



# POSCO CORPORATE CITIZENSHIP REPORT 2020

Economic, Environmental Social, and Governance Performance

# ESG FACTBOOK

This ESG Factbook was based on data from POSCO's domestic worksites and verified by a third-party along with the 2020 Corporate Citizenship Report.

With POSCO

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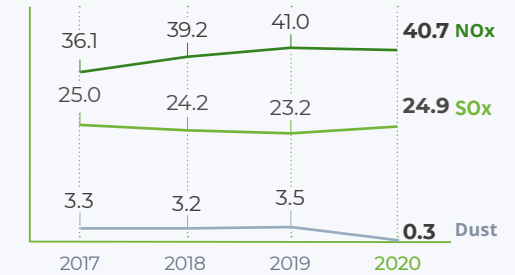
## Environmental

Indicator	Unit	2017	2018	2019	2020
<b>Basic Information</b>					
<b>Crude steel production</b>	<b>thousand tons</b>	<b>37,207</b>	<b>37,735</b>	<b>38,007</b>	<b>35,935</b>

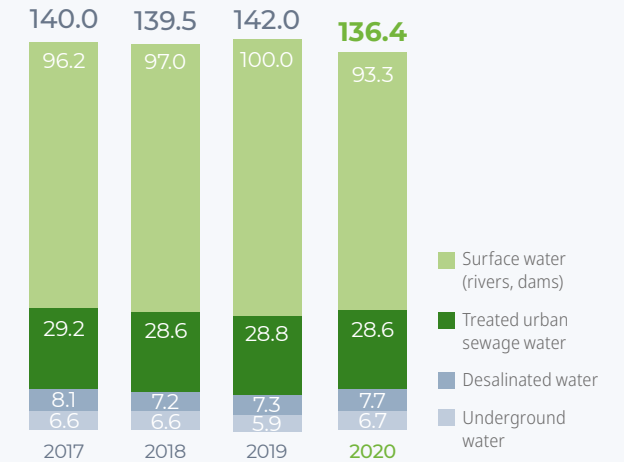
<b>Air <sup>1)</sup></b>					
<b>Absolute dust emissions</b>	<b>thousand tons</b>	<b>3.3</b>	<b>3.2</b>	<b>3.5</b>	<b>0.3</b>
Dust intensity	kg/t-crude steel	0.09	0.09	0.09	0.01
<b>Absolute NOx emissions</b>	<b>thousand tons</b>	<b>36.1</b>	<b>39.2</b>	<b>41.0</b>	<b>40.7</b>
NOx intensity	kg/t-crude steel	0.97	1.04	1.08	1.13
<b>Absolute SOx emissions</b>	<b>thousand tons</b>	<b>25.0</b>	<b>24.2</b>	<b>23.2</b>	<b>24.9</b>
SOx intensity	kg/t-crude steel	0.67	0.64	0.61	0.69

<b>Water</b>					
<b>Water withdrawal</b>	<b>million m<sup>3</sup></b>	<b>140.0</b>	<b>139.5</b>	<b>142.0</b>	<b>136.4</b>
Treated urban sewage water	million m <sup>3</sup>	29.2	28.6	28.8	28.6
Desalinated water	million m <sup>3</sup>	8.1	7.2	7.3	7.7
Surface water (rivers, dams)	million m <sup>3</sup>	96.2	97.0	100.0	93.3
Underground water	million m <sup>3</sup>	6.6	6.6	5.9	6.7
<b>Net water use</b>	<b>m<sup>3</sup>/t-crude steel</b>	<b>3.70</b>	<b>3.70</b>	<b>3.74</b>	<b>3.80</b>
Total water consumption <sup>2)</sup>	million m <sup>3</sup>	72.7	68.8	68.7	64.4
Total recycled water	million m <sup>3</sup>	46.9	48.0	50.9	50.8
Total rainwater and wastewater discharge <sup>3)</sup>	million m <sup>3</sup>	67.4	70.6	73.3	71.9
Percentage of water withdrawn from regions with "High" or "Extremely High" baseline water stress	million m <sup>3</sup>	None	None	None	None
Percentage of water consumed in regions with "High" or "Extremely High" baseline water stress	million m <sup>3</sup>	None	None	None	None

**Air Emissions** (Unit: thousand tons)



**Water Withdrawal** (Unit: million m<sup>3</sup>)



1) In accordance with the Special Act on the Improvement of Air Quality in Air Control Zones, the facilities subject to air emission calculations have been changed

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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## Environmental

Indicator	Unit	2017	2018	2019	2020
<b>Waste</b>					
<b>Total waste generated<sup>1)</sup></b>	<b>tons</b>	<b>10,587,757</b>	<b>11,295,560</b>	<b>16,713,940</b>	<b>21,974,669</b>
Total waste recycled	tons	10,201,434	10,892,423	16,332,607	21,662,981
Total waste disposed (incineration and landfill)	tons	386,323	403,137	381,333	311,688
<b>Percentage of hazardous waste</b>	<b>%</b>	<b>1.5</b>	<b>0.9</b>	<b>0.6</b>	<b>0.4</b>

1) Granulated slag-producing facilities were reclassified as waste-recycling facilities in reflection of the governmental interpretation of waste that was redefined in 2019. The amount of granulated slag excluded until 2018 was included in the calculation of waste for reporting purposes.

<b>Resource Recycling</b>						
<b>Recycled blast furnace slag</b>	<b>tons</b>	<b>12,039,635</b>	<b>12,239,298</b>	<b>12,450,191</b>	<b>11,998,028</b>	
Granulated slag	Cement industry use	tons	11,151,012	10,728,377	10,625,781	10,810,459
	Fertilizer, and others	tons	257,019	259,484	260,406	277,349
Palletized slag	tons	631,603	1,251,437	1,564,005	910,220	
CO <sub>2</sub> avoided from slag re-use in the cement industry <sup>1)</sup>	thousand tCO <sub>2</sub> e	8,596	8,392	8,311	8,486	
<b>Reused production residue and by-products</b>	<b>%</b>	<b>98.4</b>	<b>98.3</b>	<b>98.3</b>	<b>98.8</b>	

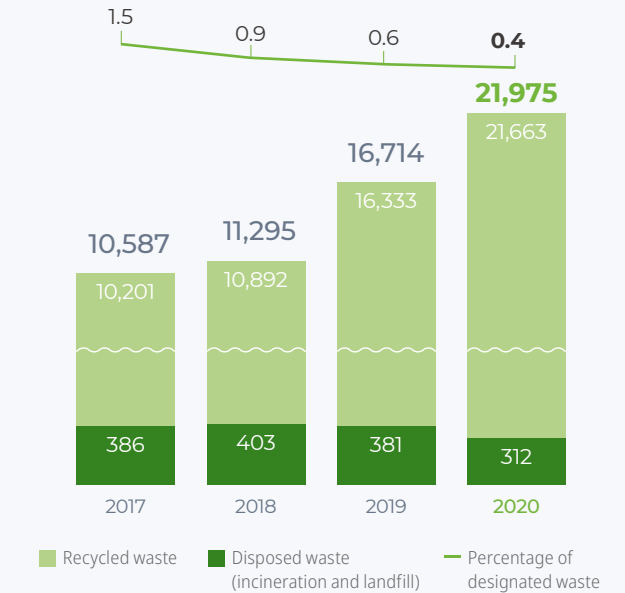
1) By applying the theoretical ratio of which CaO, the main component of cement clinker, is converted to CO<sub>2</sub>, the CO<sub>2</sub> reduction result for every 1 ton of clinker being replaced by 1 ton of granulated slag has been calculated as 0.785 t-CO<sub>2</sub>/t-Clinker.

<b>Management</b>					
<b>Percentage of ISO 50001 certified</b> (Energy Management System)	<b>%</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
No. of certified worksites	worksites	2	2	2	2
No. of certification-target worksites	worksites	2	2	2	2
<b>Percentage of ISO 14001 certified</b> (Environmental Management System)	<b>%</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
No. of certified worksites	worksites	2	2	2	2
No. of certification target worksites	worksites	2	2	2	2
<b>No. of environmental violations of legal obligations<sup>1)</sup></b>	<b>cases</b>	<b>1</b>	<b>10</b>	<b>8</b>	<b>5</b>
<b>Amount of green purchases</b>	<b>million KRW</b>	<b>267,721</b>	<b>320,014</b>	<b>315,892</b>	<b>279,686</b>

1) Number of violations of legal obligations according to POSCO's Business Report

### Total Waste and Percentage of Hazardous Waste

(Unit: thousand tons, %)



▲ ISO 50001 Certification  
(Pohang Works)



▲ ISO 50001 Certification  
(Gwangyang Works)



▲ ISO 14001 Certification  
(General)

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## Environmental

Indicator	Unit	2017	2018	2019	2020
<b>Energy</b>					
<b>Energy consumption</b>	<b>GJ</b>	<b>374,858,713</b>	<b>378,728,730</b>	<b>382,845,859</b>	<b>374,874,610</b>
Direct energy					
Natural gas	GJ	42,841,873	41,384,234	45,885,941	52,692,024
Diesel	GJ	174,541	170,094	183,292	179,288
Gasoline	GJ	10,942	10,866	12,732	8,347
Vehicle LPG	GJ	174	167	132	62
Indirect energy (electricity)	Electricity	8,550,171	8,545,433	6,300,216	4,480,025
Renewable energy	GJ	0	119	219	318
Retrieved and reused on-site energy	By-product gas	323,281,012	328,617,817	330,463,327	317,514,546
<b>Energy intensity</b>	<b>GJ/ t-crude steel</b>	<b>10.1</b>	<b>10.0</b>	<b>10.1</b>	<b>10.4</b>
Percentage of by-product gas in consumed fuel	%	86.2	86.8	86.3	84.7
Percentage of natural gas in consumed fuel	%	11.4	10.9	12.0	14.1
Percentage of electricity in consumed fuel	%	2.3	2.3	1.6	1.2
Renewable energy sales	GJ	17,834	16,135	16,012	16,287

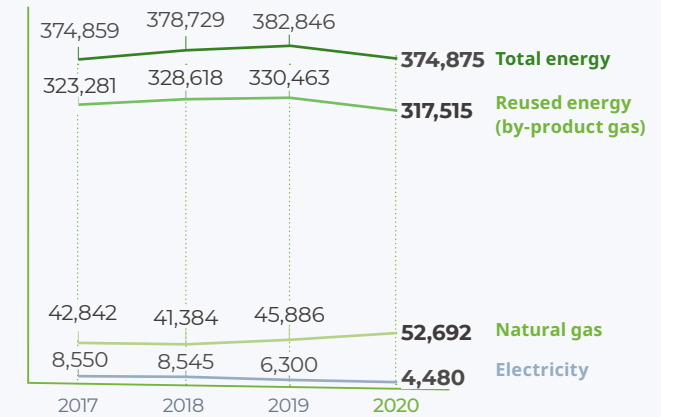
<b>GHG</b>					
<b>GHG emissions (Scope 1 &amp; 2)<sup>1)</sup></b>	<b>tCO<sub>2</sub>e</b>	<b>76,741,041</b>	<b>78,498,443</b>	<b>80,263,890</b>	<b>75,649,882<sup>3)</sup></b>
Scope 1 (direct emissions)	tCO <sub>2</sub> e	75,633,360	77,391,479	79,447,924	75,069,656
Scope 2 (indirect emissions)	tCO <sub>2</sub> e	1,107,681	1,106,964	815,966	580,226
GHG emissions (Scope 3)	tCO <sub>2</sub> e	18,044,000	18,903,000	13,139,000	11,951,000
<b>GHG intensity (per output)<sup>2)</sup></b>	<b>tCO<sub>2</sub>e/t-crude steel</b>	<b>2.06</b>	<b>2.08</b>	<b>2.11</b>	<b>2.11</b>

1) The above-listed data covers Pohang Works and Gwangyang Works only, which may lead to discrepancies from the inventory data submitted to the government that covers all worksites

2) Changes made in GHG-emission calculations may lead to discrepancies with the 2019 Corporate Citizenship Report

3) Emissions that were ultimately reported to the government after third-party verification but subject to change according to the government's final assessment results

**Total Energy Consumption** (Unit: TJ)



**GHG Emissions (Scope 3)** (Unit: thousand tCO<sub>2</sub>)

Other CO <sub>2</sub> Emissions	2017	2018	2019	2020
Transportation of purchased raw materials	978	986	936	903
Employee commutes	7	7	5	6
Employees' domestic/overseas business travels	0.7	0.6	0.8	0.4
Purchased products and services	2,638	2,997	3,287	3,332
Upstream leased assets	2,081	2,180	2,184	2,014
Investments	12,339	12,733	6,725	5,696
Total (excluding downstream leased assets)	18,044	18,904	13,138	11,951

1) Calculated with reference to WBCSD/WRI Greenhouse Gas Protocol

2) The total weight of purchased raw materials amounted to 89.71 million tons (concerning coal, iron ore, and limestone, which make up the majority)

3) While the total number of employees was 17,937 at the end of 2020, the data was calculated for Scope 1 & 2 only, which concerns only 14,169 employees at Pohang Works and Gwangyang Works

4) GHG emissions were calculated with a focus on suppliers of primary raw materials out of all purchased products and services

5) GHG emissions were calculated from the limestone calcination plant leased to POSCO CHEMICAL out of upstream leased assets

6) Calculated based on POSCO-invested companies subject to the Emissions Trading System in consideration of their Scope 1 & 2 emissions and proportions of equity ownership

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## Social

Indicator	Unit	2017	2018	2019	2020
<b>Safety</b>					
<b>Injured employees (total)<sup>1)</sup></b>	<b>persons</b>	<b>8</b>	<b>18</b>	<b>21</b>	<b>21</b>
Injured employees (direct employees)	persons	4	6 <sup>3)</sup>	13	12
Injured employees (contractors)	persons	4	12	8 <sup>4)</sup>	9
<b>Injury rate (total)</b>	<b>%</b>	<b>0.03</b>	<b>0.06</b>	<b>0.07</b>	<b>0.07</b>
Injury rate (direct employees)	%	0.02	0.04	0.07	0.07
Injury rate (contractors)	%	0.03	0.09	0.06	0.06
<b>Fatalities (total)<sup>2)</sup></b>	<b>persons</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>4</b>
Fatalities (direct employees)	persons	0	0	2	2
Fatalities (contractors)	persons	0	5	0	2
<b>Fatality rate (total)</b>	<b>%</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>
Fatalities (direct employees)	%	0.00	0.03	0.01	0.02
Fatalities (contractors)	%	0.00	0.04	0.00	0.01
<b>Percentage of ISO 45001 certified</b> (health and safety management system)	<b>%</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
No. of certified worksites	worksites	2	2	2	2
No. of certification target worksites	worksites	2	2	2	2

1) The above-listed numbers of injured employees, including the injury rate, total recordable injury frequency rate, and lost-time injury rate, were based on the data of direct employees and primary contractors. With the inclusion of direct employees, primary contractors, and relevant contractor, the number of annual injured employees would be as follows:

	2017	2018	2019	2020
	8 persons	18 persons	28 persons	26 persons

2) The above numbers of injured employees, including the fatality rate and lost-time injury frequency rate, were based on the data of direct employees and primary contractors. With the inclusion of direct employees, primary contractors, and relevant contractor, the number of annual fatalities would be as follows:

	2017	2018	2019	2020
	0 persons	5 persons	3 persons	5 persons

3) The 2019 Corporate Citizenship Report specifies this as 4 persons, but due to 2 additional cases verified as industrial accidents, the final number was increased to 6 persons.

- (1) 1 additional industrial accident case due to revised KOSHA regulations
- (2) 1 additional case due to approval of a post-accident change of incident status

4) Due to revisions in the Occupational Safety and Health Act in 2020, statistical standards have been expanded to include relevant contractors, leading to additions made to total accident cases, and making the total number of injured employees higher than what was published in the 2019 Corporate Citizenship Report.

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:

	2017	2018	2019	2020
Lost-time injury frequency rate (LTIFR) (total, per million hours)	0.11	0.20	0.26	0.26
Lost-time injury frequency rate (direct employees)	0.11	0.16	0.31	0.36
Lost-time injury frequency rate (contractors)	0.11	0.24	0.21	0.18
Total recordable injury frequency rate (TRIFR) (total, per million hours)	0.15	0.24	0.73	0.36
Total recordable injury frequency rate (direct employees)	0.20	0.24	0.92	0.54
Total recordable injury frequency rate (contractors)	0.11	0.24	0.52	0.20

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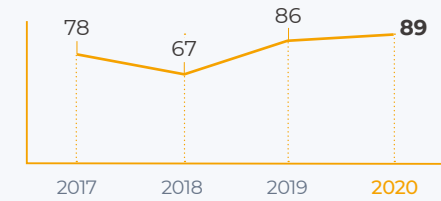
Indicator	Unit	2017	2018	2019	2020
<b>HR</b>					
<b>No. of total executives and employees</b>	<b>persons</b>	<b>17,122</b>	<b>17,221</b>	<b>17,574</b>	<b>17,937</b>
No. of executives	persons	67	71	71	74
<b>No. of employees</b>	<b>persons</b>	<b>17,055</b>	<b>17,150</b>	<b>17,503</b>	<b>17,863</b>
Permanent positions	persons	16,885	16,899	17,299	17,665
Temporary positions	persons	170	251	204	198
<b>Continuous years of service</b>	<b>years</b>	<b>19.8</b>	<b>19.9</b>	<b>19.6</b>	<b>19.1</b>
No. of new hires	persons	768	886	1,026	701
Percentage of open positions filled by internal candidates	%	99.5	99.8	98.3	99.3
Hiring costs	KRW	761,225,208	756,146,931	1,074,507,644	902,484,594
<b>Voluntary resignation rate</b>	<b>%</b>	<b>1.55</b>	<b>1.67</b>	<b>1.69</b>	<b>1.26</b>
Total turnover	persons	272	660	669	817
No. of retirees	persons	-	356	355	578
Manager turnover rate	%	0.80	1.21	1.37	1.37
<b>Employee satisfaction</b>	<b>points (100-point scale)</b>	<b>78</b>	<b>67</b>	<b>86</b>	<b>89</b>
No. of strikes exceeding one week in duration	cases	none	none	none	none

<b>Training<sup>1)</sup></b>					
<b>Training expenses per employee (including executives)</b>	<b>million KRW</b>	<b>1.30</b>	<b>1.46</b>	<b>1.63</b>	<b>1.21</b>
Total employee training costs (education and training costs)	million KRW	22,216	25,210	28,569	21,681
<b>Training hours per employee (including executives)</b>	<b>hours</b>	<b>100</b>	<b>94</b>	<b>89</b>	<b>78</b>
Total training hours	hours	1,704,253	1,613,974	1,556,680	1,397,942

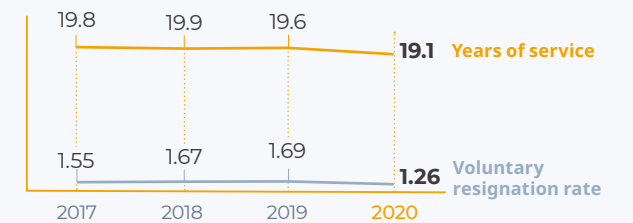
1) This includes in-house and outsourced training data. This may differ from the 2019 Corporate Citizenship Report as it only reported on in-house training by POSCO GROUP UNIVERSITY.

<b>Pension Subsidies</b>					
National pension (company contribution)	million KRW	39,820	41,465	43,230	44,937
Personal pension subsidies	million KRW	8,049	5,625	2,803	2,732
No. of personal pension beneficiaries	persons	6,478	6,759	4,354	4,197

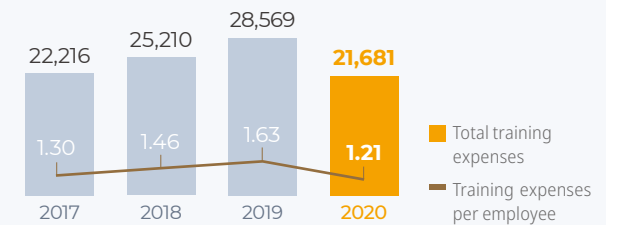
Employee Satisfaction (Unit: points)



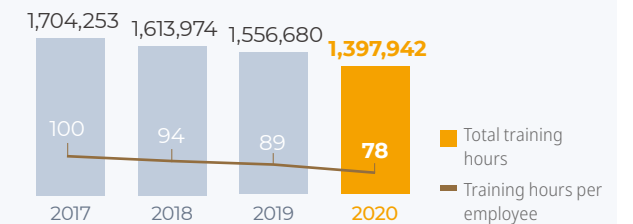
Years of Service and Voluntary Resignation Rate (Unit: years, %)



Training Expenses (Unit: million KRW)



Training Hours (Unit: hours)



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## Social

Indicator	Unit	2017	2018	2019	2020
<b>Diversity</b>					
<b>Female share of total workforce</b>	<b>%</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>
<b>Females in managerial positions or higher<sup>1)</sup></b>	<b>%</b>	<b>10.8</b>	<b>11.6</b>	<b>12.2</b>	<b>12.7</b>
Females in top management positions (including directors)	%	1.4	1.3	2.6	3.7
Females in junior managerial positions <sup>2)</sup>	%	23.0	24.3	23.5	23.9
Female employees in managerial positions in revenue-generating department <sup>3)</sup>	%	14.0	15.9	19.2	20.0
<b>Employees with disabilities</b>	<b>%</b>	<b>2.8</b>	<b>2.9</b>	<b>3.0</b>	<b>3.3</b>

- 1) Percentage of women in management, from junior managers to top management  
 2) A junior manager is defined as being at manager level. This definition may differ in the 2019 Corporate Citizenship Report.  
 3) Percentage of female employees with a management or higher position in the Marketing Division

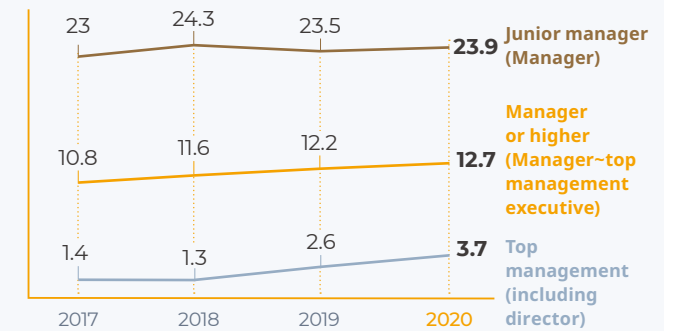
<b>Work-Life Balance</b>					
<b>Total number of employees who took childcare leave</b>	<b>persons</b>	<b>87</b>	<b>76</b>	<b>103</b>	<b>97</b>
Female employees who took childcare leave	persons	75	53	70	52
Male employees who took childcare leave	persons	12	23	33	45
<b>Reinstatement after taking childcare leave</b>	<b>%</b>	<b>87.7</b>	<b>91.3</b>	<b>91.4</b>	<b>95.5</b>
Reinstated employees after childcare leave	persons	71	94	106	127
Reinstated target employees after taking childcare leave	persons	81	103	116	133

<b>Social Contribution</b>					
<b>Community investment spending</b>	<b>million KRW</b>	<b>88,611</b>	<b>48,650</b>	<b>48,841</b>	<b>34,089</b>
<b>Volunteer hours per employee</b>	<b>hours</b>	<b>31</b>	<b>27</b>	<b>27</b>	<b>17.9</b>
Total volunteer hours	hours	530,994	462,697	451,511	319,305

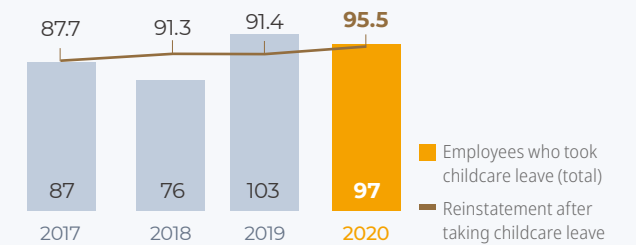
<b>Customer Satisfaction</b>					
<b>Total</b>	<b>points (100-point scale)</b>	<b>81</b>	<b>82</b>	<b>84</b>	<b>-<sup>1)</sup></b>
Domestic	points (100-point scale)	85	89	90	-
International	points (100-point scale)	78	76	78	-

1) Survey was delayed in 2020 due to COVID-19 and will be conducted in 2021

Female Share of Total Workforce (Unit: %)



Employees Who Took Childcare Leave (Total) and Percentage of Reinstatement (unit: No. of persons, %)



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## Governance

Indicator	Unit	2017	2018	2019	2020
<b>Board of Directors Composition</b>					
<b>Board of Directors size</b>	<b>persons</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
No. of executive directors	persons	5	5	5	5
No. of independent directors	persons	7	7	7	7
No. of other non-executive directors	persons	0	0	0	0
No. of female directors	persons	0	0	0	0
<b>Board of Directors Management</b>					
<b>Average board meeting attendance rate</b>	<b>%</b>	<b>100</b>	<b>99</b>	<b>100</b>	<b>98</b>
No. of independent directors with 4 or fewer mandates <sup>1),2)</sup>	persons	7	7	7	7
<b>Average tenure of directors in years<sup>3)</sup></b>	<b>years</b>	<b>2.5</b>	<b>2.9</b>	<b>2.8</b>	<b>3.8</b>
1) Those serving as a director, auditor, or executive at more than two other companies, in addition to the listed company in concern, are limited from serving as an independent director per Article 34 of the Commercial Act					
2) Those who serve as an independent director for more than six years at listed companies, or for more than nine years at listed companies and their affiliates, should be disqualified as an independent director at the listed companies in concern per Clause 5, Article 34 of the Commercial Act					
3) Tenure calculated from April 2021					
<b>Board of Directors Performance Evaluation</b>					
Longest performance evaluation period covered by executive compensation	years	3	3	3	3
Longest performance evaluation period covered by CEO compensation	years	3	3	3	3
<b>Share Ownership</b>					
Share ownership multiples of CEO compared to base salary	multiples	0.74	0.25	0.24	0.46
Average share ownership multiples of executives compared to base salary	multiples	0.21	0.23	0.31	0.66
Percentage of share ownership over 5% by government agencies	%	11.08	10.72	11.80	11.75
Percentage of share ownership over 5% by founders and family	%	N/A	N/A	N/A	N/A
<b>Compensation</b>					
Total CEO compensation <sup>1)</sup>	million KRW	2,473	1,176 <sup>2)</sup>	1,617	1,927 <sup>3)</sup>
Average compensation of all employees (excluding CEO)	million KRW	90	98	97	98
Total CEO compensation/Average employee compensation	multiples	27.48	12	16.7	19.7

1) Salary registered with the exclusion of retirement grants 2) Salary paid in January–March, August–December  
3) Including a three-years-worth lump sum payment as long-term incentive in 2020 (for 2017–2019)

### Current Status of Membership Fees and Donations

In compliance with POSCO's Corporate Citizenship Charter, the Code of Ethics, Anti-Corruption Compliance Guidelines, and Korea's Political Funds Act, donations and sponsorships made through corporate assets or political budgets are strictly prohibited. In accordance with Board regulations, the ESG Committee is obligated to examine and make decisions on donations between 100 million KRW and 1 billion KRW. The ESG Committee is also obligated to perform preliminary reviews on donations exceeding 1 billion KRW before they are finalized by the Board.

### Current Status of External Donations (2020, amounts over 1 billion KRW)

Category	Amount	Notes
COVID-19 damage relief fund	5 billion KRW (4 billion KRW from POSCO, 1 billion KRW from Group affiliates)	Decided by the Board on March 27, 2020
Flood damage restoration aid	1 billion KRW (0.6 billion KRW from POSCO, 0.4 billion KRW from Group affiliates)	Decided by the Board on November 6, 2020
Year-end disadvantaged neighbor aid	10 billion KRW (8 billion KRW from POSCO, 2 billion KRW from Group affiliates)	Decided by the Board on December 11, 2020

### Amount of Membership Fees Paid (Unit: one thousand KRW)

Category	2017	2018	2019	2020
Tax-exempt group (nonprofits, etc)	6,405,343	6,693,557	6,955,811	6,807,845
Lobbying, interest representation	0	0	0	0
Political campaigns/organizations	0	0	0	0
Others	0	0	0	0

### Major Associations and Membership Fees Paid

(2020, Unit: one thousand KRW)

Category	Total Amount of Paid Fees
Korea Iron & Steel Association (KOSA)	2,474,000
World Steel Association (WSA)	950,000
Korea Employers Federation (KEF)	318,050

\* Purpose of Participation in Organization

- 1) KOSA: To promote global competitiveness and sustainability of the steel industry
- 2) WSA: To promote the global steel industry and collect/analyze data of steel companies
- 3) KEF: To support cooperative relationships between management and labor

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# TCFD

TCFD Recommended Disclosures	POSCO's Response	CDP Alignment
<b>Governance</b>		
a) Describe the board's oversight of climate-related risks and opportunities	p. 79 (ESG Committee), p. 81 (Corporate Citizenship Committee), 2020 Corporate Citizenship Report	CDP_C1.1
b) Describe management's role in assessing and managing climate-related risks and opportunities	p. 43 (Environmental organizational chart), p. 37 (Management system), 2020 Corporate Citizenship Report	CDP_C1.2
<b>Strategy</b>		
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	pp. 36-42 (Climate change response), 2020 Corporate Citizenship Report	CDP_C2.1, C2.2c, C2.3a, C2.4a, C3.1c
b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning	pp. 36-42 (Climate change response), 2020 Corporate Citizenship Report	CDP_C2.3, C2.5, C2.6, C3.1a
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	p. 38 (1.5°C Climate change scenario), 2020 Corporate Citizenship Report	CDP_C3.1a
<b>Risk Management</b>		
a) Describe the organization's processes for identifying and assessing climate-related risks	pp. 36-42 (Climate change response), 2020 Corporate Citizenship Report	CDP_C1.2a, C2.2b
b) Describe the organization's processes for managing climate-related risks	pp. 36-42 (Climate change response), 2020 Corporate Citizenship Report	CDP_C2.2d
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	pp. 36-42 (Climate change response), 2020 Corporate Citizenship Report	CDP_C2.2
<b>Metrics and Targets</b>		
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	p. 30 (ESG key issues and response status), p. 37 (CO <sub>2</sub> emission volume and emission source units), 2020 Corporate Citizenship Report	CDP_C4.1b
b) GHG emissions and relevant risks disclosed when Scope 1, 2 and Scope 3 are applicable	p. 3 (Environmental GHG), pp. 36-42 (Climate change response), ESG Factbook	CDP_C5.1, C6.1, C6.3, C6.5
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	p. 30 (ESG key issues and response status), pp. 36-42 (Climate change response)	CDP_C4.1b

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# SASB(Domestic Steelworks) Sustainability Disclosure Topics and Accounting Metrics

\*Coverage: Domestic worksites, including Pohang Works and Gwangyang Works, that manage POSCO-exclusive crude steel output

Code	Category	Unit	Accounting Metric	POSCO's Response
<b>Greenhouse Gas Emissions</b>				
EM-IS-110a.1	Quantitative	metric tons (t), percentage (%)	<b>(1) Gross global Scope 1 emissions,</b> <b>(2) Percentage covered under emissions-limiting regulations</b>	<b>(1) 75,069,656</b> <b>(2) 100%</b> Scope 1 emissions are based on those generated from domestic worksites (Pohang Works and Gwangyang Works). POSCO receives verifications for its Scope 1 emissions through verified GHG statements.
EM-IS-110a.2	Discussion and Analysis	-	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 sets 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. <a href="#">Direct Link</a> POSCO will further promote its detailed plans in ten-year units to reflect the national energy mix and hydrogen-based enforcement results.
<b>Air Emissions</b>				
EM-IS-120a.1	Quantitative	metric tons (t)	<b>(1) NOx (excluding N<sub>2</sub>O)</b> <b>(2) SOx</b> (3) particulate matter (PM10) (4) CO (5) manganese (MnO) (6) lead (Pb) (7) volatile organic compounds (VOCs) (8) polycyclic aromatic hydrocarbons (PAHs)	<b>40,700</b> <b>24,900</b> POSCO manages PM10 on a Total Suspended Particles (TSP) standard, while the dust (TSP) emissions total 264 tons. 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 steelmaking process generates air pollutants such as SOx, NOx, and dust. POSCO reports all emission volumes. As for other substances, the data is neither collected nor calculated.
<b>Energy Management</b>				
EM-IS-130a.1	Quantitative	gigajoules (GJ), percentage (%)	<b>(1) total energy consumed</b> <b>(2) percentage grid electricity</b> (3) percentage renewable	<b>374,874,610</b> <b>1.2%</b> POSCO sold 16,287 GJ of its produced renewable energy, with the amount used totaling 318 GJ.
EM-IS-130a.2	Quantitative	gigajoules (GJ), percentage (%)	<b>(1) total fuel consumed</b> (2) percentage coal <b>(3) percentage natural gas</b> (4) percentage renewable	<b>370,394,000</b> The percentage of by-product gas out of total gas is 84.7%. Not Applicable POSCO uses coal as a reducing agent (raw material). <b>14.1%</b> Not Applicable
<b>Water Management</b>				
EM-IS-140a.1	Quantitative	thousand cubic meters (m <sup>3</sup> ) percentage (%)	<b>total fresh water withdrawn</b> <b>percentage recycled</b> percentage in regions with 'High (40-80%)' Baseline Water Stress percentage in regions with 'Extremely High (>80%)' Baseline Water Stress	<b>136,400</b> <b>37.2% (Percentage of recycled rainwater and wastewater)</b> POSCO recycles a portion of its collected wastewater and rainwater, with the recycled amount internally calculated and managed through wastewater/rainwater treatment facilities 0 In the Pohang and Gwangyang regions, where POSCO's domestic worksites are located, the Baseline Water Stress is below 40%, so this usage metric is not applicable. 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.

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# SASB (Domestic Steelworks) Sustainability Disclosure Topics and Accounting Metrics

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Code	Category	Unit	Accounting Metric	POSCO's Response
<b>Waste Management</b>				
EM-IS-150a.1	Quantitative	metric tons (t), percentage (%)	<b>total amount of waste generated</b>	<b>21,974,669</b> POSCO is managing 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 generated, treating waste containing hazardous substances as "designated waste," and legally disposing of them. 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%
<b>Workforce Health &amp; Safety</b>				
EM-IS-320a.1	Quantitative	incidence rate per 200,000 hours	<b>total recordable incident rate (full-time and contract, TRIR)</b>	<b>0.07</b>
			<b>Fatality rate (full-time and contract)</b>	<b>0.011</b>
			<b>near miss frequency rate (full-time and contract)</b>	<b>34.96</b> The near-miss frequency rate was based on directly operated worksites only.
<b>Supply Chain Management</b>				
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 is collaborating on hydrogen and low-carbon/low-cost technology development with overseas coal and iron ore suppliers for the construction and sustainability of the low-carbon supply chain across the steelmaking industry. With the expanded use of low-ash coal and low-and-medium nitrogen anthracite, it is also actively promoting the practice of reducing environmentally harmful emissions. In addition, POSCO has created the GEM (Go Extra Mile) Matching Fund for collaborating with overseas suppliers to support reforestation and social projects in Korea and overseas. These include national planned forestry, fire-damage reforestation, and fine dust reduction, as well as low-income education and employment link projects. POSCO is also working on the steel industry's goal of expanding the procurement percentage of coal and iron ore from matched suppliers. To help resolve conflicting social issues such as human rights and environmental welfare during mining practices, POSCO became the first steelmaker in Korea to join the RMI in 2020 and simultaneously established the OECD Due Diligence Guidance-based 5-Step Framework to implement responsible mineral supply chain management. POSCO gives credit to outstanding suppliers for resolving environmental and social issues, and executes regular evaluations to promote mutually beneficial relationships with outstanding ESG companies and help companies with a less competitive edge with collaborative improvement policies.

Activity Metric

Code	Category	Unit	Accounting Metric	POSCO's Response
EM-IS-000.A	Quantitative	metric tons (t), percentage (%)	Raw steel production, percentage from: <b>(1) basic oxygen furnace processes,</b> <b>(2) electric arc furnace processes</b>	Concerned data was calculated based 100% on POSCO's domestic worksites. <b>(1) Production volume: 34,703,001, Percentage: 96.57%</b> <b>(2) Production volume: 1,231,846, Percentage: 3.43%</b>
EM-IS-000.B	Quantitative	metric tons (t),	Total iron ore production	This metric is not applicable and 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 not reported as POSCO does not own any mines.

# SASB (Domestic and Overseas Steelworks) Sustainability Disclosure Topics and Accounting Metrics

\* Coverage: All worksites producing consolidated POSCO crude steel including Pohang Works; Gwangyang Works; China's POSCO (Zhangjiagang) Stainless Steel Co., Ltd.; Indonesia's PT KRAKATAU POSCO; and Vietnam's POSCO YAMATO VINA STEEL JOINT STOCK COMPANY.

Code	Category	Unit	Accounting Metric	POSCO's Response
<b>Greenhouse Gas Emissions</b>				
EM-IS-110a.1	Quantitative	metric tons (t), percentage (%)	<b>(1) Gross global Scope 1 emissions,</b> <b>(2) Percentage covered under emissions-limiting regulations</b>	<b>(1) 81,306,366</b> <b>(2) 92.3%</b> As of the end of 2020, Korea is the only country subjected to Scope 1 emission regulations.
EM-IS-110a.2	Discussion and Analysis	-	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, detailed roadmaps aiming for 2050 Carbon Neutrality are disclosed to achieve the reduction goals of 20% by 2030, and 50% by 2040. <a href="#">Direct Link</a> Plans are being established to reduce Scope 1 emissions in foreign worksites through increased scrap use and smart production processes.
<b>Air Emissions</b>				
EM-IS-120a.1	Quantitative	metric tons (t)	<b>(1) NOx (excluding N<sub>2</sub>O)</b> <b>(2) SOx</b> <b>(3) particulate matter (PM10)</b> (4) CO (5) manganese (MnO) (6) lead (Pb) (7) volatile organic compounds (VOCs) (8) polycyclic aromatic hydrocarbons (PAHs)	<b>40,963</b> <b>25,031</b> <b>573</b>    Not Applicable   Emissions from corporations were calculated in only countries (Korea and China) that are subjected to regulations based on total emissions.
<b>Energy Management</b>				
EM-IS-130a.1	Quantitative	gigajoules (GJ), percentage (%)	<b>(1) Total energy consumed</b> <b>(2) percentage grid electricity</b> (3) percentage renewable	<b>396,672,188</b> <b>2.9%</b> The renewable energy usage is 6,770 GJ.
EM-IS-130a.2	Quantitative	gigajoules (GJ), percentage (%)	<b>(1) Total fuel consumed</b> (2) percentage coal <b>(3) percentage natural gas</b> (4) percentage renewable	<b>385,353,527</b> The percentage of by-product gas out of total gas is 82.4%. Not Applicable POSCO uses coal as a reducing agent (raw material). <b>14.7%</b> Not Applicable
<b>Water Management</b>				
EM-IS-140a.1	Quantitative	thousand cubic meters (m <sup>3</sup> ) percentage (%)	<b>Total fresh water withdrawn</b> <b>percentage recycled</b> percentage in regions with High (40-80%)* Baseline Water Stress percentage in regions with Extremely High (>80%)* Baseline Water Stress	<b>151,730</b> <b>34.1% (Percentage of recycled rainwater and wastewater)</b> 0 POSCO's domestic and overseas worksite regions all have Baseline Water Stress below 40%, so this water usage metric is not applicable. 0 POSCO's domestic and overseas worksite regions all have Baseline Water Stress below 40%, so this water usage metric is not applicable.

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# SASB (Domestic and Overseas Steelworks) Sustainability Disclosure Topics and Accounting Metrics

Code	Category	Unit	Accounting Metric	POSCO's Response
<b>Waste Management</b>				
EM-IS-150a.1	Quantitative	metric tons (t), percentage (%)	<b>Total amount of waste generated</b> percentage hazardous	POSCO follows the criteria set forth by Korea's Waste Management Act in sorting and managing the waste generated, with foreign worksites lawfully managed according to national regulations. The management criteria of designated, waste as 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 forms a total of 9.8% across all worksites.
			<b>percentage recycled</b>	
				<b>24,356,843</b> <b>97.4%</b>
<b>Workforce Health &amp; Safety</b>				
EM-IS-320a.1	Quantitative	incidence rate per 200,000 hours	<b>Total recordable incident rate (full-time and contract, TRIR)</b> <b>Fatality rate (full-time and contract)</b> <b>near miss frequency rate (full-time and contract)</b>	Coverage pertains only to Korean domestic worksites (under direct operation) and China's POSCO (Zhangjiagang) Stainless Co., Ltd., (overall).
			<b>0.068</b> <b>0.008</b> <b>29.52</b>	
<b>Supply Chain Management</b>				
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 is a member of the RMI and is fortifying ESG collaboration with its raw materials suppliers. <a href="#">Direct Link</a>

## Activity Metric

Code	Category	Unit	Accounting Metric	POSCO's Response
EM-IS-000.A	Quantitative	metric tons (t), percentage (%)	Raw steel production, percentage from: <b>(1) basic oxygen furnace processes,</b> <b>(2) electric arc furnace processes</b>	Concerned data was calculated based on 100% of POSCO's domestic and overseas steelworks. <b>(1) Production volume: 37,803,322, Percentage: 93.16%</b> <b>(2) Production volume: 2,775,245, Percentage: 6.84%</b>
EM-IS-000.B	Quantitative	metric tons (t),	Total iron ore production	This metric is not applicable and 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 not reported as POSCO does not own any mines.

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