

POSCO CORPORATE CITIZENSHIP
REPORT 2021

ESG Factbook



Green Tomorrow,  with POSCO



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Environment

Indicator	Unit	2018	2019	2020	2021
Crude steel production	thousand ton	37,735	38,007	35,935	38,263

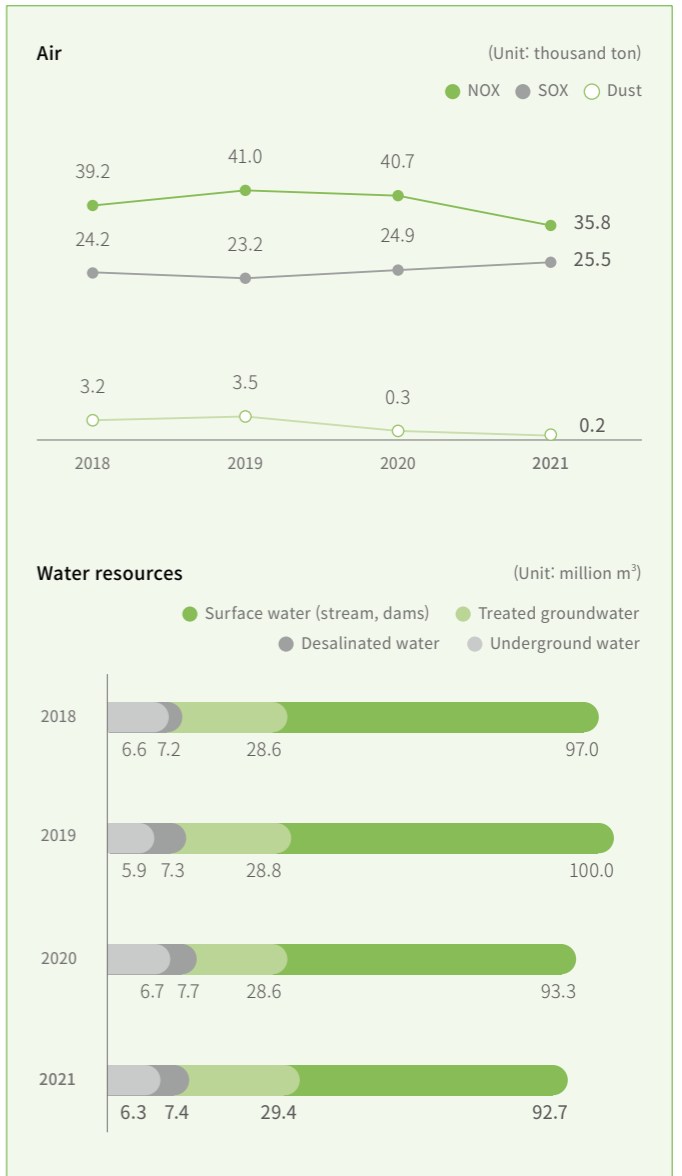
Air ¹⁾	Unit	2018	2019	2020	2021
Dust emissions = TSP	thousand ton	3.2	3.5	0.3	0.2
Dust intensity (production based)	kg/t-crude steel	0.09	0.09	0.01	0.01
NOx emissions	thousand ton	39.2	41.0	40.7	35.8
NOx intensity (production based)	kg/t-crude steel	1.04	1.08	1.13	0.94
Sox emissions	thousand ton	24.2	23.2	24.9	25.5
SOx intensity (production based)	kg/t-crude steel	0.64	0.61	0.69	0.67

1) With the enforcement of the 'Special Act on Air Environment Improvement in Air Management Areas' of the Republic of Korea, the facilities subject to air pollutant emission calculation have been modified since 2020.

Water resources	Unit	2018	2019	2020	2021
Total water intake	million m ³	139.5	142.0	136.4	135.8
Treated groundwater	million m ³	28.6	28.8	28.6	29.4
Desalinated water	million m ³	7.2	7.3	7.7	7.4
Surface water (stream, dams)	million m ³	97.0	100.0	93.3	92.7
Underground water	million m ³	6.6	5.9	6.7	6.3
Water resource intensity (crude steel production based)	million m ³	3.7	3.7	3.8	3.5
Total water resource consumption ²⁾	million m ³	68.8	68.7	64.5	61.0
Total stormwater wastewater discharge ³⁾	million m ³	70.6	73.3	71.9	74.9
Total Wastewater Recycled	million m ³	48.0	50.9	50.8	47.8
Percentage of water withdrawn from regions with "High" or "Extremely High" baseline water stress	million m ³	-	-	-	-
Percentage of water consumed in regions with "High" or "Extremely High" baseline water stress	million m ³	-	-	-	-

2) Total water consumption equals total water withdrawal minus wastewater discharge per GRI Standards.

3) Total amount of wastewater under final treatment at worksites and discharged into the sea





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Waste	Unit	2018	2019	2020	2021
Total waste generated ¹⁾	ton	11,295,560	16,713,940	21,974,695	21,806,614
Total waste recycled	ton	10,892,423	16,332,607	21,662,956	21,509,991
Total waste disposed (incineration and landfill)	ton	403,137	381,333	311,739	296,624
Percentage of hazardous waste	%	0.9	0.6	0.4	0.4

1) Reflecting the government's interpretation of waste in 2019, POSCO converted the granulated slag production facility into a waste recycling facility and reported the amount of granulated slag that was not included in waste by 2018.

Resource circulation	Unit	2018	2019	2020	2021
Recycled blast furnace slag	ton	12,239,298	12,450,191	11,998,028	12,441,549
Granulated blast furnace slag	ton	10,728,377	10,625,781	10,810,459	11,243,762
Cement industry use	ton	259,484	260,406	277,349	210,938
Other uses such as fertilizer	ton	259,484	260,406	277,349	210,938
Palletized slag	ton	1,251,437	1,564,005	910,220	986,849
CO ₂ reduction from slag re-use in the cement industry ²⁾	tCO ₂ e	8,392	8,311	8,486	7,651
Reused production residue and by-products	%	98.3	98.3	98.8	98.6

2) Calculated by assuming that 1 ton of clinker is replaced with 1 ton of granulated blast-furnace slag for 2018-2020. From 2021, we adjusted CO₂ reduction effect by assuming that 1 ton of Portlan cement, assumption of 85% clinker, is replaced with 1 ton of granulated blast-furnace slag

Management	Unit	2018	2019	2020	2021
Percentage of ISO 50001 certified (Energy Management System)	%	100	100	100	100
Number of certified worksites	count	2	2	2	2
Number of certification-target worksites	count	2	2	2	2
Percentage of ISO 14001 certified (Environmental Management System)	%	100	100	100	100
Number of certified worksites	count	2	2	2	2
Number of certification target worksites	count	2	2	2	2
Number of environmental law violations ³⁾	case	10	8	5	4
Amount of green purchases ⁴⁾	million USD	352	368	330	2,661

3) Number of environmental law violations disclosed based on the POSCO business report

4) Green Purchasing: Purchase amount of eco-friendly raw materials, facilities, and materials in terms of 3R (Recycle, Reduce, Reuse)*.

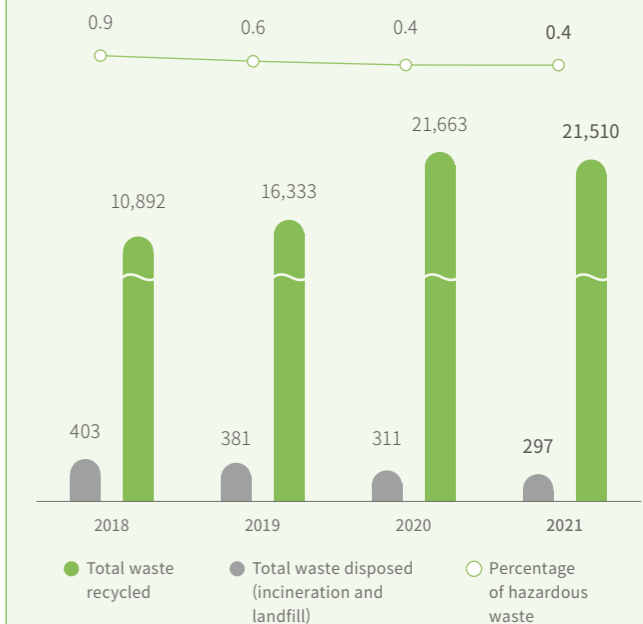
The amount of green purchasing of 2021 increased mainly due to new items such as ferrous scrap, and the values of 2018-2020 were adjusted with annual average exchange rates USD to KRW.

* Recycle: Collection and utilization of discarded resources such as iron and STS scrap

Reduce: Manufacturing by suppliers such as ECO refractories and low-ash coals – products that reduce harmful substances such as CO₂ in the process of using our company's services and eco-friendly certified products

Reuse: Products that contribute to the reduction of new purchases, such as through material recycling

Total waste generated and Percentage of hazardous waste (Unit: thousand ton, %)



Waste Treatment Details (Unit: tons)

Category	2018	2019	2020	2021
Landfill	340,308	326,410	246,431	236,196
Incineration	62,829	54,923	64,985	60,302
Others	-	-	323	126
Total	403,137	381,333	311,739	296,624



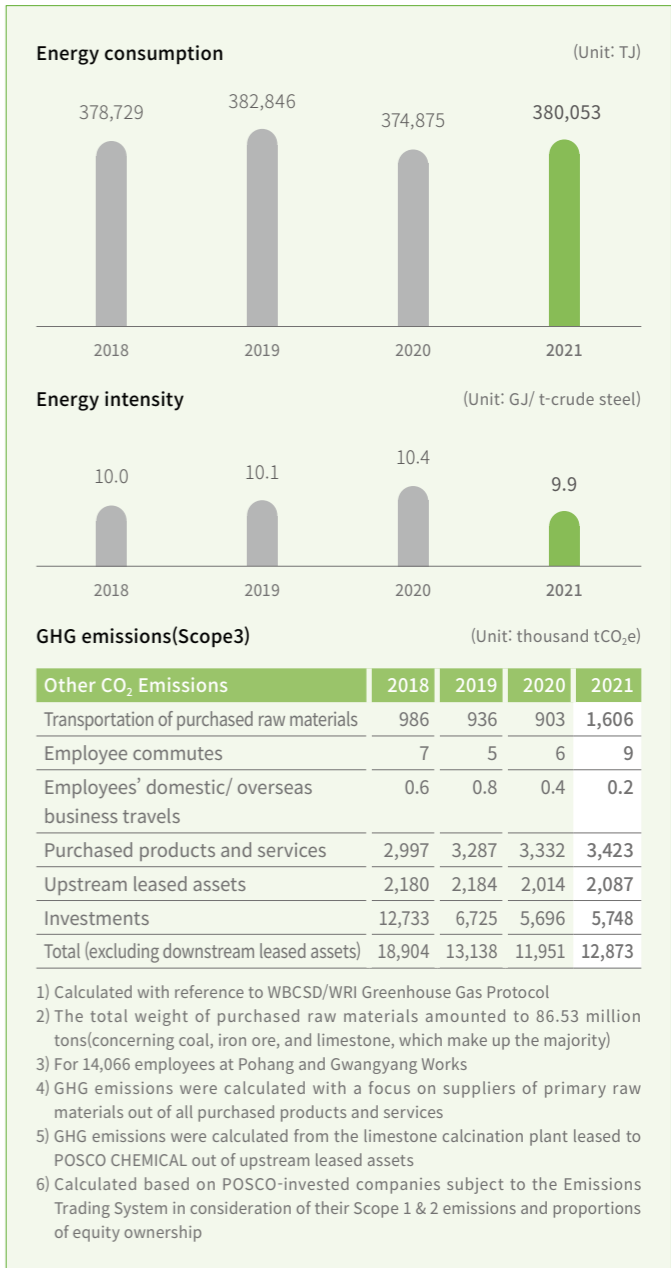
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Energy		Unit	2018	2019	2020	2021
Energy consumption		GJ	378,728,730	382,845,859	374,874,610	380,052,799
Direct energy	Natural gas	GJ	41,384,234	45,885,941	52,692,024	41,270,222
	Diesel	GJ	170,094	183,292	179,288	185,423
	Gasoline	GJ	10,866	12,732	8,347	4,587
	Vehicle LPG	GJ	167	132	62	34
Indirect energy	Electricity ¹⁾	GJ	8,545,433	6,300,216	4,480,025	10,746,994
Renewable energy		GJ	119	219	318	270
On-site energy recovery and reuse	Waste heat	GJ	-	-	-	-
	By-product gas	GJ	328,617,817	330,463,327	317,514,546	327,845,269
Energy intensity (production based)		GJ/ t-crude steel	10.0	10.1	10.4	9.9
Percentage of natural gas in energy use		%	87	86	85	86
Percentage of electricity in energy use		%	11	12	14	11
Percentage of by-product gas in energy use		%	2	2	1	3
Renewable energy sales		GJ	16,135	16,012	16,287	13,840

1) Power purchased from external grid

GHG		Unit	2018	2019	2020	2021
GHG emissions(Scope1 & 2) ²⁾		tCO ₂ e	78,498,443	80,263,890	75,649,882	78,490,205
Scope 1 (direct emissions)		tCO ₂ e	77,391,479	79,447,924	75,069,656	77,101,095
Scope 2 (indirect emissions)		tCO ₂ e	1,106,964	815,966	580,226	1,389,117
GHG emissionsScope3)		tCO ₂ e	18,903,000	13,139,000	11,951,000	12,872,905
GHG intensity (production based)		tCO ₂ e/ton	2.08	2.11	2.11	2.05

2) Due to the problem on handling the decimal point, there is a slight difference between combined value of Scope 1&2 and adding up by business worksites.





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Society

Safety	Unit	2018	2019	2020	2021
Injured employees (total)	persons	18	21	21	20
Injured employees (direct employees)	persons	6	13	12	7
Injured employees (contractors)	persons	12	8	9	13
Injury rate (total)	%	0.06	0.07	0.07	0.06
Injury rate (direct employees)	%	0.04	0.07	0.07	0.04
Injury rate (contractors)	%	0.09	0.06	0.06	0.08
Fatalities (total)	persons	5	2	4	1
Fatalities (direct employees)	persons	0	2	2	0
Fatalities (contractors)	persons	5	0	2	1
Fatality rate (total)	%	0.02	0.01	0.01	0.003
Fatality rate (direct employees)	%	0.00	0.12	0.12	0.00
Fatality rate (contractors)	%	0.04	0.00	0.01	0.01
Percentage of ISO 45001 certified (health and safety management system) (Total)	%	100	100	100	100
Number of certified worksites	count	2	2	2	2
Number of certification target worksites	count	2	2	2	2

1) The standards for direct employees and primary contractors were prepared to match the method of calculating indicators such as lost time injuries. The number of casualties in each year, including direct employees and all contractors is as follows.

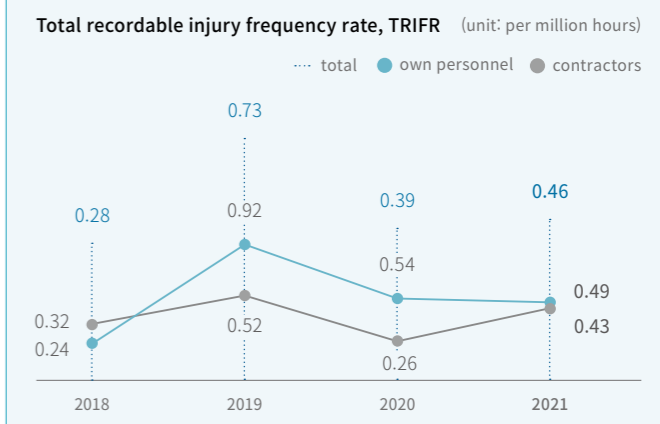
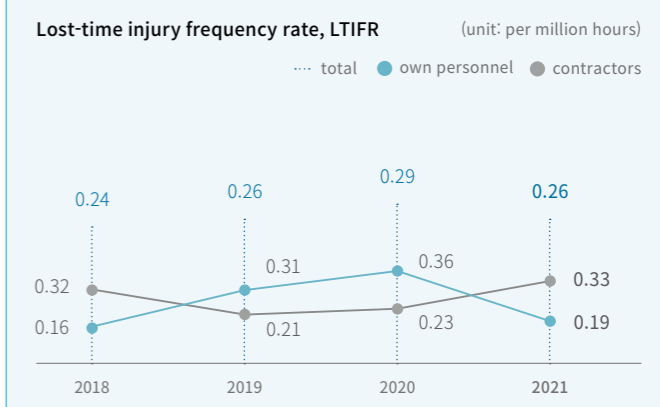
2018	2019	2020	2021
18	28	26	22

2) The standards for direct employees and primary suppliers were prepared to match the calculation method of indicators such as fatality rate. The number of deaths in each year including direct employees and all contractors is as follows.

2018	2019	2020	2021
5	3	5	1

3) The figures from the 2020 Corporate Citizenship Report differ due to a change in the statistical standards of LTIFR and TRIFR from the number of incidents to the number of injuries.

The lost-time injury frequency rate and total recordable injury frequency rate for POSCO worksite locations according to the accident management criteria of Korea are as follows:



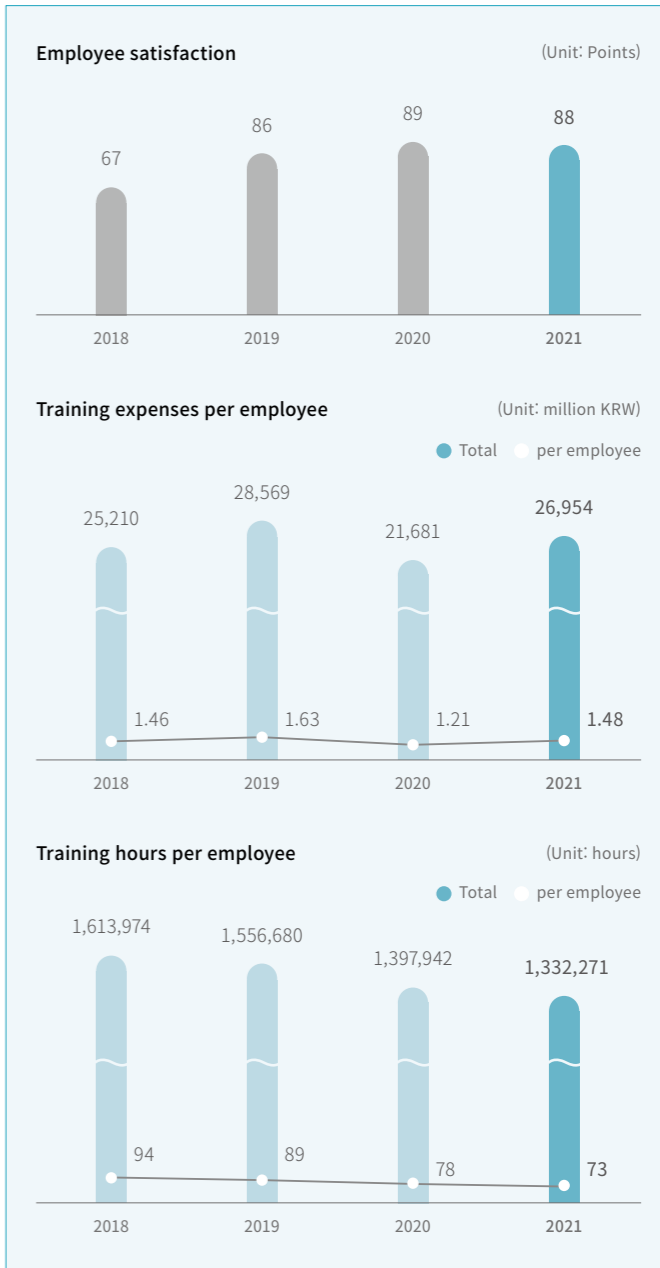


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HR	Unit	2018	2019	2020	2021
Total number of employees	persons	17,221	17,574	17,937	18,252
Total number of executives	persons	71	71	74	79
Total number of employees	persons	17,150	17,503	17,863	18,173
Number of permanent employees	persons	16,899	17,299	17,665	17,559
Number of temporary employees	persons	251	204	198	614
Continuous years of service	years	19.9	19.6	19.1	19.0
Number of new hires	persons	886	1,026	701	1,192
Percentage of open positions filled by internal candidates	%	99.8	98.3	99.3	97.2
Recruitment cost	KRW	756,146,931	1,074,507,644	902,484,594	1,236,268,814
Voluntary resignation rate	%	1.67	1.69	1.26	2.04
Total turnover	persons	660	669	817	1,070
Number of retirees	persons	356	355	578	691
Manager turnover rate	%	1.21	1.37	1.37	2.21
Employee satisfaction	Points (100-point scale)	67	86	89	88
Number of strikes exceeding one week in duration	cases	-	-	-	-

Training	Unit	2018	2019	2020	2021
Training expenses per employee	million KRW	1.46	1.63	1.21	1.48
Total employee training costs (education and training costs)	million KRW	25,210	28,569	21,681	26,954
Training hours per employee	hours	94	89	78	73
Total training hours	hours	1,613,974	1,556,680	1,397,942	1,332,271

Pension Subsidies	Unit	2018	2019	2020	2021
National pension (company contribution)	million KRW	41,465	43,230	44,937	45,921
Personal pension subsidies	million KRW	5,625	2,803	2,732	2,603
Number of personal pension beneficiaries	persons	6,759	4,354	4,197	4,074





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Diversity ¹⁾	Unit	2018	2019	2020	2021
Percentage of female employees ²⁾	%	4.9	5.0	5.2	5.8
Percentage of women in managerial positions or higher ³⁾	%	11.1	11.6	11.5	12.4
Percentage of women in top management positions (including directors)	%	1.3	2.6	3.7	2.5
Percentage of females in junior managerial positions ⁴⁾	%	23.3	23.4	22.7	23.5
Percentage of female employees in managerial positions in revenue-generating department ⁵⁾	%	15.4	18.1	19.3	22.6
Percentage of female employees related to STEM ⁶⁾	%	8.0	7.6	7.5	9.3
Percentage of employees with disabilities	%	2.9	3.0	3.3	3.3

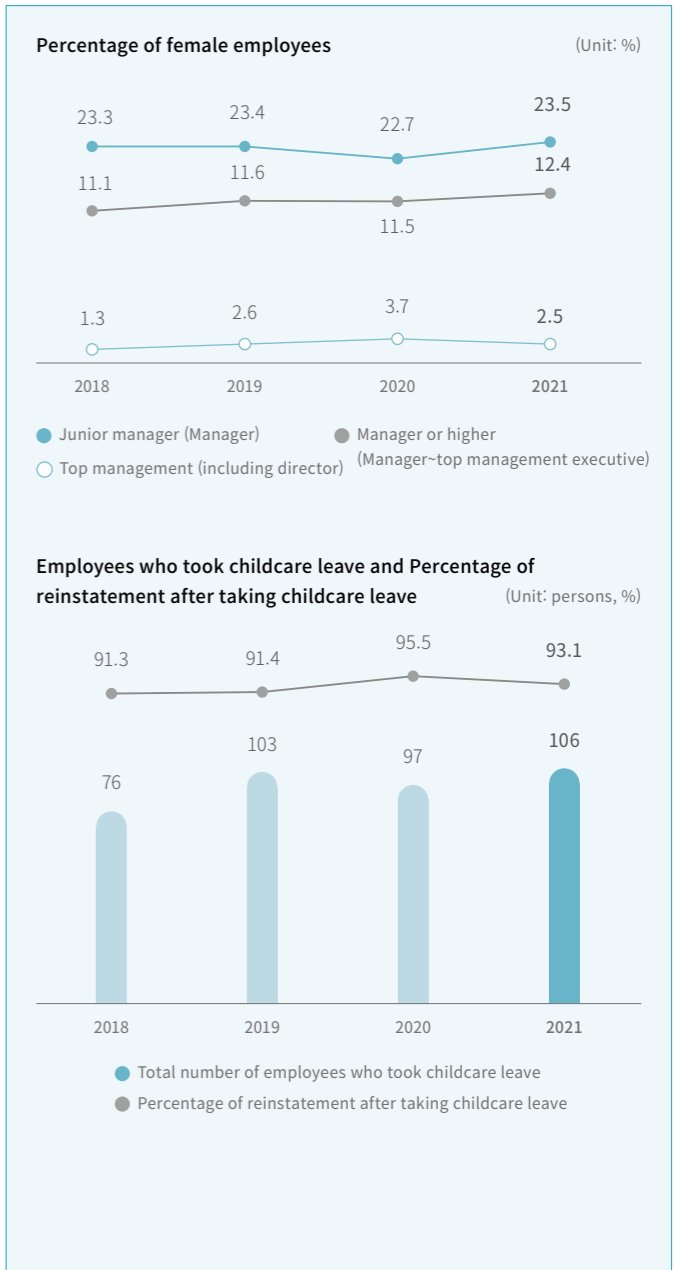
- 1) The number of foreign employees (based on domestic worksites) is 10 as of 2021. The compositions are Chinese (0.02%), Filipinos (0.02%), Russians, Uzbekistanis, and Indonesians (0.02%)
- 2) Some numbers have been updated with the integration of Annual Report disclosure standards and Calculations standards
- 3) Ratio of women in all managers, from junior managers to top executives
- 4) Junior managers refer to mid-level managers
- 5) Ratio of female employees who are managers or higher in the marketing division
- 6) STEM: Science, Technology, Engineering, Mathematics

Work-Life Balance	Unit	2018	2019	2020	2021
Total number of employees who took childcare leave	persons	76	103	97	106
Female employees who took childcare leave	persons	53	70	52	49
Male employees who took childcare leave	persons	23	33	45	57
Percentage of reinstatement after taking childcare leave	%	91.3	91.4	95.5	93.1
Reinstated employees after childcare leave	persons	94	106	127	121
Reinstated target employees after taking childcare leave	persons	103	116	133	130

Social Contribution	Unit	2018	2019	2020	2021
Social contribution expenses	million KRW	48,650	48,841	34,089	49,455
Voluntary service hours per person	hours	27	27	17.9	16.0
Total voluntary service hours	hours	462,697	451,511	319,305	296,729

Results of Customer Satisfaction Survey ⁷⁾	Unit	2018	2019	2020	2021
Total	points (100-point scale)	82	84	-	85
Domestic	points (100-point scale)	89	90	-	88
Overseas	points (100-point scale)	76	78	-	82

7) Survey postponed in 2020 due to COVID-19





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Economic

Business performance	Unit	2019	2020	2021
Sales	KRW million	30,373,511	26,509,920	39,920,201
Cost of sales	KRW million	26,700,874	24,323,352	32,136,438
Gross profit	KRW million	3,672,637	2,186,568	7,783,762
Selling and administrative expenses	KRW million	1,086,278	1,051,372	1,134,162
Operating profit	KRW million	2,586,359	1,135,197	6,649,600
Financial profit (loss)	KRW million	360,440	410,483	768,526
Other non-operating income	KRW million	1,115,550	527,799	434,425
Net income before tax	KRW million	1,831,249	1,017,880	6,983,700
Corporate tax expenses (income)	KRW million	655,536	52,017	1,802,472
Net income	KRW million	1,175,712	965,863	5,181,227

Financial position	Unit	2019	2020	2021
Current assets	KRW million	18,216,066	19,579,953	25,918,880
Non-current assets	KRW million	37,494,700	37,215,015	38,323,879
Total assets	KRW million	55,710,766	56,794,969	64,242,759
Current liabilities	KRW million	3,331,446	5,089,111	7,868,269
Non-current liabilities	KRW million	6,765,135	6,591,154	7,339,065
Total liabilities	KRW million	10,096,581	11,680,264	15,207,334
Total equity	KRW million	45,614,185	45,114,704	49,035,425

Cash flows	Unit	2019	2020	2021
Cash flows from operating activities	KRW million	3,600,955	5,157,670	4,780,338
Cash flows from investment activities	KRW million	(-) 3,952,722	(-) 4,359,430	(-) 3,413,276
Cash flows from financing activities	KRW million	1,075,756	76,314	(-) 1,149,296
Cash at the beginning of year	KRW million	259,219	978,139	1,822,660
Cash at the end of year	KRW million	978,139	1,822,660	2,042,274

* The financial data are based on the separate financial statements of POSCO Holdings as of December 31, 2021.

Association Fees and External Sponsorship Status

In accordance with the Corporate Citizenship Charter, the Code of Ethics, the Anti-Corruption Compliance Guidelines, and the Korean Political Funds Act, POSCO strictly prohibits the use of the company's assets and budget for political donations and sponsorships. In accordance with the BOD operational regulations, the ESG Committee deliberates and determines donations in excess of KRW 100 million and less than KRW 1 billion, while support donations in excess of KRW 1 billion are determined by the ESG committee following prior deliberation.

Status of external sponsorship (For 2021; portion in excess of KRW 1 billion)

Classification	Amount	Remark
Sculpture donation within Hwanho Park in Pohang City	Approx. KRW 11.7 billion	Board of Directors' resolution dated November 5, 2021
Donation to help neighbors in need at end of year	Approx. KRW 10 billion (POSCO KRW 8 billion, Group companies KRW 2 billion)	Board of Directors' resolution dated December 10, 2021

Association membership fee-related payment amount (Unit: one thousand KRW)

Category	2018	2019	2020	2021
Tax-free organizations (non-profit entities, etc.)	6,693,557	6,955,811	6,807,845	7,895,448
Lobbyists / Lobby organizations	0	0	0	0
Political campaigns/political groups	0	0	0	0
Other	0	0	0	0

Details of major association membership fee payments

(2021, Unit: one thousand KRW)

Category	Total Amount of Paid Fees
Korea Steel Association (KOSA)	2,564,000
World Steel Association (worldsteel)	910,000
Korea Employers Federation (KEF)	318,050

* Purpose of participation in association

- 1) Korea Steel Association: A consultative body formed with the purpose of enhancing the global competitiveness and sustainability of the Korean steel industry
- 2) worldsteel: A consultative body formed with the purpose of enhancing the competitiveness of the steel industry based on global steel industry data analysis
- 3) Korea Employers Federation: An economic organization formed with the purpose of enhancing corporate competitiveness and establishing a cooperative system between labor and management



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Major Material Issues

Category	Material Issues 1	Material Issues 2	Material Issues 3
Major issue	Worksite safety risk management	Climate change response	Increase energy efficiency
Category	Occupational health & Safety	Climate Strategy	Climate Strategy
Reasons for selecting major issues	POSCO operates various operations at domestic and abroad, including Pohang Steelwork and Gwangyang Steelwork. Since the process in the steel industry contains high temperatures and heavy equipments, workplace safety accidents are at high risk. Safety accidents at production sites can cause serious casualties to workers and lead to management losses such as reduced employee morale and increased regulatory costs.	Climate change is a global problem that threatens the sustainable future of humans. Due to the nature of the steel industry, POSCO emits lots of carbon and is exposed to risks such as domestic and foreign GHG regulations and increased customers' need for low-carbon products. Also, there are potential physical risks such as disruption in the procurement of raw materials due to global meteorological phenomena such as heavy rains and floods.	The process of making steel requires a lot of energy, and energy costs are an important competitiveness factor in steel production. Improving energy efficiency can increase cost competitiveness and resilience to changes in the external energy market. In addition, it can contribute to building a sustainable society by reducing carbon and reserving natural resources.
Business effect	Risk	Risk	Risk
Response method	POSCO re-established the safety and health management system into nine components to secure health and safety obligations as stipulated in the Serious Disaster Penalty Act in 2021. We are promoting the health and safety management system as a focus activities to establish a robust health and safety management system, create a safety-first organizational culture, and foster human resources to enhance safety expertise. For the continuous operation of the health and safety management system, we check and improve the direction of our health and safety activities through monthly audits on the safety index. Based on the Occupational Safety and Health Act, we establish a plan for health and safety every year and report to the board of directors, and get approval for implementation. In addition, we get a diagnosis at least once a half year through an external institution to identify the safety management level and improve our plan.	POSCO declared a vision for "2050 Net Zero" in December 2020 under a low-carbon response strategy consisting of 'Green Process, Green Product, Green Partnership.' Green Process is a technology development and investment to reduce GHG in the workplace, including energy efficiency improvement, low carbon investment and technology development, iron scrap utilization, application of carbon capture and storage (CCUS) technology, and commercialization of hydrogen reduction iron. Green Product is materials that contribute to social GHG reduction such as low-carbon steel, new material, and by-product. Through the Green Partnership, POSCO plans to strengthen cooperation on technology development and carbon policy at domestic and foreign and disclose transparent carbon information to stakeholders, such as investors, customers, and the government.	POSCO tries to increase energy efficiency by improving power generation efficiency in steel processes. We are using byproduct gas generated by the steel process as fuel for the steel process and power plants and produced 88% of the power used by the steel plant in 2021. Also, we plan to streamline aged low-efficiency power generating facilities to improve power generation efficiency and minimize by-product gas emissions. POSCO will maximize power generation by developing a technology that predicts by-product gas generation and its supply and demand in real-time.
Long-term target (2024)	Disaster rate 0, critical disaster occurrence rate 0	Emissions of 75.7 million tons	By-product gas emission rate 0.63%
Progress	<div style="display: flex; gap: 5px;"> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> </div>	<div style="display: flex; gap: 5px;"> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> </div>	<div style="display: flex; gap: 5px;"> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; background-color: #0056b3;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> <div style="width: 20px; height: 10px; border: 1px solid #ccc;"></div> </div>
Executive KPI	Reflect on assessment of the head of the SHE Division	Reflect on assessment of the head of the SHE Division and the head of the Steel Production & Technology Division	Reflect on assessment of the head of the Steel Production & Technology Division
Related report	POSCO Corporate Citizen Report p.71~75	POSCO Corporate Citizen Report p.38~48	POSCO Corporate Citizen Report p.42



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Emerging Risks

Category	Material Issue 1	Material Issue 2
Category	Emerging Risk 1	Emerging Risk 2
RISK Definition	Biodiversity loss	Supply chain management
Business effect	The 2020 Global Risk Report, from the World Economic Forum (WEF), picked loss of biodiversity and ecosystem collapse as one of the biggest crises that humanity will face over the next decade. Loss of biodiversity and ecosystem collapse means uncertainty and limitation in securing natural resources and will affect human life conservation and industrial activities. The report points out that more than half of the world's GDP depends on natural capital, which leads to financial risk to human society. It will cause a serious challenge to sustainability by weakening the profit base of most industries and companies, including the steel industry.	According to "the Proposal for Directive on Corporate Sustainability Due Diligence Directive (draft)" released by EU Commission in February 2022, companies in the EU and third countries must identify potential human rights and environmental risks throughout their supply chains, fulfill their obligations to prevent, mitigate, and terminate them and disclose it. If there is a violation of this obligation, there might lead to civil liability as well as administrative sanctions and fines. These national sanctions and management are expanding, and companies in the world are competing to build a transparent and stable supply chain.
Response method	POSCO understands the importance of biosphere restoration and biodiversity protection. Its Guidelines for Practice of Ethical Norms contains the relevant clauses. Accordingly, POSCO investigates the potential outcome that its projects may have on the biodiversity of the local ecosystem and takes measures to minimize adverse impact. POSCO will prevent, minimize, and mitigate any threat to biodiversity; prior to initiating a project, such as facility expansion, POSCO will investigate and monitor its potential impact on biodiversity. We will make efforts to ensure compliance with this principle across all Worksites, at tier-one suppliers, and at non-tier-one suppliers sites, too. At our work sites designated as World Heritage areas or IUCN Category I-IV protected area, which refer to land or biodiversity protected by international convention, we will observe the laws and regulations stipulated by the local community, country, or region.	POSCO operates ESG risk management processes from supplier registration to performance evaluation and follow-up on contract performance to establish a strong supply chain system. In addition, we operate a supplier code consisting of 49 items in seven categories, including labor human rights, safety and health, environment, ethics, shared growth, and quality management, referring to the RBA (Responsible Business Alliance) code so that all companies with POSCO fulfill their responsibilities as global corporate citizens. All suppliers must agree to the Supplier Code of Conduct to deal with POSCO. POSCO is also expanding eco-friendly purchases to realize net zero and promotes cooperation in hydrogen development and low-carbon/low-cost technology development with overseas raw material suppliers. Also, we carry out supply chain management activities to solve social problems(conflict, human rights, environment, etc.) that occur during mining.
Related report	Corporate Citizen Report p.124~125	Corporate Citizen Report p.62~68, p.134~139



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	102-2	Activities, brands, products, and services	p.5
	102-3	Location of headquarters	p.5
	102-4	Location of operations	POSCO website (https://www.posco.co.kr/homepage/docs/kor6/jsp/company/family/foreign_01.jsp)
	102-5	Ownership and legal form	p.5
	102-6	Markets served	p.5
	102-7	Scale of the organization	p.102, p.104
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Category	Index	Details	POSCO response
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GRI 102	102-45	Entities included in the consolidated financial statements	2021 Annual Report p.573~578
	102-46	Defining report content and topic Boundaries	p.2
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	102-49	Changes in reporting	N/A
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Economic Performance			
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	p.23-24
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	103-3	Evaluation of the management approach	p.24
GRI 201	201-1	Direct economic value generated and distributed	p.104
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GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	p.23-24
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Materials			
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GRI 302	302-1	Energy consumption within the organization	p.100
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GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	p.23-24
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	103-3	Evaluation of the management approach	p.24
GRI 308	308-2	Negative environmental impacts in the supply chain and actions taken	p.65-66
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Employment			
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GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	p.23-24
	103-2	The management approach and its components	p.24, p.72
	103-3	Evaluation of the management approach	p.24, p.105
GRI 403	403-1	Occupational health and safety management system	p.72
	403-2	Hazard identification, risk assessment, and incident investigation	p.73
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GRI 405	405-1	Diversity of governance bodies and employees	p.103
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GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	p.23-24
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GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	p.23-24
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SASB(Domestic worksites)

Code	Category	Unit	Accounting Metrics	POSCO's Response
Greenhouse Gas Emissions				
EM-IS-110a.1		metric tons (t), percentage (%)	(1) Gross global Scope 1 emissions (2) Percentage covered under emissions-limiting regulations	(1) 77,101,095 (2) 100% Scope 1 emissions are based on those generated from domestic work sites (Pohang Works and Gwangyang Works). POSCO verifies its Scope 1 emissions through verified GHG statements.
EM-IS-110a.2			Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	POSCO announced its POSCO 2050 Carbon Neutrality goal in December 2020. It will achieve its reduction goals for 2050 by increasing hydrogen-based steelmaking to 20% by 2030, and to 50% by 2040. Low-carbon strategies in conformity with reduction routes are detailed in the climate change response document. Direct Link
Air				
			(1) NOx (excluding N ₂ O)	35,800
			(2) SOx	25,500
			(3) Particulate matter (PM10)	POSCO manages PM10 on a Total Suspended Particles (TSP) standard. The dust (TSP) emissions are total 264 tons.
EM-IS-120a.1		metric tons (t)	(4) CO emissions (5) Manganese (MnO) emissions (6) Lead (Pb) emissions (7) Volatile organic compounds (VOCs) emissions (8) Polycyclic aromatic hydrocarbons (PAHs) emissions	POSCO's primary business is to manufacture steel products by separating and refining iron from iron ores at high temperatures through a blast furnace. This steel production process generates air pollutants such as SOx, NOx and dust. POSCO reports all emission volumes. For other substances, data is neither collected nor calculated.
Energy Management				
EM-IS-130a.1	Quantitative	gigajoules (GJ), percentage (%)	(1) Total energy consumed (2) Percentage of grid electricity (3) Percentage of renewable source electricity	380,052,799 2.9% POSCO sold 13,840 GJ of its produced renewable energy, with the amount used totaling 270 GJ.
EM-IS-130a.2	Quantitative	gigajoules (GJ), percentage (%)	(1) Total fuel consumed (2) Percentage coal (3) Percentage natural gas (4) Percentage renewable	369,305,805 N/A POSCO uses coal as a reducing agent (raw material). 11.1% N/A
Water Management				
EM-IS-140a.1	Quantitative	thousand cubic meters (m ³), percentage (%)	Total fresh water withdrawn Percentage recycled	135,800 35.2%



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Code	Category	Unit	Accounting Metrics	POSCO's Response
EM-IS-140a.1	Quantitative	thousand cubic meters (m ³), percentage (%)	Percentage in regions with High or Extremely High Baseline Water Stress	0 In Pohang and Gwangyang, where POSCO's domestic worksites are located, the Baseline Water Stress is under 40%, so this usage metric is not applicable.
			Percentage in regions with Extremely High (>80%)' Baseline Water Stress	0 In Korea, where POSCO's domestic worksites are located, Baseline Water Stress is not particularly high in any region, so this usage metric is not applicable.
Waste Management				
EM-IS-150a.1	Quantitative	metric tons (t), percentage (%)	Total amount of waste generated	21,806,614 POSCO manages its generation and treatment of waste through Allbaro, the Korean government's official waste disposal system.
			Percentage hazardous	POSCO follows the criteria set forth by the Waste Management Act of Korea in managing the waste it generates, treating waste containing hazardous substances as "designated waste" and legally disposing of it. POSCO's definition of designated waste differs from that of the SASB. The percentage of designated waste generated amounts to 0.4%.
			Percentage recycled	98.6%
Workforce Health & Safety				
EM-IS-320a.1	Quantitative	incidence rate per 200,000 hours	Total recordable incident rate (full-time and contract, TRIR)	0.09
			Fatality rate (full-time and contract)	0.003
			Near miss frequency rate (full-time and contract)	28.11
Supply Chain Management				
EM-IS-430a.1	Discussion and Analysis		Discussion of the process for managing iron ore and/or coking coal sourcing risks arising from environmental and social issues	POSCO has promoted cooperation with overseas coal and iron ore suppliers to develop hydrogen and low-carbon/low-cost technologies for the establishment of a low-carbon supply chain and sustainability throughout the steel industry. We have actively promoted activities to reduce emissions of harmful substances into the environment by expanding the use of low-ash coal and low-to medium-nitrogen anthracite. We have also supported education and employment-related projects for low-income residents by establishing the one-to-one matching "GEM (Go the Extra Mile) Matching Fund" with overseas suppliers, afforestation projects in Korea and its supplier countries, and planting and forest formation projects. We also cooperate with them to increase the purchase ratio of coal and iron ore from matching suppliers. To resolve social issues during mineral mining, we became the first company in the Korean steel industry to join the RMI in 2020. At the same time, we established the five-step procedures based on the OECD Due Diligence Guidance in order to conduct responsible mineral supply chain management activities. When finding new suppliers, POSCO offers additional points to suppliers that show excellence in resolving environmental and social issues. In addition, we implement a policy of mutual benchmarking with suppliers who demonstrate excellent ESG through regular evaluation, and for suppliers with poor evaluations we work for their improvement through collaboration.

Activity Metric

Code	Category	Unit	Accounting Metrics	POSCO's Response
EM-IS-000.A	Quantitative	metric tons (t), percentage (%)	Raw steel production, percentage from: (1) basic oxygen furnace processes (2) electric arc furnace processes	The data below include all Korean and overseas worksites corresponding to POSCO's consolidated crude steel production. (1) Production volume: 36,907,365, Percentage: 96.5% (2) Production volume: 1,355,865, Percentage: 3.5%
EM-IS-000.B	Quantitative	metric tons (t)	Total iron ore production	This metric is not applicable and is not reported, as POSCO does not own any mines.
EM-IS-000.C	Quantitative	metric tons (t)	Total coking coal production	This metric is not applicable and is not reported, as POSCO does not own any mines.



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SASB(Global work sites)

Code	Category	Unit	Accounting Metrics	POSCO's Response
Greenhouse Gas Emissions				
EM-IS-110a.1		metric tons (t), percentage (%)	(1) Gross global Scope 1 emissions (2) Percentage covered under emissions-limiting regulations	(1) 83,675,676 (2) 92.1% One country (South Korea)
EM-IS-110a.2			Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	With domestic worksites accounting for 92.3% of total emissions, a detailed roadmap aiming for 2050 Carbon Neutrality is disclosed to achieve the reduction goals of 20% by 2030 and 50% by 2040. Direct Link
Air				
			(1) NOx emissions (excluding N ₂ O)	35,936
			(2) SOx emissions	25,502
			(3) Particulate matter emissions	341
EM-IS-120a.1		tons (t)	(4) CO emissions (5) Manganese (MnO) emissions (6) Lead (Pb) emissions (7) Volatile organic compounds (VOCs) emissions (8) Polycyclic aromatic hydrocarbons (PAHs) emissions	N/A
Energy Management				
EM-IS-130a.1	Quantitative	gigajoules (GJ), percentage (%)	(1) Total energy consumed (2) Percentage of grid electricity (3) Percentage of renewable source electricity	414,385,404 4.2% The renewable energy usage is 6,928 GJ.
EM-IS-130a.2	Quantitative	gigajoules (GJ), percentage (%)	(1) Total fuel consumed (2) Percentage coal (3) Percentage natural gas (4) Percentage renewable	397,275,042 N/A POSCO uses coal as a reducing agent (raw material). 11.3% N/A
Water				
EM-IS-140a.1	Quantitative	thousand cubic meters (m ³), percentage (%)	Total fresh water withdrawn Percentage recycled	150,193 32.70%



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Code	Category	Unit	Accounting Metrics	POSCO's Response
EM-IS-140a.1	Quantitative	thousand cubic meters (m ³), percentage (%)	Percentage in regions with High (40-80%)' Baseline Water Stress	0 In Pohang and Gwangyang where POSCO's domestic worksites are located, Baseline Water Stress is under 40%, so this usage metric is not applicable.
			Percentage in regions with Extremely High (>80%)' Baseline Water Stress	0 In Pohang and Gwangyang where POSCO's domestic worksites are located, Baseline Water Stress is under 40%, so this usage metric is not applicable.

Waste Management

EM-IS-150a.1	Quantitative	metric tons (t), percentage (%)	Total amount of waste generated	24,109,815 POSCO manages its generation and treatment of waste through Allbaro, the Korean government's official waste disposal system.
			Percentage hazardous	POSCO follows the criteria set forth by Korea's Waste Management Act in sorting and managing the waste generated in Pohang steelworks and Gwangyang steelworks with foreign worksites lawfully managed according to national regulations. The management criteria of designated waste stipulated in each nation's regulations differs from that defined by the SASB. Regardless, the percentage of designated waste regulated by each nation's governmental laws is a total of 9.8% across all worksites.
			Percentage recycled	98.1%

Workforce Health & Safety

EM-IS-320a.1	Quantitative	incidence rate per 200,000 hours	Total recordable incident rate (full-time and contract, TRIR)	0.077
			Fatality rate (full-time and contract)	0.002
			near miss frequency rate (full-time and contract)	24.83 Based on employees under direct operations, excluding Indonesia PT-KP

Supply Chain Management

EM-IS-430a.1	Qualitative		Discussion of the process for managing iron ore and/or coking coal sourcing risks arising from environmental and social issues	POSCO is a member of the RMI and is strengthening ESG cooperation with its raw materials suppliers. Direct Link
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Activity Metric

Code	Category	Unit	Accounting Metric	POSCO's Response
EM-IS-000.A	Quantitative	metric tons (t), percentage (%)	Raw steel production, percentage from: (1) basic oxygen furnace processes (2) electric arc furnace processes	The data below includes all domestic and overseas worksites corresponding to POSCO's consolidated crude steel production (42,964,419 tons). (1) Production volume: 40,042,554, Percentage: 93.2% (2) Production volume: 2,921,865, Percentage: 6.8%
EM-IS-000.B	Quantitative	metric tons (t)	Total iron ore production	This metric is not applicable and is not reported, as POSCO does not own any mines.
EM-IS-000.C	Quantitative	metric tons (t)	Total coking coal production	This metric is not applicable and is not reported, as POSCO does not own any mines.



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	T0002	Qualitative	Frequency by which the board is informed about climate-related issues	p.39-40
	T0003	Qualitative	Whether the board considers climate-related issues when making decisions	p.39-40
	T0004	Qualitative	Monitoring the board to oversee progress against goals and targets for addressing climate-related issues	p.39-40
	T0005	Qualitative	Top decision making organization related to climate-related issues	p.13, p.40
	T0006	Qualitative	Role and responsibility of decision making organization related to climate-related issues	p.13, p.40
	T0007	Qualitative	Structure of decision making organization related to climate-related issues	p.13, p.40
	T0008	Qualitative	Processes by which management is informed about climate-related issues	p.13, p.40
	T0009	Qualitative	How management monitors climate-related issues	p.39, p.40
Strategy	T0010	Qualitative	Describe the climate-related issues the organization has identified over the short, medium, and long term. (including how to divide terms)	p.38
	T0013	Qualitative	Climate-related issues impact on the organization's business and strategy (products and services, supply chains, adaptation and mitigation activities, R&D investment, operation)	p.39-40, p.42-50
	T0015	Qualitative	Explanation on climate-related scenario (when the scenario is linked to the organization's strategy and financial plan)	p.39
	T0016	Qualitative	The organization's strategy that can be affected by climate-related risks and opportunities	p.39
	T0017	Qualitative	Change on the organization's strategy that reflects the climate-related risks (including change over time)	p.39
Risk Management	T0018	Qualitative	Explaining process that identify and assess climate-related risk	p.39-40
	T0019	Qualitative	Explaining management process for climate-related decision making	p.39-40
	T0020	Qualitative	Describe whether climate-related risk identifying process is integrated into the existing risk management system	p.39-40
Metrics and Targets	T0021	Quantitative	Major climate-related risk metrics (water, energy, land usage, waste management, etc.)	p.97-99
	T0022	Quantitative	Direct GHG emissions (Scope 1)	p.38, p.99
	T0023	Quantitative	Indirect GHG emissions (Scope 2)	p.38, p.99
	T0024	Quantitative	Other indirect GHG emissions (Scope 3)	p.99
	T0025	Qualitative	Percentage used to calculate emissions (number of employees, unit production, etc.)	p.38, p.99
	T0026	Quantitative	Metrics and targets on major climate-related risk	p.38