

posco



POSCO

**Sustainable
Financing Framework**

December 2023



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1. Introduction¹

1.1. Business Overview

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.

Vision and core values



¹ POSCO's website and Sustainability Reports:
<https://www.posco.co.kr/homepage/docs/eng7/jsp/s91a0000001i.jsp>

POSCO Overseas Subsidiaries



13 production subsidiaries and **26** processing centers across **13** countries

In March 2022, POSCO was relaunched as a sustainable steel business, revamping its management system and bolstering its market leadership through efforts to enhance its specialty in steel and execution capabilities.

1.2. POSCO's Sustainability Vision

Guided by its corporate citizenship management philosophy, POSCO is promoting an eco-friendly leadership, fostering a sustainable social community, and practicing an ESG management philosophy via an advanced management system. As part of this commitment, POSCO has developed a five key ESG initiatives, encompassing Environmental (E), Social (S), and Governance (G) under the keyword GREEN, a term symbolic of its focus on sustainable future materials. To implement and systematically manage these ESG commitments, POSCO has identified nine core areas linked to the GREEN framework. These efforts are designed to build a consensus on ESG management practices throughout the organization while enhancing and embedding employee understanding.

Green framework

Strategy

Green Competency

Responsible Value Chain

Employee Happiness

Ethics & Integrity

New Governance for Real Value

Core Areas

Achieving carbon neutrality

Sales of eco-friendly materials

Minimizing environmental impact

Managing a sustainable supply chain

Implementing strategic CSR

Enhanced safety and health

Establishing a Workplace Culture of Respecting Human Dignity

Ethics / Compliance

Enhanced Transparency

POSCO's Approach to Environmental Protection and Energy Conservation

When it comes to sustainable business growth, environmental protection is a foremost priority. To deliver on its vision to help build a sustainable, low-carbon and eco-friendly economy, POSCO strives to stay ahead of the rapidly shifting business landscape and conduct campaigns to improve the local environment.

To help build a sustainable, low-carbon and eco-friendly economy as a corporate citizen, POSCO Group adopts the following practices:

- Operate an integrated system of environmental protection and energy conservation programs that meets both ISO 14001 and ISO 50001 requirements. Comply with applicable laws and regulations.
- Continuously improve the system through goal setting and resource allocation
- Reduce greenhouse gas emissions and minimize climate impact by increasing the use of clean energy and introducing low carbon processes.
- Reduce the environmental impact of products throughout their entire lifecycles by making efficient use of natural resources and by-products and developing products with low carbon footprint.

- Minimize pollutant emissions by applying eco-friendly production processes and best available techniques for pollution abatement.
- Regularly review environmental protection and energy conservation activities, report outcomes to management and consult with stakeholders.

1.3. POSCO's Greenhouse Gas (“GHG”) Emissions Reduction Strategy

The UN IPCC special report published in 2018 stated that the average temperature rise must be kept within 1.5°C above pre-industrial levels to prevent climate change-induced catastrophes.


POSCO Group plans to analyze the risks and opportunities associated with the 1.5°C scenario with a view to realigning its flagship steelmaking business and driving new businesses, such as rechargeable battery materials and hydrogen/LNG.

In December 2020, POSCO set an objective to become net zero by 2050. To actualize this vision and enhance its implementation, POSCO has put together the ‘Net Zero Carbon 2050 Roadmap.’

This comprehensive medium-to long-term strategy encompasses technology development, raw materials, hydrogen, and energy. In the short-to medium-term, POSCO is striving to reduce its coal consumption by implementing a multi-faceted strategy. This includes deploying electric arc furnaces, utilizing low-carbon raw materials within its existing facilities, and leveraging low-carbon bridge technologies such as low HMR operations². These measures will bridge the gap until hydrogen-based steelmaking achieves commercial viability. A detail of POSCO's GHG emissions Scope 1, 2 and 3 can be found in Appendix 1: “POSCO's Scope 1, 2 and 3 GHG emissions as reported in POSCO's 2022 Sustainability Report”.

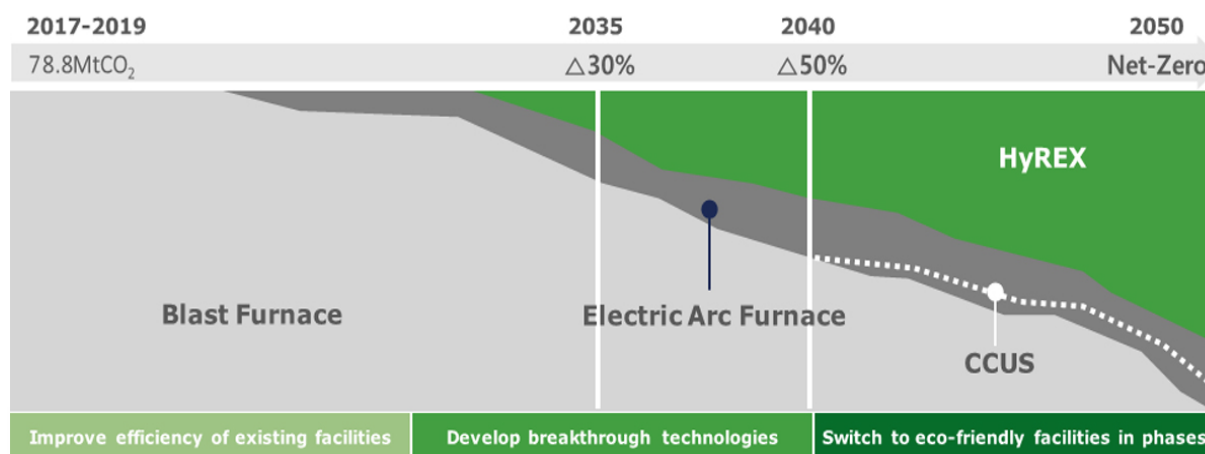
In the long term, POSCO's aim is to progressively introduce ‘HyREX’ (Hydrogen Reduction) technology for hydrogen-based steelmaking. By doing so, POSCO plans to transition to a low-carbon production system and restructure its business operations, which will further enhance the company's competitiveness.

Additionally, POSCO is steadfast in its commitment not only to reduce direct emissions from its operations but also to contribute to wider societal emission reductions. This is achieved by consistently supplying low-carbon products and expanding the use of by-products as a resource. In doing so, POSCO is diligently meeting the expectations of various stakeholders, including investors and clients, maintaining its competitive standing in the marketplace, and playing a significant role in mitigating GHG emissions.



“In 2020, POSCO was the first Asian steelmaker to commit to ‘net zero by 2050.’ POSCO will usher in the new era of sustainable steelmaking by developing hydrogen reduction steelmaking technology.”

² Operation technology that increases the ratio of scraps instead of hot metal (HMR)



Roadmap for Net Zero by 2050

This roadmap serves as a detailed plan to effectively execute POSCO's vision by 2050. POSCO's goal is to significantly reduce its carbon emissions: 30% by 2035, 50% by 2040, using its average emissions of 78.8 million tons for the 3-year period between 2017 and 2019 as the benchmark, and to achieve its net zero target by 2050.

POSCO also aims to reduce its emissions by 10% by 2030 from a 2017-2019 average.

Its low carbon response strategy is categorized into three core areas: Green Process, Green Product, and Green Partnership.



Green Process

Iron is made by placing iron ore in a blast furnace and burning it with coal to produce pig iron; in this process, a significant amount of greenhouse gases is emitted. Among the many processes involved in making steel, the ironmaking produced the highest volume of greenhouse gases (as of 2021). Therefore, POSCO employs numerous techniques to curb gas production and is developing proprietary abatement technologies.

- **For example, by energy reuse, 88% of its power is self-generated.**

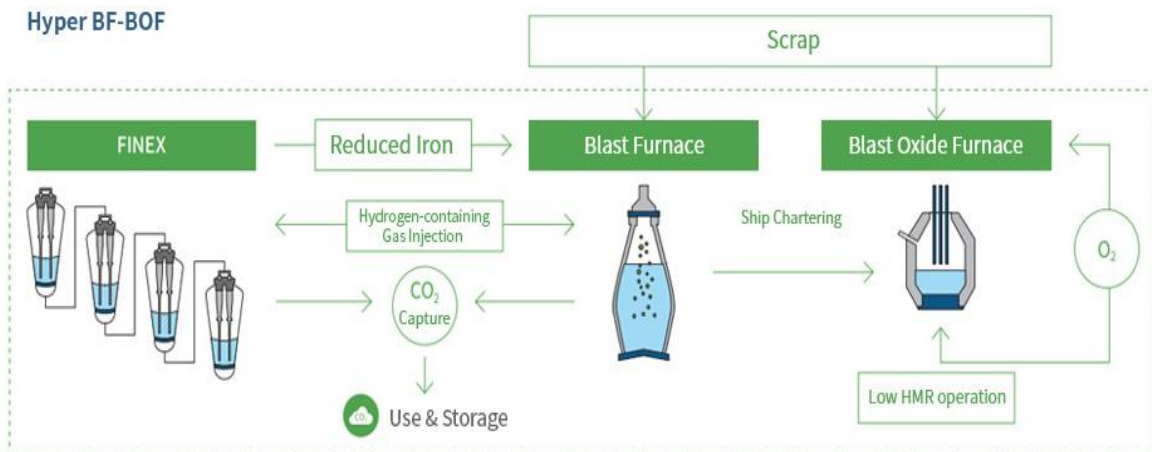
By-product gas produced during the ironmaking process is recycled as fuel for steel processing and power generation. By recycling by-product gas, POSCO self-generates 88% of the electricity it consumes (as of 2021).

- **Low Carbon Investment and Technology Development**

In 2021, POSCO introduced new energy recovery equipment and refurbished or replaced existing facilities. With the goal to conserve energy, investments were made to improve manufacturing processes.

- **Deploying Smart Technology**

Smart technology presents a crucial means to reduce greenhouse gases. By developing smart technology to be applied to the blast furnace and the FINEX plant, POSCO intends to better control the aging process, thereby improving deviations in operation, and to cut coal use.



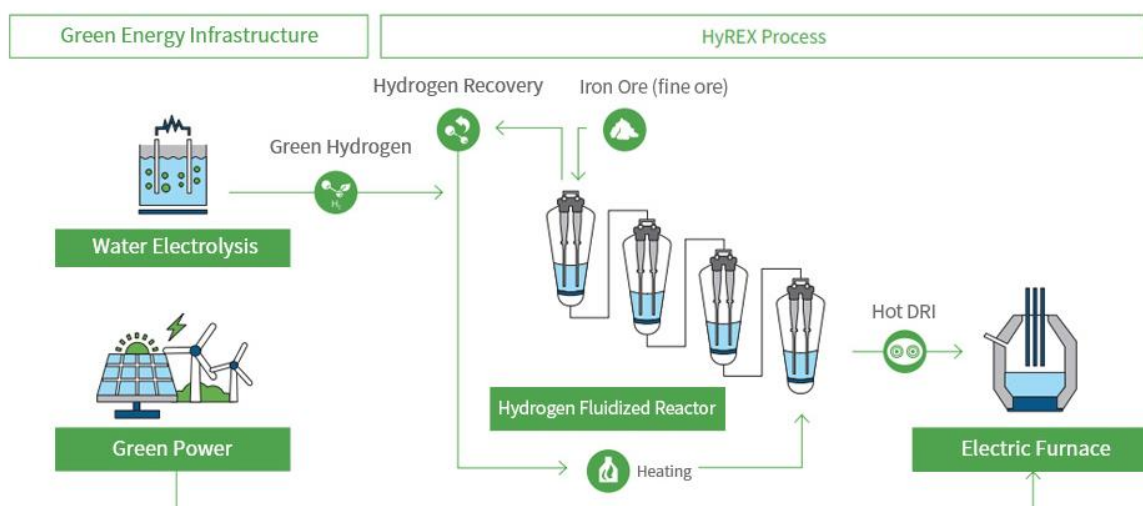
- **For the transition to Hydrogen Reduction Ironmaking**

The blast furnace-based Hyper BF-BOF process is an intermediate technology intended to help the shift to complete hydrogen-based ironmaking. Blast furnace-based breakthrough techniques are necessary until POSCO has reliable access to green hydrogen and renewable energy sources, as well as economic feasibility of the new process. Until then, POSCO will cut coal consumption by injecting by-product gas generated from the coking and FINEX processes back into the BF and the FINEX plant.

- **Hydrogen Reduction Ironmaking Process**

Hydrogen reduction ironmaking is a technology that dramatically reduces greenhouse gases by replacing coal with hydrogen as a reducing agent. POSCO's proprietary FINEX process already employs processes, such as hydrogen injection and direct reduced iron (DRI) integral to hydrogen-based ironmaking.

HyREX³, POSCO's proprietary hydrogen-reduction ironmaking technology, replicates FINEX, to which green hydrogen is applied. Then, DRI is produced in fluidized reactors. In effect, HyREX makes steel by smelting DRI in an electric furnace that uses 100% renewable energy.



³ <https://www.posco.co.kr/homepage/docs/eng7/jsp/hyrex/>

- **Hot Briquetted Iron**

As part of POSCO's strategy to achieve carbon neutrality by 2050, POSCO is actively engaged in activities to secure low-carbon steel raw materials. Hot Briquetted Iron (HBI) is a product made by molding Direct Reduced Iron (DRI), which is reduced by removing oxygen from iron ore, into a briquette shape. It is an essential raw material for producing high-quality steel during electric operations. POSCO is moving forward with the introduction of an electric furnace for a phased transition to a carbon-neutral production system, so a stable supply and demand of high-quality HBI are important.

Green Products: Innovation into Reality

By introducing Green Products, POSCO offers a broader array of product solutions that help to reduce its carbon footprint. For example, automobiles are made lighter with advanced high strength steel (AHSS), and energy use of motors and transformers are enhanced with high-efficiency electrical steel (e-steel). In effect, Green Products reduce footprint across the entire industry value chain.

- **Lighter and Stronger**

POSCO will increase the share of Giga Steel-grade AHSS to expand the sale of automotive steel sheets. AHSS sheets make vehicles lighter, improving fuel efficiency and helping to reduce greenhouse gas emissions.

- **Granulated Blast Furnace Slag Reduces 761 tons of GHG Emissions**

Granulated blast furnace slag (GBS) has a chemical composition similar to that of cement, making it an ideal cement substitute. By replacing cement with GBS, energy is saved and greenhouse gases reduced. In 2021, POSCO produced 11.24 million tons of granulated slag, staving off 761 tons of GHG emissions.

Green Partnership as a Solid Link to Carbon Neutrality

POSCO will bolster Green Partnership by exercising transparency in disclosing our emissions data to investors, customers, government, the World Steel Association and its stakeholders, and by cooperating in local and overseas carbon policy enforcement and technology development efforts.

- **Ever Greater Transparency**

Since 2003, POSCO has participated in the Dow Jones Sustainability Index (DJSI) and the Carbon Disclosure Project (CDP), through which we disclose climate-related data. In 2020, POSCO became the first South Korean manufacturer to join as a TCFD Supporter by disclosing its carbon data in compliance with the recommendations of the task force.

- **Climate Change Partnership**

In February 2021, POSCO launched the "Green Steel Committee." At the launch ceremony, the "2050 Carbon Neutrality Joint Declaration" was signed with five local steelmakers. The joint pact made numerous proposals to reduce emissions: enhanced energy efficiency; shift to low-carbon fuels and raw materials; increased use of recycled iron scrap; hydrogen reduction steelmaking technology; and development of steel for hydrogen storage and transport to build the hydrogen economy.

- **Lowering Social Cost of Carbon**

As a means to achieve carbon net zero, POSCO is reducing direct GHG emissions at its worksites and expanding its eco-friendly product offerings and reuse of by-products. This is how POSCO engages in avoided GHG emissions. By making more low-carbon products available, POSCO helps to reduce and/or avoid more GHG emissions against standard product emissions, across the value chain.

POSCO participates in social reduction by using manufacturing by-products to conserve the environment; for example, granulated slag is used to replace cement clinker; siliceous fertilizer helps to reduce GHG emissions in rice fields; and artificial reef Triton is used to create sea forests.

- **Reporting Avoided Emissions Reduction in the Steel Industry and SBTi partnership**

POSCO teamed up with POSRI (POSCO Research Institute) to publish the Guidelines for Calculating and Reporting Avoided Emissions Reduction in the Steel Industry⁴. As the first of its kind to be published in Korea, the guidelines present a method for estimating the volume of avoided emissions.

In 2023, the SBTi published a guidance⁵ for steel companies to halve emissions before 2030 and achieve net-zero by 2050.

POSCO was part of the Expert Advisory Group composed of 28 organizations from industry, civil society and academia, who provided detailed input during the development of this guidance and tool.



1.4. POSCO's Carbon Neutrality Management System

POSCO presents monthly reports on its environmental performance and key environmental trends to its C-level executives. This includes detailed assessments and analyses of key issues, aimed at achieving its internal environmental management targets.

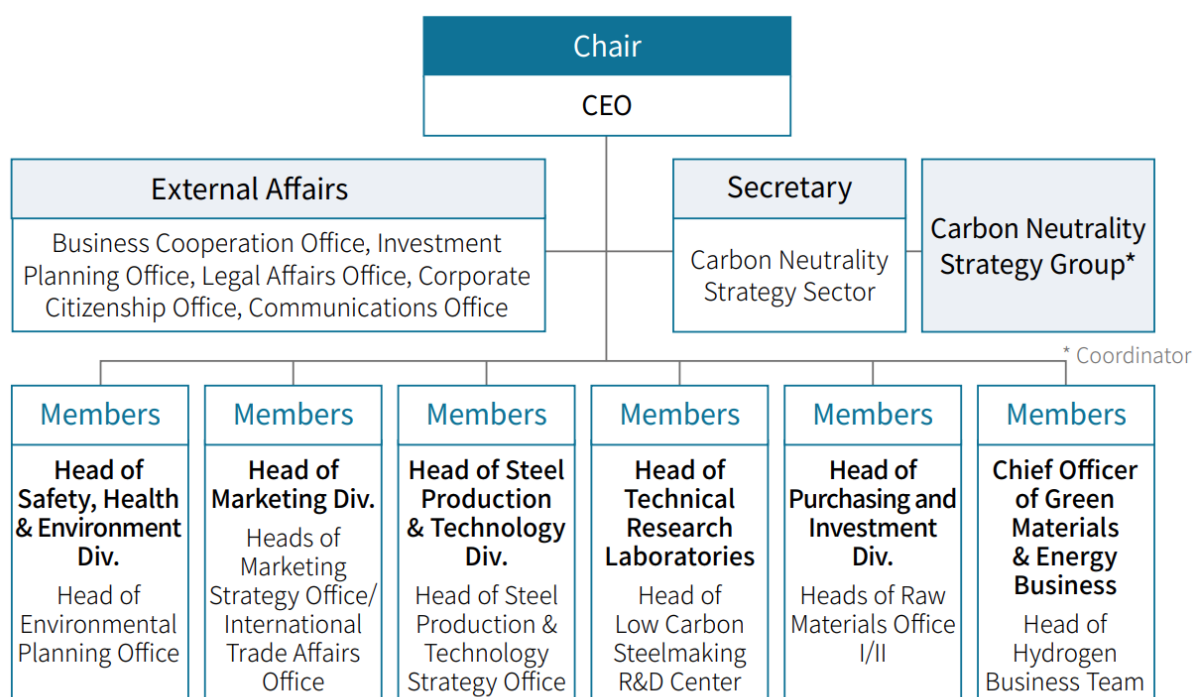
Each year, POSCO presents its ESG management plans, which include investments in environmental improvements, as well as the budget and performance of these plans, to the Board of Directors. This process ensures that its environmental management direction is fully integrated into its company-wide business strategy.

Under the guidance of the Environmental Planning Office, located at its headquarters, POSCO has put in place the Environmental Planning Group, the Carbon Neutral & Energy Group, the Byproduct Recycling Group, and the Environmental Consulting Support Team. These groups formulate and evaluate its company-wide environmental strategies. At the steelworks level, the Environment & Byproduct Group, consisting of sections that focus on environmental improvement, air conservation, water quality conservation, and byproduct recycling, implements its companywide environmental management strategies and on-site environmental improvement initiatives to minimize the environmental impact of its steel production processes.

Environmental organizational chart:

⁴https://www.posco.co.kr/docs/eng7/jsp/resources/file/esg/Accounting_and_Reporting_Guidelines_for_Avoided_GHG_Emissions.pdf

⁵<https://sciencebasedtargets.org/resources/files/SBTi-Steel-Guidance.pdf>



2. POSCO Sustainable Financing Framework Overview

To support POSCO’s commitment towards sustainability, POSCO has established this Sustainable Financing Framework (the “**Framework**”). Sustainable Financing Transactions (“**SFT**”s) will include bonds, loans and other forms of debt financing with structures tailored to contribute to sustainable development by application of the proceeds to Eligible Green Projects and/or Eligible Social Projects as defined in this Framework.

- With respect to bonds, bonds issued under this Framework will be aligned with the 2021 Green Bond Principles⁶ (“**GBP**”), 2023 Social Bond Principles⁷ (“**SBP**”) and the 2021 Sustainability Bond Guidelines⁸ (“**SBG**”) by the International Capital Markets Association (“**ICMA**”), or as they may subsequently be updated.
- With respect to loans, loans issued under this Framework will be aligned with the 2023 Green Loan Principles⁹ (“**GLP**”) and 2023 Social Loan Principles¹⁰ (“**SLP**”) including Guidance Notes by the Loan Market Association (“**LMA**”), the Asia Pacific Loan Market Association (“**APLMA**”) and the Loan Syndications and Trading Association (“**LSTA**”) ¹¹, or as they may subsequently be updated.
- Bonds and loans with green use of proceeds as per section 2.1.1.a of this framework will aim to be in alignment with the Technical Screening Criteria (TSC) of the *Steel Eligibility Criteria of the*

⁶ <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

⁷ <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/>

⁸ <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg/>

⁹ <https://www.lsta.org/content/green-loan-principles/>

¹⁰ <https://www.lsta.org/content/social-loan-principles-slp/>

¹¹ <https://www.lsta.org/content/social-loan-principles-slp/>

*Climate Bonds Standard & Certification Scheme*¹² from the Climate Bonds Initiative (“CBI”) from May 2023, or as they may subsequently be updated.

- Other SFTs may conform to other sustainable finance principles as may have been established at the time of such a financing transaction being undertaken.

SFTs do not place restrictions on the tenor and currency, and can include other terms and conditions including covenants, to reflect the financing strategy and plans of POSCO as well as the outcome of the commercial discussions between the Issuer/Borrower and Manager/Arranger/Lender.

SFTs may be issued in any jurisdiction and market as per POSCO’s current and future business needs.

Each SFT will adopt the following core components of the GBP, SBP, SBG and GLP, SLP:

1. Use of Proceeds;
2. Process for Project Evaluation and Selection;
3. Management of Proceeds; and
4. Reporting.

The Framework also covers the External Review.

The Framework will be in force as long as there are outstanding SFTs. POSCO may update this Framework and commits that any new version will keep or improve the current level of transparency and reporting. POSCO commits to communicate changes with investors via POSCO’s official website¹³.

2.1. Use of Proceeds

The net proceeds of the SFTs will be used to finance or refinance, in whole or in part, new or existing Eligible Green & Social Projects (“**Eligible Projects**”), which follow the criteria set out in the section 2.1.1 and 2.1.2 below (“**Eligibility Criteria**”).

- The proceeds of a Green Bond/Loan issued under this Framework will be applied to projects that fall under the Eligible Green Project Categories set out in Section 2.1.1 below.
- The proceeds of a Social Bond/Loan issued under this Framework will be applied to projects that fall under the Eligible Social Project Categories set out in Section 2.1.2 below.
- The proceeds of a Sustainability Bond issued under this Framework will be applied to both Eligible Expenditures with Green focus set out in Section 2.1.1, and Eligible Expenditures with Social focus set out in Section 2.1.2.

Eligible Projects may include the projects POSCO made during the 24 months prior to the issuance or signing date of the respective SFTs and during the life of the SFTs.

2.1.1. Eligible Green Project Categories

The net proceeds of the Green Bonds and Loans will be used to fund or refinance, in whole or in part, the Eligible Green Projects that meet one or more of the following categories of eligibility as recognized in the 2021 GBP and 2021 GLP (“**Eligible Green Projects**”).

More specifically, eligible Green Projects in section 2.1.1.a of this framework will aim to be in alignment with the Technical Screening Criteria (TSC) of the *Steel Eligibility Criteria of the Climate Bonds Standard & Certification Scheme*¹⁴ from the Climate Bonds Initiative (“CBI”) from May 2023, or as they may subsequently be updated.

¹² <https://www.climatebonds.net/files/files/Climate%20Bonds%20Steel%20Criteria.pdf>

¹³ <https://www.posco.co.kr/homepage/docs/eng7/jsp/s91a0000001i.jsp>

¹⁴ <https://www.climatebonds.net/files/files/Climate%20Bonds%20Steel%20Criteria.pdf>

2.1.1.a. Energy Efficiency, Circular Economy & Pollution Prevention and Control

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 7.3:** By 2030, double the global rate of improvement in energy efficiency.
- **SDG 9.4:** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
- **SDG 11.6:** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
- **SDG 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources.

Climate objectives:

- **Climate change mitigation**
- **Transition to a circular economy**
- **Pollution prevention and control**



Eligible Projects and Criteria:

Activities in **bold** refer to POSCO's area of focus at the moment.

#1 - Measures and criteria for proceeds that are financing projects [within steel production facilities](#). See CBI's decision tree in *Appendix 2*.

The approach to the eligibility criteria for specific mitigation measures within steel facilities, takes into account **the type of facility where the measure will be implemented**.

This is done to reflect that for steel primary production¹⁵ the implementation of small incremental measures will not suffice to achieve 2030 reduction targets. Consequently, capital investments should be focused on achieving significant emissions savings at the facility level.

Decarbonisation activities within a specific facility type	Eligibility criteria for decarbonisation activities within a specific facility type
Optimization of Electric Arc Furnace (EAF), installation and operation of other mitigation measures associated with EAF facilities	Automatically eligible
Measures associated to a production line with a blast furnace (BF) that became operational in 2007 or later	The investment shall not be for relining; AND: <ul style="list-style-type: none"> • The decarbonisation measure(s) that has been/ will be implemented at the facility and has/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by: <ul style="list-style-type: none"> • 20% if the pre-decarbonisation baseline emissions intensity is greater than or equal to 2 tCO₂/t steel; OR • 15% if the pre-decarbonisation baseline emissions intensity is less than 2 tCO₂/t steel;
Measures associated to a production line with a blast furnace (BF) that became operational prior to 2007	The investment shall not be for relining; AND:

¹⁵ Steel produced from iron ore via the BF-BOF or DRI process

	The decarbonisation measure(s) has been/ will be implemented at the facility and has/ will reduce the facility's emissions intensity (tCO ₂ /t steel) between 2022 and 2030 by 50%;
Measures associated to a production line with a DRI	<p>Either:</p> <ul style="list-style-type: none"> if plant is fossil gas based: The measure(s) have been/ will be implemented at the facility and have/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by 20% if plant is coal based: The measure(s) have been/ will be implemented at the facility and have/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by 40%

Table 1: Examples of eligible decarbonisation activities within a specific facility type

Eligibility is due to their CO₂ emissions mitigation potential, but final eligibility is subject to the activity allowing the facility type to meet the emissions reductions thresholds listed above.

Activity type	Example of activities
Heat recovery	Installation, upgrade, and operation of heat recovery systems
Optimization of Blast Furnace	Pulverize Coke Injection, Top Gas Recycling, Stove waste gas heat recovery
Optimization of Basic Oxygen Furnace	Recovery of BOF gas and sensible heat
Optimization of Coke Plant	Coke Dry Quenching
Optimization of Sinter Plants	Sinter Plant Heat Recovery
Optimization of EAF	Oxyfuel burners, EAF scrap preheating, CHP ¹⁶ from waste heat
Optimization of rolling and finishing and reheat furnace	High Efficiency Burner, Flue-gas monitoring, combustion optimization, exhaust gas heat recovery
Optimization of casting	Near net-shape casting
Optimization of monitoring and control systems	Installation, upgrade, and operation of advanced sensors and digitized control equipment and systems
Carbon Capture Utilization and Storage	Installation, upgrade, and operation of infrastructure and equipment related to CO ₂ capture of emissions from steel production.
Fuel switching	Infrastructure, revamps or modifications of equipment needed for the production of steel using hydrogen or biomass as reducing agent
Electrification of heat	Electrification of reheating furnacing

Activity types involving hydrogen, biomass or Carbon Capture Utilization and Storage should comply with the corresponding CBI criteria (refer to the framework appendix 4,7 and 8 respectively)

¹⁶ Combined Heat and Power

#2 - Measures and criteria for proceeds that are financing a whole steel production facility. See CBI's decision tree in *Appendix 3*.

#2.a. For facilities becoming operational in 2022 or thereafter:

The below table lists investments in new assets eligible for certification due to their low emissions potential, and any associated eligibility criteria specific to those investments. The type of facilities listed are in alignment with the deep decarbonization of the sector.

Decarbonization measures	Eligibility Criteria
BF-BOF production line with integrated CCS or CCUS	CCS or CCUS should capture at least 70% of all emissions ¹⁷ CCS or CCUS complies with criteria in appendix 8
Smelting reduction production line with integrated CCS or CCU	
Fossil gas-based DRI-EAF production line with integrated CCS or CCU	
Fossil gas based DRI with integrated CCS or CCUS	
Scrap based Electric Arc Furnace (EAF)	The facility: <ul style="list-style-type: none"> • Needs to use 70%¹⁸ 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
(100%) Hydrogen-based DRI¹⁹	Hydrogen meets the criteria in appendix 4
(100%) Hydrogen-based DRI-EAF production line¹⁹	
Electrolysis of iron ore steelmaking production line	A plan that describes how the use of renewable energy will be increased/introduced in the facility within the term of the bond through different strategies such as: <ul style="list-style-type: none"> a) Increasing renewable-based²⁰ captive power generation b) Increasing renewable-based power purchase agreement The plan shall be provided with evidence of the strategies that will be implemented. Progress of the implementation plan to be assessed every 36 months.

#2.b. For facilities becoming operational prior to 2022:

For proceeds that are financing a whole steel production facility the below criteria applies. These mitigation criteria have been set to allow improvements in the emissions mitigation of existing steel production capacity, without locking in technologies that will impede achieving the decarbonization targets of the sector after 2030. On the other hand, small incremental measures will not suffice to achieve the 2030 reduction targets, particularly for BF-BOF facilities, thus investments should be focused on the implementation of a bundle of measures (see examples of applicable measures in the

¹⁷ There are multiple sources of emissions in a steel mill, which poses an economical and technical challenge for the implementation of CCS or CCUS. With 70% capture rate we refer to an average of the emissions captured from all point sources. This aims at promoting investments in 90% capture at the highest emitting point source (e.g. the BF) that should translate in 70% for the overall facility. As technology advances retrofitting the rest of the facility to capture the remaining emissions shall become feasible.

¹⁸ Close to the global average use of scrap and used in the IEA G7 report www.iea.org/reports/achieving-net-zero-heavy-industry-sectors-in-g7-members as the threshold for scrap to distinguish between primary and secondary steelmaking.

¹⁹ Such as POSCO's 'HyREX' (Hydrogen Reduction) technology for hydrogen-based steelmaking.

²⁰ Energy produced from renewable sources such as wind, solar, and small hydropower generation.

above Table 1: Examples of green eligible steel production capital investments) that will mitigate emissions by a significant rate shown here:

Facility type	Eligibility criteria specific to the facility type
Production line with a blast furnace (BF) that became operational in 2007 or later	<p>The investment shall not be for relining; AND</p> <p>A bundle of decarbonisation measures has been/ will be implemented at the facility that has/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by:</p> <ul style="list-style-type: none"> • 20% if the pre-decarbonisation baseline emissions intensity is greater than or equal to 2 tCO₂/t steel; AND by 2030 the emissions intensity of the facility should be below 1.8 tCO₂/t steel; OR • 15% if the pre-decarbonisation baseline emissions intensity is less than 2 tCO₂/t steel; AND by 2030 the emissions intensity of the facility should be below 1.8 tCO₂/t
Production line with a blast furnace (BF) that became operational prior to 2007	<p>The investment shall not be for relining; AND</p> <p>A bundle of decarbonisation measures has been/ will be implemented at the facility that have/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by 50%; AND</p> <p>The emissions intensity of the facility should be below 1.8 tCO₂/t steel by 2030</p>
Production line with a DRI	Either:
Smelting reduction production line	<p>a) if plant is fossil gas based: A bundle of decarbonisation measures has been/ will be implemented at the facility that have/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by 20%; OR</p> <p>b) if plant is coal based: A bundle of decarbonisation measures has been/ will be implemented at the facility that have/ will reduce the facility's emissions intensity (tCO₂/t steel) between 2022 and 2030 by 40%</p>

For each eligible projects, POSCO will aim to fulfill the relevant requirements as listed in *The Steel Eligibility Criteria of the Climate Bonds Standard & Certification Scheme*²¹ from the Climate Bonds Initiative (“CBI”) from May 2023, or as they may subsequently be updated.

2.1.1.b. Other Pollution Prevention and Control²²:

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 11.6:** *By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.*



Climate objectives:

- **Pollution prevention and control**

²¹ <https://www.climatebonds.net/files/files/Climate%20Bonds%20Steel%20Criteria.pdf>

²² Emissions not covered by CBI

Eligible Projects and Criteria:

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.

2.1.1.c. Renewable Energy:

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 7.2:** *By 2030, increase substantially the share of renewable energy in the global energy mix.*
- **SDG 9.4:** *By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.*



Climate objectives:

- **Climate change mitigation**
- **Pollution prevention and control**

Eligible Projects and Criteria:

Design, construction, installation and operation of renewable energy systems, such as solar and wind energy.

2.1.1.d. Water and Wastewater Management:

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 6.4:** *By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.*



Climate objectives:

- **Pollution prevention and control**
- **Sustainable use and protection of water and marine resources**
- **Protection and restoration of biodiversity and ecosystems**

Eligible Projects and Criteria:

Construction, development, installation, operation and maintenance of infrastructure or equipment for collection, treatment, recycling or reuse water, rainwater or wastewater.

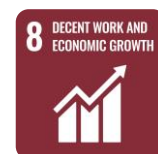
2.1.2. Eligible Social Project Categories

The net proceeds of the Social Bonds and Loans will be used to fund or refinance, in whole or in part, the Eligible Social Projects that meet one or more of the following categories of eligibility as recognized in the 2023 SBP and 2023 SLP (“**Eligible Social Projects**”).

2.1.2.a. Employment Generation:

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 5.b:** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- **SDG 8.5:** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.



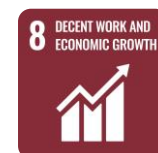
Eligible Projects and Criteria:

- Creation of meaningful employment for targeted communities as listed below.
- Fair employment opportunities for targeted communities, particularly support for female entrepreneurs.

2.1.2.b. Socioeconomic advancement and empowerment:

United Nations Sustainable Development Goals (“UN SDGs”):

- **SDG 4.4:** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
- **SDG 8.3:** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.



Eligible Projects and Criteria:

- Funding and supporting entrepreneurship programmes for startups, small-medium enterprises (SMEs), and youth / other disadvantaged groups.
- Supporting services and facilities to provide equitable access and participation in these programmes.

The aforementioned social project categories/criteria may also provide direct or indirect benefit(s) to one or more of the following targeted communities/populations:

- Low-income households²³
- Small and medium enterprises (SMEs) (i) As those defined by Enforcement Decree of The Framework Act on Small and Medium Enterprises²⁴ and (ii) With less than 50 employees
- Rural/indigenous and/or marginalised communities
- People with disabilities
- Migrants and/or displaced persons
- The undereducated

²³ 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.

²⁴ <https://www.mss.go.kr/site/smba/01/1010606000002016101111.jsp>

- 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

2.1.3. Exclusions

The following industries are excluded from consideration for eligibility (“**Exclusions**”):

- Luxury sectors (precious metals wholesale or brokerage, precious minerals wholesale or brokerage, artworks and antiques wholesale or brokerage)
- Child labour or forced labour
- Adult entertainment
- Weapons and military contracting
- Alcohol
- Tobacco
- Nuclear, and
- Production or trade in any product or activity deemed illegal under international conventions and agreements, or subject to international bans.

2.2. 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 SFTs. The SFWG is composed of representatives from the below departments with the required level of expertise and seniority:

- Finance
- Corporate Sustainability
- Operations
- Audit
- Legal

The SFWG will meet at least once every 12 months to review and select eligible projects according to the criteria outlined in Sections 2.1.1 and 2.1.2 mentioned above. The shortlisted projects will be presented to the Board of Directors for approval.

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. Projects will be selected with the United Nations Sustainable Development Goals in mind and guided by POSCO’s risk management and internal control systems and policies.

In addition, the SFWG will also be responsible for managing any future updates of the Framework, including any expansion of requirements of use of proceeds.

Eligible Projects may include new projects, projects under construction or in POSCO’s portfolio, with a disbursement date no older than 2 years.

2.3. 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 equalling 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:

2.3.1. Type of Funding Transaction

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.

2.3.2. Allocation of Use of Proceeds

- 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.

Proceeds yet to be allocated towards Eligible Projects may be managed in line with POSCO's liquidity management policy, including investing the unallocated proceeds in cash or cash equivalents, as well as short term deposits and money market funds.

During the life of the SFT issued, if the designated Projects cease to fulfil the Eligibility Criteria as defined in Section 2.1, the net proceeds will be re-allocated to replacement Projects that comply with the Eligibility Criteria as defined in Section 2.1, as soon as reasonably practicable.

2.4. 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:

2.4.1. Allocation Reporting

POSCO will provide the following information for the net proceeds of all the SFTs during the period:

- 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)

2.4.2. Impact Reporting

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).

On a best effort basis and subject to data availability, the impact reporting may include, but is not limited to, the impact metrics as outlined in the table below. We might take assumptions on units in use as well as the relevant benchmark emissions and will clearly state these in the reporting:

Eligible Categories	Impact Indicators ²⁵
Energy Efficiency	<ul style="list-style-type: none"> Annual GHG emissions reduced/avoided (tCO₂eq) Annual energy saved (MWh)
Circular Economy	<ul style="list-style-type: none"> Annual GHG emissions reduced/avoided (tCO₂eq) Expected reduction of waste in number / weight (kg) of equipment units Percentage of scrap steel used (%)
Pollution Prevention and Control	<ul style="list-style-type: none"> Annual estimated CO₂ sequestered (tCO₂) Annual GHG emissions reduced/avoided (tCO₂eq)
Other Pollution Prevention and Control	<ul style="list-style-type: none"> Annual waste / dust emissions (tonnes or % of total waste) that is prevented, minimised, reused or recycled before and after the project in % of total waste and/or in absolute amount
Renewable Energy	<ul style="list-style-type: none"> Annual renewable energy generated or purchased (MWh) Total renewable energy capacity (MW) Annual GHG emissions reduced/avoided (tCO₂eq) % of electricity consumption from renewable sources
Sustainable Water Management	<ul style="list-style-type: none"> Amount of water/wastewater recycled (litres) and % reduction Amount of water/wastewater reused (litres) and % reduction
Employment Generation	<ul style="list-style-type: none"> Estimated number of full-time employments created, including female entrepreneurs / other targeted populations supported where available
Socioeconomic advancement and empowerment	<ul style="list-style-type: none"> Number of startups / SMEs supported or funded Number of students joining and graduating from entrepreneurship programmes Jobs created, supported, and/or retained

Transparency is of particular importance in communicating the expected and/or achieved impact of projects. 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.

3. 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.

²⁵ Appropriate environmental and social impact indicators will be determined in reference to frameworks and resources published by ICMA, such as the Harmonized Framework for Impact Reporting June 2023. Visit <https://www.icmagroup.org/green-social-and-sustainability-bonds/impact-reporting/> for more.

POSCO will also leverage on the Guidelines for Calculating and Reporting Avoided Emissions Reduction in the Steel Industry, as presented in the introduction section

4. Appendix

Appendix 1: POSCO's Scope 1, 2 and 3 GHG emissions as reported in POSCO's 2022 Sustainability Report²⁶

Greenhouse gas emissions	Unit	2020	2021	2022
Direct/Indirect emissions (Scope 1&2) ⁽¹⁾	tCO ₂ e	75,649,882	78,490,205	70,185,615
Direct emissions (Scope 1)	tCO ₂ e	75,069,656	77,101,095	68,305,993
Indirect emissions (Scope 2)	tCO ₂ e	580,226	1,389,117	1,879,630
Direct/indirect emission intensity (based on crude steel production)	tCO ₂ e/ton	2.11	2.05	2.05
Other indirect emissions(Scope 3) ⁽²⁾	tCO ₂ e	13,202,091	12,872,905	7,107,502
Purchased goods & services ⁽¹⁾	tCO ₂ e	3,828,530	3,422,572	2,583,823
Capital goods ⁽²⁾	tCO ₂ e	-	-	857
Fuel and energy-related activities not included in Scope 1&2 ⁽³⁾	tCO ₂ e	-	-	298,540
Upstream transportation & distribution ⁽⁴⁾	tCO ₂ e	1,497,585	1,605,907	1,537,143
Waste generated in operations ⁽⁵⁾	tCO ₂ e	-	-	141,520
Business travel ⁽⁶⁾	tCO ₂ e	345	174	346
Employee commuting ⁽⁷⁾	tCO ₂ e	9,771	9,374	8,245
Downstream transportation & distribution ⁽⁸⁾	tCO ₂ e	-	-	489,786
Downstream leased assets ⁽⁹⁾	tCO ₂ e	2,012,756	2,087,193	1,888,240
Investments ⁽¹⁰⁾	tCO ₂ e	5,853,104	5,747,685	159,002

(1) Scope 1 & 2 emissions may fluctuate based on the government's official notification regarding emission certification. Differences may arise due to the rounding down of decimals when summing up the direct/indirect emissions (Scope 1+2) per worksite.

(2) The categories labeled (2), (3), (5), and (8) were newly incorporated in our Scope 3 emission calculations for the year 2022. All category calculations are confined to the operations of Pohang and Gwangyang steelworks.

(1) (4) Emissions calculations consider only purchased raw materials that most directly impacted the production of steel production (calculations were made using iron ore, coal, and limestone, which collectively account for over 90% of use). The calculations utilize Carbon Intensity information for each product supplied by major raw material suppliers, as well as a DB of standardized shipping distances (EPD) between countries, categorized by source of raw materials.

(2) Calculations for 2022 encompass emissions related to assets acquired by POSCO, specifically fixtures and vehicles in steelworks.

(3) Calculations were made using the carbon footprints of energy consumption, including electricity and LNG, at steelworks.

(5) Calculations were made utilizing government-provided waste management website Allbaro Sys' data and based on waste generated at worksites that was outsourced for disposal.

(6) (7) Calculations were made based on the business travel and commuting data of Pohang/Gwangyang steelworks employees.

(8) Emissions related to transportation of domestic and export sales were calculated using a DB of standardized shipping distances between countries and other resources, based on the transportation destination information (country/city) of sold products.

(9) Among leased assets, the Scope 1&2 emissions from a lime kiln plant that is leased by POSCO Future M were included in calculations.

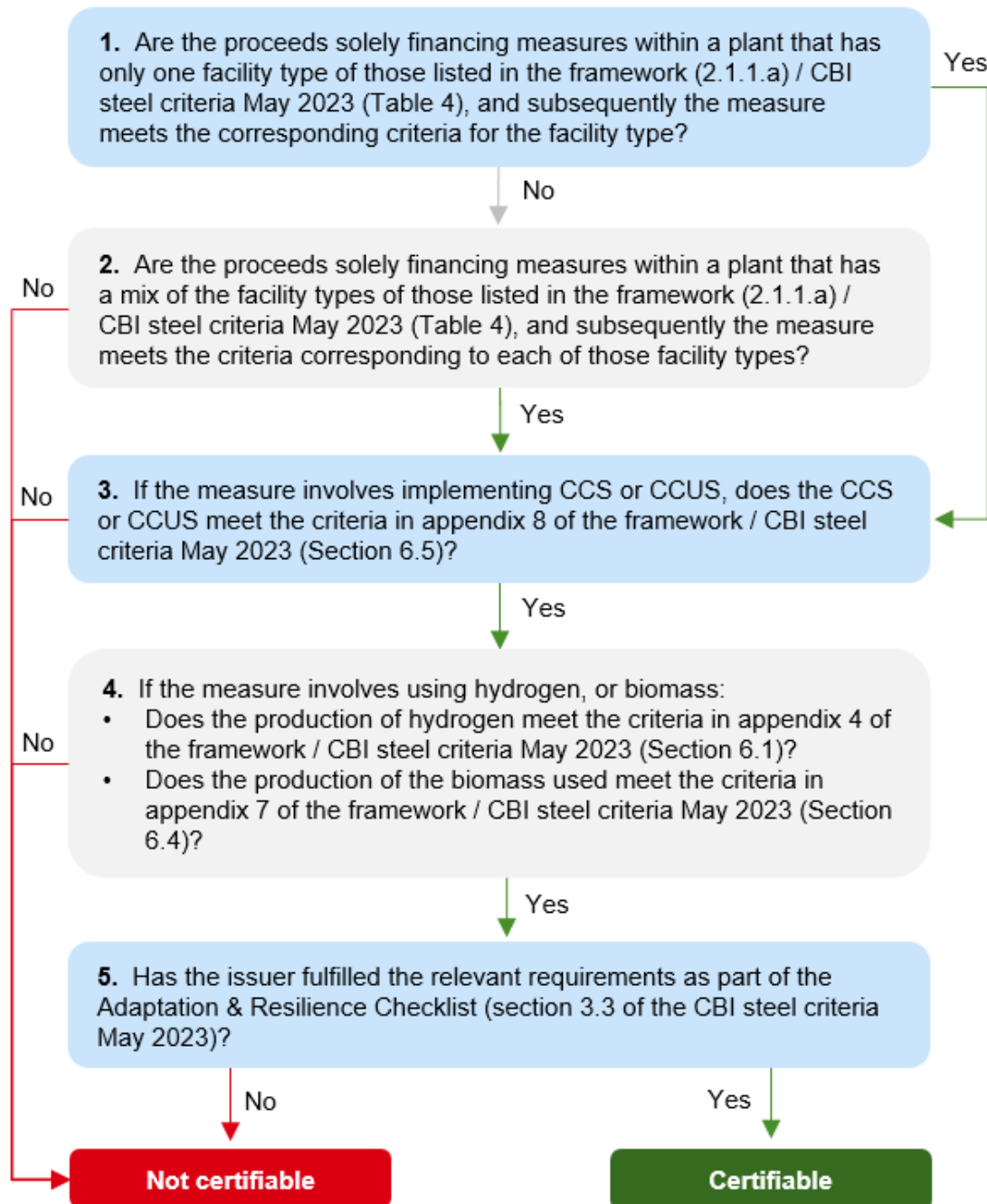
(10) For companies where POSCO has an equity stake, their respective Scope 1&2 emissions and equity ratio were taken into account in the calculations, particularly for firms that fall under the Emission Trading Scheme and Target Management System.

* Emissions decreased in categories (1) and (4) due to a reduction in crude steel production in 2022 following the flooding of the Naengcheon in Pohang in September 2022.

Category (10) emissions decreased compared to 2021 due to changes in the relationship between POSCO and its subsidiaries (excluding POSCO Future M among others) after the establishment of POSCO Holdings in March 2022.

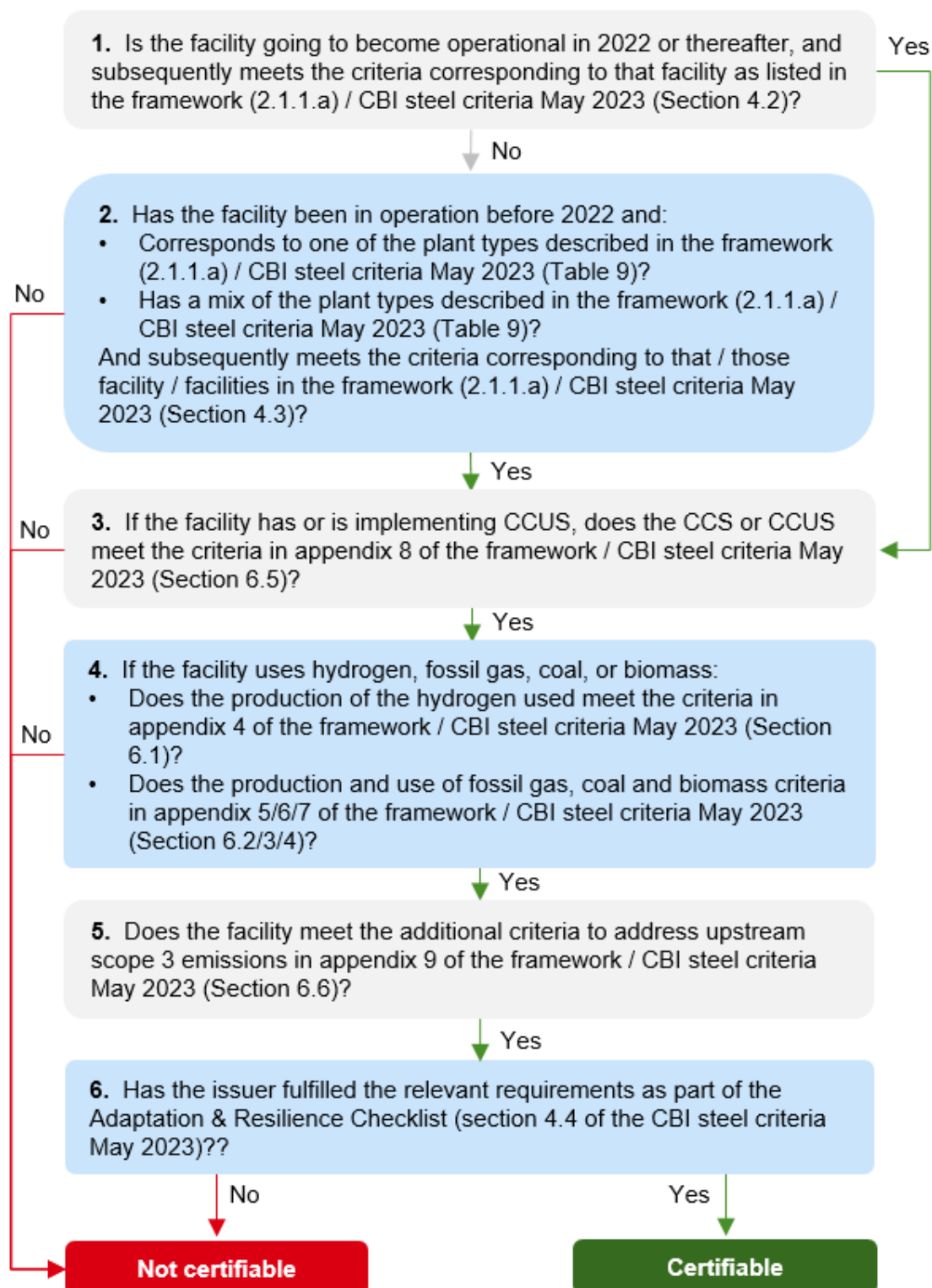
²⁶ <https://www.posco.co.kr/homepage/docs/eng7/jsp/irinfo/irdata/s91b6000030l.jsp>

Appendix 2: CBI decision tree for proceeds that are financing projects within steel production facilities²⁷



²⁷ <https://www.climatebonds.net/files/files/Climate%20Bonds%20Steel%20Criteria.pdf>

Appendix 3: CBI decision tree for proceeds that are financing a whole steel production facility²⁸



²⁸ <https://www.climatebonds.net/files/files/Climate%20Bonds%20Steel%20Criteria.pdf>

Appendix 4: Additional criteria when using hydrogen as a fuel or reducing agent

Facilities using hydrogen are eligible only if the hydrogen used meets the Climate Bonds Hydrogen Production Criteria²⁹

Appendix 5: Additional criteria for the use of Fossil gas

Both as reducing agent and for energy generation, it is only eligible for existing facilities prior to 2030. To qualify after 2030 facilities would have to use fossil gas combined with CCS or CCUS measures that meet the CSS/CCUS criteria (below).

Projects using fossil gas (even if) combined with CCS or CCUS should demonstrate:

- **On-site activities:** MRV (monitoring, reporting and verification), and mitigation measures for methane leaks as per the best practice recommended³⁰. No venting or burning within the limits of the steel plant, except in emergency situations, in such case it shall be reported and accounted in the GHG assessment.
- **Upstream activities:** The gas provider shall give evidence of: having in place MRV (monitoring, reporting and verification), and mitigation measures for methane leaks as per the best practice recommended. Upstream methane intensity³¹ must be below 0.2%³² average of aggregate upstream gas operations. The gas provider shall determine this emissions and report to the steelmaker according to Level 5 of the OGMP 2.0 reporting framework³³. Evidence of grade A, B or maximum C MiQ certification³⁴ is accepted as a proxy.

Appendix 6: Additional criteria for the use of coal

Direct use of coal for on-site electricity generation is not certifiable.

Both as reducing agent and fuel in the steelmaking process, the use of coal is only eligible for existing facilities prior to 2030. After 2030, eligible facilities would have to use coal combined with CCS or CCUS measures that meet the CCS/CCUS criteria.

Projects using coal should demonstrate:

- Upstream activities: The coal provider shall provide evidence of: having in place MRV (monitoring, reporting and verification), and mitigation measures for methane leaks as per the best practice recommended³⁵; Upstream methane intensity must be below 5Kg of methane/tonne of coal produced (average at facility level); Any venting or burning shall be avoided, except in emergency situations. The coal provider shall determine these emissions

²⁹ <https://www.climatebonds.net/standard/hydrogen-production>

³⁰ Best practice can be found in the report: Best Practice Guidance for Effective Methane Management in the Oil and Gas Sector. Monitoring, Reporting and Verification (MRV) and Mitigation. United Nations Economic Commission for Europe. 2019

https://unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/Best_Practice_Guidance_for_Effective_Methane_Management_in_the_Oil_and_Gas_Sector_Monitoring_Reporting_and_Verification_MRV_and_Mitigation- FINAL_with_covers .pdf

³¹ Defined as the ratio of Methane Emissions relative to natural gas throughput according to the Natural Gas Sustainability Initiative (NGSI) www.eei.org/issuesand-policy/NGSI

³² Methane emission intensity targets under the Oil and Gas Climate Initiative (OGCI): www.ogci.com/ogci-reports-significant-progress-on-aggregate-upstreammethane-and-carbon-intensity-targets/#:~:text=OGCI%2C%20having%20surpassed%20the%20original,upstream%20methane%20emissions%20since%202017.

³³ www.ogmpartnership.com/ogmp-20-reporting-framework

³⁴ <https://miq.org/the-technical-standard/>

³⁵ Best practice can be found in the report: Best Practice Guidance for Effective Management of Coal Mine Methane at National Level. Monitoring, Reporting, Verification (MRV) and Mitigation. United Nations Economic Commission for Europe. 2021 https://unece.org/sites/default/files/2022-07/2119167_E_ECE_ENERGY_139_WEB.pdf

and report to the steelmaker according to Level 5 of the OGMP 2.0 reporting framework³⁶ adapted for coal or equivalent practice.

Appendix 7: Additional criteria when using biomass as a fuel and reducing agent

- As reducing agent: only two potential sources of biomass are covered, dedicated crops are not eligible
 - Agricultural residues: needs to comply with the following sections of the criteria applicable for biomass sourcing set out in the CBI Bioenergy criteria: Section 3.3.2 - “Requirement 2: Feedstocks certified under approved best practice standards”.
 - Plantation and other wood waste: the wood plantation shall demonstrate to meet the requirements set out for “plantation forestry” of the Climate Bonds Forestry Criteria³⁷

OR, Demonstration of compliance to the use of biomass as a reducing agent can also be done by showing that the product has a “Certified Steel” label from Responsible Steel³⁸

Appendix 8: Additional criteria for Carbon Capture & Storage and Carbon Capture & Utilization

Utilisation of direct CO₂ emissions from steel production is only eligible when the CO₂ is used for the manufacture of durable products (e.g. construction materials stored in buildings, or recyclable products e.g. PET). CO₂ should not be used for products that release the CO₂ immediately when these are used (such as in urea, carbonated beverages, or fuels), nor for enhanced oil recovery, and the production of other forms of fossil energy sources.

Carbon capture and storage. Carbon Capture equipment, both as an individual measure and as part of a whole facility being evaluated, is eligible so long as there is evidence³⁹ that demonstrates the CO₂ will be suitably transported and (if being stored and not utilised) stored in line with the criteria below:

Component	Requirements
Transport ⁴⁰	1. The CO ₂ transported from the installation where it is captured to the injection point does not lead to CO ₂ leakages above 0.5 % of the mass of CO ₂ transported. 2. Appropriate leakage detection systems are applied and a monitoring plan is in place, with the report verified by an independent third party

³⁶ www.ogmpartnership.com/ogmp-20-reporting-framework

³⁷ www.climatebonds.net/standard/forestry

³⁸ The Responsible Steel Standard (www.responsiblesteel.org/) covers 13 principles in the environmental, social and governance domain. These have been evaluated to determine which can be leveraged by the Climate Bonds Criteria, and those areas are referenced in the additional cross-cutting criteria. Projects or assets seeking certification via Responsible Steel will still have to comply with the areas of the Steel Criteria that the best practice does not cover

³⁹ Either directly from the applicants or through contracts or agreements with a third party

⁴⁰ From the technical screening criteria for qualifying as contributing substantially to climate change mitigation for “Transport of CO₂” in Annex 1 of the Commission Delegated Regulation (EU) 2021/2139 (EU taxonomy)

Storage ⁴¹	<ol style="list-style-type: none"> 1. Characterisation and assessment of the potential storage complex and surrounding area, or exploration⁴² is carried out in order to establish whether the geological formation is suitable for use as a CO₂ storage site. 2. For operation of underground geological CO₂ storage sites, including closure and post-closure obligations: <ol style="list-style-type: none"> a. appropriate leakage detection systems are implemented to prevent release during operation; b. a monitoring plan of the injection facilities, the storage complex, and, where appropriate, the surrounding environment is in place, with the regular reports checked by the competent national authority. 3. For the exploration and operation of storage sites, the activity complies with ISO 27914:2017⁴³ for geological storage of CO₂.
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Furthermore, the use of any certification scheme would be encouraged. Examples of certification schemes include the U.S. EPA Class VI well certification, which includes Reservoir Characterisation⁴⁴. Another example includes the DNV GL certification framework to verify compliance with the ISO 27914:2017 Carbon dioxide capture, transportation and geological storage - Geological storage⁴⁵.

Appendix 9: Additional criteria to address upstream scope 3 emissions

Applicants must lay out a strategy to address other scope 3 emissions sources that have not been addressed in this section, namely upstream transport, scrap collection and sorting, iron ore mining and limestone mining. Demonstration of compliance can be done by showing:

- Evidence for low-carbon procurement policies; or
- Partnerships with suppliers with GHG emissions reduction targets that can be measured; or
- The product has the “Certified Steel” label from Responsible Steel⁴⁶

For upstream products results from a life cycle GHG assessment with a cradle-to-site boundary needs to be used to quantify scope 3 upstream emissions.

⁴¹ From the technical screening criteria for qualifying as contributing substantially to climate change mitigation for “Underground permanent geological storage of CO₂” in Annex 1 of the Commission Delegated Regulation (EU) 2021/2139

⁴² “Exploration’ means the assessment of potential storage complexes for the purposes of geologically storing CO₂ by means of activities intruding into the subsurface such as drilling to obtain geological information about strata in the potential storage complex and, as appropriate, carrying out injection tests in order to characterise the storage site

⁴³ ISO Standard 27914:2017, Carbon dioxide capture, transportation and geological storage - Geological storage: www.iso.org/standard/64148.html)

⁴⁴ www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2

⁴⁵ www.dnv.com/news/dnv-gl-launches-certification-framework-and-recommended-practice-for-carbon-capture-and-storage-ccs--108096

⁴⁶ The Responsible Steel Standard (www.responsiblesteel.org/) covers 13 principles in the environmental, social and governance domain. These have been evaluated to determine which can be leveraged by the Climate Bonds Criteria, and those areas are referenced in the additional cross-cutting criteria. Projects or assets seeking certification via Responsible Steel will still have to comply with the areas of the Steel Criteria that the best practice does not cover