Second-Party Opinion

POSCO E&C Sustainable Financing Framework



Evaluation Summary

Sustainalytics is of the opinion that the POSCO E&C Sustainable Financing Framework aligns with the Green Bond Principles 2018, Social Bond Principles 2020, Sustainability Bond Guidelines 2018 and Green Loan Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds – (i) Energy Efficiency, (ii) Green Buildings, (iii) Renewable Energy, (iv) Clean Transportation, (v) Affordable Housing, (vi) Employment Generation, (vii) Socio-Economic Advancement and Empowerment – are aligned with those recognized by the GBP, SBP, and GLP. Sustainalytics considers that the eligible categories will lead to a transition to a low-carbon economy and advance the socio-economic development in South Korea while contributing to the UN Sustainable Development Goals, specifically SDG 7, 8, 9, 10, and 11.



PROJECT EVALUATION / SELECTION Initial list of potential social and green projects will be identified by a Sustainable Financing Working Group ("SFWG"), which is comprised of members from Treasury, Finance, Risk Management, Sustainability and Technical Departments. The proposed project list will be approved by senior management of POSCO E&C. The SFWG will review eligible projects on an annual basis and manage any updates of the Framework. Sustainalytics considers the project evaluation and selection process in line with market practice.



MANAGEMENT OF PROCEEDS The processes for management of proceeds is managed by the POSCO E&C's Finance Team. Proceeds will be allocated using the general funding accounts and tracked via an internal accounting system. Pending full allocation, unallocated proceeds will be temporarily held in cash or cash equivalents, or repay existing borrowings under general credit facilities of the Company. If the existing project is no longer eligible, it will be removed and replaced as soon as practically feasible. This process is in line with market practice.



REPORTING Until full allocation, POSCO E&C intends to report on allocation and impact of the proceeds on its corporate website on an annual basis. Allocation reporting will include the aggregate amount of allocation to eligible projects, the balance of unallocated proceeds and type of temporary investment, the share of financing and refinancing, and examples of eligible projects. In addition, POSCO E&C intends to report on relevant impact metrics. This process is aligned with market practice.

Evaluation date	30 June, 2020
Issuer Location	Pohang, Republic of Korea

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Introduction

Established in 1994 and headquartered in Pohang, POSCO E&C (the "Company", or the "Issuer") is a Korean engineering and construction company providing Engineering, Procurement, Construction (plant and urban infrastructure) and Operation & Maintenance services domestically and internationally. As a majority-owned subsidiary of POSCO Group, POSCO E&C has its business networks in 37 countries through 10 overseas subsidiaries, 5 branches and 25 Project Management Offices as of April 2020.

POSCO E&C has developed the POSCO E&C Sustainable Financing Framework (the "Framework") under which it intends to issue sustainability bonds, loans and other forms of debt financing such as term loans and project loans, and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future projects that will contribute to the transition towards a low-carbon economy and advance the socio-economic development where it operates.

The Framework defines green eligibility criteria in four areas:

- 1. Energy Efficiency
- 2. Green Buildings
- 3. Renewable Energy
- 4. Clean Transportation

The Framework defines social eligibility criteria in three areas:

- 1. Affordable Housing
- Employment Generation including through the Potential Effect of SME Financing and Microfinance
- Socio-Economic Advancement and Empowerment

POSCO E&C engaged Sustainalytics to review the POSCO E&C Sustainable Financing Framework, dated June 2020, and provide a second-party opinion on the Framework's environmental and social credentials and its alignment with the Green Bond Principles 2018 (GBP), ¹ the Social Bond Principles 2020 (SBP), ² the Sustainability Bond Guidelines 2018 (SBG)³ and Green Loan Principles 2018 (GLP). ⁴ This Framework has been published in a separate document. ⁵

Scope of work and limitations of Sustainalytics Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent⁶ opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2018, the Social Bond Principles 2020, the Sustainability Bond Guidelines 2018, and the Green Loan Principles 2018;
- The credibility and anticipated positive impacts of the use of proceeds;
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.4.1, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

¹ The Green Bond Principles are administered by the International Capital Market Association and are available at: https://www.icmagroup.org/greensocial-and-sustainability-bonds/green-bond-principles-gbp/

² The Social Bond Principles are administered by the International Capital Market Association and are available at: https://www.icmagroup.org/greensocial-and-sustainability-bonds/social-bond-principles-sbp/.

³ The Sustainability Bond Guidelines are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/

⁴ The Green Loan Principles are administered by the International Capital Market Association and are available at:

https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/LMA_Green_Loan_Principles_Booklet-220318.pdf

⁵The POSCO E&C Sustainable Financing Framework is available on POSCO E&C's website at:

https://www.poscoenc.com:446/eng/sustainability/sustainability_finance_report.asp.

⁶ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.



As part of this engagement, Sustainalytics held conversations with various members of POSCO E&C's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. POSCO E&C representatives have confirmed (1) they understand it is the sole responsibility of POSCO E&C to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and POSCO E&C.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the intended allocation of proceeds but does not guarantee the realized allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that POSCO E&C has made available to Sustainalytics for the purpose of this SPO.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the POSCO E&C Sustainable Financing Framework

Sustainalytics is of the opinion that the POSCO E&C Sustainable Financing Framework is credible, impactful and aligns with the four core components of the GBP, SBP and GLP. Sustainalytics highlights the following elements of POSCO E&C's Sustainability Bond Framework:

Use of Proceeds:

- The eligible categories (i) Energy Efficiency, (ii) Green Buildings, (iii) Renewable Energy, (iv) Clean Transportation, (v) Affordable Housing, (vi) Employment Generation including through the Potential Effect of SME Financing and Microfinance, (vii) Socio-Economic Advancement and Empowerment are aligned with those recognized by the GBP, SBP and GLP. Sustainalytics believes that POSCO E&C's financing can contribute to the transition towards a low-carbon economy and advance the socio-economic development in South Korea.
- POSCO E&C established a 24-month look-back period for its refinancing activities, which Sustainalytics considers to be in line with market practice.
- POSCO E&C confirmed that the Company excludes any investment that contributes to a fossilfuel lock-in across all sectors from its financing.
- As part of the Energy Efficiency category, POSCO E&C intends to finance the development of energy-efficient materials and equipment, and the construction of plants, infrastructures, and buildings, aiming to achieve at least 20% energy consumption savings. Project examples include the development of smart grid and upgrades in residential and commercial buildings. Sustainalytics views positively the Framework's inclusion of a defined energy efficiency threshold, and encourages the Company to provide further disclosure on the financed projects in its annual reporting to ensure transparency.
- In regard to the Green Buildings category, POSCO E&C intends to finance the following: (i) development or redevelopment of green buildings with third-party certification standards, namely LEED gold or above, BREEAM excellent or above, G-SEED Green 2 or above, or any



equivalent standard, (ii) investments aimed at achieving specified certification standards, including consulting and research and development (R&D) expenditures, and (iii) renovation of buildings, aimed at achieving at least 20% energy efficiency improvement. Sustainalytics has conducted an evaluation of these standards and considers them to be robust and credible (see Appendix 1 for additional details on the certification schemes). By setting the minimum threshold for energy efficiency improvements, POSCO E&C aligns with market practice.

- The Renewable Energy category includes investments in solar, wind, and small-scale (<20 MW) hydropower projects, as well as energy storage systems for the specified renewable energy sources.
- Under the Clean Transportation category, POSCO E&C intends to invest in the construction of light rail systems. The Company confirmed that expenditures will be directed to electric-powered rail systems only.
- Sustainalytics highlights POSCO E&C's eligibility criteria under the following social categories:
 (Please see Section 3: Impact of Use of Proceeds for additional details)
 - Affordable Housing: Improvement of old housing in deteriorated residential areas for low-income households. Sustainalytics welcomes POSCO E&C's targeting of lowincome households, and encourages the Company, where feasible, to take further measures to ensure affordability, and report on the impact achieved.
 - Employment Generation: Investments in venture and start-up companies, which are recognized as venture companies as per the Act on Special Measures for the Promotion of Venture Business or younger than five years, and small and medium-sized enterprises (SMEs) with fewer than 20 employees. Intended investments include R&D activities, loans with below-market interest rates, recruitment centers that intend to help the enterprises find suitable recruits, and new technology developments with the condition of buying. While Sustainalytics recognizes the importance of supporting SMEs, ventures, and startups in South Korea, Sustainalytics encourages POSCO E&C to apply sufficient targeting of enterprises to ensure positive social impact, and to report on the impact achieved. Additionally, regarding the intended co-development activities, Sustainalytics recommends POSCO E&C to ensure the implementation of adequate mechanisms for the mitigation of risks associated with financing environmentally and socially harmful technologies, and provide transparent disclosure on the financed technologies.
 - Socioeconomic Advancement and Empowerment: Financing POSCO Humans, a subsidiary of POSCO Group that aims to provide job security for disadvantaged groups (disabled, elderly, and low-income individuals). POSCO Humans has five business divisions: office support services, IT services, cleaning services, steel house division and vehicle business. As of 2019, POSCO Humans' 40.3% workforce is from disadvantaged groups, mainly disabled employees. Sustainalytics believes that the creation of workplaces for disadvantaged groups will contribute to the integration of socially vulnerable groups into the South Korean labour market. However, Sustainalytics considers the provision of general purpose loans to POSCO Humans as a limitation of the Framework due to indirect targeting of disadvantaged groups, and encourages POSCO E&C to limit financing to projects and activities within POSCO Humans that directly address the employment of disadvantaged groups.
 - Socioeconomic Advancement and Empowerment: Construction of parks, education centers and art centers, all for general public use. Sustainalytics views positively that the services and infrastructures in this category will be publicly available, and encourages POSCO E&C to apply further targeting of disadvantaged groups to ensure positive social impact.
- Project Evaluation and Selection:
 - POSCO E&C will establish a Sustainable Financing Working Group ("SFWG"), comprised of members from Treasury, Finance, Risk Management, Sustainability and Technical Departments, which will be in charge of project selection and evaluation process as well as any updates of the Framework. After the initial project selection conducted by the SFWG, senior management of POSCO E&C will approve the final eligible projects. The SFWG will annually meet to review and manage eligible projects aligned based on the eligibility criteria under the Framework.



- Sustainalytics considers this project selection and evaluation process to be in line with market practice.
- · Management of Proceeds:
 - POSCO E&C's Finance Team will manage the net proceeds which will be deposited in the general funding accounts. POSCO E&C will track the use of proceeds, using an internal accounting system.
 - Pending full allocation, the net proceeds will be temporarily held in cash or cash equivalents, or used to repay existing borrowings under general credit facilities of the Company. In case of the existing projects falling out of the eligibility criteria, they will be substitute to the new ones aligned with eligibility criteria in a reasonable timeframe.
 - Sustainalytics considers this process to be in line with market practice.

· Reporting:

- Until full allocation, POSCO E&C will publish the annual allocation and impact reporting on its corporate website.
- Where feasible, allocation reporting will provide information on the aggregate amount of allocation to eligible projects, the balance of unallocated proceeds and type of temporary investment, the share of financing and refinancing, and examples of eligible projects.
- Upon data availability, impact reporting will disclose impact indicators including energy savings in MWh/GWh, GHG emission reduced/avoided in tonnes of CO₂ equivalent, amount of water recycled or reused in liters, level of green buildings certification by property, renewable energy produced, number of disadvantaged communities helped and number of SMEs and start-up supported or funded.
- Sustainalytics considers this process to be in line with market practice.

Alignment with Green, Social and Sustainability Bond Guidelines 2018 and Green Loan Principles 2018

Sustainalytics has determined that the POSCO E&C Sustainable Financing Framework aligns to the four core components of the Green Bond Principles 2018, Social Bond Principles 2020 and Green Loan Principles 2018. For detailed information please refer to Appendix 2: Sustainability Bond/ Sustainability Bond Programme External Review Form.

Section 2: Sustainability Strategy of POSCO E&C

Contribution of Framework to POSCO E&C's sustainability strategy and performance

POSCO E&C has integrated sustainability considerations into its business operations by committing to provide socially and environmentally responsible business operations and give back to the communities.⁷

Through its social and environmental commitments, POSCO E&C aims to improve water infrastructure and transportation systems while addressing housing challenges, with a particular focus on developing countries. Sustainalytics highlights a few projects executed in 2018 by POSCO E&C in line with its social and environmental commitments: (i) improvement of the water supply system that impacted the water supply of 1 million Myanmar residents, (ii) reinforcement of a Vietnamese sewage treatment system whose sewage treatment capacity was increased by 328,000 tons per day, (iii) Hanoi light rail system project aimed at solving motorbike-oriented transportation system, (iv) hydropower project in Indonesia aimed at increasing the access to electricity for around 430,000 persons, and (v) living environment improvement project in Korea aimed at improving deteriorated/substandard housings to increase public rental housing supply (5,678 new households).8

Furthermore, to address the social challenges of the local communities where the Company operates, POSCO E&C has established three key action areas, including supporting socially vulnerable groups, and nurturing future talents. In 2019, based on the needs of targeted socially vulnerable groups/regions, POSCO E&C provided healthcare services, equipment and awareness education in Korea (254 beneficiaries), Bangladesh (1,542 beneficiaries), and Vietnam (1,291 beneficiaries). Additionally, the Company provided construction career training to 100 trainees in Indonesia and 60 trainees in Myanmar in 2019, who have access to employment at the construction sites of POSCO E&C. 11

POSCO E&C, "POSCO E&C Corporate Citizenship Report 2019 (Korean)", (2019), at: https://www.poscoenc.com:446/service/think_forward_2019.pdf

⁸ POSCO E&C "Sustainability Report (p.46)", (2018), at: https://www.poscoenc.com:446/file_download/download/sustainability_report_2018.pdf

⁹ POSCO E&C "Sustainability Report (p.84)", (2018), at: https://www.poscoenc.com:446/file_download/download/sustainability_report_2018.pdf

¹⁰ POSCO E&C, "Responsible Corporate Citizenship (p. 65)", (2019), at: https://www.poscoenc.com:446/service/think_forward_2019.pdf

¹¹ POSCO E&C, "Responsible Corporate Citizenship (p. 66)", (2019), at: https://www.poscoenc.com:446/service/think_forward_2019.pdf



Based on the above, Sustainalytics is of the opinion that the POSCO E&C Sustainable Financing Framework is aligned with the Company's overall sustainability strategy and initiatives and will contribute to the Company's action on its key environmental priorities. Sustainalytics encourages POSCO E&C to establish time-bounded quantitative social and environmental targets to further strengthen its commitments.

Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the use of proceeds from the Framework are recognized by the GBP, SBP and GLP to have positive environmental and social impacts, Sustainalytics is aware that such eligible projects could also lead to adverse environmental and social impacts. Some key environmental and social risks associated with the eligible projects could include occupational health and safety, community relations, land use and biodiversity issues associated with large-scale infrastructure development. POSCO E&C is able to manage and mitigate potential risks through the implementation of the following measures:

- POSCO E&C's all operations are certified under the ISO 14001 standard,¹² indicating a credible and robust environmental management system in place. Moreover, POSCO E&C has integrated the requirements of the ISO 45001 standard,¹³ an internationally recognized health and safety standard, into its health and safety management system. As such, the Company has established a four-step health and safety system aimed at meeting the goal of 'Zero Critical Accidents': (i) keep reinforcing safety & health policy, (ii) enhance safety awareness, (iii) manage suppliers by prioritizing outstanding ones in safety, and (iv) expand employee engagement by incorporating their opinions in the decision-making process for risk evaluation and amendment of applicable procedures.¹⁴
- POSCO E&C Environmental Management System (POEMS)¹⁵ consists of the three focusing areas: (i) environment management by addressing environmental issues (e.g. scattering dust and waste emissions) and conducting environmental impact assessment, (ii) accident prevention through the engagement of all stakeholders, and (iii) GHG reduction by enhancing environmental awareness through the relevant trainings and campaigns.¹⁶ The system consists of four key steps considering the projects' life cycle: (i) planning: environmental impacts assessment, aligning with applicable environmental laws and regulations; (ii) enforcement and operation: project arrangement and relevant training, environmental management communication, site practice for environmental engagement, and emergency plan; (iii) checks and corrective measures: monitoring and measurement management, auditing internal quality and environment; and (iv) manager's review. After the construction stage, POSCO E&C conducts a site visit according to the construction types and relevant environmental issues to avoid any remaining environmental risks.
- Following the international standards on human rights (e.g. Universal Declaration of Human Rights,¹⁷
 UN Global Compact,¹⁸ and OECD Guidelines for Multinational Enterprises¹⁹), POSCO E&C commits to
 protecting human rights and, where required, conducting due diligence for detecting human rights
 violation.²⁰
- In regard to community relations associated with construction, POSCO E&C complies with the Act on the Improvement of Urban Areas and Residential Environments ²¹ for its redevelopment and reconstruction projects which requires integrating residents' opinions into the project master plan.
- Under the Framework, POSCO E&C will exclude any businesses or projects associated with (i) fossil fuel, (ii) nuclear, (iii) weapon, and (iv) child/forced labour.

Based on above regulations, standards, and assessments, Sustainalytics is of the opinion that POSCO E&C has implemented adequate measures and is well-positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

¹² ISO, "14001:2015", (2015), at: https://www.iso.org/standard/60857.html

¹³ ISO, "ISO 45001:2018: Occupational health and safety management systems — Requirements with guidance for use", (2018), at: https://www.iso.org/standard/63787.html

¹⁴ POSCO E&C "Sustainability Report (p,60)", (2018), at: https://www.poscoenc.com:446/file_download/download/sustainability_report_2018.pdf

¹⁵ POSCO E&C, "System Diagram", at: https://www.poscoenc.com:446/eng/sustainability/system_diagram.asp

¹⁶ POSCO E&C "Sustainability Report (p.68)", (2018), at: https://www.poscoenc.com:446/file_download/download/sustainability_report_2018.pdf

¹⁷ UN, "The Universal Declaration of Human Rights", (1948), at: https://www.un.org/en/universal-declaration-human-rights/

¹⁸ United Nations Global Compact, "The Ten Principles of the UN Global Compact", at: https://www.unglobalcompact.org/what-is-gc/mission/principles

¹⁹ OECD, "Guidelines for multinational enterprises", at: http://mneguidelines.oecd.org/guidelines/

²⁰ POSCO E&C, "Code of Ethics – Practical Guidelines", at: https://www.poscoenc.com:446/eng/sustainability/code_ethics3.asp#guide-7

²¹ KLRI, "Act on the Improvement of Urban Areas and Residential Environments", at:



Section 3: Impact of Use of Proceeds

All seven use of proceeds categories are aligned with those recognized by the GBP, SBP and GLP. Sustainalytics has focused on five below where the impact is relevant in the global and local context.

Relevance of renewable energy, energy efficiency and green buildings in South Korea

To keep the global temperature increase below 2°C in conjunction with the Paris Agreement,²² two-thirds of the global energy should be comprised of renewables by 2050, while renewables accounted for only one-sixth of the global energy-mix in 2019.²³ Renewables are expected to lead to a reduction in energy-related GHG emissions by around 70% by 2050, and 90% with the support of advanced energy efficiency and electrification technologies.²³ According to the *Tracking SDG 7: Energy Progress Report*, the share of total final energy consumption from renewables has increased only 1% between 2010-2017,²⁴ indicating a need of further facilitation in renewable energy.

In particular, the International Renewable Energy Agency (IRENA) notes that the building sector requires further investment in renewables and energy- efficient solutions since the progress in the building industry is well below the levels needed for low carbon economy. ²⁵ Currently, the building and construction sector accounts for 39% of global carbon emissions, comprised of operational emissions (energy used to heat, cool and light buildings) and construction processes. Although buildings take the largest share of energy efficiency expenditures, current investments in sustainable buildings are still not enough to follow the 2°C trajectory of the Paris Agreement. ²⁶ Furthermore, energy efficiency investments in buildings dropped by 3% in 2018. ²⁶

Energy supply in Korea has been primarily sourced from fossil fuels with a high dependency on imports.²⁷ To address this challenge, the Government of Korea set a target of meeting 20% renewable sources in the Country's energy mix by 2030 under the *Renewable Energy 3020 Implementation Plan (RE3020)*.²⁸ As part of the RE3020, the Government aims to achieve around a five-fold increase in renewable energy capacity between 2017-2030 (15.1 GW to 63.8 GW), which is expected to be sourced by mainly solar (30.8 GW) and wind energy (16.5 GW).²⁸ Additionally, in 2020, Ministry of Trade, Industry and Energy announced the *Energy Efficiency Innovation Strategy*, aiming to reduce national GHG emissions through improved energy efficiency.²⁹ The Government aims to reduce the Country's energy consumption by 14.4% by 2030²⁹ and 18.6% by 2040 compared to the 2017 baseline,³⁰ with a particular focus on reducing energy consumption in the following sectors: (i) industry (61.7%), (ii) buildings (20.0%), and (iii) transportation (18.3%).²⁹

Based on the above, Sustainalytics is of the opinion that POSCO E&C's financing in renewable energy, energy efficiency and green buildings can contribute to global decarbonization by increasing the share of renewable energy while advancing energy efficiency, particularly in the building sector, and thereby support the goals set out in the Paris Agreement, and energy-related goals of Korea.

Importance of supporting SMEs in Korea to facilitate employment generation

Korea's economic growth has been led by large enterprises focusing on manufacturing exports during the Country's industrialization.³¹ Despite large enterprises' role in Korea's rapid economic growth, which was improved from one of the poorest countries in the world to a high-income Country over the span of decades, this trickle-down growth model has resulted in economic polarization among large enterprises and small- and

²² UNFCCC, "The Paris Agreement", at: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

²³ IRENA, "People, Planet and Prosperity", (2019), at: https://www.irena.org/publications/2019/Jul/People-Planet-and-Prosperity

²⁴ IRENA, "Tracking SDG 7: The Energy Progress Report", (2020), at: https://www.irena.org/publications/2020/May/Tracking-SDG7-The-Energy-Progress-Report-2020

²⁵ IRENA, "Global Energy Transformation: A Roadmap to 2050", (2019), at: https://www.irena.org/-

[/]media/Files/IRENA/Agency/Publication/2019/Apr/IRENA_Global_Energy_Transformation_2019.pdf

²⁶ IEA, "Tracking Buildings 2019", (2019), at: https://www.iea.org/reports/tracking-buildings-2019

²⁷ IEA, "Korea", at: https://www.iea.org/countries/korea

²⁸ Ministry of Trade, Industry and Energy, "Korea's Renewable Energy 2030 Plan", at: http://gggi.org/site/assets/uploads/2018/10/Presentation-by-Mr.-Kyung-ho-Lee-Director-of-the-New-and-Renewable-Energy-Policy-Division-MOTIE.pdf

²⁹ Ministry of Trade, Industry and Energy, "Energy Efficiency Innovation Strategy (Korean)", (2020), at:

http://www.motie.go.kr/motie/py/td/energeitem/bbs/bbsView.do?bbs_seq_n=210271&bbs_cd_n=72¤tPage=1&search_key_n=&cate_n=4&dept_v = &search_val_v=

³⁰ Ministry of Trade, Industry and Energy, "Third Energy Master Plan", (2019), at:

https://www.etrans.or.kr/ebook/05/files/assets/common/downloads/Third%20Energy%20Master%20Plan.pdf

³¹ OECD, "Enhancing Dynamism in SMEs and Entrepreneurship in Korea", Working Paper, (2018), at:

http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2018)58&docLanguage=En



medium-sized enterprises (SMEs).³¹ Korea ranked first for having the most significant gap of wage income between large enterprises and SMEs among the OECD member countries.³¹

In 2017, SMEs accounted for 99.9% of Korean enterprises and 87.9% of employment in Korea³². Given that SMEs are the main drivers of job creation in Korea, the Government aims to shift the lead of the economic growth model from large enterprises to SMEs and start-ups.³¹ To achieve this goal, the government launched a KRW 10 trillion (USD 9.3 billion) venture capital investment fund and increased financial support for SMEs through state-owned banks.³¹ Additionally, the government provides annual support of KRW 20 million (USD 18,524) to newly hired young employees for working at SMEs as an incentive to ensure employment and business continuity by minimizing the income gap of employees between large enterprises and SMEs.³¹

Given the importance of SMEs for employment generation in South Korea, Sustainalytics is of the opinion that POSCO E&C's financing will contribute to fostering Korean SMEs, thereby creating decent jobs and reducing income gaps between large enterprises and SMEs in Korea.

Impact of supporting redevelopment in deteriorated residential areas of South Korea

Owing to ongoing governmental initiatives, access to quality housing has considerably increased over the past decades in South Korea .³³ There had been a significant increase in the share of dwellings having piped water, modern kitchens, modern toilets and hot water, mainly due to the increased modern facilities from apartments between 1980-2010.³⁴ However, rapid urbanization resulted in significant inequality challenges, thereby the government has committed to promote inclusive growth through urban regeneration since 2017, improving underdeveloped and deteriorated areas in the Country.³⁴ Under the Urban Renewal Activation and Special Law Support, as of 2020, the Government plans to expand the share of rental housing (social housing) to maximum 30% of the redevelopment projects so that the vulnerable groups can benefit from the increased share of social housing.³⁵

Sustainalytics is of the opinion that POSCO E&C's financing can promote inclusive urbanization by targeting low income households in deteriorated residential areas and support the government's goals on this regard.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This sustainability bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Energy Efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Green Buildings	9. Industry Innovation and Infrastructure	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
	11. Sustainable Cities and Communities	11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

³² Ministry of SMEs and Startups, "Status of Korean SMEs", at: https://www.mss.go.kr/site/eng/02/20202000000002019110610.jsp

³³ OECD, "Housing Dynamics in Korea: Building Inclusive and Smart Cities", (2018), at: https://www.oecd.org/governance/housing-dynamics-in-korea-9789264298880-en.htm

³⁴ ADB, "Housing Policy in the Republic of Korea", (2016), at: https://www.adb.org/sites/default/files/publication/183281/adbi-wp570.pdf

³⁵ Hankyung, "Redevelopment district in Seoul, provide rental housing by 30% from September", article, (2020), at: https://www.hankyung.com/realestate/article/202006161445e



Clean Transportation	11. Sustainable cities and communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
Affordable Housing	11. Sustainable Cities and Communities	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Employment Generation including through the Potential Effect of SME Financing and Microfinance	8. Decent Work and Economic Growth	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
Socio-Economic Advancement and Empowerment	10. Reduced Inequalities	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

Conclusion

POSCO E&C has developed the POSCO E&C Sustainability Financing Framework under which it will issue green, social and sustainability bonds and use the proceeds to finance or refinance eligible project categories: (i) Energy Efficiency, (ii) Green Buildings, (iii) Renewable Energy, (iv) Clean Transportation, (v) Affordable Housing, (vi) Employment Generation including through the Potential Effect of SME Financing and Microfinance, (vii) Socio-Economic Advancement and Empowerment. Sustainalytics considers that the projects funded by the bonds' proceeds will facilitate a transition to a low-carbon economy and advance the socioeconomic development in South Korea.

The POSCO E&C Sustainability Financing Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the POSCO E&C Sustainability Financing Framework is aligned with the overall sustainability strategy of the Company and that the use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals, particularly SDG 7, 8, 9, 10, and 11. Additionally, Sustainalytics is of the opinion that POSCO E&C has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is of the opinion that POSCO E&C is well-positioned to issue sustainability bonds and that the POSCO E&C Sustainability Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2018 (GBP), Social Bond Principles 2020 (SBP) and Sustainability Bond Guidelines 2018 (SBG) and Green Loan Principles 2018 (GLP).



Appendices

Appendix 1: Comparison of Green Building Certification Schemes

	LEED ³⁶	BREEAM	G-SEED
Background	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.	BREEAM (Building Research Establishment Environmental Assessment Method) was first published by the Building Research Establishment (BRE) in 1990. Based in the UK. Used for new, refurbished and extension of existing buildings.	G-SEED (Green Standard for Energy and Environmental Design) is a green building certification standard used in Korea. First implemented in 2002, and later expanded in 2016, G-SEED is administered by the Korean Government under the authority of the Green Building Act (2006).
Certification levels/rating	Certified Silver Gold Platinum	Pass Good Very Good Excellent Outstanding	Green 4 Green 3 Green 2 Green 1
Areas of Assessment: Environmental Performance of the Building	Energy and Atmosphere Sustainable Sites Location and Transportation Materials and Resources Water efficiency Indoor Environmental Quality Innovation in Design Regional Priority	Energy Land Use and Ecology Pollution Transport Materials Water Waste Health and Wellbeing Innovation	Land Use & Transportation Energy & Environmental Pollution Materials & Resources Water Management Maintenance Ecology Indoor Environment Innovative Design
Requirements	Prerequisites (independent of level of certification) + Credits with associated points These points are then added together to obtain the LEED level of certification There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major	Prerequisites depending on the levels of certification + Credits with associated points This number of points is then weighted by item ³⁷ and gives a BREEAM level of certification, which is based on the overall score obtained (expressed as a percentage). Majority of BREEAM issues are flexible, meaning that the client can choose which to comply with to build their BREEAM performance score. BREAAM has two stages/audit reports: a 'BREEAM Design Stage' and a 'Post	Prerequisites (independent of level of certification) + Credits with associated points Individual credits are achieved in several categories, category scores are then weighted to achieve an overall grade.

³⁶ USGBC, LEED: <u>www.usgbc.org/LEED</u>

³⁷ BREEAM weighting: Management 12%, Health and wellbeing 15%, Energy 19%, Transport 8%, Water 6%, Materials 12.5%, Waste 7.5%, Land Use and ecology 10%, Pollution 10% and Innovation 10%. One point scored in the Energy item is therefore worth twice as much in the overall score as one point scored in the Pollution item



	Renovations, Existing Buildings: Operation and Maintenance).	Construction Stage', with different assessment criteria.	
Performance display		Pass Outstanding	**************************************
Accreditation	LEED AP BD+C LEED AP O+M	BREEAM International Assessor BREEAM AP BREEAM In Use Assessor	Certification Bodies, appointed by the Ministry of Environment (MOE) and the Ministry of Land, Infrastructure and Transportation (MLIT) review and certifies projects.
Qualitative considerations	Widely recognised internationally, and strong assurance of overall quality.	Used in more than 70 countries: Good adaptation to the local normative context. Predominant environmental focus. BREEAM certification is less strict (fewer minimum thresholds) than HQE and LEED certifications.	Widely used in Korea and aligned with government standards. Strong overall qualifications. Little international recognition.

Appendix 2: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	POSCO E&C
Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:	POSCO E&C Sustainable Financing Framework
Review provider's name:	Sustainalytics
Completion date of this form:	June, 2020

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs and SBPs:



×	Use of Proceeds	X	Process for Project Evaluation and Selection
	Management of Proceeds	\boxtimes	Reporting
ROLE(S) OF REVIEW PROVIDER		
\boxtimes	Consultancy (incl. 2 nd opinion)		Certification
	Verification		Rating
	Other (please specify):		
	Note: In case of multiple reviews / different pro	oviders,	, please provide separate forms for each review.
EXECU	JTIVE SUMMARY OF REVIEW and/or LINK TO FU	JLL RE\	/IEW (if applicable)
Please	e refer to Evaluation Summary above.		
Sect	ion 3. Detailed review		
	vers are encouraged to provide the information n to explain the scope of their review.	below	to the extent possible and use the comment
1. USE	OF PROCEEDS		
Overal	I comment on section (if applicable):		
Transp SME F those contrib South Sustai As par materi least : upgrad In regaredeve BREEA achiev	ligible categories – (i) Energy Efficiency, (ii) cortation, (v) Affordable Housing, (vi) Employment Financing and Microfinance, (vii) Socio-Economic recognized by the GBP, SBP and GLP. Sustable to the transition towards a low carbon economic Korea. POSCO E&C established a 24-month I nalytics considers to be in line with market pract to the Energy Efficiency category, POSCO E&C is als and equipment, and the construction of plan 20% energy consumption savings. Project exactles in residential and commercial buildings. and to the Green Buildings category, POSCO E&C elopment of green buildings with third-party commercial market practical specified certification standards, including ditures, and (iii) renovation of buildings, aimed at	nt General Gen	eration including through the Potential Effect of incement and Empowerment – are aligned with the solicities that POSCO E&C's financing cannot advance the socio-economic development in the period for its refinancing activities, which is to finance the development of energy-efficient astructures, and buildings, aiming to achieve at include the development of smart grid and disto finance the following: (i) development or tion standards, namely LEED gold or above, a equivalent standard, (ii) investments aimed at ulting and research and development (R&D)

Use of proceeds categories as per GBP:

⊠ Renewable energy

projects, as well as energy storage systems for the specified renewable energy sources.

POSCO E&C defined target populations for its eligible social projects.



	Pollution prevention and control		Environmentally sustainable management of living natural resources and land use
	Terrestrial and aquatic biodiversity conservation	\boxtimes	Clean transportation
	Sustainable water and wastewater management		Climate change adaptation
	Eco-efficient and/or circular economy adapted products, production technologies and processes	×	Green buildings
	Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs		Other (please specify):
If ap	pplicable please specify the environmental taxono	my, i	if other than GBPs:
Use	of proceeds categories as per SBP:		
	Affordable basic infrastructure		Access to essential services
\boxtimes	Affordable housing	\boxtimes	Employment generation (through SME financing and microfinance)
	Food security	\boxtimes	Socioeconomic advancement and empowerment
	Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs		Other (please specify):
If ap	pplicable please specify the social taxonomy, if ot	her t	han SBPs:
2 D	ROCESS FOR PROJECT EVALUATION AND SELE	CTIO	NN
	rall comment on section (if applicable):	0	
	<u> </u>	., .	. 0 (((0)))
Trea proj sele The und	asury, Finance, Risk Management, Sustainability ect selection and evaluation process as well as ction conducted by the SFWG, senior manageme SFWG will annually meet to review and manage	and ind any of the angle and angle ang and in angle an	ing Group ("SFWG"), comprised of members from Technical Departments, which will be in charge of updates of the Framework. After the initial project POSCO E&C will approve the final eligible projects. ble projects aligned based on the eligibility criteria t selection and evaluation process to be in line with
Eval	uation and selection		
\boxtimes	Credentials on the issuer's social and green objectives		Documented process to determine that projects fit within defined categories



	Defined and transparent criteria for projects eligible for Sustainability Bond proceeds		Documented process to identify and manage potential ESG risks associated with the project
	Summary criteria for project evaluation and selection publicly available		Other (please specify):
Info	rmation on Responsibilities and Accountability	,	
\boxtimes	Evaluation / Selection criteria subject to external advice or verification		In-house assessment
	Other (please specify):		
3. N	IANAGEMENT OF PROCEEDS		
Ove	rall comment on section (if applicable):		
acco alloo borr eligi	ounts. POSCO E&C will track the use of proception, the net proceeds will be temporarily he owings under general credit facilities of the Co	eeds eld in ompa ew o	eeds which will be deposited in the general funding, using an internal accounting system. Pending full cash or cash equivalents, or used to repay existing any. In case of the existing projects falling out of the ones aligned with eligibility criteria in a reasonable in line with market practice.
Trac	king of proceeds:		
\boxtimes	Sustainability Bond proceeds segregated or tr	acke	d by the issuer in an appropriate manner
\boxtimes	Disclosure of intended types of temporary inve	estme	ent instruments for unallocated proceeds
	Other (please specify):		
Add	itional disclosure:		
	Allocations to future investments only	\boxtimes	Allocations to both existing and future investments
	Allocation to individual disbursements	\boxtimes	Allocation to a portfolio of disbursements
	Disclosure of portfolio balance of unallocated proceeds		Other (please specify):

4. REPORTING

Overall comment on section (if applicable):

Until full allocation, POSCO E&C will publish the annual allocation and impact reporting on its corporate website. Where feasible, allocation reporting will provide information on the aggregate amount of allocation to eligible projects, the balance of unallocated proceeds and type of temporary investment, the share of financing and refinancing, and examples of eligible projects. Upon data availability, impact reporting will disclose impact indicators including energy savings in MWh/GWh, GHG emission reduced/avoided in tonnes of CO2 equivalent, amount of water recycled or reused in liters, level of green buildings certification by



property, renewable energy produced, number of disadvantaged communities helped and number of SMEs and start-up supported or funded. Sustainalytics considers this process to be in line with market practice.

Use	of proceeds	repo	rting:			
	Project-by-p	oroje	ct	\boxtimes	On a pro	ject portfolio basis
	Linkage to	indiv	idual bond(s)		Other (pl	lease specify):
		Info	ormation reported:			
		\boxtimes	Allocated amounts			Sustainability Bond financed share of total investment
			Other (please specify): fire vs refinancing	nanci	ng	
		Free	quency:			
		\boxtimes	Annual			Semi-annual
			Other (please specify):			
Imp	act reporting:	:				
	Project-by-p	oroje	ct	\boxtimes	On a pro	oject portfolio basis
	Linkage to i	indiv	idual bond(s)		Other (p	please specify):
		Info	ormation reported (expected	or ex	(-post):	
		\boxtimes	GHG Emissions / Savings		\boxtimes	Energy Savings
		\boxtimes	Decrease in water use		\boxtimes	Number of beneficiaries
			Target populations			Other ESG indicators (please specify): Level of certification by property; Renewable energy produced (MWh); Renewable energy capacity (MW); Number of redevelopment and rebuilding projects of deteriorated residential areas; Number of jobs created; Number of SMEs and start-up supported or funded; Number of employees of SMEs supported or funded; Number and type of disadvantageous communities helped
		Free	quency:			
		\boxtimes	Annual			Semi-annual
			Other (please specify):			



	ns of Disclosure					
	Information published in financial report		Information published in sustainability report			
	Information published in ad hoc documents	\boxtimes	Other (please specify): corporate website			
	Reporting reviewed (if yes, please specify external review):	whic	h parts of the reporting are subject to			
Whe	ere appropriate, please specify name and date	of pu	blication in the useful links section.			
USE	FUL LINKS (e.g. to review provider methodolo	gy or	credentials, to issuer's documentation, etc.)			
http	s://www.poscoenc.com					
	SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE					
SPE	CIFY OTHER EXTERNAL REVIEWS AVAILABLE	E, IF <i>A</i>	APPROPRIATE			
	CIFY OTHER EXTERNAL REVIEWS AVAILABLE e(s) of Review provided:	E, IF <i>A</i>	APPROPRIATE			
			APPROPRIATE Certification			
Тур	e(s) of Review provided:					
Тур	e(s) of Review provided: Consultancy (incl. 2 nd opinion)		Certification			

ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

- i. Second Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability Bond framework, or appropriate procedures such as information barriers will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social features of the type of Projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.
- iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green, Social and Sustainability Bond Scoring/Rating: An issuer can have its Sustainability Bond, associated Sustainability Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental and/or social performance



data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.



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