[4]

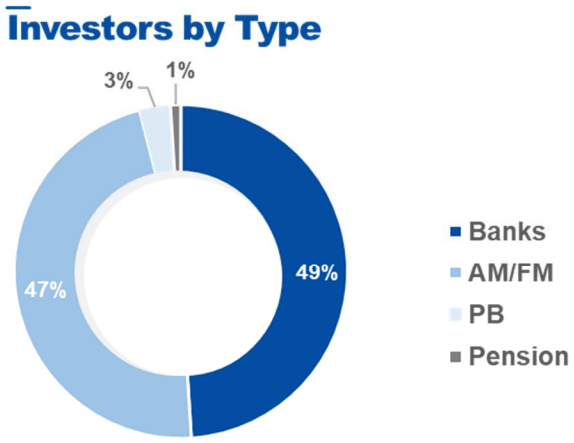
The Framework obtained a Second Party Opinion from DNV GL, which confirmed that the Framework is credible and impactful and aligns with the four core components (Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, Reporting)

[1] Link to HHI's Sustainable Finance Framework and Second Party Opinion: https://english.hhi.co.kr/sustain/green
[2] In alignment with ICMA Green Bond Principles, June 2018, https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/
[3] In alignment with ACMF Green Bond Standards, October 2018, https://www.theacmf.org/initiatives/sustainable-finance/asean-green-bond-standards
[4] In alignment with LMA Green Loan Principles, February 2021, https://www.lsta.org/content/green-loan-principles/

3. Hyundai Heavy Green Bond Issuance

Issuer	**Hyundai Heavy Industries Co., Ltd. ("HHI")**
Guarantor	Korea Development Bank ("KDB")
Structure	Senior Unsecured Green Bond Unconditionally and irrevocably guaranteed by KDB
Issue Rating	AA (S&P)
Currency	USD
Size (m)	300
Pricing Date	21 March 2022
Issue Date	28 March 2022
Maturity	28 March 2027
Tenor	5-year
Coupon	3.179%
Use of Proceeds	To finance and/or refinance, in whole or in part, of new or existing projects in Eligible Green Projects in accordance with the Issuer's Green Financing Framework
Listing	Singapore Exchange
Governing Law	English Law
ISIN	XS2454246989





4. Allocation Reporting

4.1. Allocation Overview

Total proceeds of USD 300 million from Hyundai Heavy's Senior Unsecured Green Bond guaranteed by KDB ("HHI Green Bond") have been fully allocated to 23 projects as of 2022. This corresponds to a lookback period of 3 years per the framework.

4.2. Amounts Allocated by Bond

Bond (ISIN)	Coupon	Issue Date	Maturity Date	Face Value	Allocated	To Be Allocated
XS2454246989	3.179%	28 March 2022	28 March 2027	USD 300 mn (KRW 368.2bn*)	KRW 370.8bn	-

* Note: Based on FX spot rate(KRW 1,227.3/USD) on issue date

4.3. Amounts Allocated by Projects

(Unit : Million KRW)

Eligible Project Category	Project	No. of Vessel	Allocated Amount	Allocated Portion
Clean Transportation (Clean and sustainable shipbuilding)	Expenditure to construction of 14.8K LNG Dual Fuel Containers	13	177,814	48%
	Expenditure to design of 14.8K LNG Dual Fuel Containers		12,254	3%
	Expenditure to construction of 15.6K LNG Dual Fuel Containers	2	31,118	8%
	Expenditure to design of 15.6K LNG Dual Fuel Containers		7,190	2%
	Expenditure to construction of 16.2K Methanol Dual Fuel Containers	8	131,068	35%
	Expenditure to design of 16.2K Methanol Dual Fuel Containers		11,307	3%
	Total	**23**	**370,751**	**100%**

5. Impact Reporting

5.1. Impact Overview

Key impact indicators related to the eligible projects that are financed under the green bond showing reduction of carbon dioxide, sulphur oxide, nitrogen oxide that dual fuel vessels emit when they actually operate after the delivery.

Eligible Project Category	Projects	No. of Vessel	Annual CO2 Reduction (ton/year)	Annual SOx Reduction (ton/year)	Annual NOx Reduction (ton/year)
Clean Transportation	LNG Dual Fuel / Methanol Dual Fuel Container Vessels	23	3,796,610	60,207	79,823

5.2. Calculation Methodology

Ship Type*1)	Applied EEDI - Attained / Req. (Ph0) EEDI (g-CO2/ton.nm)	Applied EEDI Phase	Annual CO2 reduction compared to EEDI Phase 0 (zero) ship*2) (ton /year)	Annual SOx reduction compared to HFO ship*3) (ton/year)	Annual NOx reduction compared to HFO ship*4) (ton/year)	Note
14800-Container (LNG Dual Fuel)	6.58 / 15.69	Satisfy Phase 3	165,198	2,757	3,505	Preliminary EEDI Calculation standard
15600-Container (LNG Dual Fuel)	5.52 / 15.63	Satisfy Phase 3	180,834	2,779	3,369	Preliminary EEDI Calculation standard
16200-Container (Methanol Dual Fuel)	5.89 / 14.63	Satisfy Phase 3	160,921	2,351	3,440	Preliminary EEDI Calculation standard

✓ Preconditions:

1) Based on 300 days of sailing at the EEDI Speed (75% MCR)

* MCR : Maximum Continuous Rating

2) Dual Fuel vessels : Based on consuming 100% of Primary Fuel (LNG, Methanol)

3) SOx reduction : Based on consuming HFO (contains 3.5% of Sulphur) → LNG (contains 0.001% of Sulphur) or Methanol (contains 0.045% of Sulphur)

4) NOx reduction : Based on Tier I → Tier III Gas mode or Methanol mode

6. Summary of HHI Sustainable Finance Framework

6.1. Use of Proceeds

An amount equal to the net proceeds of the Green Bonds and Loans will be used to fund and/or refinance, in whole or in part, new or existing eligible green projects that meet one or more of the following categories of eligibility as recognized in the GBP ("Eligible Green Projects") and/or SBP ("Eligible Social Projects"):

Eligible Green Projects and Eligible Social Assets may include fixed assets, capital expenditures and operating expenditures. Key category used for the issuance of HHI's USD 300 million green bond is as below;

GBP / GLP Categories and UN SDGs	Eligible Criteria and Description	Environmental Sustainability Objectives	GBP / GLP Categories and UN SDGs
Clean Transportation	**Clean and sustainable shipbuilding** 1. Investment and expenditure in relation to design, construction and maintenance of clean and sustainable vessels ("CSV"[5]) according to IMO [6] and Norwegian shipping regulations [7] and retrofit of existing vessels to include a dual-fuel set up, designed for alternative fuels CSVs would represent the below vessels: • LNG-fueled Vessels, LNG Dual Fuel Vessels, Methanol Dual Fuel Vessels In line with the EU Taxonomy, the design of CSVs safeguard that the Energy Efficiency Design Index (EEDI) values of the vessels are at least 10% below IMO's EEDI requirements applicable on 1 April 2022. CSVs may have the following features: • Dual fuel liquefied natural gas (LNG) engine • Dual fuel methanol engine • Hybrid powered • Hydrogen fuel cell • Ammonia or hydrogen in combustion engine • Machinery efficiency and wind assistance powered • Ability to use onshore power supply when at berth 2. Research and Development (R&D) would have, but not limited to, the below technology, design, equipment and facilities: • Alternative dual fuel engine such as Ammonia or Methanol in combustion engine	**Pollution prevention and control** • Reduction of air emissions including NOx, SOx and GHG emissions	

[5] Clean and sustainable vessels ("CSV") in this Framework are vessels built by HHI which have specific features as defined in Section 2.1 Use of Proceeds
[6] http://www.imo.org/en/About/Pages/Default.aspx
[7] https://www.sdir.no/en/shipping/legislation/

GBP / GLP Categories and UN SDGs	Eligible Criteria and Description	Environmental Sustainability Objectives	GBP / GLP Categories and UN SDGs
	• Ammonia and hydrogen propulsion vessels • Eco-friendly technology such as electric propulsion, SOx reduction, VOC recovery system, NOx reduction • Sailing efficiency improvement such as Energy Storage System, Wind Assistance, Smartship Technologies • Investment in hydrogen infrastructure / value-chain (liquefaction of hydrogen (lower energy consumption target), development of hydrogen storage facility) dedicated to green hydrogen (produced via 100% electrolysis from renewables)		

6.2. Process for Evaluation and Selection of Projects

The Eligible Green Projects and Eligible Social Projects are identified and selected via a process that involves participants from various functional areas. A dedicated Sustainable Finance Working Group ("SFWG") has been set up to identify and select Eligible Green Projects and Eligible Social Projects, with representatives from the below departments:

- Corporate Affairs Team
- Electricity Planning Team
- Environmental Section
- Project Planning Department
- Shipbuilding Production Engineering Department
- Technology Planning Departments
- International Finance Team

Potential Eligible Green Projects and Eligible Social Projects will be submitted to SFWG for review by business units. The SFWG will evaluate their compliance with not only the eligibility criteria outlined in the Use of Proceeds section of Sustainable Finance Framework ("SFF") but also the environmental guidelines which are applicable within HHI. If such project is considered as an Eligible Green Project and Eligible Social Project by the SFWG in accordance with the SFF, it will be presented to the senior management of HHI for final approval.

6.3. Management of Proceeds

The net proceeds from each Sustainable Financing Transactions ("SFT") will be managed by HHI's International Finance Team, and the proceeds of each SFT will be deposited in the general funding accounts and be earmarked to Eligible Green Projects and Eligible Social Projects.

HHI will maintain a register ("Sustainable Finance Register") to keep track of the use of proceeds for each SFT. The Sustainable Finance Register will contain the following information:

6.4. Reporting

On an annual basis until full SFWG allocation of net proceeds to Eligible Green Projects and Eligible Social Projects, and in case of any material changes, HHI will provide information on the allocation of the net proceeds of its SFTs. Such reporting will be made publicly available on HHI's Sustainability Report, Annual Report or website htlp://english.hhi.co.kr/sustain/green.