

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES

Consolidated Financial Statements

December 31, 2023 and 2022

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

To the Shareholders and Board of Directors of
Doosan Enerbility Co., Ltd.:

Opinion

We have audited the consolidated financial statements of Doosan Enerbility Co., Ltd. and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, the consolidated statements of operations and comprehensive income (loss), changes in equity and cash flows for the years then ended, and notes, comprising material accounting policy information and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2023 and 2022, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

We also have audited, in accordance with Korean Standards on Auditing ("KSAs"), the Group's Internal Control over Financial Reporting ("ICFR") for Consolidation Purposes as of December 31, 2023 based on the criteria established in Conceptual Framework for Designing and Operating ICFR issued by the Operating Committee of ICFR in the Republic of Korea, and our report dated March 15, 2024 expressed an unmodified opinion on the effectiveness of the Group's ICFR for consolidation purposes.

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing ("KSAs"). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Republic of Korea, and we have fulfilled our ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

1) Uncertainty in estimated total contract cost

As described in note 3 to the consolidated financial statements, the Group estimates percentage-of-completion of performance obligation satisfied over time by using the input method and recognizes revenue over time accordingly.

The determination of the percentage-of-completion is influenced by the estimated total contract cost and the adequacy of the cumulative input cost. The total contract cost estimate is based on management's accounting estimates and judgements, which involves uncertainty. Therefore, as there is a risk of overstatement of revenue due to an error in judgment or intent, we have identified the uncertainty in estimated total contract cost as a key audit matter.

The following audit procedures were performed regarding uncertainty in estimated total contract cost.

- Evaluation and testing of internal controls related to the determination and modification of estimated total contract cost.
- For major projects completed during the current year, performed retrospective review by comparing the actual cost incurred during the current year with the estimated cost at the end of the prior year.
- Inquiries and inspection of documents for projects with significant changes in estimated total contract cost.
- Inquiries and analytical review of changes in the percentage-of-completion as compared to prior year.
- For major projects, inquiries and inspection of documents if there were significant differences between the progress rate in the respective monthly progress reports and the percentage-of-completion calculated based on input cost.
- Performed site visits for on-going construction sites and sites which have equipment under construction for a selection of projects.
- Comparison between estimated total contract cost used in revenue recognition and that maintained by respective site department for major projects.

2) Impairment of goodwill

As described in note 2 to the consolidated financial statements, the Group conducts an annual impairment test for goodwill and compares the carrying amount of each cash generating unit to which goodwill is allocated with the recoverable amount which is measured at value in use using discounted cash projection.

In calculating the value in use, significant judgments by management and uncertainties are involved in forecasting future cash flows and estimating key assumptions (terminal growth rate, discount rate, etc.). Therefore, we identified the impairment of goodwill as a key audit matter.

The following audit procedures were performed regarding impairment of goodwill.

- Evaluation and testing of internal controls related to impairment test for goodwill.
- Evaluation of the competence and objectivity of management experts involved in value in use estimation.
- Inquiries and assessment of the valuation model applied by the Group.
- Verifying the mathematical accuracy of the valuation model applied to the estimation of the value in use of the goodwill.
- Understanding of the future cash flows and checking whether the estimated future cash flow agrees to business plan approved by the Group's management.
- Testing the appropriateness of major assumptions (discount rate, terminal growth rate, etc.) applied in the valuation model by comparing to benchmark of peer industry and historical financial information of cash generating unit.
- Evaluation of the sensitivity analysis results for the discount rate and permanent growth rate presented by the Group to assess the impact of changes in major assumptions on the impairment assessment.

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.



Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with K-IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.



We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is Jeong Gu Kang.

KPMG Samjong Accounting Corp.

Seoul, Korea

March 15, 2024

This report is effective as of March 15, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Financial Position
As of December 31, 2023 and 2022

(In won)	Note	2023	2022
Assets			
Cash and cash equivalents	4,10	₩ 2,620,186,984,799	1,395,837,596,356
Short-term financial instruments	4,5,10,34	118,271,676,341	105,780,374,651
Short-term investments in securities	4,6,10	84,976,777,668	23,775,906,989
Trade receivables, net	4,7,10,26,35	1,333,420,120,397	1,619,606,553,120
Due from customers for contract work, net	7,26,35	1,485,570,356,529	1,156,934,174,443
Other receivables, net	4,7,10,35	479,390,915,301	208,081,476,274
Prepayments, net	7,26	508,209,823,792	609,869,214,936
Prepaid expenses, net		120,137,746,844	118,613,409,154
Short-term loans, net	4,7,10,35	47,332,371,009	73,900,528,476
Derivative financial assets	4,9,10	20,214,850,884	72,485,060,186
Firm commitment assets	9	37,393,785,368	54,927,582,112
Inventories, net	8,26,34	2,539,004,351,527	2,459,025,995,764
Assets held for sale	37	44,183,591,818	4,684,773,518
Other current assets, net	4,7,10,14	203,274,890,905	195,371,082,511
Total current assets		9,641,568,243,182	8,098,893,728,490
Long-term financial instruments	4,5,10	28,596,416,660	31,513,699,275
Long-term investments in securities	4,6,10,34	218,617,996,841	321,093,597,491
Investments in associates and joint ventures	11,34	316,869,585,227	355,954,924,015
Due from customers for contract work, net	26	-	102,739,503,644
Long-term loans, net	4,7,10,35	184,879,255,106	41,235,869,325
Property, plant and equipment, net	12,14,34,37	5,225,149,297,141	5,022,147,617,428
Intangible assets, net	13,34,39	7,892,981,692,782	7,772,723,576,214
Investment properties, net	14,15	208,608,263,362	274,446,280,278
Derivative financial assets	4,9,10	17,103,572,237	18,057,362,857
Firm commitment assets	9	25,848,796,296	40,539,228,724
Guarantee deposits, net	4,7,10,26,35	222,643,655,020	334,333,042,824
Deferred tax assets	31	502,987,741,553	416,706,171,660
Defined benefit asset, net	17	10,383,480,707	14,400,518,959
Other non-current assets, net	4,7,10,14	144,595,949,510	204,996,678,737
Total non-current assets		14,999,265,702,442	14,950,888,071,431
Total assets		₩ 24,640,833,945,624	23,049,781,799,921

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Financial Position, Continued
As of December 31, 2023 and 2022

(In won)	Note		2023	2022
Liabilities				
Trade payables	4,10,35	₩	2,434,047,605,820	2,518,709,955,521
Short-term borrowings	4,10,16,33,34,36		1,186,577,312,455	1,433,571,969,401
Other payables	4,10,35		380,067,014,822	263,751,374,574
Advance received	26		46,174,103,875	49,454,651,620
Due to customers for contract work	26,35		2,261,264,801,268	1,734,717,867,012
Withholdings			103,254,420,667	29,728,488,184
Accrued expenses	4,10		940,747,237,645	585,783,617,640
Current Income tax liabilities	31		78,519,127,532	62,254,573,267
Current portion of long-term debt	4,10,16,33,34,36		1,576,371,477,449	771,005,503,541
Derivative financial liabilities	9,10		57,146,142,868	74,833,353,086
Firm commitment liabilities	9		11,661,258,589	16,710,336,818
Provisions	19,26,33		257,968,844,978	319,218,544,700
Current lease liabilities	4,10,14,36		78,987,396,076	76,193,144,764
Sales and lease back liabilities	18,36		17,269,367,103	27,499,428,692
Other current liabilities	4,10		166,693,471,900	96,022,725,232
Total current liabilities			9,596,749,583,047	8,059,455,534,052
Bonds	4,10,16,33,34,36		493,916,905,369	356,347,784,913
Long-term borrowings	4,10,16,33,34,36		1,457,749,360,531	2,350,867,610,263
Long-term asset-backed borrowings	4,10,16,33,34,36		52,762,102,132	-
Long-term other payables	4,10		11,673,972,958	11,278,271,449
Defined benefit liabilities, net	17		472,216,381,829	452,352,771,950
Deposits received	4,10		309,947,213,252	317,890,642,911
Derivative financial liabilities	9,10		38,608,853,324	41,217,731,602
Firm commitment liabilities	9		13,447,734,190	6,307,158,879
Deferred tax liabilities	31		477,395,351,119	502,157,754,739
Provisions	19,26,33		372,326,692,241	380,357,585,584
Non-current lease liabilities	4,10,14,36		309,080,381,226	317,700,599,789
Non-current sales and lease back liabilities	18,36		49,030,370,834	49,848,395,281
Other non-current liabilities	4,10		144,420,107,047	123,709,674,640
Total non-current liabilities			4,202,575,426,052	4,910,035,982,000
Total liabilities		₩	13,799,325,009,099	12,969,491,516,052

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Financial Position, Continued
As of December 31, 2023 and 2022

<i>(In won)</i>	Note	2023	2022
Equity			
Capital stock	20	₩ 3,267,326,780,000	3,256,061,215,000
Capital surplus	20,21	1,712,764,116,060	2,870,068,226,942
Other components of equity	22	46,056,899,745	45,676,122,284
Accumulated other comprehensive income	9,10,12,17,23	906,691,285,072	882,653,386,161
Retained earnings	24	1,184,531,890,516	58,813,720,119
Equity attributable to owners of the controlling company		7,117,370,971,393	7,113,272,670,506
Non-controlling interests	1	3,724,137,965,132	2,967,017,613,363
Total equity		10,841,508,936,525	10,080,290,283,869
Total liabilities and equity		₩ 24,640,833,945,624	23,049,781,799,921

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Operations
For the years ended December 31, 2023 and 2022

<i>(In won)</i>	Note	2023	2022
Continuing operations			
Sales	25,26,35 ₩	17,589,887,709,510	15,421,058,082,388
Cost of sales	8,27,35	14,572,886,225,647	12,865,180,742,482
Gross profit		3,017,001,483,863	2,555,877,339,906
Selling and administrative expenses	10,27,28,35	1,549,683,145,739	1,449,756,471,669
Operating profit	25	1,467,318,338,124	1,106,120,868,237
Finance income and expenses		(267,951,275,483)	(477,602,183,965)
Finance income	10,29	595,111,219,960	747,016,336,410
Finance expenses	10,29	863,062,495,443	1,224,618,520,375
Other non-operating income and expenses		(422,197,685,877)	(584,511,751,885)
Other non-operating income	10,30	49,303,777,557	158,643,957,813
Other non-operating expenses	10,30	471,501,463,434	743,155,709,698
Share of profit (loss) of equity method investees, net	11	(38,687,621,670)	(230,486,284,587)
Profit (loss) before income tax		738,481,755,094	(186,479,352,200)
Income tax expense	31	220,959,852,052	146,997,419,221
Profit (loss) from continuing operations		517,521,903,042	(333,476,771,421)
Discontinued operations			
Profit (loss) from discontinued operations, net of tax	38	-	(119,673,094,128)
Profit (loss) for the year	25 ₩	517,521,903,042	(453,149,865,549)
Profit (loss) attributable to:			
Owners of the Company	₩	55,597,965,382	(772,492,598,021)
Non-controlling interests	1	461,923,937,660	319,342,732,472
Earnings (loss) per share			
Basic earnings (loss) per share	32	87	(1,249)
Continuing operations		87	(1,056)
Discontinued operations		-	(193)
Diluted earnings (loss) per share	32	87	(1,249)
Continuing operations		87	(1,056)
Discontinued operations		-	(193)

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income (Loss)
For the years ended December 31, 2023 and 2022

<i>(In won)</i>	Note	2023	2022
Profit (loss) for the year	₩	517,521,903,042	(453,149,865,549)
Other comprehensive income		19,751,059,262	334,291,327,136
Items that will not be reclassified subsequently to profit or loss		(123,595,329,141)	100,283,793,179
Remeasurements of the defined benefit liabilities	17,30	(85,518,272,668)	87,030,282,952
Gain (loss) on change in fair value of fair value through other comprehensive income ("FVOCI") financial assets	6,10,30	(575,879,530)	(3,521,253,520)
Gain (loss) on revaluation of assets	12,30	(37,501,176,943)	16,774,763,747
Items that are or may be reclassified subsequently to profit or loss		143,346,388,403	234,007,533,957
Effective portion of changes in fair value of cash flow hedges	9,10,30	(13,419,703,941)	5,109,493,430
Equity adjustments in equity method investees	11	807,846,105	(2,174,793,785)
Gain on translation of foreign operations		155,958,246,239	231,072,834,312
Total comprehensive income (loss) for the year	₩	537,272,962,304	(118,858,538,413)
Total comprehensive income (loss) attributable to:			
Owners of the Company	₩	(785,739,983)	(554,489,591,594)
Non-controlling interests		538,058,702,287	435,631,053,181

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity
For the years ended December 31, 2023 and 2022

(In won)		Capital stock	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings (Accumulated deficit)	Non-controlling interests	Total Equity
Balance at January 1, 2022	₩	2,675,624,980,000	1,865,083,188,183	46,159,352,713	731,324,738,126	773,234,887,563	2,716,168,498,136	8,807,595,644,721
Total comprehensive income (loss):								
Profit (loss) for the year		-	-	-	-	(772,492,598,021)	319,342,732,472	(453,149,865,549)
Remeasurements of defined benefit liabilities		-	-	-	-	33,716,076,437	53,314,206,515	87,030,282,952
Gain on change in fair value of FVOCI financial assets		-	-	-	(4,141,289,018)	283,637,909	336,397,589	(3,521,253,520)
Effective portion of changes in fair value of cash flow hedges		-	-	-	5,079,074,193	-	30,419,237	5,109,493,430
(Negative) Equity adjustments in equity method investees		-	-	-	(2,174,793,785)	-	-	(2,174,793,785)
Gain on translation of foreign operations		-	-	-	168,512,676,321	-	62,560,157,991	231,072,834,312
Gain on revaluation of assets		-	-	-	16,134,751,424	592,872,946	47,139,377	16,774,763,747
Subtotal		-	-	-	183,410,419,135	(737,900,010,729)	435,631,053,181	(118,858,538,413)
Transactions with owners of the Company:								
Issuance of ordinary shares		414,364,500,000	722,579,110,040	-	-	-	-	1,136,943,610,040
Stock option		-	716,821,025	(716,821,025)	-	-	-	-
Exercise of stock warrants		166,071,735,000	277,622,498,847	-	-	-	-	443,694,233,847
Additional acquisition of investments in subsidiaries		-	4,068,028,434	-	-	-	(100,018,242,002)	(95,950,213,568)
Dividends of subsidiaries		-	-	-	-	-	(88,311,378,600)	(88,311,378,600)
Stock option of subsidiaries		-	-	233,590,596	-	-	262,198,951	495,789,547
Acquisition of treasury stock of subsidiaries		-	6,782,749	-	-	-	(1,573,015,480)	(1,566,232,731)
Changes in the scope of consolidation		-	-	-	(32,074,851,473)	23,478,843,285	4,877,340,749	(3,718,667,439)
Others		-	(8,202,336)	-	(6,919,627)	-	(18,841,572)	(33,963,535)
Balance at December 31, 2022	₩	3,256,061,215,000	2,870,068,226,942	45,676,122,284	882,653,386,161	58,813,720,119	2,967,017,613,363	10,080,290,283,869

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity, Continued
For the years ended December 31, 2023 and 2022

<i>(In won)</i>		Capital stock	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings (Accumulated deficit)	Non-controlling interests	Total Equity
Balance at January 1, 2023	₩	3,256,061,215,000	2,870,068,226,942	45,676,122,284	882,653,386,161	58,813,720,119	2,967,017,613,363	10,080,290,283,869
Total comprehensive income (loss):								
Profit for the year		-	-	-	-	55,597,965,382	461,923,937,660	517,521,903,042
Remeasurements of defined benefit liabilities		-	-	-	-	(81,832,571,773)	(3,685,700,895)	(85,518,272,668)
Gain (loss) on change in fair value of FVOCI financial assets		-	-	-	(846,876,066)	270,996,536	-	(575,879,530)
Effective portion of changes in fair value of cash flow hedges		-	-	-	(13,639,995,873)	-	220,291,932	(13,419,703,941)
Equity adjustments in equity method investees		-	-	-	807,846,105	-	-	807,846,105
Gain on translation of foreign operations		-	-	-	79,323,604,365	-	76,634,641,874	155,958,246,239
Gain (loss) on revaluation of assets		-	-	-	(41,606,679,620)	1,139,970,961	2,965,531,716	(37,501,176,943)
Subtotal		-	-	-	24,037,898,911	(24,823,638,894)	538,058,702,287	537,272,962,304
Disposition of deficit		-	(1,150,541,809,291)	-	-	1,150,541,809,291	-	-
Stock option		-	212,332,338	(212,332,338)	-	-	-	-
Conversion of convertible bonds		11,265,565,000	13,274,903,871	-	-	-	-	24,540,468,871
Partial disposal of investment in subsidiaries		-	(19,698,032,111)	-	-	-	300,235,126,335	280,537,094,224
Dividends of subsidiaries		-	-	-	-	-	(79,960,990,050)	(79,960,990,050)
Stock option of subsidiaries		-	(5,443,369)	593,109,799	-	-	658,441,540	1,246,107,970
Acquisition of treasury stock of subsidiaries		-	446,134,148	-	-	-	(2,960,008,208)	(2,513,874,060)
Others		-	(992,196,468)	-	-	-	1,089,079,865	96,883,397
Balance at December 31, 2023	₩	<u>3,267,326,780,000</u>	<u>1,712,764,116,060</u>	<u>46,056,899,745</u>	<u>906,691,285,072</u>	<u>1,184,531,890,516</u>	<u>3,724,137,965,132</u>	<u>10,841,508,936,525</u>

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
For the years ended December 31, 2023 and 2022

(In won)	Note	2023	2022
Cash flows from operating activities			
Cash generated from operations:	36 ₩	2,709,523,778,474	1,182,171,879,662
Profit (loss) for the year		517,521,903,042	(453,149,865,549)
Adjustments		1,547,385,281,369	2,382,037,519,974
Changes in operating assets and liabilities		644,616,594,063	(746,715,774,763)
Interest received		54,207,868,908	18,012,504,260
Interest paid		(350,143,474,667)	(279,737,590,179)
Dividends received		6,123,322,875	4,337,224,618
Income tax paid		(349,078,204,514)	(299,706,296,979)
Net cash provided by operating activities		2,070,633,291,076	625,077,721,382
Cash flows from investing activities			
Cash inflows from investing activities:			
Decrease in short-term financial instruments		146,342,642,317	787,559,761,929
Proceeds from disposal of short-term investments in securities		19,578,165,348	162,136,362,721
Collection of short-term loans		30,929,120,650	57,292,223,906
Decrease in long-term financial instruments		1,538,544,304	1,744,125,221
Proceeds from disposal of long-term investments in securities		3,262,971,440	17,988,145,450
Collection of long-term loans		2,532,827,392	4,862,488,140
Proceeds from disposal of investments in subsidiaries		5,000,000,000	95,429,428,992
Proceeds from disposal of property, plant and equipment		8,882,855,728	10,853,678,723
Proceeds from disposal of intangible assets		1,812,926,035	1,460,086,431
Proceeds from disposal of investment properties		-	15,400,000,000
Proceeds from disposal of assets held for sales		3,679,796,824	64,357,012,271
Decrease in lease receivables		2,345,454,987	2,455,823,349
Others		13,648,684,463	48,231,089,974
Subtotal		239,553,989,488	1,269,770,227,107
Cash outflows for investing activities:			
Increase in short-term financial instruments		(158,804,314,697)	(406,815,325,379)
Increase in short-term loans		(102,645,951,871)	(80,443,893,936)
Increase in long-term financial instruments		(6,247,208)	(6,274,641,920)
Acquisition of long-term investments in securities		(16,487,286,777)	(14,491,296,543)
Increase in long-term loans		(165,589,624,258)	(14,038,083,146)
Acquisition of investments in associates and joint ventures		(1,995,760,000)	(54,426,218,200)
Acquisition of investments in subsidiaries		-	(77,292,421,359)
Acquisition of property, plant and equipment		(395,596,062,651)	(348,704,095,585)
Acquisition of intangible assets		(207,597,240,011)	(196,006,727,977)
Acquisition of investment properties		(1,103,760,000)	-
Decrease in derivative financial liabilities		(6,157,154,646)	(142,140,077,479)
Others		(199,061,240)	(267,996,630)
Subtotal		(1,056,182,463,359)	(1,340,900,778,154)
Net cash used in investing activities		(816,628,473,871)	(71,130,551,047)

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Cash Flows, Continued
For the years ended December 31, 2023 and 2022

(In won)	Note	2023	2022
Cash flows from financing activities			
Cash inflows from financing activities:			
Proceeds from liquidity long-term debt	₩	-	2,492,380,000
Proceeds from asset-backed borrowings		69,643,423,760	-
Issuance of bonds		509,198,261,250	367,157,100,000
Proceeds from long-term borrowings		646,065,929,110	2,566,375,645,776
Issuance of ordinary shares		-	1,147,789,665,000
Exercise of stock warrants		-	443,883,380,246
Exercise of stock warrants of subsidiaries		274,620,000,053	-
Lease liabilities in sale and leaseback transactions		8,245,093,574	26,397,769,349
Subtotal		<u>1,507,772,707,747</u>	<u>4,554,095,940,371</u>
Cash outflows for financing activities:			
Decrease in short-term borrowings, net		(242,390,897,285)	(2,368,288,469,195)
Repayment of current portion of long-term debt		(735,927,642,855)	(917,842,655,936)
Repayment of long-term borrowings		(390,811,512,905)	(1,669,034,786,204)
Redemption of bond		-	(398,972,247,300)
Payment of lease liabilities		(84,153,650,460)	(79,506,468,359)
Payment of lease liabilities in sale and leaseback transactions		(24,890,841,210)	(55,198,209,756)
Expense of ordinary shares issuance		(59,778,325)	(11,671,319,540)
Additional acquisition of investments in subsidiaries		-	(95,950,213,568)
Payment of dividends in subsidiaries		(79,960,990,050)	(88,311,378,600)
Acquisition of treasury stock in subsidiaries		(2,513,874,060)	(1,654,175,566)
Others		-	(118,648,966)
Subtotal		<u>(1,560,709,187,150)</u>	<u>(5,686,548,572,990)</u>
Net cash used in financing activities		<u>(52,936,479,403)</u>	<u>(1,132,452,632,619)</u>
Effect of movements in exchange rates on cash held		23,281,050,641	65,739,069,508
Net increase (decrease) in cash and cash equivalents		1,224,349,388,443	(512,766,392,776)
Cash and cash equivalents at January 1		<u>1,395,837,596,356</u>	<u>1,908,603,989,132</u>
Cash and cash equivalents at December 31	₩	<u>2,620,186,984,799</u>	<u>1,395,837,596,356</u>

See accompanying notes to the consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
For the years ended December 31, 2023 and 2022

1. Reporting entity

(1) The controlling company

Doosan Enerbility Co., Ltd. (the "Company") was incorporated on September 20, 1962, with its headquarters in Changwon, Korea. The Company is engaged in the manufacturing of various power generation equipment such as boilers, turbines and generators. Additionally, it engages in engineering, procurement and construction of thermal power plants as well as general construction activities, seawater desalination and other related areas.

The Company was listed on the Korea Exchange on October 25, 2000 and its major stockholder as of December 31, 2023 is Doosan Corp (holding 30.40% equity ownership).

(2) Consolidated subsidiaries

Details of consolidated subsidiaries as of December 31, 2023 and 2022 are as follows:

Company	Key operating activities	Location	Ownership(%)(*1)		Closing date(*2)
			2023	2022	
Doosan Enerbility Vietnam Co., Ltd.	Manufacturing of machinery & equipment	Vietnam	100.00	100.00	December 31
Doosan HF Controls Corp.	Manufacturing	USA	100.00	100.00	"
Doosan HF Controls Asia Co., Ltd.	Manufacturing	Korea	100.00	100.00	"
PT. Doosan Heavy Industries Indonesia	Manufacturing	Indonesia	83.64	83.64	"
Doosan Heavy Industries Malaysia Sdn. Bhd	Dormant	Malaysia	100.00	100.00	"
Doosan Enerbility Japan Corp.	Sales	Japan	100.00	100.00	"
Doosan Water UK Ltd.	Engineering & Services	UK	100.00	100.00	"
Doosan Power Systems India Private Ltd.	Engineering & Services	India	100.00	100.00	March 31
Doosan Heavy Industries Muscat LLC	Manufacturing	Oman	70.00	70.00	December 31
Doosan Power Systems Arabia Company Limited	Manufacturing & Services	Saudi Arabia	51.00	51.00	"
Azul Torre Construction Corporation(*3)	Manufacturing	Philippines	40.00	40.00	"
Doosan Enerbility America Holdings Inc.	Holdings Company	USA	100.00	100.00	"
Doosan Enerbility America LLC	Sales	USA	100.00	100.00	"
Doosan ATS America, LLC	Engineering & Services	USA	100.00	100.00	"
Doosan Power Service America, LLC	Engineering & Services	USA	100.00	100.00	"
Doosan Turbomachinery Services Holding, Inc.	Holdings Company	USA	100.00	100.00	"
Doosan Turbomachinery Services Inc.	Manufacturing	USA	100.00	100.00	"
Doosan GridTech Inc.	Software & System engineering	USA	100.00	100.00	"
Doosan GridTech LLC	Software & System engineering	USA	100.00	100.00	"
Doosan GridTech CA LLC	Software & System engineering	USA	100.00	100.00	"
Doosan GridTech EPC LLC	Software & System engineering	USA	100.00	100.00	"
Doosan GridTech C&I LLC	Software & System engineering	USA	100.00	100.00	"
Continuity Energy LLC	Software & System engineering	USA	100.00	100.00	"
Doosan Skoda Power s.r.o	Manufacturing	Czech	100.00	100.00	"
Skoda Power Private Ltd.	Engineering	India	100.00	100.00	March 31
DPS UK Pension Company Ltd.	Professional services	UK	100.00	100.00	December 31

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

1. Reporting entity, Continued

Company	Key operating activities	Location	Ownership(%)(*1)		Closing date(*2)
			2023	2022	
Doosan Power Systems Pension Trustee Co., Ltd.	Professional services	UK	100.00	100.00	"
Doosan Lentjes GmbH	Engineering & Services	Germany	100.00	100.00	"
Doosan Power Systems S.A.	Holdings Company	Luxembourg	100.00	100.00	"
Doosan Lentjes Czech s.r.o	Professional services	Czech	100.00	100.00	"
Osung Power O&M Co., Ltd.	Engineering & Services	Korea	100.00	100.00	"
Doosan Ukudu Power, LLC	Engineering & Services	USA	100.00	100.00	"
Doosan Recycle Solution Co., Ltd. (*5)	Manufacturing	Korea	100.00	-	"
Doosan Geosolution Co., Ltd. (*5)	Professional Science and Technology Service	Korea	100.00	-	"
Doosan Cuvex Co., Ltd.	Operation of resort and golf club	Korea	100.00	100.00	"
Doosan Bobcat Inc. and the subsidiaries (*4)	Manufacturing and sales of construction equipment	Korea and others	46.11	51.07	"
Doosan Fuel Cell Co., Ltd. (*4)	Manufacturing	Korea	30.33	30.33	"
D20 Capital, LLC and the subsidiaries	Financial investment	USA	100.00	100.00	"

(*1) The ownership percentage represents the ownership interest held by the Company (the parent) in each respective subsidiary.

(*2) Where the reporting date of subsidiaries is not consistent with that of the Company based on local laws, adjustments have been made to conform to the Company's reporting date for preparation of consolidated financial statements.

(*3) Although the Company's ownership interest in the investee is less than 50%, it is classified as a consolidated subsidiary since the Company is considered to have the majority voting rights in the equity's board of directors, and others.

(*4) Although the Company's ownership interest in the investee is less than 50%, the Company assessed that it has control over the investee based on its holdings relative to the size and dispersion of ownership interests held by other equity holders and the voting patterns in previous shareholders' meetings.

(*5) Newly established in 2023.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

1. Reporting entity, Continued

(3) Summarized financial information of major subsidiaries

Summarized financial information of subsidiaries as of and for the year ended December 31, 2023 is as follows:

(In millions of won)

Company	Assets	Liabilities	Sales	Net profit (loss)	Total comprehensive income (loss)
Doosan Enerbility Vietnam Co., Ltd.	₩ 570,061	234,854	499,459	39,650	39,650
Doosan HF Controls Corp. and the subsidiaries (*1)	33,881	6,329	20,109	3,804	3,804
PT. Doosan Heavy Industries Indonesia	44,046	129,894	195,286	(6,085)	(6,085)
Doosan Enerbility Japan Corp.	11,868	8,624	2,256	87	87
Doosan Water UK Ltd.	14,955	78,735	3,020	(22,315)	(22,315)
Doosan Power Systems India Private Ltd.	466,918	778,961	190,726	(74,960)	(73,560)
Doosan Power Systems Arabia Company Limited	35,901	19,093	29,063	4,962	4,962
Doosan Enerbility America Holdings Inc. and the subsidiaries (*1)	192,285	57,040	105,131	15,040	15,040
Doosan GridTech Inc. and the subsidiaries (*1)	46,149	156,819	1,774	(89,536)	(89,536)
Doosan Power Systems S.A. and the subsidiaries (*1)	979,525	708,832	398,602	(73,393)	(76,214)
Doosan Ukudu Power, LLC	41,948	34,863	129,413	3,181	3,181
Doosan Recycle Solution Co., Ltd.	49,248	150	-	7	7
Doosan Geosolution Co., Ltd.	29,606	1,316	-	3	3
Doosan Cuvex Co., Ltd.	481,261	111,298	57,506	31,791	31,791
Doosan Bobcat Inc. and the subsidiaries (*1)	10,371,754	4,416,941	9,758,907	921,479	1,011,581
Doosan Fuel Cell Co., Ltd.	1,070,843	558,191	260,886	(8,500)	(10,478)
D20 Capital, LLC and the subsidiaries (*1)	61,325	1,601	1,113	(4,462)	(4,545)

(*1) Consolidated financial statements of each intermediate controlling company.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

1. Reporting entity, Continued

(4) Changes in the scope of consolidation

Changes in the scope of consolidation for the year ended December 31, 2023 are as follows:

Company	Description	Reason
Genesis Forklift Trucks Limited	Excluded from consolidation	Liquidation
Doosan Materials Handling UK Ltd.	Excluded from consolidation	Liquidation
Rushlift Holdings Ltd.	Excluded from consolidation	Liquidation
Doosan Recycle Solution Co., Ltd.	Newly included in consolidation	Establishment of new corporation
Doosan Bobcat Mexico Monterrey, S. de R.L. de C.V.	Newly included in consolidation	Establishment of new corporation
Doosan Geosolution Co., Ltd.	Newly included in consolidation	Establishment of new corporation
Doosan Industrial Vehicle America Corp.	Excluded from consolidation	Merger
Doosan Equipment South East, LLC	Excluded from consolidation	Liquidation
Doosan Bobcat Global Collaboration Center, Inc.	Excluded from consolidation	Liquidation

(5) Significant non-controlling interests

Financial information of subsidiaries attributable to significant non-controlling interests as of December 31, 2023 is as follows:

(In millions of won)

Company		Net profit attributable to non-controlling interests	Cumulative non-controlling interests	Dividends distributed to non-controlling interests
Doosan Bobcat Inc. and its subsidiaries	₩	469,464	3,330,185	(79,961)
Doosan Fuel Cell Co., Ltd.		(9,765)	406,231	-

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

1. Reporting entity, Continued

(6) Cash flow information for subsidiaries with significant non-controlling interests

Cash flow information for subsidiaries with significant non-controlling interests for the year ended December 31, 2023 is as follows:

(In millions of won)

		2023	
		Doosan Bobcat Inc. and its subsidiaries	Doosan Fuel Cell Co., Ltd.
I.	Net cash flows from operating activities	₩ 1,296,324	7,772
II.	Net cash flows from investing activities	(253,088)	(95,709)
III.	Net cash flows from financing activities	(351,264)	105,280
IV.	Effect of movements in exchange rates on cash held	9,054	973
V.	Net increase (decrease) in cash and cash equivalents	701,026	18,316
VI.	Cash and cash equivalents at January 1	699,005	31,857
VII.	Cash and cash equivalents at December 31	₩ 1,400,031	50,173

2. Material accounting policies and basis of preparation

(1) Basis of consolidated financial statements

Doosan Enerbility Co., Ltd. and its subsidiaries ("the Group") has prepared the consolidated financial statements in accordance with K-IFRS.

The material accounting principles as applied in the consolidated financial statements correspond to those pertaining to the annual consolidated financial statements for the year ended December 31, 2022, except for the effects associated with the introduction of the Standard or Interpretation as described below.

The accompanying consolidated financial statements have been prepared on the historical cost basis, except for certain properties/non-current assets and financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is based on the fair values of the consideration given in exchange for assets.

1) Changes in accounting standards effective from January 1, 2023 are as follows:

- *Amendments to K-IFRS No. 1117 'Insurance Contracts'* : the amendments clarify standards for recognition and measurement, presentation and disclosure for insurance contracts.

- *Amendments to K-IFRS No. 1008 'Accounting Policies, Changes in Accounting Estimates and Errors'* : the amendments clarify the definition of accounting estimates.

- *Amendments to K-IFRS No. 1001 'Presentation of Financial Statements'* : the amendments require the Company to disclose 'material' accounting policies instead of 'significant' accounting policies, and add guidance on how the Company applies the concept of materiality in making decisions about accounting policy disclosures.

- *Amendments to K-IFRS No. 1001 'Presentation of Financial Statements'* : the amendments provide guidance for disclosure of valuation gains and losses on financial liabilities subject to exercise price adjustment conditions.

- *Amendments to K-IFRS No. 1012 'Income Taxes'* – the amendments provide guidance for recognition of deferred tax related to assets and liabilities arising from a single transaction.

- *Amendments to K-IFRS No. 1012 'Income Taxes'* : The amendments provide a mandatory temporary exception to the recognition and disclosure of deferred taxes arising from the jurisdictional implementation of the Pillar Two Model Rules

The Group believes that these amendments have no significant impact on the Group's consolidated financial statements.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

2. Material accounting policies and basis of preparation, Continued

2) New and revised K-IFRSs in issue, but not yet effective:

- *Amendments to K-IFRS No. 1001 'Presentation of Financial Statements'* – the amendments clarify guidance for classification of liabilities as current or non-current and future loan agreement.

- *Amendments to K-IFRS No. 1007 'Statement of Cash Flows' and K-IFRS No. 1107 'Financial Instruments: Disclosures'* – the amendments require the Company to disclose of supplier finance arrangements.

- *Amendments to K-IFRS No. 1116 'Lease'* – the amendments clarify accounting guidance for lease liability in a sale and leaseback.

- *Amendments to K-IFRS No. 1001 'Presentation of Financial Statements'* – the amendments clarify guidance for disclosure of virtual assets.

The Group anticipates that the application of the enactment and amendments will not have a significant impact on the Group's consolidated financial statements.

(2) Basis of consolidation

Non-controlling interest is measured proportional share of the current equity investment among the amount recognized for the acquiree's identified net assets at the acquisition date. Transactions, balances, profits and expenses, unrealized gains and losses (excluding foreign currency translation effect) within the Group are all eliminated when preparing consolidated financial statements.

(3) Investments in associates and joint ventures

Unrealized gains from transactions between the Group and its associates and joint ventures are eliminated up to the interests in those entities, and Unrealized losses are also eliminated unless evidence of impairment in assets transferred is provided.

(4) Foreign currency translation

Unless the functional currency of the Group's foreign operations is not the currency of a hyperinflationary economy, the assets and liabilities are translated into Korean won using exchange rates at the end of the reporting period, and income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity.

2. Material accounting policies and basis of preparation, Continued

(5) Cash and cash equivalents

Cash and cash equivalents include cash on hand, demand deposits, short-term, highly liquid investments with maturities (or date of redemption) of three months or less upon acquisition.

(6) Non-derivative financial assets

1) Initial recognition and measurement

Trade and other receivables, and debt investment are initially recognized when they are originated. Other financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instruments.

2) Classification and subsequent measurement

The Group makes an assessment of the objective of the business model in which, financial assets is held at a portfolio level because this best reflects the way the business is managed, and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice;
- how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and, in particular, the way in which those risks are managed;
- how managers of the business are compensated (e.g. whether the compensation is based on the fair value of the assets managed or on the contractual cash flows collected); and
- the frequency, volume and timing of sales of financial assets in prior periods, the reason for those sales and expectation about future sales activity for financial asset.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Portfolio of financial assets that meet the definition of trading or which performance is evaluated on a fair value basis is measured at FVTPL.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition.

2. Material accounting policies and basis of preparation, Continued

In making this assessment, the Group considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable-rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

3) Offsetting between financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

(7) Impairment of financial assets

1) Recognition of impairment on financial assets

The Group recognizes loss allowances for expected credit losses ("ECLs") on:

- financial assets measured at amortized costs;
- debt securities measured at FVOCI; and
- contract assets defined by K-IFRS No. 1115.

The Group's impairment losses are likely to be recognized a lifetime ECLs based on the extent of increase in credit risk since inception except for below asset to be recognized loss allowances measured on 12-month.

- credit risk of debt instruments is low at the end of reporting date
- credit risk has not increased significantly since the initial recognition of debt investment (lifetime ECLs: ECLs that resulted from all possible default events over the expected life of a financial instrument)

The Group adopted an accounting policy to recognize loss allowances at an amount equal to lifetime ECLs for trade receivables and contract assets.

2) Credit-impaired financial instrument

A debt instrument carried at amortized cost and FVOCI is assessed at the end of each reporting period to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably.

Objective evidence that a financial asset is impaired includes:

- significant financial difficulty of the issuer or borrower;
- a breach of contract, such as default or delinquency in interest or principal payments;
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- it becomes probable that the borrower will enter bankruptcy or other financial reorganization; or
- the disappearance of an active market for that financial asset because of financial difficulties.

2. Material accounting policies and basis of preparation, Continued

3) Presentation of credit loss allowance on financial position

For loss allowance on financial assets measured at amortized cost is deducted from the carrying amount of the respective assets, while loss allowance on debt instruments at FVOCI is recognized in OCI.

4) De-recognition

The Group derecognizes a financial asset when it has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. The Group assess whether there are reasonable expectations of recovering the contractual cash flows from customers and individually assess the timing and amount of write-off. The Group does not expect that such write-off will be recovered but they may be subject to collection activity according to the Group's past due collection process.

(8) Trade receivables

Trade receivables are amounts owed by customer for products and services provided in the ordinary course of business. Receivables expected to be collected within one year are classified as current assets. Otherwise, they are classified as non-current assets. Trade receivables are initially measured at fair value except that they do not contain a significant financing component in accordance with K-IFRS No. 1115 'Revenue from contracts with customers' and are presented as net of allowance for doubtful accounts, estimated on an individual basis based on past bad debt experience.

(9) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of inventories includes fixed and variable manufacturing overhead costs which are systematically allocated to inventories by appropriate methods based on each category of inventory. The cost of inventories is determined by the specific identification method for finished goods, work-in-process and materials in transit, and moving average method for all other inventories.

The Group periodically reviews changes in net realizable value of inventories (current replacement cost for raw materials) due to damage, obsolescence, decline in selling prices and others and recognizes loss on inventory valuation. Loss on inventory valuation is charged to cost of sales when it is ordinary and to other non-operating expense when it is extraordinary. When the circumstances that previously caused inventories to be written down below cost no longer exist and the new market value of inventories subsequently recovers, the valuation loss is reversed to the extent of the original valuation loss and the reversal is deducted from cost of sales.

(10) Property, plant and equipment

After initial recognition, the land is stated as fair value at revaluation date less accumulated impairment loss. The revaluation is performed periodically to ensure that carrying value of the asset does not differ materially from its fair value at the end of reporting period. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment. The cost of an item of property, plant and equipment includes expenditure that is directly attributable to the acquisition of the asset including the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are capitalized only if it is highly probable that future economic benefits associated with the assets will flow into the Group.

2. Material accounting policies and basis of preparation, Continued

Depreciation of property, plant and equipment is calculated to the cost of each asset less residual value using the straight-line method over the estimated useful lives of the assets as follows:

	Useful lives
Buildings	7~40 years
Structures	5~40 years
Machinery	3~20 years
Others	3~15 years

When there is an indicator for impairment, and the carrying amount of property, plant and equipment is higher than the recoverable amount, the carrying amount is adjusted to the recoverable amount and the difference is recognized as an impairment loss. Meanwhile, when the recoverable amount subsequently exceeds the carrying amount of the impaired asset, the excess is recorded as a reversal of impairment loss to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation, if no impairment loss had been recognized. Upon derecognition of a property, plant and equipment, the difference between the net disposal proceeds and carrying amount of the item is recognized in other non-operating income (expense).

A revaluation surplus is recorded in OCI and credited to the asset revaluation reserve in equity. However, to the extent that it reverses a revaluation deficit of the same asset previously recognized in profit or loss, the increase is recognized in profit and loss. A revaluation deficit is recognized in the statement of profit or loss, except to the extent that it offsets an existing surplus on the same asset recognized in the asset revaluation reserve.

(11) Investment property

Subsequent to initial recognition, the book value of investment property is presented at the cost less accumulated depreciation and accumulated impairment.

While land is not depreciated, building is depreciated using the straight-line method over the useful lives between 10 and 40 years.

(12) Intangible assets

Intangible assets are initially measured at cost and are carried at cost less accumulated amortization and accumulated impairment losses. Subsequent expenditure on an intangible asset is capitalized only when it is probable that the expected future economic benefits that are attributable to the asset will increase.

Intangible assets other than goodwill and intangibles with indefinite useful lives are amortized on a straight-line basis over their estimated useful lives from the date that they are available for use. The estimated useful lives of the intangible assets are as follows:

	Useful lives
Industrial property rights	5~10 years
Development costs	5~20 years
Others	1~20 years

2. Material accounting policies and basis of preparation, Continued

Goodwill acquired in business combination is the consideration paid in excess of the fair value of the group's interest in the identifiable net assets of the subsidiary acquired at the acquisition date, and the goodwill resulting from the acquisition of the subsidiary is included in the intangible asset. The goodwill is not amortized, is annually tested for impairment and is the cost less accumulated impairment losses. Reversal of an impairment loss for goodwill is prohibited. The goodwill is distributed to the cash-generating unit for the purpose of impairment testing, and the distribution is made to the identified cash-generating unit or group of cash-generating units that are expected to benefit from the business combination in which the goodwill occurs, and it is determined by the sales segment.

Expenditures relating to development activities are capitalized when the result of the development is for the development of new products or substantial improvement of functions of existing products; there is technical and commercial feasibility of completing the development; and the Group has the ability to measure reliably the expenditure attributable to the development. Capitalized development cost include expenditure on materials, salaries, wages and other employment-related costs of personnel directly engaged in generating assets and related overhead cost which is systematically allocated. Capitalized development costs are presented at the acquisition cost less accumulated amortization and accumulated impairment losses. Capitalized development costs are amortized using the straight-line method over the estimated useful life and amortization expenses are included in cost of goods manufactured and amortization in selling and administrative expenses. The expenditure on research and development which does not meet conditions noted above is recognized as an expense when it is incurred.

However, useful lives of other intangible assets, which are determined to be indefinite since there is no foreseeable limit to the period over which the assets are expected to generate net cash inflows for the Group, are not amortized but tested for impairment once a year.

(13) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at FVTPL or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

(14) Financial guarantee contracts

The Group has financial guarantee contract liabilities, which are obligations to pay specific amounts for indemnifying creditors' loss on insolvency of specific debtors according to initial or revised contract provisions of liabilities on the payment date. Financial guarantee contract liabilities are initially measured at their fair value less the direct transaction cost relating to the issuance. Subsequently, financial guarantee contract liabilities are measured at the higher of the amount of the loss allowance determined in accordance with K-IFRS No. 1109 'Financial instruments', and the amount initially recognized less the cumulative amortizations recognized in accordance with the K-IFRS No. 1115.

2. Material accounting policies and basis of preparation, Continued

(15) Employee benefits liability

The defined benefit obligation is calculated by an independent actuary using the projected unit credit method.

(16) Provision

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. The increase in provision due to passage of time is recognized as interest expense. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period. When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. In this case, any income arising from the third-party reimbursement is netted off against the related expense to be recognized in the consolidated statements of profit or loss from the recognition of provisions.

(17) Leases

1) Lessee

At the commencement or effective date of the contract that includes the lease element, the Group allocates the consideration of the contract to each lease element based on its relative stand-alone price. However, the Group applies a practical expedient that does not separate the non-lease component for a real estate lease and accounts for the non-lease component related to the lease element as a single lease element.

Lease liabilities are initially measured at the present value of the lease payments not paid as of the commencement of the lease. Generally, the Group uses the incremental borrowing rate as the discount rate. Lease liabilities are amortized in accordance with the effective interest method. When remeasurement of a lease liability, the relevant right-of-use asset is adjusted and the remeasurement amount is recognized in profit or loss if the carrying amount of the right-of-use asset is reduced to nil.

As practical expedient, the Group does not recognize right-of-use assets and lease liabilities for short-term leases with a lease term of less than 12 months and low-value assets. The Group shall recognize the lease charges relating to these leases as expenses in accordance with the straight-line method over the lease term.

2) Lessor

As a lessor, the Group determines whether the lease is a finance lease or an operating lease at the inception of the lease. To classify each lease, the Group generally determines whether the lease transfers most of the risks and rewards of ownership of the underlying asset.

2. Material accounting policies and basis of preparation, Continued

(18) Derivative financial instruments and hedge accounting

The Group operates fair value hedges to avoid the risk of fair value change, which is incurred from specific risk on assets, liabilities and firm contracts, and cash flow hedges to avoid the risk of future cash flow change, which is incurred from specific risk on expecting contracts.

At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group assesses whether there is an economic relationship between the hedged item and the hedging instrument.

(19) Share-based payments

The Group measures the cost of share options granted to employees by reference to the estimated fair value at the date at which they are granted. The share-based payment expenses are recognized on a straight-line basis over the vesting period reflecting expected forfeiture rate. The Group determines the fair value of share option using the Black-Scholes option pricing model.

(20) Due from (to) customers for contract work

When contract costs incurred to date plus recognized profits less recognized losses exceed progress billing, the surplus is shown as amounts due from customers for contract work. For contracts where progress billings exceed contract costs incurred to date plus recognized profits less recognized losses, the surplus is shown as the amounts due to customers for contract work. Amounts received before the related work is performed are included in the separate statement of financial position, as a liability, as advances received. Amounts billed for work performed but not yet paid by the customer are included in the consolidated statement of financial position under trade receivables.

(21) Government grants

The benefits of government loans at an interest rate lower than the market interest rate are treated as government grants, and the government grants are measured as the difference between the fair value of the government loans calculated based on the market interest rate and the consideration received.

Asset-related government grants are deducted when determining the carrying amount of assets and presented in the statements of financial position. The government grants are recognized in profit or loss over the useful life of the related assets by reducing depreciation expenses.

Revenue-related government grants are recognized as revenue over the period based on a systematic basis in order to respond to expenses intended to be compensated. Government grants received for immediate financial assistance provided to the Group without compensation for expenses or losses already incurred or related costs in the future are recognized in profit or loss during the period in which the right to receive them is incurred.

2. Material accounting policies and basis of preparation, Continued

(22) Taxes and deferred tax

The minimum tax paid in accordance with Pillar Two Model Rules is corporate tax subject to K-IFRS No. 1012 'Income Tax'. The Group has applied the mandatory temporary exception to recognition of deferred tax assets and liabilities arising from Pillar Two income taxes and recognizes current income tax as incurred. The impact of Pillar Two Model Rules is described in Note 31.

(23) Greenhouse gas emission right

In connection with Enforcement of Allocation and Trading of Greenhouse Gas Emissions Allowances, the Group applies the following accounting policies for greenhouse gas emissions rights and obligations.

1) Greenhouse gas emissions rights

Greenhouse gas emissions rights consist of the allowances received free of charge from the government and the ones purchased. The allowances received free of charge from the government are measured and recognized at zero, and emissions rights purchased are recognized at acquisition cost by including expenditures arising directly from the acquisition and any other costs incurred during normal course of the acquisition.

Greenhouse gas emissions rights are held by the Group to fulfill the legal obligation and recorded as intangible assets. To the extent that the portion to be submitted to the government within one year from the end of reporting period, the greenhouse gas emissions rights are classified as current assets. Greenhouse gas emissions rights recorded as intangible assets are initially measured at cost and substantially remeasured at cost less accumulated impairment losses.

Greenhouse gas emissions rights with the intention to sell within a short period are classified as current assets and measured at fair value, and changes in fair value are recognized in profit or loss for the year. Greenhouse gas emissions rights are derecognized on submission to the government or when no future economic benefits are expected from its use or disposal.

2) Greenhouse gas emissions obligations

Greenhouse gas emissions obligations are the Group's present legal obligation to submit the greenhouse gas emissions allowances to the government and measured as the sum of the carrying amount of the allocated rights and best estimate of expenditure required to settle the obligation at the end of the reporting period for any excess emission. The Group derecognizes the emission obligations when the Group submits the emissions rights to the government.

(24) Operating segments

Operating segments are reported on the same basis as the financial information that is reported to the management of the Group. The management of the Group is responsible for the allocation of resources and assessment of performance for the operating segments.

2. Material accounting policies and basis of preparation, Continued

(25) Revenue from contracts with customers

1) Identify performance obligations

The Group is mainly engaged in the businesses of power generation facilities, industrial facilities, manufacturing of casting and forging products and comprehensive construction business. The Group identifies separate performance obligations in the contracts and determines whether each of the performance obligations is satisfied at a point of time or over time under K-IFRS No. 1115.

The Group identified as a separate performance obligation if the customer benefits from the good or service on its own or together with other readily available resources and the entity's promise to transfer the good or service separately is identifiable from other promises in the contract. In addition, the transaction price is allocated to each performance obligation in proportion to its stand-alone selling price and if the stand-alone selling price is not directly observable then the entity estimates the amount by using a suitable method.

2) Obligations to perform over period of time

The Group manufactures and sells specialized power machinery which are built based on customer's orders designating the design elements. The Group recognizes revenue over time measuring the progress towards complete satisfaction of the performance obligation, only when the asset in its completed state has no alternative use to the Group and there is an enforceable right to payment for performance completed to date.

3) Measurement of the percentage-of-completion by using the input method

The Group contracts for EPC plant construction contracts and power generating service contracts including purchasing, manufacturing and installing boiler, turbine and others and generally proceeds over a long period of time. The Group recognizes revenue following percentage-of-completion method, judging whether the construction/service contracts are provided over period of time if it meets all of the following conditions:

- the customers simultaneously acquire and consume benefits that the Group provides
- the Group creates or enhances the value of the asset that customers control

However, to represent performance degree faithfully, the Group recognizes the amount equal to the cost of the goods to perform the obligation as revenue if it meets all of the following conditions:

- the good is not distinct when the contract initiates
- expected that the customer can control significantly before the service is provided related to the goods
- the cost of the goods transferred is more significant than the total cost expected to fully perform the obligation
- the Group is provided the goods from the third party
- not significantly involved in the design and production of the goods

4) Variable consideration

The Group estimates an amount of variable consideration by using the method the Group expects to better predict the amount of consideration to which it will be entitled. The Group includes an amount of variable consideration in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the return period expires.

2. Material accounting policies and basis of preparation, Continued

5) Allocating the transaction price to performance obligations

The Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis. The Group uses adjusted market assessment approach to estimate the stand-alone selling price, however, for certain transactions, 'expected cost plus a margin approach' is used exceptionally.

6) Warranty obligation

The Group generally provide warranty contract with customers pursuant to the local laws and customs. Most of these warranties are assurance type of warranty. The Group recognizes provision based on reliable estimate under K-IFRS No. 1037, 'Provisions, Contingent Liabilities and Contingent Assets'.

However, if the Group provides extended warranty that is not assurance type of warranty under non-standardized contract, it is accrued as service type of warranty and separated to performance obligation requiring allocation of transaction price. Revenue is recognized over period of time.

3. Significant accounting estimates and assumptions

The estimates and underlying assumptions are reviewed on an ongoing basis. The estimates and underlying assumptions are based on historical experiences and other factors including expectation on possible future events. Actual results may differ from these estimates. The following are critical assumptions and key sources of estimation uncertainty at the end of reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of the Group's assets and liabilities within the next financial year.

(1) Recognition of revenue

The Group recognizes revenue over time using the input method in relation to its performance obligation over time. Revenue is recognized as work progresses based on the ratio of actual costs incurred to estimated total costs. The percentage-of-completion basis using the input method requires the Group to estimate the ratio of actual costs incurred to total estimated costs. Any changes in the early stages of long-term projects in the scope and costs of project implementation in the construction period, and in construction plans may have a significant effect on the amount of revenue recognized.

(2) Impairment of goodwill

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Recoverable amount of cash generating unit ("CGU") is calculated based on the value in use and fair value, this calculation requires the use of accounting estimates.

(3) Defined benefit liability

The Group operates a defined benefit plan. Defined benefit liability is calculated by annual actuarial valuations as of the reporting date. In order to perform the actuarial valuations, assumptions for discount rates, future salary increases and others are required to be estimated.

(4) Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, and if it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and if a reliable estimate can be made of the amount of the obligation. In accordance with the relevant laws and practices, the estimated amounts may change to prescribe for additional provisions to be recognized in future periods.

(5) Deferred tax

Recognition and measurement of deferred tax assets and liabilities require judgment of the Group's management. Especially, the recognition of deferred tax asset and the scope of recognition are influenced by assumptions about future circumstances and judgment of management.

(6) Impairment of non-financial assets

The Group is assessing whether there is any indication that an asset may be impaired at the end of each reporting period. The Group estimates the recoverable amount of an asset when such indication exists or when an impairment test for an asset is required each year. Recoverable amount of an asset is the higher of its fair value less costs of disposal and its value in use. The recoverable amount is determined for individual assets. However, if an asset does not generate cash inflows that are largely independent of those from other assets, the recoverable amount is determined for the CGU to which the asset belongs. The asset is impaired if its carrying amount exceeds its recoverable amount and the carrying amount of the asset is reduced to its recoverable amount.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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4. Financial risk management

The Group is exposed to various financial risks, such as market (foreign currency risk, interest rate risk and price risk), credit and liquidity, relating to the operations of the Group. The purpose of risk management policy is to mitigate the risks which could have material adverse effect on financial performance.

Financial risk management activities are performed by the treasury department in accordance with the risk management policies. In addition, the Group enters into derivative contracts to hedge against certain risks. The Group is trying to minimize the effect of financial risks by reorganizing financial risk management policy and monitoring financial risks regularly.

(1) Market risk

1) Foreign currency risk

The Group's exposure to the risk of changes in foreign currency exchange rates relates primarily to the Group's operating activities and net investments in foreign subsidiaries. The Group's objective of foreign currency risk management is to minimize uncertainty and volatility arising from fluctuations in foreign currency exchange rates. Foreign currency risk is managed in accordance with the Group's policy on foreign currencies, and currency trading for speculative purposes is prohibited.

The Group's objective for foreign currency management is to reduce income/loss volatility. The Group reduces exposure to foreign currency risk by matching the inflow and the outflow of foreign currencies (natural hedge) and manages foreign currency risk by using currency derivatives, such as currency forwards, for the remaining exposure.

The book value of the Group's monetary assets and liabilities denominated in foreign currencies, which represents the maximum exposure to foreign currency risk as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023				
		USD	EUR	JPY	GBP	Others(*1)
Financial assets	₩	1,609,914	169,036	2,822	93,879	611,136
Financial liabilities		1,421,611	296,636	54,116	25,608	329,045
Net assets (liabilities)	₩	188,303	(127,600)	(51,294)	68,271	282,091
						Total
						2,486,787
						2,127,016
						359,771

(*1) Others are assets and liabilities denominated in foreign currencies other than USD, EUR, JPY and GBP.

<i>(In millions of won)</i>		2022				
		USD	EUR	JPY	GBP	Others(*1)
Financial assets	₩	1,459,420	93,989	7,001	174,902	226,787
Financial liabilities		1,874,796	296,648	32,002	76,826	234,488
Net assets (liabilities)	₩	(415,376)	(202,659)	(25,001)	98,076	(7,701)
						Total
						1,962,099
						2,514,760
						(552,661)

(*1) Others are assets and liabilities denominated in foreign currencies other than USD, EUR, JPY and GBP.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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4. Financial risk management, Continued

A sensitivity analysis on the Group's income before tax for the period, assuming a 10% increase and decrease in currency exchange rates, as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023		2022	
		10% increase	10% decrease	10% increase	10% decrease
Income before tax impact	₩	35,977	(35,977)	(55,266)	55,266

The above-mentioned sensitivity analysis is based on monetary assets and liabilities denominated in foreign currencies other than the Group's functional currency as of December 31, 2023 and 2022.

2) Interest rate risk

Interest rate risk is related to borrowings and bank deposits with floating interest rates, and related interest income and expense are exposed to interest rate risk. The Group is exposed to interest rate risk mainly due to its borrowing or deposit with floating interest rates. The purpose of interest rate risk management is to minimize uncertainty and financial expense arising from interest rate fluctuation.

To manage its interest rate risk, the Group minimizes external borrowings using internal funds, reduces borrowings with high interest rates, maintains an appropriate balance between borrowings with floating interest rate and fixed-interest rate and improves system for short-term and long-term borrowings. The Group manages its interest rate risk preemptively through regular monitoring and adjustments to the changing domestic and overseas markets conditions and nature of its interest rates.

Floating rate financial assets and liabilities exposed to interest rate risk as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Financial assets	₩	396,879	174,294
Financial liabilities		2,114,751	1,991,486
Net liabilities	₩	(1,717,872)	(1,817,192)

A sensitivity analysis on the Group's income before tax for the period, assuming a 1% increase and decrease in interest rates, as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023		2022	
		1% increase	1% decrease	1% increase	1% decrease
Income before tax impact	₩	(17,179)	17,179	(18,172)	18,172

3) Price risk

The Group is exposed to equity price risks arising from its listed equity investments among financial instruments. The Group periodically measures the risk as the fair value or future cash flows of equity investments may fluctuate due to the changes in market prices. Significant investments in the Group's portfolio are individually managed, and acquisition and disposal are approved by the Board of Directors.

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4. Financial risk management, Continued

(2) Credit risk

The Group is exposed to credit risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. Credit risk arises from trade and other receivables, debt instruments, beneficiary certificates, deposits in financial institutions, derivative financial instruments and financial guarantee contracts.

The Group enters into transactions with customers having met a certain level of credit quality and maintains policies and procedures on financial assets to manage such risks. The credit quality of a new customer is assessed based on publicly announced financial information and the information provided by credit rating agencies. Such assessment is used as a basis for determining a customer's credit limit. Furthermore, collaterals and credit guarantees are obtained as security, if necessary. In addition, the Group periodically reassesses the credit quality of customers by auditing credit limits and adjusts the amount covered by collaterals when deemed necessary. The Group also monitors whether the collection of financial assets have been impaired to take relevant actions.

The carrying amount of financial assets represents the Group's maximum exposure. The maximum exposure to credit risk as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023	2022
Cash and cash equivalents	₩	2,620,187	1,395,838
Short and long- term financial instruments		146,868	137,294
Trade receivables and other receivables		2,138,597	2,121,153
Deposits		222,644	334,333
Short and long- term investment in securities (excluding equity securities)		212,428	206,440
Derivative financial assets		37,318	90,542
Total	₩	5,378,042	4,285,600

In addition to the above, the maximum amount to be paid for the principal debtor related to financial guarantee contract is described in Note 33.

The Group's receivables' aging analysis as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023				
		Receivables assessed for impairment individually or on a collective basis				
		Before maturity	0-3 months	3-6 months	6-12 months	More than 12 months
Trade receivables	₩	933,530	141,707	53,324	64,635	337,944
Loans and other receivables		1,299,413	31,197	3,568	13,709	133,752
Accrued income		52,853	-	-	385	12,588
Total	₩	2,285,796	172,904	56,892	78,729	484,284

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4. Financial risk management, Continued

(In millions of won)

		2022					
		Receivables assessed for impairment individually or on a collective basis					Total
		Before maturity	0-3 months	3-6 months	6-12 months	More than 12 months	
Trade receivables	₩	1,236,148	151,022	86,768	37,419	285,229	1,796,586
Loans and other receivables		851,950	47,233	25,335	24,138	112,831	1,061,487
Accrued income		26,523	8,970	-	-	16,720	52,213
Lease receivables		2,281	-	-	-	-	2,281
Total	₩	2,116,902	207,225	112,103	61,557	414,780	2,912,567

ECLs are measured as the present value of all cash shortfalls. If the Group does not have reasonable and supportable information that is available without overwhelming cost or effort to measure ECLs on an individual instrument basis, the Group can group financial instruments on the basis of shared credit risk characteristics.

(3) Liquidity risk

The Group is exposed to liquidity risk, which is the risk that it will encounter difficulties in fulfilling the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset.

The Group manages liquidity risk by matching the duration of financial assets and liabilities through estimating future cash flows from its operating, investing and financing activities, and securing moderate levels of liquidity in advance.

A summary of expected maturity for the Group's financial liabilities, etc. as of December 31, 2023 and 2022 are as follows:

(In millions of won)

(In millions of won)		2023					
		Book value	Nominal cash flows according to contract				
			Total	Less than 1 year	1–2 years	2–5 years	More than 5 years
Principal on non-derivative financial liabilities	₩	9,122,128	9,206,660	6,103,379	919,509	1,097,196	1,086,576
Interest on non-derivative financial liabilities		-	559,498	185,119	109,776	242,732	21,871
Derivative financial liabilities		95,755	80,463	54,349	28,777	(4,270)	1,607
Guarantee contract(*1)		-	871,514	871,514	-	-	-
Total	₩	9,217,883	10,718,135	7,214,361	1,058,062	1,335,658	1,110,054

(*1) Maximum exposure associated with the guarantee contracts is the maximum amounts of the obligation(See Note 33).

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4. Financial risk management, Continued

(In millions of won)

		2022					
		Book value	Nominal cash flows according to contract				
			Total	Less than 1 year	1-2 years	2-5 years	More than 5 years
Principal on non-derivative financial liabilities (*1)	₩	9,097,542	9,186,911	5,237,329	1,817,971	934,795	1,196,816
Interest on non-derivative financial liabilities		-	685,039	213,389	134,383	241,298	95,969
Derivative financial liabilities		116,051	123,014	78,670	23,043	19,901	1,400
Guarantee contract(*2)		-	409,265	409,265	-	-	-
Total	₩	9,213,593	10,404,229	5,938,653	1,975,397	1,195,994	1,294,185

(*1) This includes provision for payment guarantees in the amount of ₩54,855 million.

(*2) Maximum exposure associated with the guarantee contracts is the maximum amounts of the obligation(See Note 33).

The contractual amounts of financial liabilities in the above tables are calculated based on non-discounted cash flows (including estimated interest expense) and differ from its book values.

(4) Capital risk

The objective of the Group's capital risk management is to secure its ability to provide earnings to its shareholders and interested parties and sustain optimal capital structure to reduce the cost of capital. In order to sustain optimal capital structure, the Group uses a debt-to-equity ratio similar to other entities in the industry. Debt-to-equity ratio is calculated by dividing total liabilities by total equity.

Debt-to-equity ratios as of December 31, 2023 and 2022 are as follows:

(In millions of won)	2023	2022
Total liabilities (A)	₩ 13,799,325	12,969,492
Total equity (B)	10,841,509	10,080,290
Debt-to-equity ratio (A/B)	127.28%	128.66%

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5. Restricted financial assets

Details of restricted financial assets as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>	2023	2022	Restrictions
Short-term financial instruments			Establishment of pledge related to financial loan, Shared
₩ 100,732	69,038		growth fund, Government R&D projects (*1)
Short-term financial instruments			Establishment of Price Return Swap ("PRS") deposit (*2) and
-	36,499		others
Long-term financial instruments			Establishment of pledge related to financial loan, Deposits
30,430	29,863		for maintenance of checking accounts and others
Total	₩ 131,162	135,400	

(*1) The amounts are restricted in use and may only be used for specific national R&D projects.

(*2) Deposit amount for the PRS contract that exchanges the profit from the changes in the stock price of Doosan Bobcat Inc., and the contracts were settled during the current period.

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6. Investments in securities

(1) Investments in securities as of December 31, 2023 and 2022 are as follows:

(In millions of won)

Description		2023	2022
Short-term investments in securities	Financial assets as measured at FVTPL	₩ 84,977	23,776
Long-term investments in securities(*1)	Financial assets as measured at FVOCI	6,530	11,100
	Financial assets as measured at FVTPL	212,088	309,994
	Subtotal	218,618	321,094
	Total	₩ 303,595	344,870

(*1) A portion of long-term investments in securities have been pledged as collateral for developers' project financing and others as of December 31, 2023 (See Note 34).

(2) Details of the Group's investments in securities as of December 31, 2023 and 2022 are as follows:

(In millions of won)

Description			2023	2022
Financial assets as measured at FVOCI	Non-marketable equity securities	Al Asilah Desalination Company and others	₩ 6,530	11,100
Financial assets as measured at FVTPL	Marketable equity securities	NuScale Power LLC and others	21,415	73,537
	Non-marketable equity securities	Greenize, Inc and others	63,222	53,793
	Investment in guarantee cooperative	Construction Guarantee Cooperative and others	120,320	118,624
	Beneficiary certificates	Emerald Technology Ventures and others	11,552	14,679
	Debt securities	Valuegrowth Co., Ltd. and others	80,556	73,137
		Subtotal	297,065	333,770
	Total		₩ 303,595	344,870

(3) Changes in financial assets as measured at fair value for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023				
		January 1	Acquisition	Disposal	Gain or loss on valuation	December 31
Financial assets as measured at FVOCI	₩	11,100	81	(1,299)	(766)	6,530
Financial assets as measured at FVTPL		333,770	16,406	(20,751)	(33,267)	297,065
Total	₩	344,870	16,487	(22,050)	(34,033)	303,595

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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6. Investments in securities, Continued

(In millions of won)

		2022					
		January 1	Acquisition	Disposal	Gain or loss on valuation	Others(*1)	December 31
Financial assets as measured at FVOCI	₩	15,517	810	(646)	(5,396)	815	11,100
Financial assets as measured at FVTPL		483,390	24,166	(178,496)	13,657	(8,947)	333,770
Total	₩	498,907	24,976	(179,142)	8,261	(8,132)	344,870

(*1) Includes changes in the scope of consolidation.

7. Trade and other receivables

(1) Trade and other receivables as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			2022		
		Gross	Allowance for doubtful accounts	Book value	Gross	Allowance for doubtful accounts	Book value
Current assets:							
Trade receivables	₩	1,531,140	(197,720)	1,333,420	1,796,586	(176,979)	1,619,607
Lease receivables		-	-	-	2,281	-	2,281
Other receivables		561,772	(82,381)	479,391	265,549	(57,468)	208,081
Accrued income		65,826	(13,397)	52,429	52,213	(12,588)	39,625
Short-term loans		194,834	(147,502)	47,332	145,246	(71,345)	73,901
Subtotal		2,353,572	(441,000)	1,912,572	2,261,875	(318,380)	1,943,495
Non-current assets:							
Long-term other receivables		88,366	(47,220)	41,146	157,577	(21,155)	136,422
Long-term loans		636,667	(451,788)	184,879	493,024	(451,788)	41,236
Subtotal		725,033	(499,008)	226,025	650,601	(472,943)	177,658
Total	₩	3,078,605	(940,008)	2,138,597	2,912,476	(791,323)	2,121,153

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7. Trade and other receivables, Continued

(2) Changes in allowance for doubtful accounts for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

(In millions of won)		2023				
		January 1	Provision for allowance	Write-off of uncollectible amounts	Changes in foreign currency translation and others	December 31
Trade and other receivables:						
Trade receivables	₩	176,979	26,644	(5,205)	(698)	197,720
Other receivables		78,623	50,896	-	82	129,601
Accrued income		12,588	809	-	-	13,397
Short and long-term loans (*1)		523,133	21,302	-	54,855	599,290
Subtotal		791,323	99,651	(5,205)	54,239	940,008
Others:						
Due from customers for contract work		77,111	3,185	(24,313)	761	56,744
Deposits		2,800	-	-	-	2,800
Prepayments		-	1,193	-	(15)	1,178
Subtotal		79,911	4,378	(24,313)	746	60,722
Total	₩	871,234	104,029	(29,518)	54,985	1,000,730

(*1) Includes ₩54,855 million related to the membership fees return guarantee, transferred from other provision to allowance for doubtful accounts.

(In millions of won)

(In millions of won)

		2022					
		January 1	Provision for (reversal of) allowance	Write-off of uncollectible amounts	Changes in the scope of consolidation	Changes in foreign currency translation and others	December 31
Trade and other receivables:							
Trade receivables	₩	213,684	(3,111)	(40,001)	(6,247)	12,654	176,979
Other receivables		81,868	2,071	(6,252)	(232)	1,168	78,623
Accrued income		12,588	74	-	-	(74)	12,588
Short and long-term loans		513,589	17,564	-	-	(8,020)	523,133
Subtotal		821,729	16,598	(46,253)	(6,479)	5,728	791,323
Others:							
Due from customers for contract work		59,570	11,977	-	-	5,564	77,111
Deposits		2,800	-	-	-	-	2,800
Subtotal		62,370	11,977	-	-	5,564	79,911
Total	₩	884,099	28,575	(46,253)	(6,479)	11,292	871,234

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

8. Inventories

Inventories as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			2022		
		Acquisition cost	Valuation allowance	Book value	Acquisition cost	Valuation allowance	Book value
Finished goods	₩	945,780	(46,301)	899,479	656,075	(39,275)	616,800
Merchandise		169,664	(18,154)	151,510	320,807	(10,268)	310,539
Semi-finished goods		32,390	-	32,390	14,942	-	14,942
Work-in-process		321,460	(22,957)	298,503	357,769	(25,955)	331,814
Raw materials		932,684	(40,298)	892,386	922,735	(28,799)	893,936
Supplies		28,801	(3,081)	25,720	26,213	(2,621)	23,592
Materials-in-transit		239,016	-	239,016	267,403	-	267,403
Total	₩	<u>2,669,795</u>	<u>(130,791)</u>	<u>2,539,004</u>	<u>2,565,944</u>	<u>(106,918)</u>	<u>2,459,026</u>

As of December 31, 2023, certain inventories have been pledged as collateral for the Group's debts (See Note 34).

Losses on inventory valuation recognized within the cost of sales amounted to ₩23,873 million and ₩11,740 million for the years ended December 31, 2023 and 2022, respectively.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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9. Derivatives

(1) Overview of the derivatives of the Group is as follows:

	Category	Summary
Fair value hedge	Forward exchange	Avoiding the risk of exchange rate fluctuations for foreign currency contracts that meet the requirements of the firm commitment
Cash flow hedge	Currency forward exchange	Avoiding the cash flow risk due to fluctuations in the exchange rate of the expected foreign currency collection and the expected foreign currency expenditure related to the purchasing of foreign materials
	Currency rate swap ("CRS")	Contracts that pay a fixed rate of local currency and receive a fixed rate of foreign currency on the future interest and principal payment date in order to avoid the cash flow risk due to fluctuations in exchange rates
	Interest rate swap ("IRS")	Contracts that pay a fixed rate and receive a variable rate on the future interest payment date in order to avoid the risk of cash flow fluctuations due to fluctuations in interest rates
Trading	Currency forward exchange	Contracts that concluded a currency forward exchange contract to avoid the risk of future cash flow fluctuations, but did not apply hedging accounting
	Currency rate swap	Contracts that pay a fixed rate of local currency and receive a fixed rate of foreign currency on the future interest and principal payment date in order to avoid the cash flow risk due to fluctuations in exchange rate, but did not apply hedging accounting
	Interest rate swap	Contracts that concluded an interest rate swap contract to avoid the risk of future interest rate fluctuations, but did not apply hedging accounting
	PRS	Derivative contracts for the purpose of trading that settles the difference in the stock price between the time of sales and time of settlement

The Group classified derivatives as non-current assets (liabilities) if their remaining maturity exceeds 12 months from the end of the reporting period to the contract maturity date, and current assets (liabilities) if they are within 12 months. When cash flow hedging is applied, the ineffective portion is recognized in profits (losses).

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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9. Derivatives, Continued

(2) Details of valuation of derivatives as of December 31, 2023 and 2022 are as follows:

(In millions of won, in thousands of foreign currency)

				2023			
Buy		Sell		Derivative financial assets (liabilities)	Gain (loss) on valuation of derivative financial instruments	Accumulated other comprehensive income (loss) (*1)	Firm commitment assets (liabilities) (*2)
Currency	Amounts	Currency	Amounts				
Forward exchange:							
KRW	2,624,037	USD	2,087,889	₩ (37,765)	(15,279)	4,357	43,276
KRW	203,110	EUR	144,558	(2,762)	(1,957)	(1,602)	625
KRW	157,907	JPY	15,871,930	6,879	3,041	(1,300)	(8,294)
KRW	129,703	Others		(5,100)	(6,232)	(562)	368
USD	892,550	KRW	1,137,891	(878)	782	542	2,107
EUR	393,798	KRW	564,972	(2,595)	2,653	(3,398)	(424)
JPY	25,271,532	KRW	258,818	(17,503)	(5,879)	(10,722)	485
Others		KRW	69,264	1,389	1,716	1,248	(9)
GBP and others		EUR and others		(734)	396	1,183	-
CRS				1,136	3,525	211	-
IRS				(504)	(555)	57	-
Subtotal				(58,437)	(17,789)	(9,986)	38,134
Tax effect				-	-	2,519	-
Adjustments for consolidation				-	-	15,087	-
Total				₩ (58,437)	(17,789)	7,620	38,134

(*1) In consideration of the amounts adjusted in sales and cost of sales, the effective portion of changes in fair value of cash flow hedges amounting to ₩7,620 million, net of tax, was recognized in accumulated other comprehensive income or loss.

(*2) In consideration of the amounts adjusted in sales, firm commitments assets of ₩63,243 million and firm commitment liabilities of ₩25,109 million were recognized in the consolidated statement of financial position by applying a fair value hedge accounting.

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9. Derivatives, Continued

(In millions of won, in thousands of foreign currency)

				2022				
Buy		Sell		Derivative financial assets (liabilities)	Gain (loss) on valuation of derivative financial instruments	Accumulated other comprehensive income (loss) (*1)	Firm commitment assets (liabilities) (*2)	
Currency	Amounts	Currency	Amounts					
Forward exchange:								
KRW	2,467,931	USD	2,009,370 ₩	(43,132)	(14,051)	3,588	82,850	
KRW	65,379	EUR	47,060	1,209	1,243	200	(1,819)	
KRW	67,650	JPY	5,822,910	7,715	2,249	1,067	(13,432)	
KRW	344,402	Others		16,888	15,949	1,353	(9,771)	
USD	547,345	KRW	690,472	(4,914)	(8,740)	4,000	12,425	
EUR	165,430	KRW	227,151	(2,852)	(3,673)	823	530	
JPY	8,733,654	KRW	97,035	(8,684)	519	(7,323)	502	
Others		KRW	103,363	(4,721)	(2,415)	(3,535)	1,339	
GBP and others		EUR and others		7,995	5,186	4,873	(175)	
CRS				21,295	19,782	508	-	
IRS				691	-	691	-	
PRS(*3)				(16,999)	(16,999)	-	-	
	Subtotal			(25,509)	(950)	6,245	72,449	
Tax effect				-	-	(292)	-	
Adjustments for consolidation				-	-	15,306	-	
	Total		₩	(25,509)	(950)	21,259	72,449	

(*1) In consideration of the amounts adjusted in sales and cost of sales, the effective portion of changes in fair value of cash flow hedges amounting to ₩21,259 million, net of tax, was recognized in accumulated other comprehensive income or loss.

(*2) In consideration of the amounts adjusted in sales, firm commitments assets of ₩95,467 million and firm commitment liabilities of ₩23,018 million were recognized in the consolidated statement of financial position by applying a fair value hedge accounting.

(*3) The Group has entered into PRS contract that exchanges the profit from the changes in the stock price of Doosan Bobcat Inc..

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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10. Financial instruments

(1) Financial assets as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023					
		Financial assets as measured at amortized cost	Financial assets as measured at FVOCI	Financial assets as measured at FVTPL	Other financial assets(*1)	Carrying amounts	Fair value
Cash and cash equivalents	₩	2,620,187	-	-	-	2,620,187	2,620,187
Short and long-term financial instruments		146,868	-	-	-	146,868	146,868
Short and long-term investment in securities (*2)		-	6,530	297,065	-	303,595	303,595
Derivative financial assets		-	-	4,673	32,645	37,318	37,318
Trade and other receivables		2,111,984	26,613	-	-	2,138,597	2,138,597
Deposits		222,644	-	-	-	222,644	222,644
Total	₩	5,101,683	33,143	301,738	32,645	5,469,209	5,469,209

(*1) Other financial assets included derivatives as hedged item.

(*2) Certain long-term investment in securities have been pledged as collateral for the Group's borrowing (See Note 34).

(In millions of won)

		2022					
		Financial assets as measured at amortized cost	Financial assets as measured at FVOCI	Financial assets as measured at FVTPL	Other financial assets(*1)	Carrying amounts	Fair value
Cash and cash equivalents	₩	1,395,838	-	-	-	1,395,838	1,395,838
Short and long-term financial instruments		137,294	-	-	-	137,294	137,294
Short and long-term investment in securities		-	11,100	333,770	-	344,870	344,870
Derivative financial assets		-	-	44,557	45,985	90,542	90,542
Trade and other receivables		2,057,885	63,268	-	-	2,121,153	2,121,153
Deposits		334,333	-	-	-	334,333	334,333
Total	₩	3,925,350	74,368	378,327	45,985	4,424,030	4,424,030

(*1) Other financial assets included derivatives as hedged item.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

10. Financial instruments, Continued

(2) Financial liabilities as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			
		Financial liabilities as measured at amortized cost	Financial liabilities as measured at FVTPL	Other financial liabilities(*1)	
					Carrying amounts Fair value
Trade and other payables	₩	2,825,789	-	-	2,825,789 2,825,789
Borrowings and bonds		4,767,377	-	-	4,767,377 4,767,377
Derivative financial liabilities		-	7,578	88,177	95,755 95,755
Financial guarantee liabilities		-	-	27,321	27,321 27,321
Lease liabilities		388,068	-	-	388,068 388,068
Sales and lease back liabilities		66,299	-	-	66,299 66,299
Others		1,023,660	-	-	1,023,660 1,023,660
Total	₩	9,071,193	7,578	115,498	9,194,269 9,194,269

(*1) Other financial liabilities include derivatives as hedged item and others.

(In millions of won)

		2022			
		Financial liabilities as measured at amortized cost	Financial liabilities as measured at FVTPL	Other financial liabilities(*1)	
					Carrying amounts Fair value
Trade and other payables	₩	2,793,740	-	-	2,793,740 2,793,740
Borrowings and bonds		4,911,793	-	-	4,911,793 4,911,793
Derivative financial liabilities		-	17,376	98,675	116,051 116,051
Financial guarantee liabilities		-	-	180	180 180
Lease liabilities		393,894	-	-	393,894 393,894
Sales and lease back liabilities		77,347	-	-	77,347 77,347
Others		760,590	-	-	760,590 760,590
Total	₩	8,937,364	17,376	98,855	9,053,595 9,053,595

(*1) Other financial liabilities include derivatives as hedged item and others.

(3) Fair value hierarchy of financial instruments

As of December 31, 2023, the Group uses the following hierarchy for determining and disclosing the fair value of financial instruments:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly.

Level 3: Inputs that are not based on observable market data (unobservable inputs).

The fair value of financial instruments traded in active markets is based on quoted market prices at the dates of the consolidated statements of financial position. These instruments are included in level 1. Instruments included in level 1 primarily comprise listed equity investments classified as trading securities.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.

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Notes to the Consolidated Financial Statements, Continued
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10. Financial instruments, Continued

If one or more of the significant inputs are not based on observable market data, the instrument is included in level 3.

Specific valuation techniques used to value financial instruments include:

- quoted or dealer price of similar instruments.
- the fair value of forward foreign exchange contracts determined by using forward exchange rates at the reporting date, with the resulting value discounted to present value.
- other financial techniques such as discounted cash flow analysis.

The level of fair value measurements of financial instruments as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			
		Level 1	Level 2	Level 3	Total
Financial assets measured at fair value:					
Measured at FVOCI	₩	-	26,613	6,530	33,143
Measured at FVTPL		21,415	4,673	275,650	301,738
Others		-	32,645	-	32,645
Total	₩	21,415	63,931	282,180	367,526
Financial liabilities measured at fair value:					
Measured at FVTPL	₩	-	7,578	-	7,578
Others		-	88,177	27,321	115,498
Total	₩	-	95,755	27,321	123,076

(In millions of won)

		2022			
		Level 1	Level 2	Level 3	Total
Financial assets measured at fair value:					
Measured at FVOCI	₩	-	63,268	11,100	74,368
Measured at FVTPL		73,537	44,959	259,831	378,327
Others		-	45,985	-	45,985
Total	₩	73,537	154,212	270,931	498,680
Financial liabilities measured at fair value:					
Measured at FVTPL	₩	-	17,376	-	17,376
Others		-	98,675	180	98,855
Total	₩	-	116,051	180	116,231

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For the years ended December 31, 2023 and 2022

10. Financial instruments, Continued

Assumptions used for the measurement of financial assets at fair value based on level 3 valuation techniques as of December 31, 2023 are as follows:

	Valuation techniques	Discount rate	Note
Gyeonggi East-West Beltway Co.	Dividend discount model	12.93%	Expected dividend cash flow for each financial period
Construction Guarantee Cooperative	Estimated sales price valuation method	-	Expected sales price
Machinery Financial Cooperative	Estimated sales price valuation method	-	Expected sales price
Engineering Guarantee Insurance	Estimated sales price valuation method	-	Expected sales price
Construction Industry Guarantee	Estimated sales price valuation method	-	Expected sales price
Gyeongnam GNTech Creative Economy Innovation Fund	Net asset value assessment	-	Fair value of net asset
Emerald Technology Ventures	Estimated sales price valuation method	-	Return rate on investment
Al Asilah Desalination Company	Net asset value assessment	-	Fair value of net asset
Electric Contractors' Financial Cooperative	Estimated sales price valuation method	-	Expected sales price
Information & Communication Financial Cooperative	Estimated sales price valuation method	-	Expected sales price
Fire Guarantee	Estimated sales price valuation method	-	Expected sales price
Valuegrowth Co., Ltd.	Dividend discount model	7.20%	Expected dividend cash flows for each financial period
Others	Estimated sales price valuation method, etc.	-	Expected sales price and others

Changes in financial assets included in level 3 of the fair value hierarchy for the years ended December 31, 2023 and 2022 are summarized as follows and there is no transfer between levels of the fair value.

(In millions of won)

2023							
	January 1	Acquisition	Disposal	Profit (loss) for the year	Other comprehensive income (loss)	Others(*1)	December 31
Financial assets as measured at FVOCI ₩	11,100	81	(1,299)	-	(766)	(2,586)	6530
Financial assets as measured at FVTPL	259,831	16,406	(1,964)	470	-	907	275,650
Total ₩	270,931	16,487	(3,263)	470	(766)	(1,679)	282,180

(*1) It includes amounts due to changes in foreign currency translation.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

10. Financial instruments, Continued

(In millions of won)

		2022						
		January 1	Acquisition	Disposal	Reclassified category(*1)	Profit (loss) for the year	Other comprehensive income (loss)	December 31
Financial assets as measured at								
FVOCI	₩	15,517	810	(646)	-	-	(5,396)	11,100
Financial assets as measured at								
FVTPL		272,817	23,659	(9,737)	(35,692)	3,609	-	259,831
Total	₩	288,334	24,469	(10,383)	(35,692)	3,609	(5,396)	270,931

(*1) Reclassified from level 3 to level1 because the financial instruments were converted to be traded in active market in 2022.

(*2) It includes amounts due to consolidation scope changes and changes in foreign currency translation.

(4) Gain or loss by categories of financial instruments

1) Gain or loss by categories of financial instruments for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023						
		Gain or loss						
		Interest income (expense)	Dividend income	Gain or loss on valuation (*1)	Impairment loss on financial instruments	Gain or loss on disposal	Gain or loss on financial guarantee	Other comprehensive income(*2)
Financial assets:								
Measured at								
amortized cost	₩	80,220	-	-	(105,801)	(27)	-	-
Measured at								
FVOCI		-	-	-	-	(10,906)	-	(766)
Measured at								
FVTPL		-	2,906	(27,905)	-	790	-	-
Total	₩	80,220	2,906	(27,905)	(105,801)	(10,143)	-	(766)
Financial liabilities:								
Measured at								
amortized cost	₩	(320,892)	-	-	-	(2,218)	(2,890)	-
Others		-	-	-	-	-	(364)	-
Total	₩	(320,892)	-	-	-	(2,218)	(3,254)	-

(*1) The amounts in gain or loss on valuation exclude the gain or loss related with foreign exchange and derivatives.

(*2) The amounts in other comprehensive income exclude deferred tax effect.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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10. Financial instruments, Continued

(In millions of won)

		2022					
		Gain or loss					Other comprehensive income(*2)
	Interest income (expense)	Dividend income	Gain or loss on valuation (*1)	Impairment loss on financial instruments	Gain or loss on disposal	Gain or loss on financial guarantee	
Financial assets:							
Measured at amortized cost	₩ 18,964	-	-	(19,201)	(136)	-	-
Measured at FVOCI	-	-	-	-	(4,952)	-	(5,396)
Measured at FVTPL	250	3,811	14,452	-	3,007	-	-
Total	₩ 19,214	3,811	14,452	(19,201)	(2,081)	-	(5,396)
Financial liabilities:							
Measured at amortized cost	₩ (260,038)	-	-	-	(26,038)	(1,801)	-
Others	-	-	-	-	-	(1,817)	-
Total	₩ (260,038)	-	-	-	(26,038)	(3,618)	-

(*1) The amounts in gain or loss on valuation exclude the gain or loss related with foreign exchange and derivatives.

(*2) The amounts in other comprehensive income exclude deferred tax effect.

Gains or losses on translation or transaction of foreign currencies arising from foreign currency transactions except for derivative financial instruments have been mostly incurred from financial assets and liabilities measured at amortized cost.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

10. Financial instruments, Continued

- 2) Details of gains and losses on valuation and settlement of derivative financial instruments for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023		
		Gain or loss on valuation	Gain or loss on settlement	Other comprehensive income (*1)
Derivatives measured at FVTPL	₩	(358)	9,173	-
Derivatives for fair value hedge		(16,819)	-	-
Derivatives for cash flow hedge		(612)	450	(16,231)
Total	₩	(17,789)	9,623	(16,231)

(*1) The amounts in other comprehensive income exclude deferred tax effect.

(In millions of won)

		2022		
		Gain or loss on valuation	Gain or loss on settlement	Other comprehensive income (*1)
Derivatives measured at FVTPL	₩	14,007	17,226	-
Derivatives for fair value hedge		25,437	(40)	-
Derivatives for cash flow hedge		(40,394)	21,403	5,703
Total	₩	(950)	38,589	5,703

(*1) The amounts in other comprehensive income exclude deferred tax effect.

Above gains or losses on financial instruments for the years ended December 31, 2023 and 2022 include selling and administrative expenses, finance income and expenses, other non-operating income and expenses and other comprehensive income or loss from each financial instrument.

- (5) Financial assets and financial liabilities subject to an enforceable master netting arrangement or similar agreement as of December 31, 2023 are as follows:

(In millions of won)

		Eligible for legal right to offset		
		Total assets (liabilities)	Offset amounts	Amounts after offset
Financial assets :				
Derivative financial assets	₩	61,319	(30,860)	30,459
Trade receivables		16,099	(8,096)	8,003
Other receivables		21	(19)	2
Total	₩	77,439	(38,975)	38,464
Financial liabilities :				
Derivative financial liabilities	₩	(119,804)	30,860	(88,944)
Trade payables		(27,601)	8,115	(19,486)
Total	₩	(147,405)	38,975	(108,430)

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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11. Investments in associates and joint ventures

(1) Details of share of investment in associates and joint ventures as of December 31, 2023 and 2022 are as follows:

(In millions of won)

(In millions of won)	Percentage of ownership (%)			Acquisition cost		Book value	
				Countries	2023	2022	2023
Associates:							
Samcheok Blue Power Co., Ltd.(*1,2)	KOREA	9.00	₩	43,568	43,568	32,052	31,876
Daejung Offshore Wind Power Co., Ltd.	KOREA	26.65		3,196	3,196	2,380	2,419
Hychangwon Co., Ltd.(*3,6)	KOREA	25.74		7,000	7,000	6,180	7,013
Tuwaiq Casting & Forging Company(*2)	SAUDI ARABIA	15.00		43,926	43,926	37,032	44,674
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st	KOREA	65.00		10,496	8,500	10,406	8,494
Doosan Engineering & Construction Co., Ltd. (*5)	KOREA	46.35		317,666	317,666	108,956	173,702
Daesan Green Energy Co., Ltd.(*2,4)	KOREA	10.00		3,630	3,630	3,804	2,476
Prestolite Asia Ltd.	KOREA	32.31		2,787	2,787	3,638	3,141
Ainstein AI, Inc(*2)	USA	9.09		2,360	2,360	2,440	2,355
BUNDANG DOOSAN TOWER REIT Co., Ltd (*2)	KOREA	18.60		42,089	42,089	36,068	41,355
Subtotal				476,718	474,722	242,956	317,505
Joint ventures:							
The Zenith Holdings Ltd. (*7)	KOREA	31.75		120,000	120,000	-	-
The Weve Holdings Ltd.	KOREA	46.50		119,584	119,584	73,914	38,450
Subtotal				239,584	239,584	73,914	38,450
Total			₩	716,302	714,306	316,870	355,955

(*1) The Group's investments in the investee have been pledged as collateral for the company's project financing and contract of completion guarantee (See Note 34).

(*2) Although the Group's ownership interest in the investee is less than 20%, the investee is classified as an associate considering the exercise of voting rights in the board of directors.

(*3) Investments in the investee have been pledged as collateral for the Group's project financing (See Note 34).

(*4) The Group's investments in the investee have been pledged as collateral for the investee's borrowings (See Note 34).

(*5) The Group's investments in the investee have been pledged as collateral for the Group's borrowing (See Note 34).

(*6) The percentage of ownership is calculated after considering preferred stock. The entity is classified as an associate because the Group holds more than 20% of stock with voting right.

(*7) The carrying amount does not exist because the equity method was discontinued during the previous period.

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Notes to the Consolidated Financial Statements, Continued
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11. Investments in associates and joint ventures, Continued

(2) Changes in investment in associates and joint ventures for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023					
		January 1, 2023	Acquisition	Share of profit (loss)(*1)	Increase (decrease) in equity of associates	Increase in the scope of consolidation	December 31, 2023
Associates:							
Samcheok Blue Power Co., Ltd.	₩	31,876	-	-	176	-	32,052
Daejung Offshore Wind Power Co., Ltd.		2,419	-	-	(39)	-	2,380
Hychangwon Co., Ltd.(*1)		7,013	-	-	(834)	1	6,180
Tuwaiq Casting & Forging Company		44,674	-	-	(8,449)	807	37,032
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		8,494	1,996	-	(84)	-	10,406
Doosan Engineering & Construction Co., Ltd.		173,702	-	-	(64,746)	-	108,956
Daesan Green Energy Co., Ltd.		2,476	-	-	1,328	-	3,804
Prestolite Asia Ltd.		3,141	-	-	497	-	3,638
Ainstein AI, Inc		2,355	-	-	44	-	2,440
BUNDANG DOOSAN TOWER REIT Co., Ltd		41,355	-	(3,242)	(2,045)	-	36,068
Subtotal		317,505	1,996	(3,242)	(74,152)	808	242,956
Joint ventures:							
The Zenith Holdings Ltd.		-	-	-	-	-	-
The Weve Holdings Ltd.		38,450	-	-	35,464	-	73,914
Subtotal		38,450	-	-	35,464	-	73,914
Total	₩	355,955	1,996	(3,242)	(38,688)	808	316,870

(*1) Share of loss of equity method investees was calculated as a 41.18% share on common stock basis.

(*2) Others include changes in foreign currency translation.

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Notes to the Consolidated Financial Statements, Continued
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11. Investments in associates and joint ventures, Continued

(In millions of won)

(In millions of won)		2022						
		January 1, 2022	Acquisition (disposal)	Share of profit (loss)(*1)	Increase (decrease) in equity of associates	Increase (decrease) in the scope of consolidation	Others(*3)	December 31, 2022
Associates:								
Samcheok Blue Power Co., Ltd.	₩	34,764	-	(2,888)	-	-	-	31,876
Daejung Offshore Wind Power Co., Ltd.		2,482	-	(63)	-	-	-	2,419
Hychangwon Co., Ltd.(*2)		4,995	2,000	19	(1)	-	-	7,013
Tuwaiq Casting & Forging Company		-	43,926	78	670	-	-	44,674
ReCarbon, Inc.		7,870	-	(561)	686	(7,995)	-	-
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		-	8,500	(6)	-	-	-	8,494
Doosan Property Co., Ltd.		75,684	-	(1,518)	(29)	(74,137)	-	-
Doosan Engineering & Construction Co., Ltd. (*4)		317,666	-	(27,339)	-	-	(116,625)	173,702
Daesan Green Energy Co., Ltd.		2,883	-	(407)	-	-	-	2,476
Prestolite Asia Ltd.		2,882	-	259	-	-	-	3,141
Ainstein AI, Inc		2,291	-	(96)	-	-	160	2,355
StructionSite Inc.		10,528	(7,506)	(3,966)	-	-	944	-
BUNDANG DOOSAN TOWER REIT Co., Ltd		-	-	(734)	-	42,089	-	41,355
Subtotal		462,045	46,920	(37,222)	1,326	(40,043)	(115,521)	317,505
Joint ventures:								
The Zenith Holdings Ltd.		120,000	-	(120,000)	-	-	-	-
The Weve Holdings Ltd.		-	-	(77,728)	(3,406)	119,584	-	38,450
Subtotal		120,000	-	(197,728)	(3,406)	119,584	-	38,450
Total	₩	582,045	46,920	(234,950)	(2,080)	79,541	(115,521)	355,955

(*1) Share of profit (loss) of equity method includes profit(loss) from discontinued operations.

(*2) Share of profit (loss) of equity method investees was calculated as a 41.18% share on common stock basis.

(*3) Others include impairment and changes in foreign currency translation.

(*4) Share of profit (loss) of equity method is calculated based on shareholder's agreement. The Group recognized an impairment loss (other non-operating expenses) of ₩116,625 million based on the impairment test for the year ended December 31, 2022 as the carrying amount exceeds the aggregate recoverable amount of Doosan Engineering & Construction Co., Ltd.. The recoverable amount of Doosan Engineering & Construction Co., Ltd. is valued based on fair value less cost to sell. Net asset value assessment was applied to calculate fair value.

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11. Investments in associates and joint ventures, Continued

(3) The condensed financial information of the investees as of and for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023				
		Total assets	Total liabilities	Sales	Net Profit (loss)	Total comprehensive income (loss)
Samcheok Blue Power Co., Ltd.	₩	4,228,510	3,668,999	14,002	(28,864)	(28,864)
Daejung Offshore Wind Power Co., Ltd.		5,277	2,094	-	(145)	(145)
Hychangwon Co., Ltd.		91,241	63,725	-	(3,092)	(3,092)
Tuwaiq Casting & Forging Company		823,364	540,114	-	(17,987)	(17,987)
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		17,836	8,952	-	(79)	(79)
Doosan Engineering & Construction Co., Ltd.		1,670,974	1,410,031	1,721,730	(76,210)	(76,210)
Daesan Green Energy Co., Ltd.		237,691	171,228	111,225	14,541	14,541
Prestolite Asia Ltd.		15,711	5,414	19,661	1,540	1,540
Ainstein AI, Inc		7,371	6,131	8,903	481	481
BUNDANG DOOSAN TOWER REIT Co., Ltd		663,593	524,449	27,729	4,033	4,033
The Zenith Holdings Ltd.		1,838,208	1,423,015	1,721,746	(72,187)	(72,187)
The Weve Holdings Ltd.		1,797,995	1,423,015	1,721,746	(72,194)	(72,194)

(In millions of won)

		2022				
		Total assets	Total liabilities	Sales	Net Profit (loss)	Total comprehensive income (loss)
Samcheok Blue Power Co., Ltd.	₩	3,515,861	2,885,218	-	(8,447)	(8,447)
Daejung Offshore Wind Power Co., Ltd.		5,342	2,014	-	(237)	(237)
Hychangwon Co., Ltd.		80,358	49,733	-	(1,344)	(1,344)
Tuwaiq Casting & Forging Company		338,073	42,217	-	(1,448)	(1,448)
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		15,063	6,100	-	(9)	(9)
Doosan Engineering & Construction Co., Ltd.		1,783,756	1,442,192	1,190,566	(210,444)	(210,444)
Daesan Green Energy Co., Ltd.		245,826	190,918	101,689	(6,641)	(6,641)
Prestolite Asia Ltd.		13,800	4,080	16,891	799	799
Ainstein AI, Inc		3,328	2,780	5,375	(1,177)	(1,054)
BUNDANG DOOSAN TOWER REIT Co., Ltd		671,559	524,366	27,319	3,606	3,606
The Zenith Holdings Ltd.		1,951,894	1,459,903	1,190,566	(223,370)	(223,370)
The Weve Holdings Ltd.		1,911,489	1,459,904	1,190,566	(223,371)	(223,371)

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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11. Investments in associates and joint ventures, Continued

(4) The following table provides a reconciliation of the summarized financial information of the associates and joint ventures to the carrying amount of its interest in the associates and joint ventures as of December 31, 2023 and 2022:

(In millions of won)

Company	2023							
	Net asset (a)	Equity ownership (%) (b)	Equity interest in the investee (axb)	Adjustment amount			Book value	
				Difference	Internal transaction	Others		
Associates:								
Samcheok Blue Power Co., Ltd. (*1)	₩	2,597	9.00	234	38,268	(6,450)	-	32,052
Daejung Offshore Wind Power Co., Ltd.		3,183	26.65	848	1,532	-	-	2,380
Hychangwon Co., Ltd.(*2)		10,665	41.18	4,392	79	1,709	-	6,180
Tuwaiq Casting & Forging Company		283,250	15.00	42,488	-	(5,456)	-	37,032
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		8,884	65.00	5,775	4,664	-	(33)	10,406
Doosan Engineering & Construction Co., Ltd.		260,943	46.35	120,947	60,232	-	(72,223)	108,956
Daesan Green Energy Co., Ltd.		66,463	10.00	6,646	-	(2,842)	-	3,804
Prestolite Asia Ltd.		10,297	32.31	3,327	-	-	311	3,638
Ainstein AI, Inc		1,240	9.09	113	2,306	-	21	2,440
BUNDANG DOOSAN TOWER REIT Co., Ltd		139,144	18.60	25,881	14,936	(3,242)	(1,507)	36,068
Subtotal		786,666		210,651	122,017	(16,281)	(73,431)	242,956
Joint ventures:								
The Zenith Holdings Ltd.(*3)		119,827	31.75	38,045	18,991	-	(57,036)	-
The Weve Holdings Ltd. (*3)		80,896	46.50	37,617	18,517	-	17,780	73,914
Subtotal		200,723		75,662	37,508	-	(39,256)	73,914
Total	₩	987,389		286,313	159,525	(16,281)	(112,687)	316,870

(*1) Includes net assets other than hybrid bonds with equity shares.

(*2) Includes net assets and equity ownership other than share on preferred stock.

(*3) Includes net assets other than goodwill and non-controlling interest of individual entities.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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11. Investments in associates and joint ventures, Continued

(In millions of won)

Company		2022						
		Net asset (a)	Equity ownership (%) (b)	Equity interest in the investee (axb)	Adjustment amount			Book value
					Difference	Internal transaction	Others	
Associates:								
Samcheok Blue Power Co., Ltd. (*1)	₩	31,460	9.00	2,831	38,268	(9,223)	-	31,876
Daejung Offshore Wind Power Co., Ltd.		3,328	26.65	887	1,532	-	-	2,419
Hychangwon Co., Ltd.(*2)		13,755	41.18	5,664	79	1,270	-	7,013
Tuwaiq Casting & Forging Company		295,856	15.00	44,378	-	296	-	44,674
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		8,963	65.00	5,826	2,668	-	-	8,494
Doosan Engineering & Construction Co., Ltd.		341,564	46.35	158,315	60,232	-	(44,845)	173,702
Daesan Green Energy Co., Ltd.		54,908	10.00	5,491	-	(3,015)	-	2,476
Prestolite Asia Ltd.		9,720	32.31	3,141	-	-	-	3,141
Ainstein AI, Inc		548	9.09	50	2,305	-	-	2,355
BUNDANG DOOSAN TOWER REIT Co., Ltd		147,193	18.60	27,378	14,936	(158)	(801)	41,355
Subtotal		907,295		253,961	120,020	(10,830)	(45,646)	317,505
Joint ventures:								
The Zenith Holdings Ltd.(*3)		43,936	31.75	13,950	18,991	-	(32,941)	-
The Weve Holdings Ltd. (*3)		28,905	46.50	13,440	18,518	-	6,492	38,450
Subtotal		72,841		27,390	37,509	-	(26,449)	38,450
Total	₩	980,136		281,351	157,529	(10,830)	(72,095)	355,955

(*1) Includes net assets other than hybrid bonds with equity shares.

(*2) Includes net assets and equity ownership other than share on preferred stock.

(*3) Includes net assets other than goodwill and non-controlling interest of individual entities.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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12. Property, plant and equipment

(1) Changes in property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

	2023						
	Land	Buildings and structures	Machinery	Others	Construction in progress	Right-of-use assets	Total
As of January 1, 2023	₩ 3,019,812	705,164	657,652	89,563	234,582	315,375	5,022,148
Acquisition/ capital expenditure	-	33,843	50,739	22,927	313,038	88,245	508,792
Transfer(*1)	(23,802)	64,171	116,952	16,630	(199,767)	2,542	(23,274)
Disposals(*2)	(1,753)	(1,169)	(4,125)	(1,118)	-	(6,250)	(14,415)
Depreciation	-	(54,650)	(151,584)	(31,260)	-	(78,868)	(316,362)
Impairment	(19,114)	(6,088)	(4,832)	(16)	(240)	-	(30,290)
Revaluation	35,973	-	-	-	-	-	35,973
Changes in foreign currency translation and others	3,580	10,529	15,115	3,057	8,736	1,560	42,577
As of December 31, 2023	₩ 3,014,696	751,800	679,917	99,783	356,349	322,604	5,225,149
- Acquisition cost	₩ 1,456,104	1,642,437	2,549,703	430,288	393,711	512,606	6,984,849
- Accumulated depreciation and impairment	(111)	(890,637)	(1,869,786)	(330,505)	(37,362)	(190,002)	(3,318,403)
- Revaluation surplus	1,558,703	-	-	-	-	-	1,558,703

(*1) For the year ended December 31, 2023, certain land and buildings were classified as assets held-for-sale (See Note 37).

(*2) Includes the amount due to the contract cancelation of the right-of-use assets (See Note 14).

As of December 31, 2023, certain property, plant and equipment have been pledged as collateral for debts (See Note 34).

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Notes to the Consolidated Financial Statements, Continued
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12. Property, plant and equipment, Continued

(In millions of won)

	2022						
	Land	Buildings and structures	Machinery	Others	Construction in progress	Right-of-use assets	Total
As of January 1, 2022	₩ 3,367,242	715,867	714,093	83,510	236,865	319,392	5,436,969
Acquisition/ capital expenditure	1	65,352	83,765	29,910	176,330	109,765	465,123
Transfer(*1)	(136,326)	(3,865)	11,235	6,910	(172,766)	(13,842)	(308,654)
Disposals(*2)	(1,442)	(1,281)	(8,330)	(3,863)	(2,199)	(16,901)	(34,016)
Depreciation	-	(51,763)	(159,351)	(26,725)	-	(71,323)	(309,162)
Impairment	(1,803)	(119)	(60)	(44)	(15,953)	-	(17,979)
Business combination	-	-	-	37	-	626	663
Changes in the scope of consolidation	(208,550)	(38,131)	(11,586)	(1,006)	(100)	(13,914)	(273,287)
Changes in foreign currency translation and others	690	19,104	27,886	834	12,405	1,572	62,491
As of December 31, 2022	₩ 3,019,812	705,164	657,652	89,563	234,582	315,375	5,022,148
- Acquisition cost	₩ 1,475,893	1,536,875	2,431,548	401,971	271,704	467,868	6,585,859
- Accumulated depreciation and impairment	-	(831,711)	(1,773,896)	(312,408)	(37,122)	(152,493)	(3,107,630)
- Revaluation surplus	1,543,919	-	-	-	-	-	1,543,919

(*1) For the year ended December 31, 2022, certain land, buildings, and construction in progress have been reclassified as investment property (See Note 15).

(*2) Includes the amount due to the contract cancelation of the right-of-use assets (See Note 14).

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Notes to the Consolidated Financial Statements, Continued
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12. Property, plant and equipment, Continued

(2) Capitalized borrowing cost

Capitalized borrowing costs for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Capitalized borrowing costs	₩	6,803	2,623
Interest rate of borrowing costs		4.01%~6.48%	3.73%~6.29%

(3) Depreciation

Details of depreciation on property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Cost of sales	₩	257,493	248,102
Selling and administrative expenses		53,165	49,499
Research and development costs and others		5,704	5,248
Profit for the year from discontinued operation		-	6,313
Total	₩	<u>316,362</u>	<u>309,162</u>

(4) Revaluation of land

In order to determine the fair value of the land, the Group requested fair value evaluation to a recognized independent evaluation agency, and the revaluation date was October 31, 2023.

The fair value of the land was assessed based on the standard land price, and based on the principles of marketability and substitution, the trade cases where similarity is recognized in the neighborhood where the object is located are calculated and the ratification price is calculated by the comparison of transaction cases. The final appraisal was determined by reviewing the adequacy of the amounts calculated based on the standard quoted land prices.

The standard evaluation of the standard land price is based on the public land price of the comparative standard land located in the neighboring area. The price is determined by integrating price-forming factors such as demand and marketability. The other factors are determined by calculating the gap between targets and valuation precedents, taking into account the neighboring land price level and the real estate economic trends.

The carrying amount of the land measured by applying the cost model as of December 31, 2023 and 2022 amounted to ₩1,455,993 million and ₩1,475,893 million, respectively.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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13. Intangible assets

(1) Changes in intangible assets for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023				
		Goodwill	Industrial property rights	Development costs	Construction in progress	Other intangible assets
As of January 1, 2023	₩	4,946,440	1,246,264	1,157,295	-	422,725
Increase		-	2,082	168,710	50,343	24,127
Internal development		-	-	168,710	-	-
Individual acquisition		-	2,082	-	50,343	24,127
Decrease		-	(1,674)	(75,371)	-	(68,035)
Amortization		-	(1,674)	(75,371)	-	(67,094)
Disposal		-	-	-	-	(941)
Transfer to other assets		-	-	(3,860)	4,830	19,110
Transfer to other expense		-	-	(633)	-	-
Changes in foreign currency translation and others		132,745	37,656	3,876	(213)	2,075
Impairment loss		(164,883)	(6,453)	(4,174)	-	-
As of December 31, 2023	₩	4,914,302	1,277,875	1,245,843	54,960	400,002

As of December 31, 2023, certain intangible assets have been pledged as collateral for the Group's debts (See Note 34).

(In millions of won)

		2022				
		Goodwill	Industrial property rights	Development costs	Other intangible assets	Total
As of January 1, 2022	₩	5,254,319	1,186,614	1,091,799	483,248	8,015,980
Increase		-	5,147	183,849	31,907	220,903
Internal development		-	-	183,849	-	183,849
Individual acquisition		-	5,147	-	31,424	36,571
Business combination		-	-	-	483	483
Decrease		(1,435)	(1,252)	(89,082)	(71,213)	(162,982)
Amortization		-	(1,244)	(89,082)	(66,311)	(156,637)
Disposal		(1,435)	(8)	-	(4,902)	(6,345)
Transfer to other assets		-	-	788	12,666	13,454
Transfer to other expense		-	-	(2,292)	-	(2,292)
Changes in the scope of consolidation		(19,946)	-	-	(10,262)	(30,208)
Changes in foreign currency translation and others		134,942	55,755	7,155	6,554	204,406
Impairment loss		(421,440)	-	(34,922)	(30,175)	(486,537)
As of December 31, 2022	₩	4,946,440	1,246,264	1,157,295	422,725	7,772,724

The carrying amounts of intangible assets with indefinite useful lives including goodwill and others as of December 31, 2023 and 2022 amounted to ₩6,205,379 million and ₩6,203,770 million, respectively.

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13. Intangible assets, Continued

(2) Research and development costs

Research and development costs expensed as incurred for the years ended December 31, 2023 and 2022 amounted to ₩236,375 million and ₩192,144 million, respectively.

(3) Capitalized borrowing costs for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Capitalized borrowing costs	₩	33,102	22,907
Interest rate of borrowing costs		4.82%~8.17%	3.73%

(4) Details of amortization of intangible assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Cost of sales	₩	92,278	98,012
Selling and administrative expenses		51,861	56,571
Profit from discontinued operation		-	2,054
Total	₩	<u>144,139</u>	<u>156,637</u>

(5) Carrying amount of goodwill allocated to each CGU as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>	CGU		2023	2022
Enerbility	Enerbility	₩	743,811	722,422
Doosan Bobcat Inc.	Doosan Bobcat Inc.		3,673,816	3,562,460
Doosan Fuel Cell Co., Ltd.	Doosan Fuel Cell Co., Ltd.		496,675	661,558
	Total	₩	<u>4,914,302</u>	<u>4,946,440</u>

The recoverable amount of CGU is determined based on a value in use calculation or fair value less costs to sell, and major assumptions used as of December 31, 2023 are as follows:

	Enerbility	Doosan Bobcat Inc.	Doosan Fuel Cell Co., Ltd.
Valuation methods	Fair value less costs to sell	Value in use	Fair value less costs to sell
Major assumptions and estimation methods	Estimated at the Company's share price	Forecast growth rate: 1.50% Discount rate: 9.76%	Estimated at Doosan Fuel Cell Co., Ltd.'s share price

A value in use is calculated using pre-tax cash flow projections based on financial budgets approved by senior management covering a five-year period. The management assessed the total profit in the budget based on past performances and market growth forecasts. Cash flows beyond the five-year period are extrapolated using forecast growth rates, which do not exceed the long-term average growth rate for the industry in which the CGU operates and are consistent with estimations included in industry reports. The discount rate used is risk adjusted discount rate that reflects relevant risks specific to the related CGU.

Fair value less costs to sell is calculated by deducting the cost of disposal after adding control premium to the share price as of December 31, 2023, valuation date.

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

13. Intangible assets, Continued

(6) Details of development costs as of December 31, 2023 and 2022 are as follows:

(In millions of won)		2023	
	Description	Book value	Remaining amortization period(*1)
Enerbility	Large-sized Gas Turbine	₩ 727,992	-
	Gas Turbine 7F Retrofit	59,252	-
	Mid-sized Gas Turbine Development Phase1	560	5.58 years
	Mid-sized Gas Turbine Development Phase2	37,777	-
	8MW Offshore Wind Power	49,951	-
Doosan Bobcat Inc.	Compact product development (relating to new models and emission regulations)(*2)	60,234	-
	Compact product development (relating to new models and emission regulations)(*2)	73,191	2.73 years
	Portable Power product development (relating to new models and emission regulations)(*2)	214	-
	Portable Power product development (relating to new models and emission regulations)(*2)	11,399	3.06 years
	Forklift product development (relating to new models and emission regulations)(*2)	6,032	-
	Forklift product development (relating to new models and emission regulations)(*2)	10,442	3.29 years

(*1) Remaining amortization period is disclosed for assets which amortization has been initiated and disclosed as '-' for assets not yet amortized.

(*2) Some of the sub-projects that were amortized among the development costs were separately marked.

(In millions of won)		2022	
	Description	Book value	Remaining amortization period(*1)
Enerbility	Large-sized Gas Turbine	₩ 655,072	-
	Gas Turbine 7F Retrofit	51,635	-
	Mid-sized Gas Turbine Development Phase1	661	6.58 years
	Mid-sized Gas Turbine Development Phase2	37,777	-
	8MW Offshore Wind Power	45,023	-
Doosan Bobcat Inc.	Compact product development (relating to new models and emission regulations)(*2)	45,993	-
	Compact product development (relating to new models and emission regulations)(*2)	94,836	3.21 years
	Portable Power product development (relating to new models and emission regulations)(*2)	4,213	-
	Portable Power product development (relating to new models and emission regulations)(*2)	11,258	3.07 years
	Forklift product development (relating to new models and emission regulations)(*2)	6,077	-
	Forklift product development (relating to new models and emission regulations)(*2)	10,652	3.55 years

(*1) Remaining amortization period is disclosed for assets which amortization has been initiated and disclosed as '-' for assets not yet amortized.

(*2) Some of the sub-projects that were amortized among the development costs were separately marked.

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Notes to the Consolidated Financial Statements, Continued
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13. Intangible assets, Continued

(7) Intangible assets for which an impairment loss has been recognized for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

(In millions of won)		2023					
		Acquisition cost	Impairment loss		Accumulated amortization	Book value	Method used to assess recoverability
	Description		Loss	Accumulated			
Enerbility	Development costs						
	Development of rota automated inspection system	₩ 874	157	536	338	-	Value in use
	Others	33,013	878	24,752	8,261	-	Value in use
	Subtotal	33,887	1,035	25,288	8,599	-	
Doosan							
Bobcat Inc.	Industrial rights and others						
	RYAN brand right	6,453	6,453	6,453	-	-	Fair value
	Development costs						
	Medium Frame GenV and others	65,411	3,139	11,292	54,119	-	Fair value
	Subtotal	71,864	9,592	17,745	54,119	-	
Doosan Fuel							
Cell Co., Ltd.	Goodwill(*1)						
	Good will	1,082,998	164,883	586,323	-	496,675	Fair value
	Total	₩ 1,188,749	175,510	629,356	62,718	496,675	

(*1) The Group recognized impairment loss of ₩ 164,883 million because the book value of goodwill acquired from the business combination with Doosan Fuel Cell Co., Ltd. exceeded net fair value.

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Notes to the Consolidated Financial Statements, Continued
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13. Intangible assets, Continued

(In millions of won)

		2022					Method used to assess recoverability
Description		Acquisition cost	Impairment loss Loss	Accumulated	Accumulated amortization	Book value	
Enerbility	Development costs(*1)						
	Development of boiler-USC element technology	₩ 4,503	3,644	3,644	859	-	Value in use
	Development of boiler-USC element technology (I&C sector)	3,347	2,748	2,748	599	-	Value in use
	Development of large-scale freshwater element technology	2,731	2,731	2,731	-	-	Value in use
	Development ST-USC element technology	2,212	1,924	1,924	288	-	Value in use
	Others	32,136	23,875	23,875	8,261	-	Value in use
	Other intangible assets						
	Golf membership	14,424	5,097	8,766	-	5,658	Fair value
	Reclamation license and other	63,823	24,663	54,812	9,011	-	Value in use
	Subtotal	123,176	64,682	98,500	19,018	5,658	
Doosan Bobcat Inc.	Industrial rights						
	Forklift control method and others	12	-	9	3	-	Fair value
	Development costs						
	Medium Frame GenV and others	58,024	-	5,502	52,522	-	Fair value
	Other intangible assets						
Doosan Fuel Cell Co., Ltd.	DS Platform(software) and others	4,257	413	3,130	1,127	-	Fair value
	Subtotal	62,293	413	8,641	53,652	-	
Doosan Fuel Cell Co., Ltd.	Goodwill(*2)						
	Good will	1,082,998	421,440	421,440	-	661,558	Fair value
Doosan Cuvex Co., Ltd.	Other intangible assets						
	Condominium membership	38	2	2	-	-	Fair value
	Total	₩ 1,268,505	486,537	528,583	72,670	667,216	

(*1) The carrying amount is recognized as an impairment loss, as the value in use decreased due to changes in industry environment.

(*2) The Group recognized impairment loss of ₩ 421,440 million because the book value of goodwill acquired from the business combination with Doosan Fuel Cell Co., Ltd. exceeded net fair value.

(8) Reversal of impairment loss of intangible assets

There is no reversal of impairment loss of intangible assets for the years ended December 31, 2023 and 2022.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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13. Intangible assets, Continued

(9) Items in the consolidated statements of profit or loss that included an impairment loss

For the years ended December 31, 2023 and 2022, item in the consolidated statements of profit or loss for which the Group recognized an impairment loss are as follows:

(In millions of won)

		2023	2022
Other non-operating expenses	₩	175,510	486,537

(10) Greenhouse gas emission permits and obligations

1) The emission permits that are received free of charge from the government as the 3rd planning period (from year 2021 to 2025) as of December 31, 2023 are as follows:

(In tons (tCO₂-eq))

	2021	2022	2023	2024	2025	Total
Free emission permits	260,526	260,526	260,526	258,086	258,086	1,297,750

2) Changes in emission permits for the years ended December 31, 2023 and 2022 are as follows:

(In tons (tCO₂-eq))

	2023				
	2022	2023	2024	2025	Total
As of January 1, 2023 (*1)	302,876	260,736	258,294	258,294	1,080,200
Succession of allowances received free of charge	-	-	-	-	-
Cancellation of free permits	(574)	-	-	-	(574)
Submission to the government	(214,550)	-	-	-	(214,550)
Sale	(30,000)	-	-	-	(30,000)
Carried forward	(57,752)	57,752	-	-	-
As of December 31, 2023	-	318,488	258,294	258,294	835,076

(*1) Including succession of allowances received free of charge.

(In tons (tCO₂-eq))

	2022					
	2021	2022	2023	2024	2025	Total
As of January 1, 2022	264,750	260,526	260,526	258,086	258,086	1,301,974
Succession of allowances received						
free of charge	210	210	210	208	208	1,046
Cancellation of free permits	(519)	-	-	-	-	(519)
Submission to the government	(200,301)	-	-	-	-	(200,301)
Sale	(22,000)	-	-	-	-	(22,000)
Carried forward	(42,140)	42,140	-	-	-	-
As of December 31, 2022	-	302,876	260,736	258,294	258,294	1,080,200

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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13. Intangible assets, Continued

Greenhouse gas emission rights that are granted by the government were recognized by measuring the carrying amount in zero.

3) Details of emission permits held for short-term trading purpose for the year ended December 31, 2023 and 2022 is as follows:

(In tons (tCO ₂ -eq), in millions of won)	2023		2022	
	Quantity	Book value	Quantity	Book value
Beginning balance	55,248	₩ 1,657	-	₩ -
Acquisition	-	-	55,248	1,657
Gain(Loss) on Valuation	-	(939)	-	-
Ending balance	<u>55,248</u>	<u>₩ 718</u>	<u>55,248</u>	<u>₩ 1,657</u>

4) The estimate of greenhouse gas emissions as of December 31, 2023 was 230,000 tons (tCO₂-eq) and no emission liabilities are recognized as it is not expected to exceed the free emission permits.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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14. Lease

(1) Changes in the right-of-use assets for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023				
		Land	Buildings & structures	Machinery	Other tangible assets	Total
As of January 1, 2023	₩	7,651	285,136	7,337	15,251	315,375
Acquisition		25	67,060	5,522	15,638	88,245
Contract cancelation		(129)	(4,544)	-	(1,577)	(6,250)
Depreciation		(821)	(62,833)	(3,430)	(11,784)	(78,868)
Transfer(*1)		-	2,549	-	(7)	2,542
Foreign currency differences and others		139	1,378	122	(79)	1,560
As of December 31, 2023	₩	6,865	288,746	9,551	17,442	322,604
- Acquisition cost	₩	8,052	442,494	14,974	47,086	512,606
- Accumulated depreciation		(1,187)	(153,748)	(5,423)	(29,644)	(190,002)

(*1) Reclassified to right-of-use assets from investment properties due to the change in sub-lease ratio of BUNDANG DOOSAN TOWER in 2023.

(In millions of won)

		2022				
		Land	Buildings & structures	Machinery	Other tangible assets	Total
As of January 1, 2022	₩	7,150	292,161	1,608	18,473	319,392
Acquisition		1,740	90,716	9,033	8,276	109,765
Business combination		-	530	-	96	626
Contract cancelation		(170)	(14,926)	(605)	(1,200)	(16,901)
Depreciation		(1,054)	(57,283)	(2,511)	(10,475)	(71,323)
Transfer(*1)		-	(13,842)	-	-	(13,842)
Changes in the scope of consolidation		-	(13,852)	-	(62)	(13,914)
Foreign currency differences and others		(15)	1,632	(188)	143	1,572
As of December 31, 2022	₩	7,651	285,136	7,337	15,251	315,375
- Acquisition cost	₩	8,863	405,059	10,356	43,590	467,868
- Accumulated depreciation		(1,212)	(119,923)	(3,019)	(28,339)	(152,493)

(*1) Reclassified from right-of-use assets to investment properties due to the change in sub-lease ratio of BUNDANG DOOSAN TOWER in 2022.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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14. Lease, Continued

(2) Changes in the lease liabilities for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
As of January 1	₩	393,894	381,187
Payment of lease		(106,299)	(98,762)
Acquisition		85,049	109,720
Business combination		-	690
Contract cancelation		(4,055)	(16,869)
Interest expense		22,145	19,227
Changes in scope of consolidation		-	(14,212)
Foreign currency differences and others		(2,666)	12,913
As of December 31	₩	<u>388,068</u>	<u>393,894</u>

(3) The depreciation of right-of-use assets by type of accounts for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Cost of sales	₩	39,670	32,322
Selling and administrative expenses		38,493	37,102
R&D costs and others		705	617
Profit from discontinued operation		-	1,282
Total	₩	<u>78,868</u>	<u>71,323</u>

(4) The maturity of lease receivables and liabilities as of December 31, 2023 and 2022 are as follows:

(In millions of won)		2023				
		Contractual nominal cash flow				
		Total	Less than 1 year	1-2 years	2-5 years	More than 5 years
Lease liabilities	₩	447,810	90,335	79,387	179,692	98,396

(In millions of won)		2022				
		Contractual nominal cash flow				
	Total	Less than 1 year	1-2 years	2-5 years	More than 5 years	
Lease receivables	₩ 2,345	2,345	-	-	-	
Lease liabilities	455,665	84,285	70,950	168,052	132,378	

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14. Lease, Continued

(5) Expenses incurred in short-term leases and low-value asset leases that are not included in the Group's right-of-use assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Cost of sales	₩	15,939	19,665
Selling and administrative expenses		6,579	3,850
R&D costs and others		2	2
Profit from discontinued operation		-	208
Total	₩	22,520	23,725

The Group, as an intermediate lessor, recognized a lease income amounted to ₩2,345 million and ₩2,456 million from the sub-lease of right-of-use assets for the years ended December 31, 2023 and 2022, respectively.

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15. Investment properties

(1) Changes in the investment property for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			
		Land	Construction in progress	Buildings	Total
As of January 1, 2023	₩	165,878	37,837	70,731	274,446
Acquisition/ capital expenditure		-	-	1,104	1,104
Transfer (*1)		(13,446)	-	(2,690)	(16,136)
Depreciation		-	-	(6,164)	(6,164)
Impairment loss		-	(37,837)	-	(37,837)
Others		-	-	(6,805)	(6,805)
As of December 31, 2023	₩	152,432	-	56,176	208,608
- Acquisition cost	₩	161,397	53,790	76,061	291,248
- Accumulated depreciation and impairment loss		(8,965)	(53,790)	(19,885)	(82,640)

(*1) Including amount reclassified from investment properties to assets held-for-sale and right-of-use assets.

(In millions of won)

		2022			
		Land	Construction in progress	Buildings (*1)	Total
As of January 1, 2022	₩	36,025	-	36,895	72,920
Transfers		129,853	37,837	39,435	207,125
Depreciation		-	-	(5,599)	(5,599)
As of December 31, 2022	₩	165,878	37,837	70,731	274,446
- Acquisition cost	₩	167,681	53,790	83,384	304,855
- Accumulated depreciation and impairment loss		(1,803)	(15,953)	(12,653)	(30,409)

(*1) Including amount reclassified from right-of-use assets to investment properties due to the change in the sub-lease ratio of BUNDANG DOOSAN TOWER in 2022.

(2) Rental incomes from investment properties for the years ended December 31, 2023 and 2022 are ₩ 24,101 million and ₩ 18,689 million, respectively.

(3) Changes in the right-of-use assets which are classified as investment properties for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023	2022
Beginning balance	₩	46,548	36,772
Transfer		(2,549)	13,842
Depreciation		(4,624)	(4,066)
Others		(6,805)	-
Ending balance	₩	32,570	46,548

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Notes to the Consolidated Financial Statements, Continued
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15. Investment properties, Continued

(4) Fair value of investment properties excluding right-of-assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Land	₩	148,195	134,358
Construction in progress		33,905	21,263
Buildings		24,188	63,158
Total	₩	206,288	218,779

The fair value of the investment property was assessed by an independent evaluation agency, and the Group believes that changes in the fair value following the fair value assessment performed upon initial recognition of the investment property are not material. Meanwhile, the fair value of investment properties is classified as Level 3 based on the input variables used in the valuation. The valuation techniques used to measure fair value include the individual valuation method, transaction case comparison method, and profit return method.

However, for right-of-use assets classified as investment properties, the value-in-use based on K-IFRS No. 1116 'Lease' was used as fair value, and recorded as initial book value. As there was no significant change in assumptions such as cash flow and interest rates after the acquisition, the value-in-use according to IFRS 16 'Lease' was considered as a proxy for fair value, and fair value evaluation was not performed.

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16. Bonds and borrowings

(1) Borrowings

1) Short-term borrowings as of December 31, 2023 and 2022 are as follows:

(In millions of won)

Type of borrowings	Borrower(*1)	Lender	Annual interest rate (%) as of December 31, 2023	2023(*2)	2022
Denominated in KRW	Enerbility	Korea Development Bank ("KDB") and others	2.00~6.55	₩ 753,250	948,250
	Doosan Fuel Cell Co., Ltd.	Woori Bank and others	Industrial financial debentures (1yr) + 1.30~CD(3M) + 2.802	60,000	64,000
	Doosan bobcat Inc.	Shinhan Bank China	3.30	12,825	-
Denominated in foreign currencies	Enerbility	Woori Bank and others	0.53~10.30	310,851	367,381
	Doosan Bobcat Inc.	Shinhan Bank China and others	EURIBOR + 1.50~3.30	49,651	53,941
Total				₩ 1,186,577	1,433,572

(*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

(*2) The Group's PP&E and others have been pledged as collateral for the above borrowings (See Notes 33 and 34).

2) Long-term borrowings as of December 31, 2023 and 2022 are as follows:

(In millions of won)

Type of Borrowings	Borrower(*1)	Lender	Annual interest rate (%) as of December 31, 2023	2023 (*2)	2022
Denominated in KRW	Enerbility	NH Investment & securities Co., Ltd. and others	1.10~6.85	₩ 1,260,663	1,272,714
	Doosan Bobcat Inc.	Nonghyup Bank and others	3.25~3M MOR + 1.88	80,000	80,000
	Doosan Cuvex Co., Ltd.	Woori Bank	3.69	20,000	20,000
	Doosan Fuel Cell Co., Ltd.	Korea Development Bank	Industrial financial debentures (1yr) +1.45 ~ Industrial financial debentures (1yr) +1.47	70,000	30,000
	Enerbility	SABB and others	1M SOFR + 2.625~8.17	162,709	6,589
Denominated in foreign currencies	Doosan Bobcat Inc.	Institutional investors and banks in the United States and others	Japan ST Prime Lending Rate - 0.575~ 3M SOFR + 2.50	1,060,898	1,174,452
Subtotal				2,654,270	2,583,755
Less: Current portion of long-term borrowings				(1,178,626)	(206,957)
Less: Discount on long-term borrowings				(17,895)	(25,930)
Total				₩ 1,457,749	2,350,868

(*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

(*2) The Group's PP&E and others have been pledged as collateral for the above borrowings (See Notes 33 and 34).

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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16. Bonds and borrowings, Continued

(2) Bonds

1) Details of bonds as of December 31, 2023 and 2022 are as follows:

(In millions of won)	Annual interest rate (%)		
	as of December 31, 2023	2023	2022
Public offering bonds (*1)	5.10~6.50 ₩	696,820	685,190
Privately placed bonds (*1)	4.80~9.20	184,500	213,500
Convertible bonds	-	-	23,374
Subtotal		881,320	922,064
Add: Redemption premium		-	1,604
Less: Conversion rights adjustment		-	(491)
Less: Current portion of long-term bonds		(381,084)	(564,048)
Less: Discount on bonds		(6,319)	(2,781)
Total	₩	493,917	356,348

(*1) The ordinary shares of Doosan Bobcat Inc. and Doosan Fuel Cell Co., Ltd. have been pledged as collateral for public offering bonds in foreign currencies and privately placed bonds of the Company (See Notes 33 and 34).

2) Convertible bonds

Changes in the carrying amount of convertible bonds for year ended December 31, 2023 are as follows:

(In millions of won)	January 1	Exercise / Amortization(*1)	December 31
Convertible bonds	₩ 23,374	(23,374)	-
Redemption premium	1,604	(1,604)	-
Discount on bond	(31)	31	-
Conversion rights adjustment	(491)	491	-
Book value	₩ 24,456	(24,456)	-
Consideration for conversion rights (other capital surplus)	₩ 760	(760)	-

(*1) Convertible bonds have been converted to common stock due to the exercise of conversion rights during the current period (see Note 20).

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16. Bonds and borrowings, Continued

(a) 59th convertible bonds issued by the Company

Issue date(*2)	Maturity Date	Coupon rate	YTM	Exercise period	Exercise price (in won)	Face value	Issuance value(*1)
July 1, 2021	June 8, 2023	2.87%	4.82%	2021.06.08~2023.05.08	₩8,907/share	₩1,655 million	₩1,641 million

(*1) Discount on debentures is deducted from the face value of debentures.

(*2) Among the convertible bonds issued by HD Hyundai Infracore Co., Ltd. on June 8, 2020, the bond was succeeded by the Company from a spin-off merger with HD Hyundai Infracore Co., Ltd. on July 1, 2021.

① Early redemption

The early redemption right is exercisable as a whole or in part against the face value of convertible bonds at the interest payment date after June 8, 2022.

② Redemption at maturity

June 8, 2023, the maturity date of the bond, 106.2537% of the remaining bond principal shall be paid in full.

③ Calculation of exercise price

The exercise price is adjusted when there is an increase in paid-in capital through the issuance of shares at a price lower than the market price, bonus issue, stock dividends, or capitalization of reserves, before exercising the stock warrants, or when there is an issuance of stock purchase warrants or debt securities with warrants.

(b) 60th convertible bonds issued by the Company

Issue date(*2)	Maturity Date	Coupon rate	YTM	Exercise period	Exercise price (in won)	Face value	Issuance value(*1)
July 1, 2021	August 3, 2023	2.81%	4.96%	2021.08.03~2023.07.03	₩10,506/share	₩21,719 million	₩21,584 million

(*1) Discount on debentures is deducted from the face value of debentures.

(*2) Among the convertible bonds issued by HD Hyundai Infracore Co., Ltd. on August 3, 2020, the bond was succeeded by the Company from a spin-off merger with HD Hyundai Infracore Co., Ltd. on July 1, 2021.

① Early redemption

The early redemption right is exercisable as a whole or in part against the face value of convertible bonds at the interest payment date after August 3, 2022.

② Redemption at maturity

August 3, 2023, the maturity date of the bond, 106.9085% of the remaining bond principal shall be paid in full.

③ Calculation of exercise price

The exercise price is adjusted when there is an increase in paid-in capital through the issuance of shares at a price lower than the market price, bonus issue, stock dividends, or capitalization of reserves, before exercising the stock warrants, or when there is an issuance of stock purchase warrants or debt securities with warrants.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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16. Bonds and borrowings, Continued

(3) Asset-backed borrowings

The Group transferred revenue from construction contracts to a special purpose vehicle, and the special purpose vehicle issued asset-backed securities backed by transferred assets. Asset-backed borrowings as of December 31, 2023 and 2022 are as follows:

(In millions of won)

Company	Lender	Discount rate (%)	2023 (*1)	2022
Doosan Fuel Cell Co., Ltd.	NewstarFC 1 st Co., Ltd. and others	7.00~CD(3M)		
		+ 3.61	₩ 70,000	-
	Less: Current portion of long-term borrowings		(16,662)	-
	Less: Discount on long-term borrowings		(576)	-
	Total		₩ 52,762	-

(*1) The Group provides a beneficiary certificate as collateral (See Notes 33 and 34).

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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17. Defined benefit assets and liabilities

The Group operates defined benefit plans, and the cost of providing benefits under the defined benefit plans is determined using the projected unit credit method on the actuarial valuation of the present value of its defined benefit obligations.

(1) Details of defined benefit assets and liabilities as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Present value of defined benefit obligations	₩	1,648,634	1,529,305
Fair value of plan assets(*1)		(1,186,801)	(1,091,353)
Defined benefit liabilities	₩	472,216	452,353
Defined benefit assets	₩	(10,383)	(14,401)

(*1) Include employer contributions of ₩564 million and ₩575 million to the National Pension Service as of December 31, 2023 and 2022, respectively.

(2) Expenses recognized in consolidated statements of income (loss) for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Current service cost	₩	52,359	68,995
Net interest cost		20,286	16,796
Past service cost (*1)		(67,935)	18,042
Total	₩	4,710	103,833

(*1) Changes in retirement benefit obligations due to the revision of the employee severance provision ₩67,935 million were recognized as a deduction from past service costs in 2023.

(3) Classification of expenses related to the employee benefit liability for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Cost of sales	₩	40,758	59,979
Selling and administrative expenses		(40,994)	39,817
Research and development costs		4,946	2,818
Profit from discontinued operations		-	1,219
Total	₩	4,710	103,833

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

17. Defined benefit assets and liabilities, Continued

(4) Changes in the present value of the defined benefit obligations for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>	2023	2022
As of January 1	₩ 1,529,305	2,036,298
Current service costs	52,359	68,995
Past service costs	(67,935)	18,042
Transfer from related parties	3,027	3,694
Transfer to related parties	(2,007)	(5,734)
Interests	75,047	51,934
Remeasurement loss (gain) in OCI:		
Actuarial changes arising from changes in demographic assumptions	2,212	(1,473)
Actuarial changes arising from changes in financial assumptions	58,030	(600,736)
Others	49,405	50,952
Changes in the scope of consolidation	-	(17,519)
Contributions by plan participants	1,033	1,480
Benefits paid	(103,853)	(98,713)
Others	52,011	22,085
As of December 31	₩ 1,648,634	1,529,305

(5) Changes in the fair value of plan assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>	2023	2022
As of January 1	₩ 1,091,353	1,495,801
Expected return on plan assets	54,761	35,138
Transfer from related parties	2,010	3,070
Transfer to related parties	(1,683)	(9,392)
Remeasurement gain (loss) in OCI	7,563	(411,882)
Contributions by plan participants	1,033	20,328
Contributions by employer	78,155	54,010
Benefits paid	(83,624)	(76,228)
National Pension Service	-	(22)
Changes in the scope of consolidation	-	(19,819)
Others	37,233	349
As of December 31	₩ 1,186,801	1,091,353

In relation to the defined benefit plans, the reasonable estimates of future employer contributions during the year 2024 amounts to ₩301,103 million. In addition, the actual return on plan assets for the years ended December 31, 2023 and 2022 amounts to ₩62,324 million and ₩(376,744) million, respectively.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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17. Defined benefit assets and liabilities, Continued

(6) The principal assumptions used in determining employee benefit obligation as of December 31, 2023 and 2022 are as follows:

	2023	2022
Discount rate	3.50%~7.44%	2.00%~7.44%
Future salary increase rate	0.75%~5.00%	0.80%~6.00%

(7) Components of plan assets as of December 31, 2023 and 2022 are as follows:

(In millions of won)	2023	2022
Equity investments	₩ 122,686	156,812
Government bonds	707,491	559,498
Trust funds and others	356,624	375,043
Total	₩ 1,186,801	1,091,353

(8) Details of a sensitivity analysis on the defined benefit obligation for changes in the significant assumptions as of December 31, 2023 are as follows:

(In millions of won)	Amount	Ratio
Discount rate:		
1% increase	₩ (193,184)	(11.72)%
1% decrease	143,763	8.72%
Future salary increases:		
1% increase	₩ 96,614	5.89%
1% decrease	(164,639)	(10.02)%

(9) The weighted average maturity of defined benefit obligations is approximately 10.22 years as of December 31, 2023.

(10) With regard to the defined contribution pension plans, the Group recognized expenses for the years ended December 31, 2023 and 2022 amounting to ₩27,212 million and ₩45,550 million, respectively.

18. Sale and leaseback liabilities

Sale and leaseback liabilities as of December 31, 2023 and 2022 are as follows:

(In millions of won)	Annual interest rate (%) as of December 31, 2023	2023	2022
Company			
Doosan Bobcat Inc.	7.00%	₩ 66,299	77,347
Less: Current portion		(17,269)	(27,499)
Total		₩ 49,030	49,848

Doosan Bobcat Inc. has been providing guarantee on the sale and leaseback liabilities as of December 31, 2023.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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19. Provision

Changes in significant provisions for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)		2023						
		January 1	Arising during the year	Unused amounts reversed	Utilized	Others(*1,2)	December 31	Less: Current Non-current
Provisions for warranties	₩	421,311	153,022	(14,569)	(127,881)	5,922	437,805	(132,872) 304,933
Provisions for construction losses		99,573	18,392	(28,505)	(16,482)	904	73,882	(53,670) 20,212
Others (*3)		178,693	69,666	(16,772)	(59,148)	(53,830)	118,609	(71,427) 47,182
Total	₩	699,577	241,080	(59,846)	(203,511)	(47,004)	630,296	(257,969) 372,327

(*1) Includes gain or loss arising from changes in foreign exchange rates and changes in the scope of consolidation.

(*2) As of December 31, 2023, it includes ₩54,855 million in provisions related to guarantee the return of membership fees and other considerations.

(*3) The Company has provided to guarantees for supplemental funding of ₩ 5,256 million to Gyeonggi East-West Beltway Co. in relation to the construction of Bongdam-Songsan Expressway construction project, which was recognized as other provision during the current period (See Note 33).

(In millions of won)		2022						
		January 1	Arising during the year	Unused amounts reversed	Utilized	Others(*1)	December 31	Less: Current Non-current
Provisions for warranties	₩	330,510	176,152	(1,289)	(96,520)	12,458	421,311	(123,096) 298,215
Provisions for construction losses		94,309	40,569	(29,905)	-	(5,400)	99,573	(64,037) 35,536
Others(*2)		208,155	43,725	(4,040)	(55,398)	(13,749)	178,693	(132,086) 46,607
Total	₩	632,974	260,446	(35,234)	(151,918)	(6,691)	699,577	(319,219) 380,358

(*1) Includes gain or loss arising from changes in foreign exchange rates and changes in the scope of consolidation.

(*2) As of December 31, 2022, it includes ₩54,855 million in provisions related to guarantee the return of membership fees and other considerations.

The Group estimates expenses required to settle the Group's obligations on product warranties, refunds, maintenance and others based on the level of warranty period, historical experience and other considerations.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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20. Capital stock

The Company is authorized to issue 2,000,000,000 shares, with a par value of ₩5,000 per share and the number of ordinary shares issued as of December 31, 2023 and 2022 are 640,561,146 shares and 638,308,033 shares, respectively. The number of shares with limited voting rights under Korean Commercial Code as of December 31, 2023 and 2022 are 95,978 treasury shares.

On March 28, 2023, the Company issued ordinary shares of 2,253,113 shares due to the exercising of conversion rights of convertible bonds.

Details in capital stock and Paid-in capital in excess of par value as of December 31, 2023 and 2022 are as follows:

(In millions of won except for share, In shares)

	Number of shares		Capital stock			Paid-in capital in excess of par value		
	Ordinary shares	Preference shares	Ordinary shares	Preference shares(*1)	Total	Ordinary shares	Preference shares	Total
December 31, 2023	640,561,146	- ₩	3,202,805	64,522	3,267,327	1,225,998	-	1,225,998
December 31, 2022	638,308,033	- ₩	3,191,539	64,522	3,256,061	2,362,505	-	2,362,505

(*1) Redeemable convertible preference shares were purchased and retired using voluntary reserves before prior year, and there is no reduction in capital stock.

21. Capital surplus

Capital surplus as of December 31, 2023 and 2022 are summarized as follows:

(In millions of won)

	2023	2022
Paid-in capital in excess of par value (*1)	₩ 1,225,998	2,362,505
Other capital surplus	486,766	507,563
Total	₩ 1,712,764	2,870,068

(*1) During the current period, accumulated deficits of ₩ 1,150,542 million was compensated using paid-in capital in excess of par value.

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22. Other components of equity

(1) Other components of equity as of December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Treasury stock	₩	(2,135)	(2,135)
Stock options		174	386
Others		48,018	47,425
Total	₩	46,057	45,676

(2) Treasury stocks as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won except for share, In shares)</i>		2023		2022	
		Number of shares	Amount	Number of shares	Amount
Ordinary shares		95,978	₩ 2,135	95,978	₩ 2,135

(3) Stock option

The Company has granted stock options to its executives. The settlement method for stock options includes issuance of new shares, issuance of treasury shares or cash settlement. The type of settlement method chosen is determined based on the Board of Directors' decision at the time of exercise. These stock options require a vesting condition of a two-year continuous employment from the grant date.

1) The terms and conditions of stock options granted as of December 31, 2023 are summarized as follows:

<i>(In won, shares)</i>					Estimated fair value as of the grant date
Grant date	Number of shares to be issued	Exercise period	Exercise price		
Mar 28, 2014	14,900	Mar 28, 2017 ~ Mar 27, 2024	₩ 34,550	₩	7,948
Mar 21, 2014(*1)	5,851	Mar 21, 2017 ~ Mar 20, 2024	19,867		9,402
Total	20,751				

(*1) It has been succeeded from spin-off and merger with HD Hyundai Infracore Co., Ltd. during 2021.

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Notes to the Consolidated Financial Statements, Continued
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22. Other components of equity, Continued

2) Change in the stock options for the year ended December 31, 2023 is summarized as follows:

<i>(In shares)</i>		Number of shares to be issued		
Grant date		January 1	Retired	December 31
Mar 29, 2013		14,565	(14,565)	-
Mar 21, 2014		5,851	-	5,851
Mar 28, 2014		20,800	(5,900)	14,900
Total		41,216	(20,465)	20,751

<i>(In millions of won)</i>		Valuation		
Grant date		January 1	Retired	December 31
Mar 29, 2013	₩	165	(165)	-
Mar 21, 2014		55	-	55
Mar 28, 2014		166	(47)	119
Total	₩	386	(212)	174

No compensation expenses are recognized for the years ended December 31, 2023 and 2022 and are expected to be recognized in the future periods.

3) The estimated fair value was calculated using the modified fair value method and assumptions applied to this method are summarized as follows:

Grant date	Risk free rate(*1)	Expected exercise period	Expected volatility	Expected dividend yield
Mar 28, 2014	2.88%	3 years	34.72%	15.00%
Mar 21, 2014	3.27%	6.5 years	42.29%	0.00%

(*1) Based on a treasury bond yield rate following by the expected exercise period.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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23. Accumulated other comprehensive income

(1) Accumulated other comprehensive income as of December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Loss on valuation of FVOCI	₩	(15,134)	(14,287)
Gain on valuation of derivative financial instruments		7,619	21,259
Change in equity of equity method investments		(1,800)	(2,608)
Gain on revaluation of assets		1,063,431	1,105,038
Loss on translation of foreign operations		(147,425)	(226,749)
Total	₩	<u>906,691</u>	<u>882,653</u>

(2) Details of income taxes on OCI items directly reflected in equity as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023		
		Balance before tax	Tax effect	Balance after tax
Loss on valuation of FVOCI	₩	(16,080)	946	(15,134)
Gain on valuation of derivative financial instruments		659	6,960	7,619
Change in equity of equity method investments		(1,709)	(91)	(1,800)
Gain (loss) on revaluation of assets		1,558,702	(495,271)	1,063,431
Loss on translation of foreign operations		(147,425)	-	(147,425)
Total	₩	<u>1,394,147</u>	<u>(487,456)</u>	<u>906,691</u>

<i>(In millions of won)</i>		2022		
		Balance before tax	Tax effect	Balance after tax
Loss on valuation of FVOCI	₩	(15,095)	808	(14,287)
Gain on valuation of derivative financial instruments		18,069	3,190	21,259
Change in equity of equity method investments		(2,517)	(91)	(2,608)
Gain (loss) on revaluation of assets		1,543,919	(438,881)	1,105,038
Loss on translation of foreign operations		(226,749)	-	(226,749)
Total	₩	<u>1,317,627</u>	<u>(434,974)</u>	<u>882,653</u>

24. Retained earnings

(1) Retained earnings as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Legal reserve	₩	82,966	82,966
Voluntary reserve		43,396	43,396
Unappropriated retained earnings (Undisposed accumulated deficit)		1,058,170	(67,548)
Total	₩	<u>1,184,532</u>	<u>58,814</u>

(2) There is no dividend for the years ended December 31, 2023 and 2022.

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25. Segment information

(1) The reportable segments of the Group and major products and services by segments are as follows:

Business segment	Main products and services
Enerbility	NSSS, BOP, Turbine, Seawater desalination plants and water treatment systems, Plants, Road construction and others
Doosan Bobcat Inc.	Small construction machinery and equipment, and others
Doosan Fuel Cell Co., Ltd.	Manufacture and sale of fuel cell, renewable energy business, and others
Others	Operation of resort and golf club and others

(2) Summarized financial information by reportable segments for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)		2023				
		Sales	Intercompany sales	Net sales	Operating income (loss)	Net Profit (loss)
Enerbility	₩	8,239,267	(709,077)	7,530,190	225,069	(268,755)
Doosan Bobcat Inc.		9,758,907	(358)	9,758,549	1,389,900	921,479
Doosan Fuel Cell Co., Ltd.		260,886	(3)	260,883	1,642	(8,500)
Others		58,619	(18,353)	40,266	(2,402)	27,329
Subtotal		18,317,679	(727,791)	17,589,888	1,614,209	671,553
Consolidation adjustments		(727,791)	727,791	-	(146,891)	(154,031)
Attributed to:						
Continuing operations	₩	17,589,888	-	17,589,888	1,467,318	517,522

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25. Segment information, Continued

(In millions of won)

		2022				
		Sales	Intercompany sales	Net sales	Operating income (loss)	Net Profit (loss)
Enerbility	₩	7,605,461	(502,735)	7,102,726	167,236	(714,717)
Doosan Bobcat Inc.		8,621,912	(678)	8,621,234	1,071,607	644,056
Doosan Fuel Cell Co., Ltd.		312,149	-	312,149	7,222	3,864
Others		78,154	(14,869)	63,285	(1,176)	4,632
Subtotal		16,617,676	(518,282)	16,099,394	1,244,889	(62,165)
Attributed to:						
Discontinued operations		(678,763)	427	(678,336)	(1,059)	(21,043)
Consolidation adjustments		(517,855)	517,855	-	(137,709)	(250,269)
Attributed to:						
Continuing operations	₩	15,421,058	-	15,421,058	1,106,121	(333,477)

(3) Summarized financial information on assets and liabilities by business segments as of December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023		2022	
		Assets	Liabilities	Assets	Liabilities
Enerbility	₩	16,278,525	10,003,954	15,901,517	9,383,327
Doosan Bobcat Inc.		10,371,754	4,416,941	9,248,386	4,223,999
Doosan Fuel Cell Co., Ltd.		1,070,843	558,191	1,026,930	503,865
Others		542,586	112,900	544,639	110,924
Subtotal		28,263,708	15,091,986	26,721,472	14,222,115
Consolidation adjustments		(3,622,874)	(1,292,661)	(3,671,690)	(1,252,623)
Total	₩	24,640,834	13,799,325	23,049,782	12,969,492

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26. Revenue

(1) Revenue for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Revenue from contracts with customers			
Sales of goods	₩	10,107,821	8,928,343
Construction contracts		7,297,430	6,296,117
Others		186,626	195,863
Subtotal		17,591,877	15,420,323
Others			
Rental and others		113,715	126,004
Hedging losses		(115,704)	(125,269)
Subtotal		(1,989)	735
Total	₩	17,589,888	15,421,058

(2) Revenue from contracts with customers for the years ended December 31, 2023 and 2022 are disaggregated as follows.

<i>(In millions of won)</i>		2023				
		Doosan Fuel				Total
		Enerbility	Doosan Bobcat Inc.	Cell Co., Ltd.	Others	
Primary geographical market						
Domestic	₩	3,095,966	375,533	259,185	39,154	3,769,838
Americas		402,511	7,473,720	1,698	-	7,877,929
Asia		2,137,811	181,344	-	-	2,319,155
Middle East		1,550,860	151,595	-	-	1,702,455
Europe		437,352	1,251,669	-	-	1,689,021
Others		2,101	231,378	-	-	233,479
Total	₩	7,626,601	9,665,239	260,883	39,154	17,591,877
Timing of revenue recognition						
At a point in time	₩	432,271	9,633,361	145,660	39,154	10,250,446
Over time		7,194,330	31,878	115,223	-	7,341,431
Total	₩	7,626,601	9,665,239	260,883	39,154	17,591,877

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Notes to the Consolidated Financial Statements, Continued
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26. Revenue, Continued

(In millions of won)

		2022						
		Doosan				Subtotal	Discontinued	Total
		Enerbility	Doosan Bobcat Inc.	Fuel Cell Co., Ltd.	Others			
Primary geographical market								
Domestic	₩	2,726,359	379,336	312,149	54,912	3,472,756	(11,607)	3,461,149
Americas		397,661	6,392,769	-	-	6,790,430	(31,984)	6,758,446
Asia		2,134,517	197,545	-	-	2,332,062	(28,274)	2,303,788
Middle East		978,158	121,780	-	-	1,099,938	(91,251)	1,008,687
Europe		965,486	1,184,025	-	-	2,149,511	(500,208)	1,649,303
Others		15,833	238,129	-	-	253,962	(15,012)	238,950
Total	₩	7,218,014	8,513,584	312,149	54,912	16,098,659	(678,336)	15,420,323
Timing of revenue recognition								
At a point in time	₩	303,797	8,478,451	206,242	54,912	9,043,402	-	9,043,402
Over time		6,914,217	35,133	105,907	-	7,055,257	(678,336)	6,376,921
Total	₩	7,218,014	8,513,584	312,149	54,912	16,098,659	(678,336)	15,420,323

(3) Contract balances

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers as of December 31, 2023 and 2022.

(In millions of won)

	2023	2022
Receivables, which are included in 'trade and other receivables'	₩ 1,488,143	1,873,400
Contract assets	1,503,529	1,292,014
Contract liabilities	2,888,795	2,087,353

The contract assets primarily relate to the Group's rights to consideration for work completed but not billed at the reporting date. The contract assets are transferred to receivables when the rights become unconditional. The contract liabilities primarily relate to the advance consideration received from customers for construction, for which revenue is recognized over time.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

26. Revenue, Continued

(4) Changes in transaction price for construction contract allocated to the performance obligations satisfied over time for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

		2023			
	Project name	January 1	Increase (Decrease)	Revenue recognized	December 31
Enerbility	Vung Ang II Power Project and others	₩ 14,002,976	8,782,691	7,194,330	15,591,337
Doosan Fuel Cell Co., Ltd.	Operational services on consignment	1,517,089	282,039	115,223	1,683,905
Doosan Bobcat Inc.	Extended warranty and others	311,254	302,774	31,878	582,150
	Total	₩ 15,831,319	9,367,504	7,341,431	17,857,392

(In millions of won)

		2022			
	Project name	January 1	Increase (Decrease)	Revenue recognized	December 31
Enerbility	Vung Ang II Power Project and others	₩ 15,479,029	5,438,164	6,914,217	14,002,976
Doosan Fuel Cell Co., Ltd.	Operational services on consignment	1,392,305	230,691	105,907	1,517,089
Doosan Bobcat Inc.	Extended warranty and others	206,241	140,146	35,133	311,254
	Subtotal	17,077,575	5,809,001	7,055,257	15,831,319
	Attributed to: Discontinued operations	(1,313,209)	634,873	(678,336)	-
	Total	₩ 15,764,366	6,443,874	6,376,921	15,831,319

(5) The Group shall recognize as an asset for the incremental costs of obtaining a contract with a customer that is, agent fee if the Group expects to recover those costs.

(In millions of won)

	2023	2022
Incremental costs of obtaining a contract with a customer recognized as an asset	₩ 45,072	23,547
The amount of amortization recognized as cost of sales	19,806	24,356

An asset recognized in accordance with above shall be amortized on the same basis that revenue is recognized over time based on the percentage-of-completion of the specific contract concerned.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

26. Revenue, Continued

(6) The Group shall recognize an asset from the costs incurred to fulfill a contract if those costs relate directly to a contract or to an anticipated contract the Group can specifically identify. The Group believes that these costs generate or enhance resources of the Group that will be used in satisfying performance obligations in the future and are expected to be recovered.

<i>(In millions of won)</i>		<u>2023</u>	<u>2022</u>
Costs incurred to fulfill a contract recognized as an asset	₩	102,763	143,481
The amount of amortization recognized as cost of sales		94,777	92,614

An asset recognized in accordance with above shall be amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates.

(7) Changes in profit or loss in current and future reporting periods and the book value of due from (to) customers for contracts work (excluding foreign currency translation effect) resulting from provision for construction loss, changes in total contract revenue and in total estimated contract costs for construction contracts in progress as of December 31, 2023 are as follows:

<i>(In millions of won)</i>							Changes in due from (to) customer for contract work
		Provision for construction loss	Changes in total contract revenue	Changes in total contract cost	Effect on profit (loss) for the period	Effect on profit (loss) for the future	
Enerbility	₩	73,882	508,153	282,622	(12,235)	237,766	(12,235)

Impacts on current and future profit (loss) were calculated based on total contract revenue and costs which were estimated based on the current circumstances as of December 31, 2023. Those estimations may change in the future.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

26. Revenue, Continued

(8) As of December 31, 2023, details of contracts that the revenue was recognized based on the percentage-of-completion measured by input method, and whose contract revenue is more than 5% of sales of the year ended December 31, 2022 are as follows. There is no contract that the Group decided not to disclose due to the prohibition by related regulations or contracts.

(In millions of won)

	Contract date	Due date / Delivery date(*1)	Percentage-of- completion (%)		Due from customers for contract work		Trade receivables (receivables from construction contract)	
					Gross amounts	Accumulated impairment losses	Gross amounts	Allowance for doubtful accounts
Saeul #1,2 main equipment construction	Mar-09-07	Dec-31-21	99.87	₩	-	-	-	-
Saeul #3,4 main equipment construction	Jun-12-15	Sep-30-25	94.09		121,724	414	-	-
Shinhanul #1,2 NSSS	Jul-31-09	Apr-30-24	97.86		-	-	33,444	114
UAE BNPP #1,2 T/G	Jun-30-10	Nov-18-22	99.62		1,232	5	-	-
UAE BNPP #1,2 NSSS	Jun-30-10	Nov-18-22	98.00		2,680	9	-	-
Saeul #3,4 NSSS	Aug-28-14	Mar-31-25	93.21		59,677	203	21,902	-
UAE BNPP #3,4 NSSS	Jun-30-10	Dec-31-24	97.30		-	-	6,905	23
UAE BNPP #3,4 T/G	Sep-27-11	Dec-31-24	93.37		3,987	14	-	-
Vinh Tan 4 TPP	Feb-26-14	Oct-31-21	99.66		20,105	68	24,817	4,963
Gangneung Anin #1, 2 Boiler	Mar-31-15	Mar-15-23	95.99		-	-	-	-
Goseong Hai #1, 2 Boiler	Dec-27-16	Aug-30-22	99.55		-	-	-	-
Vinh Tan 4 Extension	Mar-10-16	Aug-31-21	99.79		-	-	5,870	1,174
Nghi Son 2	Dec-24-14	Jul-10-22	99.72		-	-	-	-
Samcheok #1,2 EPC	Jul-24-18	Apr-30-24	94.65		125,648	427	-	-
Van Phong 1	Aug-26-19	Dec-25-23	98.16		5,511	19	-	-
Yanbu ph.3 MSF	Dec-04-12	Dec-31-22	99.98		-	-	10,786	1,043
Shoaiba RO Ph.4	Mar-29-17	May-23-23	96.13		34,280	117	31,536	-
Jawa #9,10	Mar-20-19	Feb-15-25	87.15		141,915	483	9,096	20
Suncheon Wangji 2	Apr-24-19	Sep-03-24	61.82		24,033	82	14,460	-
Yanbu 4 IWP	Jan-22-21	Nov-01-23	89.41		-	-	-	-
Dangjin 1st phase #1~4 storage tank	Jul-23-21	Dec-31-25	43.58		38,231	130	1,297	43
Vung Ang II Power Project	Oct-26-21	Oct-26-25	63.08		-	-	-	-
Tuwaiq casting and forging project	Feb-10-22	Jan-15-25	53.04		-	-	32,116	-
Guam Ukudu CCPP	Dec-18-20	Sep-30-25	73.57		-	-	11,282	38
Shuaibah 3 IWP	Aug-19-22	May-20-25	36.08		-	-	-	-
El-Dabaa NPP	Nov-09-22	April-08-29	3.69		-	-	97,510	332
Shin Hanul Unit 3 and 4 Reactor Facility	Mar-29-23	Oct-31-33	8.78		-	-	-	-
Turkistan CCGT	Mar-14-23	Aug-23-26	15.35		-	-	-	-
Song Hau1	Apr-10-15	May-17-22	99.60		21,151	72	-	-
Jawaharpur	Dec-22-16	Jun-30-24	96.83		60,962	-	11,059	603
Obra C	Dec-22-16	Jun-30-24	90.63		31,167	-	12,399	415

(*1) Date being negotiated to extend contract period with respective contract party or due date/delivery date in contract.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

26. Revenue, Continued

(9) Customers accounting for 10% or more of the Company's revenue for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Company group A	₩	2,122,271	1,655,292

27. Expenses classified by nature

Expenses (cost of sales, selling and administrative expenses) classified by nature for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Changes in inventories	₩	(79,978)	(693,092)
Purchases of raw materials and goods		8,983,299	8,683,252
Salaries		1,896,474	1,816,645
Depreciation and amortization		466,665	463,640
Others		4,856,109	4,044,492
Total	₩	<u>16,122,569</u>	<u>14,314,937</u>

28. Selling and administrative expenses

Selling and administrative expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Salaries	₩	501,698	438,411
Post-Employment benefits		(37,956)	44,159
Employee welfare benefits		95,641	79,673
Travel		43,761	34,150
Training		21,189	18,707
Taxes and dues		21,083	18,470
Commissions		240,286	204,620
Sales commissions		30,543	32,471
Rents		8,551	13,665
Bad debt expenses		22,888	18,102
Transportation and warehousing		5,385	7,384
Depreciation		59,280	54,476
Amortization		51,861	56,571
Research		231,541	187,446
Expansion expenses of overseas market		8,716	13,160
Advertising		131,870	98,011
Warranty		6,574	24,225
Provision for loss compensation		4,990	530
Others		101,782	105,525
Total	₩	<u>1,549,683</u>	<u>1,449,756</u>

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

29. Finance income and expenses

(1) Finance income for the years ended December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Interest income	₩	80,220	19,214
Dividend income		2,906	3,811
Gain on foreign currency transaction		270,160	304,058
Gain on foreign currency translation		54,900	117,591
Gain on settlement of derivative financial instruments		76,389	139,537
Gain on valuation of derivative financial instruments		66,578	95,346
Gain on valuation of firm commitments		43,958	67,459
Total	₩	<u>595,111</u>	<u>747,016</u>

(2) Finance expenses for the years ended December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Interest expenses	₩	320,892	260,038
Loss on foreign currency transaction		261,145	339,591
Loss on foreign currency translation		67,647	291,227
Loss on settlement of derivative financial instruments		66,765	100,948
Loss on valuation of derivative financial instruments		84,367	96,296
Loss on valuation of firm commitments		27,139	54,165
Loss on redemption of borrowings		2,218	10,331
Loss on redemption of bonds		-	15,707
Loss on financial guarantee		29,999	54,515
Others		2,890	1,801
Total	₩	<u>863,062</u>	<u>1,224,619</u>

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30. Other non-operating income and expenses

(1) Other non-operating income for the years ended December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Gain on disposal of property, plant and equipment	₩	2,232	3,507
Gain on disposal of intangible assets		872	1,762
Gain on disposal of non-current assets held for sale		627	18,524
Reversal of impairment loss on property, plant and equipment		29	-
Gain on valuation of short and long-term investment in securities		11,509	24,126
Gain on disposal of short and long-term investment in securities		836	4,978
Gain on disposal of investment in associates		-	4,754
Gain on business transfer		-	10,788
Commissions income		1,967	1,912
Miscellaneous gain and others		31,232	88,293
Total	₩	49,304	158,644

(2) Other non-operating expenses for the years ended December 31, 2023 and 2022 are summarized as follows:

<i>(In millions of won)</i>		2023	2022
Loss on disposal of trade receivables	₩	10,933	7,837
Loss on disposal of property, plant and equipment		1,510	3,913
Loss on disposal of assets held for sale		2,620	5,206
Other bad debt expenses		79,920	12,815
Impairment loss of property, plant and equipment		15,054	17,979
Impairment loss of intangible assets		175,510	486,537
Impairment loss of assets held for sale		-	340
Impairment loss of investment property		37,837	-
Loss on valuation of short and long-term investment in securities		39,414	7,641
Donations		21,909	12,394
Loss on disposal of investment in subsidiaries		1,268	-
Impairment loss on investment in associates		-	116,625
Miscellaneous loss and others		85,526	71,869
Total	₩	471,501	743,156

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Notes to the Consolidated Financial Statements, Continued
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31. Income tax expense

(1) The component of income tax expense for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Current income tax expense	₩	365,001	339,392
Adjustments in respect of current income tax of prior year		2,087	(12,711)
Tax effect of temporary difference		(111,044)	(143,805)
Total income tax expense		256,044	182,876
Current income tax related to items recognized in equity during the year		582	1,947
Deferred tax related to items recognized in equity during the year		(32,548)	(32,630)
Income tax benefit related to discontinued operation		-	10,310
Others		(3,118)	(15,506)
Income tax expense	₩	220,960	146,997

(2) The component of income tax and deferred tax related to items recognized in equity for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Loss on revaluation of assets	₩	(56,402)	23,849
Loss on valuation of FVOCI		138	1,591
Loss on valuation of derivative financial instruments		3,690	(1,155)
Remeasurements of defined benefit liabilities		14,687	(44,516)
Others		5,921	(10,452)
Total	₩	(31,966)	(30,683)

(3) Changes in deferred tax assets (liabilities) for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	
		January 1	December 31
Provision for retirement and severance benefits	₩	135,803	130,713
Allowance for doubtful accounts		309,968	368,351
Property, plant and equipment		(39,180)	(58,408)
Reserve for research and human resource		9,322	55,509
Intangible assets		(487,954)	(513,512)
Derivative financial instruments		(13,381)	3,760
Foreign currency denominated assets		11,537	(4,746)
Gain (loss) on revaluation of assets		(520,917)	(577,216)
Others		509,350	621,141
Total	₩	(85,452)	25,592

<i>(In millions of won)</i>		2022	
		January 1	December 31
Provision for retirement and severance benefits	₩	175,682	135,803
Allowance for doubtful accounts		300,664	309,968
Property, plant and equipment		(28,144)	(39,180)
Reserve for research and human resource		(25,015)	9,322
Intangible assets		(469,599)	(487,954)
Derivative financial instruments		29,865	(13,381)
Foreign currency denominated assets		3,870	11,537
Gain (loss) on revaluation of assets		(529,677)	(520,917)
Others		313,097	509,350
Total	₩	(229,257)	(85,452)

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31. Income tax expense, Continued

(4) The amount of deductible temporary differences for which no deferred tax asset is recognized in the statements of financial position as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Deductible temporary differences	₩	2,920,884	3,139,341
Deferred accumulated deficit		18,956	22,799
Deferred tax credit carried forward		52,467	52,095
Others		6,015	-
Total	₩	<u>2,998,322</u>	<u>3,214,235</u>

The probability of deferred tax assets being realized depends on the Group's ability to generate taxable income in future years over which temporary differences are expected to reverse depending on the economic situation, industry forecast and other various factors. The Group periodically reviews such matters.

(5) Temporary differences related to investment in subsidiaries, associates and joint ventures which are not recognized as deferred tax asset (liability) as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Investment in subsidiaries	₩	(730,729)	(46,484)
Investment in associates or joint ventures		624,171	961,467
Total	₩	<u>(106,558)</u>	<u>914,983</u>

(6) Reconciliation of profit (loss) before income tax at the statutory tax rate to income tax expense at the effective income tax rate of the Group for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Profit (loss) before income tax	₩	738,482	(186,479)
Income tax expense using the statutory tax rate		266,068	28,711
Adjustments:			
Permanent differences		(18,911)	52,355
Unrecognized deferred tax related to temporary differences		56,992	105,573
Tax credit		(24,598)	(34,921)
Others		(58,591)	(4,721)
Income tax expense	₩	<u>220,960</u>	<u>146,997</u>
Effective tax rate (Income tax expense/ Profit (loss) before income tax)(*1)		29.92%	-

(*1) Effective tax rate for the year ended December 31, 2022 was not calculated due to loss before income tax.

31. Income tax expense, Continued

(7) Pillar Two Model Rules

The Group adopted Pillar Two Model Rules (K-IFRS No. 1012 'Income Taxes') announced on May 23, 2023. The amendments include a mandatory temporary exception to the recognition and disclosure of deferred taxes arising from the Pillar Two Model Rules; and disclosure requirements for the Group's exposure to Pillar Two income taxes arising from that legislation. Exception regarding deferred taxes is applied retroactively.

The global minimum tax is a legislation in which if the effective tax rate of an entity of multinational group member (subsidiaries included in the consolidated financial statements) with sales of more than EUR 750 million in two or more of the previous four years is less than 15%, the equivalent is paid to the customs office of the country in which the parent company meets certain requirements. The Pillar Two Model Rules will be effective for the Group's fiscal year beginning on January 1, 2024.

Although the Group has potential exposure to Pillar Two Model Rules, there was no income tax expenses recognized in 2023, since the Pillar Two Model Rules legislation shall be effective from January 1, 2024. The Group has applied the mandatory exception to recognizing and disclosing information about deferred tax assets and liabilities arising from Pillar Two income taxes.

Since Pillar Two Model Rules legislation has not been enacted, or specific regulations are in progress in certain jurisdictions where the subsidiaries of the Group operate, quantitative information to indicate potential exposure to Pillar Two income taxes is currently not known or reasonably estimable. The Group and each subsidiary are currently assessing potential exposure of Pillar Two Model Rules with tax experts.

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32. Earnings (loss) per share

(1) Basic earnings (loss) per share

Basic earnings (loss) per share attributable to the owners of the Company for the years ended December 31, 2023 and 2022 are as follows:

<i>(In won, except for share)</i>		2023	2022
Profit (loss) for the period attributable to the owners of the Company	₩	55,597,965,382	(772,492,598,021)
Profit (loss) from continuing operations		55,597,965,382	(652,819,503,893)
Profit (loss) from discontinued operations		-	(119,673,094,128)
Weighted-average number of ordinary shares at the end of period		639,928,125 shares	618,313,654 shares
Earnings (loss) per share:			
Basic earnings (loss) per share	₩	<u>87</u>	<u>(1,249)</u>
Continuing operations	₩	87	(1,056)
Discontinued operations		-	(193)

Weighted-average number of ordinary shares for the years ended December 31, 2023 and 2022 are as follows:

<i>(In shares)</i>	2023	2022
Issued ordinary shares at the beginning of the period(*1)	638,212,055	522,124,808
Issuance of ordinary shares	-	71,974,546
Exercise of bonds with stock warrants	-	24,214,300
Conversion of convertible bonds to common stock	1,716,070	-
Weighted-average number of ordinary shares at the end of period	<u>639,928,125</u>	<u>618,313,654</u>

(*1) The number of shares is net of treasury stocks.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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32. Earnings (loss) per share, Continued

(2) Diluted earnings (loss) per share

Details of potential ordinary shares that are potentially dilutive but were not included in the calculation of earnings (loss) per share, as there were no dilutive effects for the years ended December 31, 2023 and 2022 are as follows:

<i>(In shares)</i>	2023	2022
Stock option (Mar 29, 2013)	-	14,565
Stock option (Mar 21, 2014)	5,851	5,851
Stock option (Mar 28, 2014)	14,900	20,800
Bonds with stock warrants	-	2,253,113
Total	<u>20,751</u>	<u>2,294,329</u>

33. Commitments and contingencies

(1) Pledged check

As of December 31, 2023, 2 blank checks have been provided as collateral to Gyeonggi East-West Beltway Co. in relation to Bongdam-Songsan Expressway construction project.

(2) Financial commitments

- 1) As of December 31, 2023, the Group has credit lines for borrowings, bank overdrafts and other financial needs from financial institutions up to ₩4,847,819 million and used ₩2,834,034 million, leaving unused credit lines amounting to ₩2,013,785 million.
- 2) As of December 31, 2023, the Company issued foreign currency-denominated bonds of USD 300,000 thousand. In accordance with the agreement for this bond, an early redemption clause exists for when the guarantor, KDB, is no longer controlled by Korean government. In addition, the Company has provided its 11,000,000 shares of Doosan Bobcat Inc. to lenders as collateral for the above bond. And if the total value of the shares provided is less than the collateral standard price, additional shares or deposits equivalent to the difference amounts should be provided.
- 3) As of December 31, 2023, the Company has provided 3,650,000 shares of Doosan Bobcat Inc. as collateral for borrowings of ₩100,000 million from SC Bank. In relation to the borrowings, if the ratio does not meet the certain collateral limit predetermined in the agreement, either shares or deposits equivalent to the difference amounts must be provided as collateral or some loans must be redeemed early.
- 4) As of December 31, 2023, the Company has provided 8,500,000 shares of Doosan Bobcat Inc. and 20,780,229 shares of Doosan Fuel Cell Co., Ltd. as collateral for long-term borrowings of ₩500,000 million from NH Investment & Securities Co., Ltd. and others and 72nd privately placed bond of ₩100,000 million. In relation to the borrowings, if the ratio does not meet the certain collateral limit predetermined in the agreement, either shares or deposits equivalent to the difference amounts must be provided as collateral. In addition, if the Company receives a long-term credit rating of BB+ or lower or short-term credit rating of B+ or lower from one or more than one of the domestic credit rating agencies (Nice Investors Service Co., Ltd., Korea Investors Service, Inc. and Korea Ratings Corporation), an acceleration clause would be invoked for the immediate payment.

33. Commitments and contingencies, Continued

- 5) As of December 31, 2023, the 73rd public offering bond of ₩80,000 million and the 74th public offering bond of ₩80,000 million issued by the Company include the covenant requiring the Company to maintain a debt-to-equity ratio less than 700% and if the Company fails to meet the certain requirements, an acceleration clause would be invoked for immediate payment.
- 6) As of December 31, 2023, the Company has provided 2,800,000 shares of Doosan Bobcat Inc. as collateral for a loan facility of ₩80,000 million from Korea Securities Finance. According to the agreement, if the ratio does not meet the certain collateral limit predetermined in the agreement, either shares or deposits equivalent to the difference amounts must be provided as collateral or some loans must be redeemed early.
- 7) As of December 31, 2023, the Company has provided 2,000,000 shares of Doosan Fuel Cell Co., Ltd. as collateral for loan facility of ₩50,000 million from SC Bank. According to the agreement, if the ratio does not meet the certain collateral limit predetermined in the agreement, either shares or deposits equivalent to the difference amounts must be provided as collateral or some loans must be redeemed early.
- 8) As of December 31, 2023, the Company has provided 11,100,000 shares of Doosan Bobcat Inc. as collateral for long-term borrowings of ₩250,000 million from KDB and 3 other financial institutions. In relation to the borrowings, if the ratio does not meet the certain collateral limit predetermined in the agreement, additional shares or deposits must be provided as collateral. In addition, in case the Company receives a long-term credit rating of BB0 or lower from two or more than two of the domestic credit rating agencies (Nice Investors Service Co., Ltd., Korea Investors Service, Inc. and Korea Ratings Corporation), it will trigger the financial institutions to collect the loans before the maturity.
- 9) As of December 31, 2023, the Company has provided 3,200,000 shares of Doosan Bobcat Inc. as collateral for short-term borrowings of ₩80,000 million from KDB and 2 other financial institutions. In relation to the borrowings, if the ratio does not meet the certain collateral limit predetermined in the agreement, additional shares or deposits must be provided as collateral. In addition, in case the Company receives a long-term credit rating of BB0 or lower from two or more than two of the domestic credit rating agencies (Nice Investors Service Co., Ltd., Korea Investors Service, Inc. and Korea Ratings Corporation), it will trigger the financial institutions to collect the loans before the maturity.
- 10) As of December 31, 2023, in connection with the long-term loan of ₩143,000 million borrowed from SC Bank, if the Company does not meet the collection schedule and amount of a specific project provided to the bank, deposits equivalent to the difference amounts must be provided as collateral or some amount of the loan must be redeemed early.
- 11) The bond offering agreement for non-guaranteed public bonds issued by Doosan Fuel Cell Co., Ltd. requires that the debt-to-equity ratio be maintained below 700%, the creation of security rights is limited to 500% of equity capital, disposal of assets limited to 100% of total assets, and other restrictions, based on the financial statements of Doosan Fuel Cell Co., Ltd. If the above regulations are violated, acceleration clause would be invoked for immediate payment. Meanwhile, among the bonds issued by Doosan Fuel Cell Co., Ltd., the bonds issued to which the above regulations apply are ₩150,000 million as of December 31, 2023.

33. Commitments and contingencies, Continued

12) As of December 31, 2023, the underwriting agreement for non-guaranteed private placement bonds issued by Doosan Fuel Cell Co., Ltd. requires the Company to maintain a credit rating higher than BB+, and others restrictions. If the above regulations are violated, acceleration clause would be invoked for immediate payment. Meanwhile, among the bonds issued by Doosan Fuel Cell Co., Ltd., the bonds issued to which the above regulations apply are ₩27,500 million as of December 31, 2023.

13) As of December 31, 2023, in connection with ₩70,000 million of asset-backed borrowings that Doosan Fuel Cell Co., Ltd., borrowed from NewstarFC 1st Co., Ltd., if collateral provided to lender (including deposit return claims to be collected under the LTSA contract, which is the original trust in the trust contract, and other accompanying rights) is provided as collateral to third party or transferred, acceleration clause would be invoked for immediate payment.

(3) Pending litigations and others

As of December 31, 2023, the Group is involved in pending lawsuits as a defendant with total claims against the Group amounting to approximately ₩70,271 million and the outcome is currently unpredictable.

(4) Technical contract

As of December 31, 2023, the Group has entered into 21 technical contracts with Mitsubishi Hitachi Power System, Ltd. and others, which have been effective from April 12, 2007 to September 4, 2035. For the years ended December 31, 2023 and 2022, royalty payments amounted to ₩ 16,238 million and ₩ 21,831 million, respectively.

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

33. Commitments and contingencies, Continued

(5) Project Financing Contingencies

1) Summary of contingencies related to real estate PF

As of December 31, 2023, the Company is providing a conditional debt assumption agreement of ₩459,262 million (Prior year: ₩385,417 million) for project financing loans, in case of violation of completion guarantees. Other business is solely operated by the Company, and, there is no credit enhancement provided to related parties within this business.

Among the contingencies disclosed as of December 31, 2022, ₩5,256 million was recognized as a provision during the current period (See Note 19).

As of December 31, 2023, summary of PF contingencies related to other business are as follows. The Company does not have PF contingencies related to maintenance business :

(In millions of won)

(in millions of won)				Balance of Loans							
				Maturity							
Type	Guarantee Limit	Guarantee Amount		2023	-3 months	3-6 months	6-12 months	1-2 years	2-3 years	3years-	2022
Other business	Bridge Loans	₩ -	-	-	-	-	-	-	-	-	-
	Main PF	591,890	459,262	353,278	-	-	32,578	253,300	67,400	-	296,475

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33. Commitments and contingencies, Continued

2) PF payment guarantee (Real estate PF)

As of December 31, 2023, the Company is providing a conditional debt assumption agreement as follows for project financing loans, in case of violation of completion guarantees.

Some agreements related to PF guarantee include the acceleration clause amounting to ₩459,262 million (Prior year: ₩385,417 million). The acceleration clause activates when the borrower fails to pay the amount due under the financial contract, default occurs on the construction company or the borrower, or the construction company's credit rating falls, etc..

(In millions of won)

Location	Real Estate Type	PF Type	Type of Credit Enhancement	Guarantee Limit	Rate (%)	Guarantee amount	Debtor	Related Party (Y/N)	Financial Institutions	Loan Balance		Loan Period	Maturity (Liquidation Securities)	Loan Type	Completion Guarantee Amount
										2023	2022				
Yangsan-si, Gyeongsangnam- do	Apartment	Main PF	Conditional debt assumption	₩ 70,590	100%	42,352	Kyungdong Smart Industry Co., Ltd and others	N	Comprehensive financial companies and others	₩ 32,578	44,875	2021.06.30 ~2024.09.30	2024.09.30	ABL	331,462
<p>Early redemption clause The borrower makes early repayments before the of the land trust to the extent permitted by the lender in accordance with the Regulation on the business conduct and services of financial investment companies.</p> <p>The Company has entered into an agreement to lend repayment funds to borrowers, using construction receivables paid by Korea Asset Trust Co., Ltd., and is obligated to supplement the principal and interest of partial repayment if the repayment funds lent by the Company are less than the principal and interest of the loan agreement.</p>															
Suncheon-si, Jeollanam-do	Apartment units	Main PF	Conditional debt assumption	292,500	100%	260,260	Eastern Urban Development Co., Ltd and others	N	Korean Federation of Community Credit Cooperatives and others	200,200	159,000	2021.05.04 ~2025.03.04	-	PF Loan	667,638
Seoul	Efficiency apartment	Main PF	Conditional debt assumption	143,000	100%	87,620	Ruby Limited	N	Korean Federation of Community Credit Cooperatives and others	67,400	54,000	2022.05.19 ~2026.02.19	-	PF Loan	49,820
<p>Early redemption clause The borrower makes early repayments before the end of the land trust, to the extent permitted by the lender's regulations on the business conduct and services of financial investment companies.</p>															
Seoul	Knowledge Industry Center	Main PF	Conditional debt assumption	85,800	100%	69,030	T-Star Co., Ltd	N	Capital companies and others	53,100	38,600	2022.07.29 ~2025.11.29	-	PF Loan	34,848
<p>Early redemption clause The borrower makes early repayments to the extent permitted by the lender in accordance with the management land trust.</p>															
Total				₩ 591,890		459,262				₩ 353,278	296,475				

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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33. Commitments and contingencies, Continued

3) Completion guarantees (Real estate PF)

As of December 31, 2023, the Company is providing a conditional debt assumption agreement as follows for other business, in case of violation of completion guarantees. The Company does not have completion guarantees related to maintenance business.

(In millions of won)		2023				2022			
		Number of Construction projects	Guarantee Limit	Guarantee amount	Loan Balance	Number of Construction projects	Guarantee Limit	Guarantee amount	Loan Balance
Other business	₩	4	1,083,768	1,083,768	353,278	4	1,001,623	1,001,623	296,475

4) SOC guarantees (Real estate PF)

In the event of early termination due to reasons attributable to the project operator, if the payment received by the SOC corporation is less than the sum of all liabilities of the SOC corporation and the investment funds of financial investors, the Company has an obligation to jointly provide the equivalent amount of the shortfall according to the mandatory sharing ratio, at the request of the creditor representative bank(see Note 19).

5) Intermediate payment loan guarantee in relation to main PF

As of December 31, 2023, the Company is providing guarantees for intermediate payment loan of the buyers amounting to ₩104,543 million (Prior year : ₩52,216million). Other business is solely operated by the Company, and the Company does not have intermediate payment loan guarantee related to maintenance business.

(In millions of won)		2023				2022			
		Number of Construction projects	Guarantee Limit	Guarantee amount	Loan Balance	Number of Construction projects	Guarantee Limit	Guarantee amount	Loan Balance
Other business	₩	3	282,084	104,543	460,572	2	185,004	52,216	232,551

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33. Commitments and contingencies, Continued

(6) Non-PF guarantee contracts

1) Summary

As of December 31, 2023, the Group is providing guarantees including contract performance and defect guarantees amounting to ₩177,758 million (Prior year : ₩210,799 million) by subscribing to insurance companies or issuing guarantee certificates, etc. as follows.

(In millions of won)	Guaranteed	Type	Guarantee		Beneficiary	Related Party (Y/N)
	Company		Limit	Balance		
Received Guarantee	Tuwaiq Casting & Forging Company and others	Construction Guarantee and others	₩ 112,429	10,563	KDB and others	Y
	Altrad Babcock General Maintenance Services LLC and others	Construction Guarantee and others	167,195	167,195	Construction Industry Guarantee and others	N
			279,624	177,758		
Provided Guarantee	Doosan Enerbility Co., Ltd. and others	Construction Guarantee and others	14,258,543	10,327,939	Hana Bank and others	N
		Total	₩ 14,538,167	10,505,697		

2) Guarantees of payment provided to the related party

As of December 31, 2023, details of payment guarantees provided by the Group for the related parties are as follows.

(In millions of won, in thousands of foreign currency)

Related Party	Guarantee	Type	Currency	Foreign Currency		Local Currency		Beneficiary
				Guarantee Limit	Guarantee Balance	Guarantee Limit	Guarantee Balance	
Associates	Doosan Engineering & Construction Co., Ltd.	Construction Guarantee	EUR	7,404	7,404	₩ 10,563	10,563	Korea EXIM Bank
	Tuwaiq Casting & Forging Company	Debt Guarantee	SAR	296,250	-	101,866	-	KDB
	Total					₩ 112,429	10,563	

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33. Commitments and contingencies, Continued

3) Guarantees of payment provided to the third parties

As of December 31, 2023, details of payment guarantees provided by the Group for the third parties are as follows.

(In millions of won, in thousands of foreign currency)

Company (*1)	Guarantee	Type	Currency	Foreign Currency		Local Currency		Beneficiary
				Guarantee Limit	Guarantee amount	Guarantee Limit	Guarantee amount	
Enerbility	Altrad Babcock General Maintenance Services LLC.	Construction Guarantee	AED	7,068	7,068	₩ 2,481	2,481	Construction Industry Guarantee
	Altrad Babcock W.L.L	Construction Guarantee	QAR	7,800	7,800	2,761	2,761	Construction Industry Guarantee
	Employee of DPSI and others	Employee Loan	INR	50,000	50,000	1,160	1,160	DPSI
	Subtotal					6,402	6,402	
Doosan Bobcat Inc.	Customers and others	Debt Guarantee and others	USD	124,704	124,704	160,793	160,793	Doosan Bobcat North America Inc and others
	Total					₩ 167,195	167,195	

(*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
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33. Commitments and contingencies, Continued

4) Guarantees of payment provided by third parties

As of December 31, 2023, details of payment guarantees provided by third parties are as follows:

(In millions of won)

Company (*1)	Beneficiary	Type	Guarantee Limit	Guarantee Balance	Related Party (Y/N)
Enerbility	Hana Bank	Construction Guarantee	₩ 113,844	23,159	N
	Korea EXIM Bank	Construction Guarantee	210,966	210,966	N
	Korea Trade Insurance Corporation	Construction Guarantee	412,608	73,562	N
	Woori Bank	Construction Guarantee	84,198	68,799	N
	Construction Industry Guarantee (*2)	Construction Guarantee	1,288,127	1,118,864	N
	Construction Guarantee Cooperative (*2)	Construction Guarantee	6,580,318	4,143,283	N
	Seoul Guarantee Insurance	Construction Guarantee	318,860	318,860	N
	Machinery Financial Cooperative	Construction Guarantee	2,610,380	2,320,306	N
	Engineering Guarantee Insurance (*2)	Construction Guarantee	646,145	449,388	N
	Korea Federation of Small and Medium Businesses	Construction Guarantee	20,000	14,171	N
	KDB and others	Debt Guarantee	450,645	450,645	N
	Standard Chartered Bank and others	Construction Guarantee and others	176,737	176,737	N
	Others	Construction Guarantee	810,743	635,949	N
	Subtotal		13,723,571	10,004,689	
Doosan Bobcat Inc.	Machinery Financial Cooperative	Performance Guarantee	36,583	36,583	N
Doosan Fuel Cell Co., Ltd.	Machinery Financial Cooperative	Performance Guarantee	498,389	286,667	N
	Total		₩ 14,258,543	10,327,939	

(*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

(*2) The guaranteed limit was calculated by inverse calculation of the weighted amount, and the guarantee balance is based on the actual amount issued.

33. Commitments and contingencies, Continued

(7) Other commitments and contingencies

- 1) As of December 31, 2023, the Group entered into invest agreements with ZIGG CAPITAL I, L.P and other 8 funds, and the total remaining amounts of agreements are USD 1,221 thousand.
- 2) The Group signed a new lease contract with BUNDANG DOOSAN TOWER REIT Co., Ltd. for 5 years on January 8, 2021 in conjunction with Doosan Corp. and HD Hyundai Infracore Co., Ltd. As HD Hyundai Infracore Co., Ltd. withdrew from the lease agreement on December 31, 2022, the Company took over the related status and rights and obligations. In accordance with above contracts, the Group jointly has lease obligations. If certain condition of the lease contract is not met, the contract will be extended once for 5 years under the same conditions. In addition, the sublease of the real estate is jointly performed by the Group, Doosan Corp. and each party has the right to the rental income to the extent applicable excluding the self-lease and related expenses.
- 3) The Group accounts for the joint lease contract mentioned in note 2) above as joint operation in which the parties jointly control the lease arrangement also have the right to assets and liabilities of the leased asset in accordance to K-IFRS No. 1111 'Joint Arrangements.' As of December 31, 2023, the Group's participating rate is 93.3%.
- 4) As of December 31, 2023, the Company is an investor of Samcheok Blue Power Co., Ltd. which is responsible for the EPC construction project of Samcheok #1, 2 TPP, and obligated to make an additional investment of ₩77,740 million before the completion of the comprehensive construction in accordance with the investor agreement.

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33. Commitments and contingencies, Continued

- 5) Doosan Fuel Cell Co., Ltd., a subsidiary, has joint liability to pay the debt before the spin-off with Doosan Corp. and contingent tax liabilities may arise due to joint tax payment obligation.
- 6) Doosan Bobcat Inc., a subsidiary, has succeeded to the joint liability for financial and operating liabilities of Doosan Industrial Vehicle Co., Ltd. and Doosan Corp in relation to business combination with Doosan Industrial Vehicle Co., Ltd, and judged that the possibility of an outflow of resources is remote.
- 7) Doosan Bobcat North America Inc. and Doosan Bobcat EMEA s.r.o, subsidiaries of Doosan Bobcat Inc., have entered into a Supply Chain Financing agreement and recognized USD 33,659 thousand as trade payables.
- 8) Daesan Green Energy Co., Ltd., an associate of Doosan Fuel Cell Co., Ltd. which is a subsidiary, has entered into a loan agreement with financial institutions including KDB and others. In this regards, investors of Daesan Green Energy Co., Ltd. including Doosan Fuel Cell Co., Ltd. and other shareholders have entered into an investor agreement with the financial institutions. The agreement states that if net operating cash inflow of Daesan Green Energy Co. does not meet the risk-sharing level, each of them is obligated to replenish the insufficient amount according to their respective investment shares. Accordingly, if Doosan Fuel Cell Co., Ltd. is obligated to fulfill the settlement according to the settlement agreement signed by Daesan Green Energy Co., Ltd. with other investors, Doosan Fuel Cell Co., Ltd. should fulfill either one of the following methods : providing cash, executing subordinated loans, or not receiving its payment. In connection with the above supplemental funding agreement, ₩ 689 million of funds were loaned to Daesan Green Energy Co., Ltd. as of December 31, 2023.
- 9) The Company compensates for the shortfall to the extent of the recoverable amount from Doosan Engineering & Construction Co., Ltd. stock (ownership 46.35%) if final distribution amount of the sales price of Doosan Engineering & Construction Co., Ltd. stock (ownership 53.65%) held by The Zenith holdings Ltd. has not met the investment capital of the investors (excluding 2018 QCP No. 13 Private Equity Joint venture, the representative PEF).
- 10) As of December 31, 2023, the Company has agreed to invest a total of ₩18,525 million in Multi-asset ESG Marine Wind Power Private Equity Fund 1st, and the remaining investment agreement commitment amount is ₩8,029 million.

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Notes to the Consolidated Financial Statements, Continued
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34. Assets pledged as collateral

(1) Assets pledged as collateral related with debt

- 1) As of December 31, 2023, assets that have been pledged as collateral for the Group's borrowings and others are as follows:

(In millions of won)

Pledger	Collateralized asset	Collateralized amount	Amount of borrowings and others	Pledgee
Enerbility	Property, plant and equipment(*1)	₩ 1,163,117	752,960	KDB and others
	Shares of subsidiaries and equity shares(*1,2,3)	2,664,515	1,696,494	KDB and others
	Subtotal	3,827,632	2,449,454	
Doosan Bobcat Inc.	Property, plant and equipment	95,736	61,051	Shinhan Bank and others
	Inventories and others	499,178	114,503	Unitcredit and others
	Subtotal	594,914	175,554	
Doosan Cuvex Co., Ltd.	The rights to the benefits and others(*4)	24,156	20,000	Woori Bank and others
Doosan Fuel Cell Co., Ltd.	Property, plant and equipment	90,000	100,000	KDB and others
	Total	₩ 4,536,702	2,745,008	

(*1) As of December 31, 2023, in accordance with bond, borrowing, and borrowing covenant held by the Company, 40,250,000 shares of Doosan Bobcat Inc., a subsidiary of the Company, 22,780,229 shares of Doosan Fuel Cell Co., Ltd., a subsidiary of the Company, land and others are provided as collateral (See Note 33).

(*2) As of December 31, 2023, in relation to guarantee payment of the Company, 50,000,000 shares of Doosan Engineering & Construction Co., Ltd., an associate of the Company, are provided as collateral.

(*3) As of December 31, 2023, 53,159 shares of Construction Guarantee Cooperative, 8,767 shares of Engineering Guarantee Insurance, 14,657 shares of Construction Industry Guarantee, 35,000 shares of Machinery financial cooperative, and 500 shares of Electric Contractors' Financial Cooperative, etc. are provided as collateral in relation to the Company's debts and others.

(*4) The rights to the benefits from real estate collateral trust related to property, plant and equipment.

2) Doosan Bobcat North America Inc., a subsidiary of Doosan Bobcat Inc., entered into a loan agreement to borrow USD 850,000 thousand and Credit line agreement of USD 595,000 thousand on April 20, 2022. In 2023, the credit line agreement amount was increased by USD 45,000 thousand. The Group has provided the entire shares of Doosan Bobcat North America Inc. as collateral for borrowings, and Credit line agreement. Also, main property, plant and equipment and intangible assets of Doosan Bobcat North America Inc. have been provided as collateral. As of December 31, 2023, the relevant balance of borrowings is USD 735,125 thousand and the total collateral amount is USD 2,512,672 thousand.

3) Doosan Fuel Cell Co., Ltd. provides deposit return bonds based on Doosan Fuel Cell Co., Ltd.'s future trade receivables and type 1 beneficiary certificate from trust property as collateral to two lenders of NewstarFC 1st Co., Ltd. including Hana bank, and to lenders of Doosan Fuel Cell Co., Ltd., consist of KisSF 15th Co., Ltd., IBK Capital Co., Ltd., and KB Securities Co., Ltd.. The period of provision of collateral is from April 3, 2023 to April 3, 2026, and additional bonds must be trusted if the expected cash flow from the trust property falls short of the agreement.

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34. Assets pledged as collateral, Continued

(2) Other Assets pledged as collateral

1) As of December 31, 2023, assets pledged as collateral on behalf of others are summarized as follows:

(In millions of won)

Pledger	Collateralized asset	Book value	Pledgee	Beneficiary
The company(*1)	Long-term investment securities	₩ 1,221	Nonghyup Bank	Gyeonggi East-West Beltway Co.
Doosan Fuel Cell Co., Ltd.	Investments in associates	3,804	KDB	Daesan Green Energy Co., Ltd.
	Total	₩ 5,025		

(*1) As of December 31, 2023, shares of Gyeonggi East-West Beltway Co. among the Company's long-term investment securities were provided as collateral for the entity's project financing.

2) As of December 31, 2023, the Company provided 1,400,000 shares of Hychangwon Co., Ltd. with the book value of ₩6,180 million as collateral for the project financing of the entity and established the right of pledge to Industrial Bank of Korea (PF syndicate).

3) As of December 31, 2023, the Company has entered into a contract of completion guarantee regarding the EPC construction project of Samcheok #1,2 TPP and provided 1,193,066 shares (the book value of ₩32,052 million) of Samcheok Blue Power Co., Ltd. as collateral for the project financing of the entity and established the right of pledge to KDB (PF syndicate).

4) As of December 31, 2023, the Company has signed the export bond insurance limit contract (₩459,000 million) with Korea Export Insurance Corporation and provided part of the land, buildings, and machinery of the Changwon Plant (Collateralized amount: ₩420,000 million) and all shares of Doosan Power Systems S.A. held by the Company (Collateralized amount: GBP 293 million) as collateral.

5) As of December 31, 2023, the Company and Doosan Fuel Cell Co., Ltd., a subsidiary, have provided ₩6,041 million and ₩1,400 million of deposits to Korea Securities Finance Corp. as collateral regarding supplement member loan for stock acquisition of Employee Stock Ownership Association.

6) As of December 31, 2023, the Company is providing construction receivables as collateral to lenders amounting to ₩32,578 million (Collateralized amount: ₩42,352 million), out of ₩54,300 million in loan agreement excluding ₩21,722 million paid, in connection with the new construction of the 3rd apartment units in Yangsan Deokgye, 5th apartment units in Yangsan Deokgye.

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35. Related party transactions

(1) The related parties of the Group and nature of their relationship with the Group as of December 31, 2023 are as follows:

1) As of December 31, 2023, the Group's ultimate parent company is Doosan Corp. (equity ownership: 30.40%).

2) As of December 31, 2023, the details of the Group's associates, joint ventures, and other related parties are as follows:

Control relationship	Related party
Associates and joint ventures	Samcheok Blue Power Co., Ltd., Daejung Offshore Wind Power Co., Ltd., Hychangwon Co., Ltd., The Zenith holdings Ltd., Doosan Engineering & Construction Co., Ltd. and the subsidiaries, Tuwaiq Casting & Forging Company , Multi-asset ESG Marine Wind Power Private Equity Fund 1 st Prestolite Asia Ltd., Daesan Green Energy Co., Ltd., Ainstein AI, Inc BUNDANG DOOSAN TOWER REIT Co., Ltd., The Weve Holdings Ltd.
Other related parties	
Subsidiaries of the parent company	Oricom Inc., Hancom Co., Ltd., Doosan Bears Inc., Doosan Business Research Institute, Doosan Robotics Co., Ltd., Doosan Mobility Innovation Inc., Doosan Logistics Solutions Co., Ltd., Doosan Mobility Innovation (Shenzhen) Co., Ltd., Doosan Electro-Materials Singapore Pte Ltd., Doosan Hongkong Ltd., Doosan Electro-Materials (Shen Zhen) Limited., Doosan Shanghai Chemical Materials Co., Ltd., Doosan Electro-Materials (Changshu) Co., Ltd., Doosan Electro-Materials Vietnam Company Limited, Doosan 2nd Real Estate Securitization Specialty Co., Ltd., Doosan Digital Innovation America LLC., Doosan Digital Innovation China LLC, Doosan Digital Innovation Europe Limited, Doosan Electro-Materials America, LLC, HyAxiom, Inc., Doosan Energy Solutions America, Inc., DESA Service, LLC, D pay 2nd Co., Ltd., Doosan H2 Innovation, Doosan Portfolio Holdings Co., Ltd. (*1) D-Pay 3 rd Co., Ltd., Doosan Tesna Inc., HyAxiom Motors Co., Ltd., NewstarBears Co., Ltd., Doosan Robotics America, LLC, Doosan Investment Co., Ltd. (*2), and others
Associates and joint ventures of the parent company (*4)	KDDI Korea Corporation, PT. SEGARA AKASA, Sichuan Kelun-Doosan Biotechnology Company Limited, Mastern Professional Investment Type Private Security Investment Trust No.98, SemiFive Co., Ltd. (*3) and others
Others (*5)	Chung-Ang University, Chung-Ang University Hospital, Doosan Credit Union, Doosan Yonkang Foundation, Folletto Robotics Co.,Ltd., Won Sang Co., Ltd., Protera SAS and others

(*1) In 2023, The business name of the entity is changed from Doosan Investment Co., Ltd to Doosan Portfolio holdings Co., Ltd.

(*2) In 2023, newly established.

(*3) In 2023, the entity is classified as other related party.

(*4) In 2023, Wise Fashion Co., Ltd., SiO2 Medical Products, Versogen Inc. have been excluded from scope of the related party.1

(*5) In 2023, Stathera IP Holding Inc. has been excluded from scope of the related party.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(2) Significant transactions with related parties

Significant transactions (excluding financial and investment) with related parties for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

	2023				
	Sales and others		Purchases and others		
	Sales	Other revenue	Purchase	Acquisition of PP&E and intangible assets	Other expense
Parent:					
Doosan Corp.	₩ 11,327	5,007	107,553	21,213	87,837
Associates and joint ventures:					
Samcheok Blue Power Co., Ltd.	264,301	-	-	-	-
Hychangwon Co., Ltd.	11,865	-	-	-	-
Daesan Green Energy Co., Ltd.	14,543	-	-	-	43
Doosan Engineering & Construction Co., Ltd.	1,718	1,021	132	-	1,480
Tuwaiq Casting & Forging Company	440,863	-	-	-	-
BUNDANG DOOSAN TOWER REIT Co., Ltd.	-	-	-	-	17,996
Prestolite Asia Ltd.	-	43	11,224	-	-
Subtotal	733,290	1,064	11,356	-	19,519
Other related parties:					
Oricom Inc.	1,217	23	584	-	18,906
Doosan Bears Inc.	797	-	530	-	12,548
Doosan Business Research Institute	2,212	39	3	-	12,524
Chung-Ang University	-	12	921	-	7,920
Doosan Digital Innovation America LLC	7	-	729	90	58,703
Doosan Information & Communications Beijing Co., Ltd.	-	-	-	-	3,194
HyAxiom, Inc.	14,247	3	10,176	-	-
Doosan Digital Innovation Europe Limited	26	-	4,514	-	1,693
Others	4,179	807	71	72	399
Subtotal	22,685	884	17,528	162	115,887
Total	₩ 767,302	6,955	136,437	21,375	223,243

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(In millions of won)

(In millions of won)		2022							
		Sales and others			Purchases and others				
		Disposal of PP&E and intangible		Other revenue	Acquisition of PP&E and intangible			Acquisition of right-of-use assets	
		Sales	assets		Purchase	assets	Other expense		
Parent:									
Doosan Corp.	₩	10,768	-	4,183	82,813	837	83,114	92	
Associates and joint ventures:									
Samcheok Blue Power Co., Ltd.		416,708	-	-	-	-	-	-	
Hychangwon Co., Ltd.		53,696	-	-	-	-	-	-	
Daesan Green Energy Co., Ltd.		14,523	-	-	-	-	43	-	
Doosan Engineering & Construction Co., Ltd.		29,574	-	133	35	101	1,362	-	
Tuwaiq Casting & Forging Company		137,852	-	-	-	-	-	-	
BUNDANG DOOSAN TOWER REIT Co., Ltd.		-	-	-	-	-	17,243	-	
Others		821	-	-	-	-	-	-	
Subtotal		653,174	-	133	35	101	18,648	-	
Other related parties:									
Oricom Inc.		1,137	-	19	46	-	17,711	-	
Doosan Bears Inc.		823	-	-	505	-	12,006	-	
Doosan Digital Innovation America LLC		-	-	54	-	-	61,235	-	
Doosan Business Research Institute		2,120	-	33	-	-	11,632	-	
Chung-Ang University		-	-	-	841	-	7,838	-	
Doosan Digital Innovation China LLC		-	-	-	-	-	1,485	-	
Doosan Digital Innovation Europe Limited		-	-	65	-	-	20,950	-	
HyAxiom, Inc.		45,482	-	2	160,645	-	-	-	
Doosan H2 Innovation		46	5,558	-	-	-	-	-	
Others		3,155	-	189	40	-	924	-	
Subtotal		52,763	5,558	362	162,077	-	133,781	-	
Total	₩	716,705	5,558	4,678	244,925	938	235,543	92	

Above transactions include amounts attributed to discontinued operations on the consolidated statements of profit or loss in 2023 and 2022.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(3) Significant balances related to the transactions with related parties

The outstanding receivables and payables arising from the transactions with related parties (excluding dividend and investment) as of December 31, 2023 and 2022 are as follows:

(In millions of won)

	2023					
	Receivables			Payables		
	Trade receivables	Loans receivables	Other receivables	Trade payables	Other payables	Lease liabilities
Parent:						
Doosan Corp.	₩ 769	-	4,229	26,786	25,548	1,025
Associates and joint ventures:						
Samcheok Blue Power Co., Ltd.(*1)	-	-	125,648	-	-	-
Hychangwon Co., Ltd.	5,500	-	47	-	1,992	-
Tuwaiq Casting & Forging Company(*2)	32,116	-	119	-	248,551	-
Doosan Engineering & Construction Co., Ltd.	157	-	51,470	122	21,639	-
Daesan Green Energy Co., Ltd.	3,625	689	-	-	4	-
BUNDANG DOOSAN TOWER REIT Co., Ltd.	-	-	26,122	-	-	158,605
Prestolite Asia Ltd.,	-	-	-	308	-	-
Subtotal	41,398	689	203,406	430	272,186	158,605
Other related parties:						
Oricom Inc.	144	-	2	3,155	2,234	-
Doosan Digital Innovation America LLC.	1	-	126	-	6,512	-
HyAxiom, Inc.(*3)	769	-	67,831	1,787	5,181	-
Doosan Digital Innovation Europe Limited	26	-	-	-	3,022	-
Others	571	-	998	951	2,942	-
Subtotal	1,511	-	68,957	5,893	19,891	-
Total	₩ 43,678	689	276,592	33,109	317,625	159,630

(*1) As of December 31, 2023, the Group has set an allowance for doubtful accounts of ₩427 million for receivables of Samcheok Blue Power Co., Ltd. and ₩339 million was recognized as reversal of allowance for doubtful accounts in 2023.

(*2) As of December 31, 2023, the Group has set an allowance for doubtful accounts of ₩3 million for receivables of Tuwaiq Casting & Forging Company and ₩247 million was recognized as reversal of allowance for doubtful accounts in 2023.

(*3) As of December 31, 2023, the Group has set an allowance for doubtful accounts of ₩4,840 million for receivables of HyAxiom, Inc. and ₩1,415 million was recognized as reversal of allowance for doubtful accounts in 2023.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(In millions of won)

	2022					
	Receivables			Payables		
	Trade receivables	Loans receivables	Other receivables	Trade payables	Other payables	Lease liabilities
Parent:						
Doosan Corp.	₩ 804	-	3,082	15,305	17,911	1,484
Associates and joint ventures:						
Hychangwon Co., Ltd.	4,070	-	-	-	9,313	-
Doosan Engineering & Construction Co., Ltd.	28,094	-	11,422	122	10,469	-
Daesan Green Energy Co., Ltd.	3,625	1,004	-	-	-	-
Samcheok Blue Power Co., Ltd.(*1)	-	-	99,581	-	-	-
Tuwaiq Casting & Forging Company(*3)	32,430	-	-	-	201,223	-
BUNDANG DOOSAN TOWER REIT Co., Ltd.	-	-	20,215	-	-	175,181
Valuegrowth Co., Ltd.	50	-	-	-	-	-
Subtotal	68,269	1,004	131,218	122	221,005	175,181
Other related parties:						
Oricom Inc.	142	-	-	1,944	1,796	-
Doosan Digital Innovation Europe Limited	-	-	-	-	4,566	-
HyAxiom, Inc.(*2)	469	-	86,814	22,774	1,227	-
Others	544	-	4,975	849	3,115	1,355
Subtotal	1,155	-	91,789	25,567	10,704	1,355
Total	₩ 70,228	1,004	226,089	40,994	249,620	178,020

(*1) As of December 31, 2022, the Group has set an allowance for doubtful accounts of ₩766 million for receivables of Samcheok Blue Power Co., Ltd. and ₩951 million was recognized as reversal of allowance for doubtful accounts in 2022.

(*2) As of December 31, 2022, the Group has set an allowance for doubtful accounts of ₩6,255 million for receivables of HyAxiom, Inc. and ₩5,113 million was recognized as bad debt expenses in 2022.

(*3) As of December 31, 2022, the Group has set an allowance for doubtful accounts of ₩250 million for receivables of Tuwaiq Casting & Forging Company and the same amount was recognized as bad debt expenses in 2022.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(4) Financial transactions between the Group and related parties

Financial transactions (including investment) with related parties for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

(In millions of won)		2023								
		Loans		Borrowings			Investments		Dividend	
		Loans	Collection	Borrowings	Repayment	Repayment of lease	Increase (decrease) of capital	Investment	Income	
Parent:										
Doosan Corp.		₩	-	-	-	-	482	-	-	-
Associates and joint ventures:										
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st			-	-	-	-	-	1,996	-	
BUNDANG DOOSAN TOWER REIT Co., Ltd.			-	-	-	-	25,902	-	-	3,242
Daesan Green Energy Co., Ltd.			-	371	-	-	-	-	-	-
Subtotal			-	371	-	-	25,902	-	1,996	3,242
Other related parties:										
Doosan Digital Innovation America LLC			-	-	-	-	754	-	-	-
KDDI Korea Corporation			-	-	-	-	-	-	-	43
Subtotal			-	-	-	-	754	-	-	43
Total		₩	-	371	-	-	27,138	-	1,996	3,285

(In millions of won)

		2022							
		Loans		Borrowings			Investments		Dividend
		Loans	Collection	Borrowings	Repayment	Repayment of lease	Increase (decrease) of capital	Investment	Income Payout
Parent:									
Doosan Corp.	₩	-	-	-	-	681	252,375	-	- 152,691
Associates and joint ventures:									
Hychangwon Co., Ltd.		-	-	-	-	-	-	2,000	-
Tuwaiq Casting & Forging Company		-	-	-	-	-	-	43,926	-
BUNDANG DOOSAN TOWER REIT Co., Ltd.		-	-	-	-	15,471	-	-	-
Multi-asset ESG Marine Wind Power Private Equity Fund 1 st		-	-	-	-	-	-	8,500	-
Daesan Green Energy Co., Ltd.		1,004	-	-	-	-	-	-	-
Subtotal		1,004	-	-	-	15,471	-	54,426	-
Other related parties:									
KDDI Korea Corporation		-	-	-	-	-	-	-	89
Doosan Digital Innovation America LLC		-	-	-	-	725	-	-	-
Oricom Inc.		-	-	-	-	-	-	-	7,495
Hancom Co., Ltd.		-	-	-	-	-	-	-	14,972
Subtotal		-	-	-	-	725	-	-	89
Total	₩	1,004	-	-	-	16,877	252,375	54,426	89 175,158

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

35. Related party transactions, Continued

(5) Guarantees of payment and collateral provided by and to the related party

The Group provides payment guarantees and collateral for certain related parties and receives payment guarantees and collateral from certain related parties as of December 31, 2023 (See Notes 33 and 34).

(6) Key management compensation

Key management personnel are standing directors who have authorities and responsibilities for planning, operation and control of the business of the Group. Compensation for key management personnel for the years ended December 31, 2023 and 2022 consists of following:

<i>(In millions of won)</i>		2023	2022
Short-term employee benefits	₩	36,251	36,922
Severance and retirement benefits		5,763	22,143
Share-based payments		3,670	2,472
Total	₩	<u>45,684</u>	<u>61,537</u>

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

36. Consolidated statements of cash flows

(1) Details of cash generated from operation for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>	2023	2022
Profit (loss) for the period:	₩ 517,522	(453,150)
Adjustments:		
Interest expenses	320,892	266,410
Loss on foreign currency translation	67,647	291,973
Bad debt expenses	22,888	21,635
Other bad debt expenses	79,920	12,815
Loss on valuation of inventory	23,873	12,491
Loss on valuation of derivative financial instruments	84,367	110,963
Loss on valuation of firm commitments	27,139	54,208
Loss on equity method investments	38,688	230,695
Gain on disposal of investment in associates	-	(4,754)
Impairment loss on investment in associates	-	116,625
Depreciation	322,526	314,761
Amortization	144,139	156,637
Loss on disposal of property, plant and equipment	1,510	5,078
Impairment loss on property, plant and equipment	15,025	17,979
Impairment loss on intangible assets	175,510	486,537
Impairment loss on impairment properties	37,837	-
(Reversal of) Impairment loss on non-current asset held for sale	(805)	340
Loss on valuation of short and long-term investment securities	44,877	8,659
Severance and retirement benefits	4,536	103,632
Provision for warranty expenses	138,453	174,863
(Reversal of) Provision for construction warranties	(10,113)	10,664
Provision for others	52,894	39,685
Loss on redemption of bonds	-	15,707
Income tax expense	220,960	136,688
Interest income	(80,220)	(19,871)
Dividend income	(2,906)	(4,355)
Gain on foreign currency translation	(54,900)	(138,912)
Gain on valuation of derivatives financial instruments	(66,578)	(94,887)
Gain on valuation of firm commitments	(43,958)	(82,476)
Gain on disposal of property, plant and equipment	(2,232)	(3,539)
Gain on disposal of intangible assets	(872)	(1,762)
Gain on disposal of short and long-term investment securities	(11,526)	(24,350)
Gain on valuation of short and long-term investment securities	(836)	(4,978)
Loss on disposal of discontinued operation	-	140,716
Others	(1,350)	32,160
Subtotal	₩ 1,547,385	2,382,037

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

36. Consolidated statements of cash flows, Continued

(In millions of won)

	2023	2022
Changes in operating assets and liabilities:		
Trade receivables	₩ 294,511	(741,905)
Due from customers for contract work	(218,070)	194,358
Other receivables	(156,955)	(13,712)
Derivative financial assets and liabilities	16,437	(50,950)
Firm commitments assets and liabilities	51,129	(3,043)
Inventories	(201,212)	(639,786)
Other current assets	100,027	(109,228)
Other non-current assets	(55,216)	(35,712)
Trade payables	15,908	585,955
Due to customers for contract work	522,052	312,486
Other payables	477,353	57,994
Provision for warranty expenses	(127,255)	(96,520)
Provision for construction losses	(16,482)	-
Provision for others	(59,148)	(55,398)
Other current liabilities	104,025	(33,575)
Other non-current liabilities	(4,103)	(22,358)
Severance payments paid	(102,820)	(97,233)
Plan assets	4,436	1,912
Subtotal	644,617	(746,715)
Cash generated from operations	₩ 2,709,524	1,182,172

(2) Significant non-cash transactions for the years ended December 31, 2023 and 2022 are as follows:

(In millions of won)

	2023	2022
Transfer from construction-in-progress to other assets	₩ 199,767	172,766
Acquisition of right-of-use assets	88,245	109,765
Transfer to current portion of bonds, borrowing and others	1,661,944	743,258
Changes in other payables through acquisition of property, plant and equipment, and intangible assets	5,361	42,818
Transfer to assets and liabilities held for sale	12,298	3,057
Acquisition of investment properties	(10,643)	206,584
Write-off of trade and other receivables	(29,518)	(46,253)
Conversion of convertible bonds to common stock	24,600	-

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

36. Consolidated statements of cash flows, Continued

(3) Change of liability in financing activities for the years ended December 31, 2023 and 2022 are summarized as follows:

(In millions of won)

	Balance at January 1, 2023	Cash flows from financing activities, net	Non-cash changes			Balance at December 31, 2023
			Current portion of long-term debt	Changes in foreign currency translation	Others	
Short-term borrowings	₩ 1,433,572	(242,391)	26,808	(31,412)	-	1,186,577
Current portion of long-term debt	771,006	(735,928)	1,559,181	5,062	(22,950)	1,576,371
Current portion of financial lease liabilities	76,193	(60,386)	61,907	2,524	(1,251)	78,987
Current sale and leaseback liabilities	27,499	(24,891)	14,048	613	-	17,269
Bonds	356,348	509,198	(380,697)	7,080	1,988	493,917
Long-term borrowings	2,350,868	255,254	(1,188,630)	33,177	7,080	1,457,749
Long-term asset-backed borrowings	-	69,643	(16,662)	-	(219)	52,762
Non-current financial lease liabilities	317,701	(23,768)	(61,907)	2,117	74,937	309,080
Non-current sales and lease back liabilities	49,848	8,245	(14,048)	4,985	-	49,030
Total	₩ 5,383,035	(245,024)	-	24,146	59,585	5,221,742

(In millions of won)

	Balance at January 1, 2022	Cash flows from financing activities, net	Non-cash changes				Balance at December 31, 2022
			Current portion of long-term debt	Changes in foreign currency translation	Changes in consolidation scope	Others	
Short-term borrowings	₩ 3,908,483	(2,368,288)	344	(57,566)	(49,401)	-	1,433,572
Current portion of long-term debt	938,863	(915,350)	684,277	26,168	(9,998)	47,046	771,006
Current portion of financial lease liabilities	64,880	(38,979)	58,981	173	(4,716)	(4,146)	76,193
Current sale and leaseback liabilities	30,936	-	5,680	(9,117)	-	-	27,499
Bonds	848,257	(31,816)	(508,279)	31,531	-	16,655	356,348
Long-term borrowings	1,516,919	897,341	(176,342)	95,401	-	17,549	2,350,868
Non-current financial lease liabilities	316,307	(40,527)	(58,981)	12,740	(8,806)	96,968	317,701
Non-current sales and lease back liabilities	253,224	(28,800)	(5,680)	5,490	(174,386)	-	49,848
Total	₩ 7,877,869	(2,526,419)	-	104,820	(247,307)	174,072	5,383,035

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

37. Assets and liabilities held for sale

The Group's assets held for sale as of December 31, 2023 and 2022 are as follows:

<i>(In millions of won)</i>		2023	2022
Property, plant and equipment (*1,3,4)	₩	30,637	5,871
Investment property (*2)		13,588	-
Subtotal		44,225	5,871
Accumulated impairment loss (*1,4)		(41)	(1,186)
Total	₩	44,184	4,685

(*1) In 2023, the Group reclassified certain land and buildings as assets held-for-sale. Also, the sale of the assets held-for-sale was partially completed.

(*2) As the Company signed a contract to sell its land and certain buildings located in Icheon-si, Gyeonggi-do, it was classified as assets held-for-sale during the current period.

(*3) DPSI, a subsidiary, signed a contract to sell its operating land and buildings on November 22, 2023, classifying the assets as assets held-for-sale during the current period.

(*4) In 2022, Doosan Bobcat Inc., a subsidiary, signed a contract to sell its operating rental assets, classifying the assets as assets held-for-sale. In April 2023, the sale of the assets held-for-sale was completed.

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

38. Discontinued operations

(1) Summary of discontinued operations

- 1) The Company decided to sell Doosan Babcock Ltd. and the subsidiaries("DBL"), pursuant to a resolution of Board of Director's meeting held on October 2021. The transaction of sales was completed on September 25, 2022.
- 2) The Company decided to sell Bumhan Mecatec Co., Ltd.(formerly, Doosan Mecatec Co., Ltd.), a subsidiary, with a resolution of Board of Director's meeting held on June 2022. The transaction of sales was completed on September 15, 2022.

In this regard, the Group has reclassified the business division of DBL and Bumhan Mecatec Co., Ltd. as discontinued operations.

(2) Operational performance of discontinued operations of the Group for the year ended December 31, 2022 are as follow:

(In millions of won)

	2022		
	Bumhan Mecatec Co., Ltd. (formerly, Doosan Mecatec Co., Ltd.)		Total
	DBL	Co., Ltd.)	
Sales	₩ 462,542	215,794	678,336
Cost of sales	418,180	197,224	615,404
Selling and administrative expenses	43,871	18,002	61,873
Operating profit	491	568	1,059
Other non-operating income and expenses	10,185	(511)	9,674
Income before income tax	10,676	57	10,733
Income tax expenses (benefit)	539	(10,849)	(10,310)
Profit (loss) from discontinued operation	10,137	10,906	21,043
Subtotal of disposal of discontinued operation	57,420	(198,136)	(140,716)
Total profit (loss) from discontinued operation	₩ 67,557	(187,230)	(119,673)
Profit (loss) from discontinued operation attributable to			
Owners of the Company	₩ 67,557	(187,230)	(119,673)
Non-controlling interests	-	-	-

DOOSAN ENERBILITY CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2023 and 2022

38. Discontinued operations, Continued

(3) The net cash flows incurred by discontinued operations of the Group for the year ended December 31, 2022 are as follows:

(In millions of won)

		2022	
		Bumhan Mecatec Co., Ltd. (formerly, Doosan Mecatec Co., Ltd.)	Total
	DBL		
Net cash flows from operating activities	₩	(8,156)	(41,923)
Net cash flows from investing activities		(28,423)	10,925
Net cash flows from financing activities		41,616	3,725
Effect of exchange rate fluctuations on cash held		(794)	315
Net increase in cash and cash equivalents	₩	4,243	(26,958)

39. Approval of consolidated financial statements

The consolidated financial statements for 2023 were authorized for issue by the Board of Directors on February 7, 2024 and will get final approval during the shareholders' meeting on March 26, 2024.

Independent Auditors' Report on Internal Control over Financial Reporting for Consolidation Purposes

Based on a report originally issued in Korean

To the Shareholders and Board of Directors of
Doosan Enerbility Co., Ltd.:

Opinion on Internal Control over Financial Reporting for Consolidation Purposes

We have audited Doosan Enerbility Co., Ltd. and its subsidiaries' ("the Group") internal control over financial reporting ("ICFR") for consolidation purposes as of December 31, 2023 based on the criteria established in the Conceptual Framework for Designing and Operating ICFR ("ICFR Design and Operation Framework") issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea (the "ICFR Committee").

In our opinion, the Group maintained, in all material respects, effective internal control over financial reporting for consolidation purposes as of December 31, 2023, based on ICFR Design and Operation Concept Framework.

We also have audited, in accordance with Korean Standards on Auditing ("KSAs"), the consolidated financial statements of the Group, which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, the consolidated statements of operations and comprehensive income(loss), changes in equity and cash flows for the years then ended, and notes, comprising material accounting policy information and other explanatory information, and our report dated March 15, 2024 expressed an unmodified opinion on those consolidated financial statements.

Basis for Opinion on Internal Control over Financial Reporting for Consolidation Purposes

We conducted our audit in accordance with KSAs. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting for Consolidation Purposes section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the internal control over financial reporting in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Internal Control over Financial Reporting for Consolidation Purposes

The Group's management is responsible for designing, operating and maintaining effective internal control over financial reporting for consolidation purposes and for its assessment of the effectiveness of internal control over financial reporting for consolidation purposes, included in the accompanying Report on the Operational Status of Internal Control over Financial Reporting.

Those charged with governance are responsible for overseeing the Group's internal control over financial reporting for consolidation purposes.

Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting for Consolidation Purposes

Our responsibility is to express an opinion on the Group's internal control over financial reporting for consolidation purposes based on our audit. We conducted our audit in accordance with KSAs. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting for consolidation purposes was maintained in all material respects.



Our audit of internal control over financial reporting for consolidation purposes included obtaining an understanding of internal control over financial reporting for consolidation purposes, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk.

Definition and Limitations of Internal Control over Financial Reporting for Consolidation Purposes

The Group's internal control over financial reporting for consolidation purposes is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with Korean International Financial Reporting Standards ("K-IFRS"). The Group's internal control over financial reporting for consolidation purposes includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Group; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with K-IFRS, and that receipts and expenditures of the Group are being made only in accordance with authorizations of management and directors of the Group; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Group's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting for consolidation purposes may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The engagement partner on the audit resulting in this independent auditors' report is Jeong Gu Kang.

KPMG Samjong Accounting Corp.

Seoul, Korea

March 15, 2024

<p>This report is effective as of March 15, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the internal control over financial reporting. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.</p>
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**Report on the Operational Status of Internal Control over Financial Reporting ("ICFR") for
Consolidation Purposes**

English Translation of a Report Originally Issued in Korean

To the Shareholders, Board of Directors and Audit Committee of Doosan Enerbility Co., Ltd.

We, as the CEO and Internal Accounting Control Officer ("IACO") of Doosan Enerbility Co., Ltd. and its subsidiaries ("the Group"), assessed the status of the design and operation of the Group's ICFR for consolidation purposes for the year ended December 31, 2023.

The Group's management including CEO and IACO are responsible for designing and operating ICFR for consolidation purposes. We, as the CEO and IACO, assessed whether the ICFR for consolidation purposes has been appropriately designed and is effectively operating to prevent and detect any error or fraud which may cause any misstatement of the financial statements, for the purpose of preparing and disclosing reliable financial statement.


We, as the CEO and IACO, adopted the 'ICFR Design and Operation Concept Framework' established by the Operating Committee of Internal Control over Financial Reporting for the design and operation of the ICFR for consolidation purposes. Also applied the 'ICFR Assessment and Reporting Standards' established by the Operating Committee of Internal Control over Financial Reporting for the assessment of design and operation of the ICFR for consolidation purposes.

Based on assessment of the ICFR for consolidation purposes, the Group's ICFR for consolidation purposes has been appropriately designed and is operating effectively as of December 31, 2023, in all material respect, in accordance with the ICFR Design and Operation Concept Framework.

We, as the Company's CEO and IACO, confirmed that the contents of the report are not misstated or displayed, and there is no missing information to be stated or displayed.

Also, We, as the Company's CEO and IACO, confirmed that the report did not contain or display any content that cause major misunderstanding, and sufficiently reviewed the report.

7 February 2024

Chief Executive Officer	SANGHYUN PARK	
Internal Accounting Control Officer	SANGJU JEONG	