

POSCO Green Bond Report

December 2024

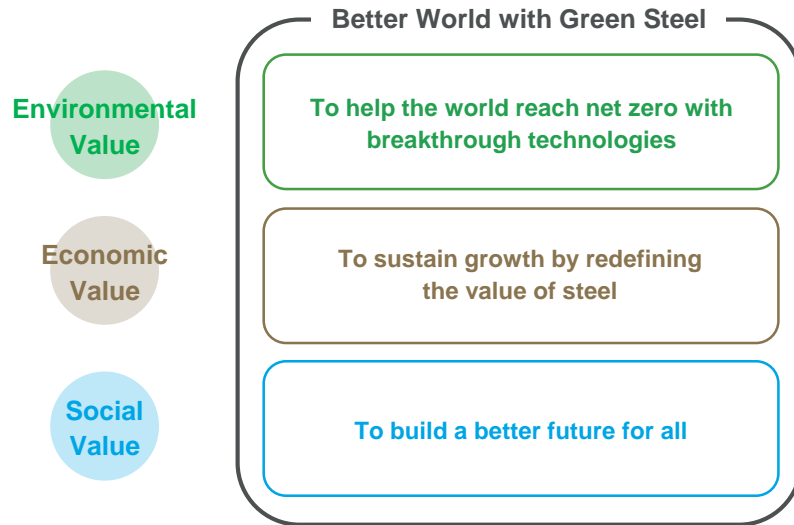


POSCO's Carbon Neutrality Roadmap

Company Background

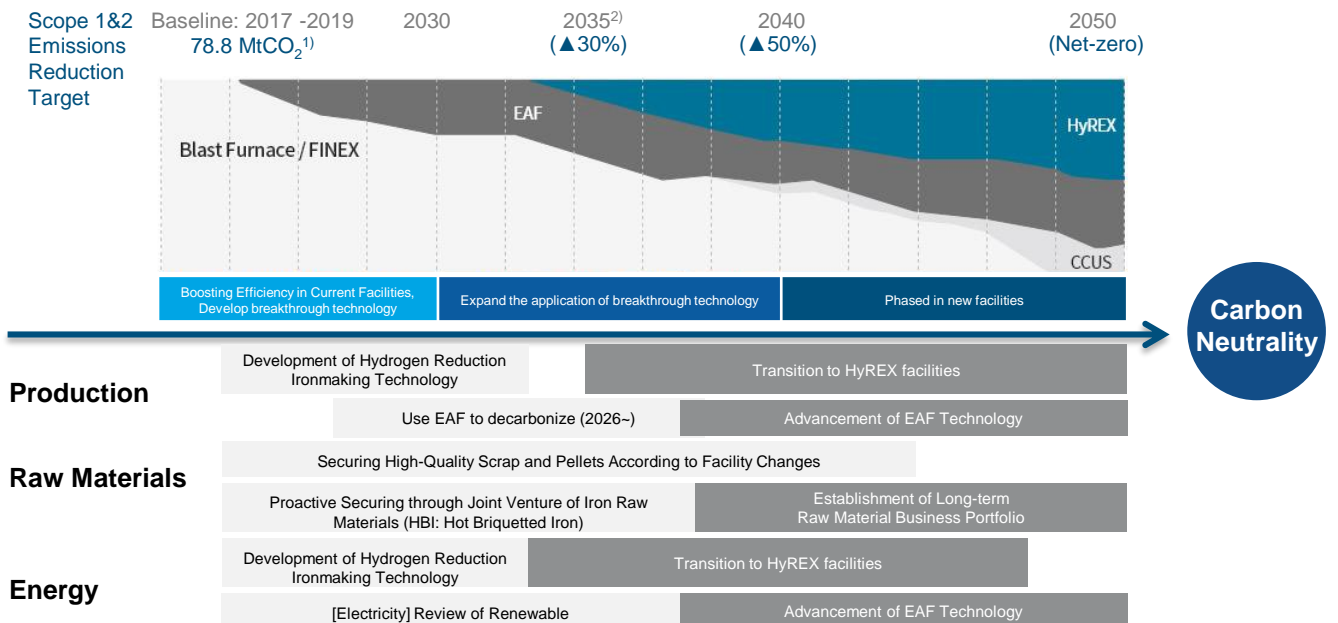
POSCO is an integrated steel producer, specializing in the production of hot rolled, cold rolled, and stainless steel. It boasts ownership of Pohang and Gwangyang Steelworks, which are globally recognized as the largest producers of crude steel. In its global operations, POSCO manages 13 production subsidiaries (comprising 3 upstream processes and 10 single-stand rolling mills) and 26 processing centers spread across 13 countries abroad.

POSCO Vision



POSCO's Carbon Neutrality Roadmap

As a global leading steel company committed to building an eco-friendly future society, POSCO is dedicated to proactive and responsible climate action. POSCO is striving to secure GX (Green Transformation) technology that combines competitiveness and economic efficiency, and to establish an implementation system to achieve the 2050 carbon neutrality goal.



Note: 1) Average total emissions from POSCO's domestic operations between 2017 and 2019. 2) Added a 2035 mid-term goal (▲30%) under the net zero roadmap.

POSCO's ESG Strategy

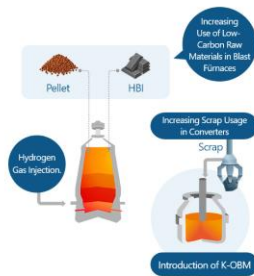
POSCO's Endeavor to Carbon Neutrality

POSCO is advancing towards a low-carbon production system based on the '2050 Carbon Neutrality Roadmap', which includes a mid- to long-term comprehensive carbon reduction strategy encompassing technology development, facility investment, raw material procurement, and energy procurement.

In the mid- to short-term, POSCO plans to reduce carbon emissions by expanding the use of low-carbon fuel and raw materials, operating at a low Hot Metal Ratio (HMR), and introducing Electric Arc Furnaces (EAF) using the current facilities through low-carbon bridge technology. In the long-term, POSCO aims to achieve carbon neutrality by gradually implementing POSCO's hydrogen reduction ironmaking technology, 'HyREX (Hydrogen Reduction)'.

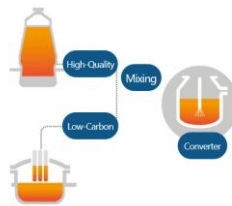
Bridge Technology

Blast Furnace-Based Low-Carbon Bridge Technology



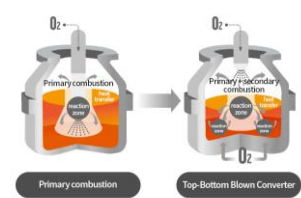
- ◆ Better control of operational conditions to reduce coal consumption in blast furnaces
- ◆ Alternative low-carbon materials including pellets

Converter based Bridge Technology : Melted Scrap Charging Method



- ◆ Operate EAF with annual production capacity of 2.5 million tons from 2026
- ◆ Reduce carbon emissions by up to 3.5 million tons annually

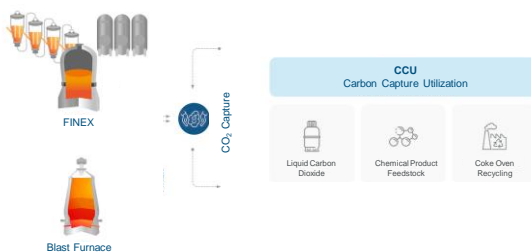
Converter based Bridge Technology : Oxygen Top & Bottom Blown (OTBB) Converter



- ◆ HMR in the converter to be below 70%
- ◆ Operate OTBB Converter in Pohang Steelworks by 2026 which will complete a 300-ton-top-bottom blown converter

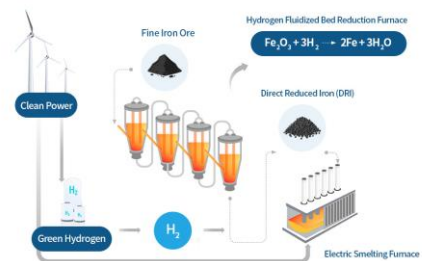
Ultimate Technology

FINEX-Based Carbon Capture and Utilization (CCU)



- ◆ Develop CCUS technology used to separate CO₂ from by-product gases and utilize them as an alternative energy source
- ◆ Operate one of the largest Carbon Capture facilities on FINEX
- ◆ Complete its technology demonstration project by 2024 and expand scope of application

POSCO's Hydrogen Reduction Ironmaking (HyREX)



- ◆ Develop HyREX technology based on Fluidized reduction reactor technology, which has been applied to FINEX
- ◆ Plan to construct a Demo plant to verify commercialization potential of HyREX
- ◆ Start shifting with 1 million tons of annual capacity by 2030, and then gradually convert blast furnaces to HYREX facilities

POSCO's Sustainable Financing Framework

Motivations for POSCO's Green Bond

The updated POSCO Sustainable Financing Framework dated December 2023 includes a green category within which the projects will be aligning with the technical screening criteria from the Steel Eligibility Criteria of the Climate Bonds Standard & Certification Scheme from the **Climate Bonds Initiative** ("CBI") from May 2023.

The Sustainable Financing Framework is aligned with the 2021 Green Bond Principles, 2023 Social Bond Principles and the 2021 Sustainability Bond Guidelines by the International Capital Markets Association, as well as with the 2023 Green Loan Principles and 2023 Social Loan Principles including Guidance Notes by the Loan Market Association, the Asia Pacific Loan Market Association and the Loan Syndications and Trading Association. This updated framework, reviewed by DNV, will help POSCO financing its **decarbonization** projects for its net zero 2050 ambition.



Aligned Eligible Green Project Categories

Category	Eligible Projects	SDG Alignment
Energy Efficiency, Circular Economy & Pollution Prevention and Control	<ul style="list-style-type: none"> Measures and criteria for proceeds that are financing projects within steel production facilities and a whole steel production facility 	
Other Pollution Prevention and Control	<ul style="list-style-type: none"> Equipment, system that are used to mitigate environmental pollution (e.g. air, noise, water) during the steel production processes Enforcement of dust control (such as in open yards) to reduce fugitive dust emissions 	
Renewable Energy	<ul style="list-style-type: none"> Design, construction, installation and operation of renewable energy systems, such as solar and wind energy 	
Water and Wastewater Management	<ul style="list-style-type: none"> Construction, development, installation, operation and maintenance of infrastructure or equipment for collection, treatment, recycling or reuse water, rainwater or wastewater 	

Aligned Eligible Social Project Categories



Category	Eligible Projects	Targeted Populations	SDG Alignment
Employment Generation	<ul style="list-style-type: none"> Measures and criteria for proceeds that are financing projects within steel production facilities and a whole steel production facility 	<ul style="list-style-type: none"> Low-income households¹ Small and medium enterprises (SMEs)² Rural/indigenous and/or marginalised communities People with disabilities Migrants and/or displaced persons 	
Socioeconomic Advancement and Empowerment	<ul style="list-style-type: none"> Equipment, system that are used to mitigate environmental pollution (e.g. air, noise, water) during the steel production processes Enforcement of dust control (such as in open yards) to reduce fugitive dust emissions 	<ul style="list-style-type: none"> The undereducated The underserved, owing to a lack of quality access to essential goods and services The unemployed Women and children Vulnerable youth and the elderly Other vulnerable groups, including as a result of natural disasters 	

Source: POSCO Sustainable Financing Framework (December 2023): https://www.posco.co.kr/homepage/docs/kor7/jsp/resources/file/esg/POSCO_Sustainable_Financing_Framework.pdf.

DNV SPO (December 2023): https://www.posco.co.kr/homepage/docs/kor7/jsp/resources/file/esg/POSCO_Sustainable_Financing_Framework_SPO.pdf

Note: 1) Low-income individuals are determined by the Korean Ministry of Health and Welfare (MOHW) and Ministry of Education (MOE)'s classification, which is based on household income. 2) As those defined by Enforcement Decree of The Framework Act on Small and Medium Enterprises and with less than 50 employees (<https://www.mss.go.kr/site/smba/01/1010606000002016101111.jsp>)

Detailed Criteria & Methodology

Process for Project Evaluation and Selection

POSCO has set up Sustainable Financing Working Group (“SFWG”) to oversee its ESG and Sustainability reporting, and the SFWG will also assume the responsibility of Sustainable Finance Transactions (“SFT”). The SFWG is composed of representatives from the below departments with the required level of expertise and seniority. The SFWG will ensure that the selected Eligible Projects comply not only with the Use of Proceeds but also the environmental and social guidelines under the Green Bond/Loan Principles and Social Bond/Loan Principles which are applicable to POSCO, as well as with POSCO’s Environmental Policy, which offers risk management tools to mitigate related ESG risks

Management of Proceeds

POSCO’s finance team will manage the net proceeds from each SFT issued and the proceeds of each SFT will be deposited in the general funding accounts. An amount equaling the net proceeds from each SFT will be earmarked for allocation to Eligible Projects, in accordance with the POSCO Sustainable Financing Framework POSCO will maintain a register to keep track of the use of proceeds for each SFT. The register will contain the following information including:

Type of Funding Transaction	Allocation of UOP
<ul style="list-style-type: none"> ◆ Key information includes issuer/borrower entity, transaction date, number of transactions, principal amount of proceeds, repayment or amortization profile, maturity date, interest or coupon, and the ISIN number in the case of a bond transaction 	<ul style="list-style-type: none"> ◆ Name and description of Eligible Projects to which the proceeds of the SFTs have been allocated in accordance with the Framework ◆ Allocation of the proceeds of SFTs to Eligible Projects ◆ The balance of unallocated proceeds ◆ Information regarding temporary investments for unallocated proceeds

POSCO is committed to allocating all proceeds from the SFTs to Eligible Projects on a best effort basis within two years of the SFT issuance in accordance with the evaluation and selection process set out above. POSCO will monitor the allocation to Eligible Projects and track the net proceeds through its internal accounting system.

Reporting

POSCO will provide information on the allocation of the net proceeds of its SFTs in POSCO’s ESG Reports and/or website. Such information will be provided on an annual basis throughout the life of outstanding SFTs. The published reports will contain at least the following details:

Allocation Reporting	Impact Reporting
<ul style="list-style-type: none"> ◆ Aggregate amount of proceeds that has been allocated to Eligible Projects ◆ Amount of unallocated proceeds and type of temporary investment ◆ Share of proceeds use for financing vs. refinancing purposes, and ◆ Illustrative examples describing Eligible Projects to which SFT net proceeds have been allocated (subject to confidentiality disclosures) 	<ul style="list-style-type: none"> ◆ Where possible, POSCO will report on the environmental and social impacts associated with the Eligible Projects funded with the net proceeds of the SFT(s) ◆ POSCO will use qualitative performance indicators and, where feasible, quantitative performance measures and disclosure of the key underlying methodology and/or assumptions used in the quantitative determination

External Review

POSCO has engaged DNV to provide a Second Party Opinion (“SPO”) on its Sustainable Financing Framework. The SPO, together with the Framework will be available on the company’s website.




“DNV views that these CBT TSC-aligned projects will be conducive for POSCO to be able to secure green eligibility of the related projects in highly strict manner... In particular, TSCs of steel production from CBI were used for assessing green eligibility of POSCO’s projects.”

December 15, 2023

Green Bond Key Information

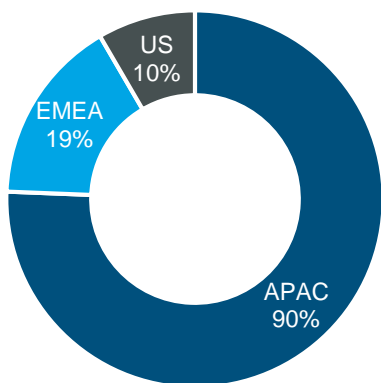
Offering Summary

ISSUER	POSCO (the "Issuer")
ISSUER RATINGS	Baa1 (Stable) by Moody's / A- (Stable) by S&P
ISSUE RATINGS	Baa1 by Moody's / A- by S&P
STATUS	Fixed Rate, Senior Unsecured
FORMAT	Rule 144A/Reg S
SIZE	US\$500 million (KRW 665,900,000,000 equiv. ¹⁾)
TRADE DATE	January 16, 2024
SETTLEMENT DATE	January 23, 2024
PAY DATES	January 23 and July 23 (First pay-date July 23, 2024)
MATURITY DATE	January 23, 2027
COUPON	4.875% (semi-annual, 30/360)
REOFFER PRICE / YIELD	99.513 / 5.052%
SPREAD OVER UST	+110 bps
TERMS	\$200k/1k Denoms, English Law
LISTING	SGX
USE OF PROCEEDS	Financing or refinancing, in whole or in part, of Eligible Green Projects in accordance with the Issuer's Sustainable Financing Framework dated December 2023
SECOND PARTY OPINION	DNV 
144A / REG S ISIN	US73730EAG89 / USY7S272AK86

The proceeds of this green bond issuance will mainly be used to finance Electric Arc Furnaces projects, in accordance with the ambitious Climate Bonds Initiative's Steel Eligibility Criteria from May 2023

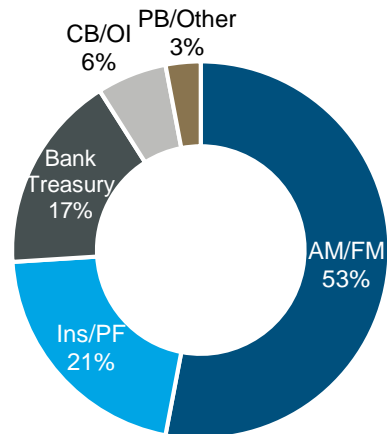
Allocation Distribution

Distribution by Geography



■ APAC ■ EMEA ■ US

Distribution by Investor Type



■ AM/FM ■ Ins/PF ■ Bank Treasury ■ CB/OI ■ PB/Other

Note: 1) KRWUSD FX KRW 1,331.80 = 1 USD as of January 16, 2024 (Pricing Date)

Allocation & Impact Reporting

POSCO's Adherence to the CBI Criteria

Climate Bonds Initiative ("CBI") updated its Steel Eligibility Criteria of the Climate Bonds Standard & Certification Scheme in May 2023 to provide investors with credibility of green labelling in international capital market.

Eligible Facility	Facility specific mitigation criteria
Scrap based Electric Arc Furnace	The facility: <ul style="list-style-type: none"> ◆ Needs to use 70% of scrap as total annual inputs; or ◆ The combined scrap and (100%) Hydrogen based DRI should add to at least 70% of the EAF total annual inputs

POSCO's Green Bond Project

POSCO is currently building **Electric Arc Furnaces** ("EAF") in Gwangyang Steelworks. Producing 2.5 million tons in the EAF is expected to reduce **3.5 million tons of CO₂** per year compared to blast furnace method of steel production. Once the EAF becomes operational in 2026, it will be in line with the framework as well as **CBI's Steel Eligibility Criteria**. EAF will "reduce and avoid annual greenhouse gas emissions" in eligible categories including energy efficiency, circular economy, pollution prevention and control.



Project description	Electric Arc Furnace at POSCO Gwangyang Steelworks
Location	Gwangyang, South Korea
Project period	January 2024 – December 2025
Capacity	2,500,000 tons of steel per annum
Project details	1) EAF construction 2) Scrap unloading/yard 3) Water supply capacity
Raw material proportion	Hot Briquetted Iron (20%) and scrap (80%)
Impact	Contribute to POSCO's CO ₂ reduction target of reducing 30% of Scope 1 and 2 emission by 2035

Allocation and Impact of POSCO's Green Bond Proceeds

Bond	Eligible Projects	Allocated ¹⁾ (US\$m equiv.)	% of Total ²⁾	Refinancing Ratio
144A/REGS: US73730EAG89 /USY7S272AK86	Gwangyang Steelworks New EAF Business	36.4	8%	0.0%
Average emission intensity of steel technologies (Energy Transition Commission data)³⁾				
Blast Furnace and Basic Oxygen Furnace (BF-BOF)			tCO ₂ e/t steel	2.109
EAF with scrap steel			tCO ₂ e/t steel	0.5
Calculation				
Capacity of the new EAF with scrap steel			t steel/year	2,500,000
Absolute emissions			tCO ₂ e/year	1,250,000
Total emission intensity of the new EAF			tCO₂e/t steel	0.5

Source: Climate Bonds Initiative – Steel Criteria Document (May 2023)

Note: 1) KRWUSD FX KRW 1,331.80 = 1 USD as of January 16, 2024 (Pricing Date). 2) As of October 2024, the figures are subject to change as the Gwangyang Steelworks Project progresses. 3) The figures are subject to change as the Gwangyang Steelworks Project progresses. Granularity on the impact of this project will be provided alongside the development of the project