Korea Western Power Co., Ltd. and its subsidiaries

Consolidated financial statements for each of the two years in the period ended December 31, 2023 with the independent auditor's report

Korea Western Power Co., Ltd. and its subsidiaries

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Independent auditor's report

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> Independent auditor's report (English Translation of a Report Originally Issued in Korean)

The Shareholders and Board of Directors Korea Western Power Co., Ltd.

Opinion

We have audited the consolidated financial statements of Korea Western Power Co., Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the consolidated statements of comprehensive income (loss), consolidated statements of changes in equity and consolidated statements of cash flows for each of the two years in the period ended December 31, 2023, and the notes to the consolidated financial statements, including material accounting policy 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 each of the two years in the period ended December 31, 2023 in accordance with the Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea ("Government Accounting Standards").

Basis for opinion

We conducted our audit in accordance with Korean Standards on Auditing ("KSA"). Our responsibilities under those standards are further described in the Auditor's 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 of the Republic of Korea that are relevant to our audit of the consolidated financial statements, and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of matter

Without qualifying our opinion, we draw attention to Note 2 to the consolidated financial statements. As described in Note 2, the Group prepared the consolidated financial statements in accordance with Government Accounting Standards. Pursuant to Article 2-5 of Government Accounting Standards, the Group applies International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") where specific accounting treatments are not prescribed by Government Accounting Standards. In accordance with Government Accounting Standards, there are no material matters applied to the Group's accounting treatment differently from KIFRS.



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 the Government Accounting Standards, 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.

Auditor's 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 auditor's 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 KSA 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 KSA, 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, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- 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, we are required to draw attention in our auditor's 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 auditor's 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 audits.

Ernst Joung Han Young

March 11, 2024

This audit report is effective as of March 11, 2024, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modification to this audit report.

Korea Western Power Co., Ltd. and its subsidiaries

Consolidated financial statements for each of the two years in the period ended December 31, 2023

"The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group."

Park, Hyung Duck Chief Executive Officer Korea Western Power Co., Ltd.

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of financial position As of December 31, 2023 and 2022

In millions of Korean won	Notes	2023	2022
Assets			
Cash and cash equivalents Current financial assets Trade and other receivables, net Inventories Current non-financial assets Current tax assets Total current assets	6,7,40 ₩ 6,7,11,12,40 6,8,40,41 13 14	77,602 121,857 781,823 387,817 77,098 <u>8</u> 1,446,205	83,596 109,324 1,195,533 516,490 98,553 5 2,003,501
Non-current financial assets Non-current trade and other receivables, net Property, plant and equipment, net Intangible assets other than goodwill, net Investments in associates and joint ventures Deferred tax assets Non-current non-financial assets Total non-current assets	6,9,10,11,12,40,41 6,8,40 17,19,20,43 18 16 37 14	2,274,686 13,050 8,591,150 32,320 560,997 732 30,635 11,503,570	2,399,661 9,199 8,663,623 38,684 531,821 1,846 17,163 11,661,997
Total assets	₩ =	12,949,775	13,665,498

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of financial position, Continued As of December 31, 2023 and 2022

In millions of Korean won	Notes	2023	2022
Liabilities			
Trade and other payables Current financial liabilities, net Current tax liabilities Current non-financial liabilities Current provisions Total current liabilities	6,20,21,40,41 ₩ 6,11,22,23,40 26 25	704,303 1,200,523 2,412 41,526 45,122 1,993,886	909,927 863,209 10,173 54,545 59,480 1,897,334
Non-current trade and other payables Non-current financial liabilities, net Non-current non-financial liabilities Employee benefits obligations, net Deferred tax liabilities Non-current provisions Total non-current liabilities	6,20,21,40 6,11,22,23,40 26 24,28,40 37 25	425,669 4,528,865 24,113 107,413 625,707 2,427 5,714,194	498,812 5,062,869 2,067 73,509 658,065 - 6,295,322
Total liabilities		7,708,080	8,192,656
Equity			
Contributed capital Retained earnings Other components of equity Equity attributable to owner of the KOWEPO	27 28,29 9,11,30	1,272,898 2,363,469 1,605,340 5,241,707	1,272,898 2,562,798 1,637,158 5,472,854
Non-controlling interests		(12)	(12)
Total equity		5,241,695	5,472,842
Total liabilities and equity	₩	12,949,775	13,665,498

The accompanying notes are an integral part of the consolidated financial statements.

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES

Consolidated statements of comprehensive income (loss) For each of the two years in the period ended December 31, 2023

In millions of Korean won, except earnings per share	Notes	2023	2022
Sales	5,31,41 ¥	₩ 6,958,843	8,177,379
Cost of sales	38,41	(6,657,172)	(7,852,774)
Gross profit	·	301,671	324,605
Selling and administrative expenses	32,38	(101,948)	(95,450)
Operating income		199,723	229,155
Other non-operating income	33	6,445	5,876
Other non-operating expenses	33	(46,956)	(18,838)
Other income (loss), net	34	(20,960)	104
Finance income	6,11,35	150,314	227,950
Finance costs	6,11,36	(225,516)	(295,612)
Gain from associates and joint ventures, net	16	106,034	79,373
Profit before income tax		169,084	228,008
Income tax expenses	37	(5,948)	(17,734)
Profit for the year		163,136	210,274
Other comprehensive income (loss), net of tax: Items that will never be reclassified to profit or loss Remeasurements of benefit liability, net of tax	24,28,30	(17,774)	28,743
Share in other comprehensive income of associates and joint ventures, net of tax Net change in the financial assets at fair value through other		456	62
comprehensive income, net of tax Items that are or may be reclassified to profit or loss	11,30	(34,551)	1,510,609
Net change in the unrealized fair value of derivatives using		(1.050)	
cash flow hedge accounting, net of tax		(1,059)	(16,534)
Foreign currency translation of foreign operations, net of tax Share in other comprehensive income of associates		1,486	(6,612)
and joint ventures, net of tax		1,915	12,461
Total other comprehensive income (loss), net of tax		(49,527)	1,528,729
Total comprehensive income for the year		113,609	1,739,003
Profit attributable to:			
Owner of the KOWEPO Non-controlling interests		163,136	210,226 48
		163,136	210,274
Total comprehensive income attributable to:		112 (00	1 720 054
Owner of the KOWEPO		113,609	1,738,954
Non-controlling interests		113,609	49 1,739,003
Earnings per share Basic and diluted earnings per share (in Korean won)	39 ¥	₩ 4,895	6,308

The accompanying notes are an integral part of the consolidated financial statements.

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of changes in equity For the year ended December 31, 2022

In millions of Korean won		Equity a	attributable to c	owner of the KOW	EPO		
		Contributed Capital	Retained earnings	Other components of equity	Subtotal	Non- controlling interests	Total equity
Balance as of January 1, 2022 Total comprehensive income (loss) for the year:	₩	1,272,898	2,323,767	137,387	3,734,052	(8)	3,734,044
Profit for the year		-	210,226	-	210,226	48	210,274
Net change in fair value of equity investments at fair value through other comprehensive income, net of tax		-	-	1,510,609	1,510,609	-	1,510,609
Net change in the unrealized fair value of derivatives using cash flow hedge accounting, net of tax		-	-	(16,534)	(16,534)	-	(16,534)
Remeasurements of defined benefit liability, net of tax		-	28,743	-	28,743	-	28,743
Share in other comprehensive income of associates and joint ventures, net of tax		-	62	12,461	12,523	-	12,523
Foreign currency translation of foreign operations, net of tax Transaction with owners recognized directly in equity:		-	-	(6,613)	(6,613)	1	(6,612)
Changes in the scope of consolidation		-	-	(152)	(152)	(53)	(205)
Balance as of December 31, 2022	₩	1,272,898	2,562,798	1,637,158	5,472,854	(12)	5,472,842

(Continued)

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of changes in equity, Continued For the year ended December 31, 2023

In millions of Korean won		Equity a	attributable to d	owner of the KOW	EPO		
		Contributed Capital	Retained earnings	Other components of equity	Subtotal	Non- controlling interests	Total equity
Balance as of January 1, 2023	₩	1,272,898	2,562,798	1,637,158	5,472,854	(12)	5,472,842
Total comprehensive income (loss) for the year:							
Profit for the year		-	163,136	-	163,136	-	163,136
Net change in fair value of equity investments at fair value							
through other comprehensive loss, net of tax		-	-	(34,551)	(34,551)	-	(34,551)
Reclassified due to disposal of the financial assets at fair value			(001)	001			
through other comprehensive income		-	(391)	391	-	-	-
Net change in the unrealized fair value of derivatives using cash flow hedge accounting, net of tax				(1,059)	(1,059)		(1,059)
		-	- (1 - ארד ד	(1,059)	• •	-	• •
Remeasurements of defined benefit liability, net of tax Share in other comprehensive income of associates and joint		-	(17,774)	-	(17,774)	-	(17,774)
ventures, net of tax		_	456	1,915	2,371	_	2,371
Foreign currency translation of foreign operations, net of tax			450	1,486	1,486		1,486
o o i		-	-	1,400	1,400	-	1,400
Transaction with owners recognized directly in equity: Dividends paid			(344,756)		(344,756)		(344,756)
•	14/	1 070 000	· /		,	(1.0)	· · · · · ·
Balance as of December 31, 2023	₩	1,272,898	2,363,469	1,605,340	5,241,707	(12)	5,241,695

The accompanying notes are an integral part of the consolidated financial statements.

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of cash flows

For each of the two years in the period ended December 31, 2023

In millions of Korean won		2023	2022
Cash flows from operating activities			
Profit for the year	₩	163,136	210,274
Adjustments for:			
Income tax expenses		5,948	17,734
Depreciation		872,772	843,637
Amortization of intangible assets		8,625	7,954
Loss on disposals of property, plant and equipment		15,732	9,914
Loss on disposals of intangible assets, net		-	-
Impairment loss on property, plant and equipment		6,331	-
Retirement benefit expenses		25,632	36,233
Interest expense		157,549	146,499
Other bad debt expenses		30,757	4,473
Interest income		(18,326)	(9,244)
Gain on disposals of property, plant and equipment		(79)	(117)
Gain on associates and joint ventures		(106,034)	(79,373)
Dividend income		(68,567)	(103,173)
Gain on derivative instruments, net		(55,548)	(86,799)
Loss on foreign currency translations, net		46,724	70,631
Provisions for others		150,876	42,416
Others		32,318	45,197
		1,104,710	945,982
Changes in:			
Current trade receivables		503,892	(472,386)
Other current receivables		(160,677)	88,086
Inventories		131,448	(213,347)
Current non-financial assets		(3,878)	(100,194)
Non-current non-financial assets		(1,479)	(906)
Trade payables		(464,532)	303,148
Other current payables		(41,708)	33,128
Current non-financial liabilities		(18,383)	(17,366)
Non-current non-financial liabilities		599	900

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES

Consolidated statements of cash flows, Continued

For each of the two years in the period ended December 31, 2023

Current provisions(66,777)(41,857)Payments of retirement benefit obligations(14,501)(20,795)Plan assets(1,172)(3,088)(137,168)(444,677)
Plan assets (1,172) (3,088) (137,168) (444,677)
(137,168) (444,677)
Cash generated from operating activities
each generated north operating activities
Dividend received 171,038 64,105
Interest received 15,841 7,132
Interest paid (168,924) (156,688)
Income tax paid (26,340) (26,315)
Net cash flows provided by operating activities1,122,293599,813
Cash flows from investing activities
Collection of loans 1,951 1,738
Increase in loans (1,592) (1,798)
Decrease in guarantee deposits 6,908 4,531
Increase in guarantee deposits (7,528) (7,395)
Net increase in short-term financial instruments8,69112,422
Proceeds from disposals of investments in associates and
joint ventures 2,688 406
Acquisition of investments in associates and joint ventures (5,634) (15,707)
Proceeds from disposals of property, plant and equipment 1,211 289
Acquisition of property, plant and equipment (819,065) (923,297)
Proceeds from disposals of intangible assets 17
Acquisition of intangible assets (3,981) (8,041)
Government grants received 14
Disposals of non-current assets held for sale - 267
Net cash inflows from changes in the consolidation scope - 724
Net cash flows used in investing activities(816,320)(935,861)

KOREA WESTERN POWER CO., LTD. AND ITS SUBSIDIARIES Consolidated statements of cash flows, Continued

For each of the two years in the period ended December 31, 2023

In millions of Korean won	2023	2022
Cash flows from financing activities		
Increse in borrowings	787,2	250 1,579,898
Repayment of borrowings	(744,4	63) (1,627,643)
Increse in debentures	528,4	60 1,150,442
Repayment of debentures	(812,4	90) (783,630)
Repayment of lease liabilities	(93,2	70) (80,530)
Settlement of derivative instruments	74,5	61,722
Dividends paid	(53,1	93) -
Net cash flows provided by (used in) financing activities	(313,1	25) 300,259
Net decrease in cash and cash equivalents before effect of		
exchange rate fluctuations	(7,1	52) (35,789)
Translation effect of foreign financial statements		
Translation effect of foreign manelal statements	ç	953 (4,753)
Effects of exchange rate fluctuations on cash held	2	205 414
Net decrease in cash and cash equivalents	(5,9	94) (40,128)
Cash and cash equivalents at the beginning of the financial year		, , , ,
	83,5	596 123,724
Cash and cash equivalents at the end of the year	₩ 77,6	

The accompanying notes are an integral part of the consolidated financial statements.

1. Reporting Entity

In accordance with a restructuring plan dated January 21, 1999 for the electricity industry in the Republic of Korea, announced by the Ministry of Commerce, Industry and Energy and the *Act on Promotion of Restructuring the Electric Power Industry* published on December 23, 2000, Korea Western Power Co., Ltd. ("KOWEPO" or the "Company") was incorporated on April 2, 2001 through a spin-off of the power generation division of Korea Electric Power Corporation ("KEPCO"). KOWEPO and its subsidiaries (collectively referred to as the "Group" hereinafter) engage in the generation of electricity and development of electric power resources.

As of December 31, 2023, KOWEPO owns and operates four power plants with a total capacity of 11,872MW.

KOWEPO's head office is located in Taean-gun, Chungcheongnam-do, Korea. Issued capital of KOWEPO as of December 31, 2023 amounts to W166,646 million and KOWEPO's sole shareholder is KEPCO (100%).

In accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") 1110 *Consolidated Financial Statements*, the Group's consolidated financial statements include the financial results of KOWEPO, which is the parent company, and 10 other subsidiaries ("consolidated entities") and 29 other investees which are accounted for as equity method investments.

2. Basis of Preparation

(1) Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with the Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea ("Government Accounting Standards") pursuant to the *Act on the Management of Public Institutions* and the *Decree on Accounting for Public Corporations and Quasi-governmental Institutions*. The Rules for Accounting Affairs of Public Corporations and Quasi-governmental Institutions mandates application of KIFRS as enacted by the *Act on External Audit of Stock Companies* where specific accounting treatments are not prescribed by the Rules for Accounting Affairs of Public Corporations and Quasi-governmental Institutions. There are no accounts of which accounting treatment is different compared to KIFRS in order for the Group to be in full compliance with the Rules for Accounting Affairs of Public Corporations and Quasi-governmental Institutions.

The accompanying consolidated financial statements have been translated into English from Korean financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's report thereon, Korean version, which is used for regulatory reporting purposes, shall prevail.

The consolidated financial statements of the Group are approved by the board of directors on February 29, 2024, and will be finally approved at a shareholders' meeting on March 28, 2024.

(2) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the statement of financial position:

- ✓ derivative financial instruments measured at fair value;
- ✓ non-current financial assets measured at fair value through other comprehensive income;
- ✓ financial assets measured at fair value through profit or loss; and
- liabilities for defined benefit plans are recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets.

2. Basis of Preparation, Continued

(3) Functional and presentation currency

These consolidated financial statements are presented in Korean won, which is the KOWEPO's functional currency and the currency of the primary economic environment in which the Group operates.

(4) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with KIFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Meanwhile, the Group considers climate-related risks in its estimates and assumptions to repond to global initiatives on climate change and their implementation on the reduction of greenhouse gas emissions. Climate-related risks increase the uncertainty of estimates and assumptions considered in various items in the financial statements. Although climate-related risks do not have a material impact on current measurement, the Group is closely monitoring climate-related changes and developments, such as new climate-related legislation.

1) The judgment of management

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following note.

✓ Note 15 : Scope of consolidation - whether the Group has de facto control over an investee

2) The uncertainty of assumptions and estimates

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the reporting period is included in the following notes:

- ✓ Note 24 : Measurement of defined benefit obligations key actuarial assumptions;
- ✓ Notes 25 and 44 : Recognition and measurement of provisions and contingencies key assumptions about the likelihood and magnitude of an outflow of resources; and
- ✓ Note 40 : Non-current financial assets at fair value through other comprehensive income significant unobservable input.

2. Basis of Preparation, Continued

(4) Use of estimates and judgments, Continued

3) Measurement of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements, including Level 3 fair values, and reports directly to the CFO.

The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of KIFRS, including the level in the fair value hierarchy in which such valuations should be classified.

When measuring the fair value of an asset or a liability, the Group uses market observable data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

- ✓ Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability are categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. The Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following note:

✓ Note 40 : Risk management

3. Changes in accounting policies

(1) New and amended standards adopted by the Group

The Group has adopted the following new standards and amendments to standards, including any consequential amendments to other standards, for annual reporting periods beginning on or after January 1, 2023.

1) Amendment to KIFRS 1001 Presentation of Financial Statements - Disclosure of Accounting Policies

The amendments to KIFRS 1001 define and require entities to disclose their material accounting policy information (being information that, when considered together with other information included in an entity's financial statements, can reasonably be expected to influence decisions that the primary users of financial statements make on the basis of those financial statements). The amendments had no material significant impact on the Group's consolidated financial statements.

3. Changes in accounting policies, Continued

(1) New and amended standards adopted by the Group, Continued

2) Amendment to KIFRS 1001 *Presentation of Financial Statements – Disclosure of gain or loss on valuation of financial liabilities subject to adjustment of exercise price*

The amendments require entities to disclose the carrying amount of financial liabilities and gains and losses in relation thereto if all or part of the instrument is classified as a financial liability under which the exercise price is adjusted according to changes in the issuer's stock price. These amendments had no material impact on the Group's consolidated financial statements.

3) Amendment to KIFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments had no material impact on the Group's consolidated financial statements.

4) Amendment to KIFRS 1012 *Income Taxes – Deferred Tax related to Assets and Liabilities arising from a Single Transaction*

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendment had no material impact on the Group's consolidated financial statements.

5) KIFRS 1117 Insurance Contract

KIFRS 1117 *Insurance Contracts replaces* KIFRS 1104 *Insurance Contracts.* The amedments estimate future cash flows of an insurance contract and measure insurance liabilities using discount rates applied with assumptions and risks at the measurement date. The entity recognizes insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual period. In addition, investment components (surrender/maturity value) repaid to a policyholder, regardless of the occurrence of an an insured event, are excluded from insurance revenue, and insurance financial income or expense and the investment income or expenses are presented separately to enable users of the information to understand the sources of income or expenses. The amendment had no material impact on the Group's consolidated financial statements.

6) KIFRS 1012 Income Taxes – International Tax Reform – Pillar Two Model Rules

The amendments to KIFRS 1012 have been introduced in response to the OECD's BEPS Pillar Two Model Rules and include a mandatory temporary exception to the accounting treatement of deferred taxes arising from the jurisdictional implementation of the Pillar Two Model Rules and disclosure requirements for affected entities in relation to the current income taxes. The amendment had no material impact on the Group's consolidated financial statements.

3. Changes in accounting policies, Continued

(2) New standards and interpretations not yet adopted by the Group

The following new accounting standards and interpretations have been issued but not yet effective and have not been early adopted by the Group for the year ended December 31, 2023.

1) Amendments to KIFRS 1001 *Presentation of Financial Statements – Classification of Liabilities as Current or Non-current, Non-current Liabilities with Covenants*

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. In addition, covenants that an entity is required to comply with after the end of the reporting period would not affect classification of a liability as current or non-current at the reporting date. When an entity classifies a liability that is subject to the covenants which an entity is required to comply with within twelve months of the reporting date as non-current at the end of the reporting period. The amendments will be affective for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is currently assessing the impact of these amendments on its consolidated financial statements.

2) Amendments to KIFRS 1007 Statement of Cash Flows, KIFRS 1107 Financial Instruments: Disclosures

- Supplier finance arrangements

When applying supplier finance arrangements, an entity shall disclose information about its supplier finance arrangements that enables users of financial statements to assess the effects of those arrangements on the entity's liabilities and cash flows and on the entity's exposure to liquidity risk. The amendments will be affective for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is currently assessing the impact of these amendments on its consolidated financial statements

3) Amendments to KIFRS 1116 Leases - Lease Liability in a Sale and Leaseback

When subsequently measuring lease liabilities arising from a sale and leaseback, a seller-lessee shall determine lease payments or revised lease payments in a way that the seller-lessee would not recognize any amount of the gain or loss that relates to the right of use retained by the seller-lessee. The amendments will be effective for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The amendments are not expected to have a material impact on the Group's consolidated financial statements.

4) Amendments to KIFRS 1001 Presentation of Financial Statements – Disclosure of Virtual Assets

The entities should separately disclose information related to holding virtual assets, holding them on behalf of the customers, and issuing them. The amendments will be effective for annual reporting periods beginning on or after January 1, 2024. The amendments are not expected to have a material impact on the Group's consolidated financial statements.

4. Material Accounting Policies

The material accounting policies applied by the Group in preparation of its consolidated financial statements are included below. The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements, except those as described in Note 3.

(1) Consolidation

1) Business combinations

Business combinations are accounted for by applying the acquisition method, except for combinations of business entities or businesses that are under the same control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities. The costs to issue debt or equity securities are recognized in accordance with KIFRS 1032, *Financial Instruments: Presentation* and KIFRS 1109, *Financial Instruments: Recognition and Measurement*.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not remeasured and settlement is accounted for within equity.

Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards relate to pre-combination service.

4. Significant Accounting Policies, Continued

(1) Consolidation, Continued

2) Non-controlling interests (NCI)

NCI are measured at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

3) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

4) Loss of control

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

5) Interests in equity-accounted investees

The Group's interests in equity-accounted investees comprise interests in associates and joint ventures.

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and joint ventures are accounted for using the equity method. They are recognized initially at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and OCI of equity-accounted investees, until the date on which significant influence or joint control ceases.

4. Material Accounting Policies, Continued

(1) Consolidation, Continued

6) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

7) Business combination under common control

For business combinations arising from transfers of interests in the entities that are under common control, the assets and liabilities acquired are recognized at the carrying amounts recognized previously in the Group controlling shareholder's consolidated financial statements. The components of equity of the acquired entities are presented in the same components within the Group's equity except that any contributed capital of the acquired entities is recognized as part of share premium.

(2) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

(3) Inventories

The cost of inventories is based on the moving average principle, and includes expenditures for acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Inventories are measured at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, are recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

4. Material Accounting Policies, Continued

(4) Non-derivative financial assets

1) Recognition and initial measurement

Trade receivable and issued debt securities are initially recognized at the time of issue. Other financial assets or financial liabilities are recognized at the time of the Group became a contracting party.

Except for trade receivables that do not contain significant financing components, financial assets or financial liabilities are measured at fair value at the time of first recognition. Financial assets in case of not financial asset or financial liability at fair value through profit or loss, the transaction costs directly related to the issue are added or subtract to fair value. Trade receivables that do not contain significant financing components are measured at transaction price.

2) Classification and subsequent measurement

Financial assets are measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) when initially recognized.

Financial assets are not reclassified unless there is a change in business model. If the Group changes a business model, all financial assets are reclassified at the time of first reporting period after the change.

Financial assets are measured at amortized cost if they meet both of the following conditions and are not designated as at fair value through profit or loss (FVTPL):

- it is held within a business model that is intended to collect contractual cash flows; and

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments are measured at fair value through other comprehensive income (FVOCI) if they meet both of the following conditions and are not designated as at fair value through profit or loss (FVTPL):

- it is held within a business model that is achieved by both collecting contractual cash flows and selling financial assets; and

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

- 4. Material Accounting Policies, Continued
 - (4) Non-derivative financial assets, Continued

2) Classification and subsequent measurement, Continued

On initial recognition of an equity instrument that is not held for trading, the Group may irrevocably elect to present subsequent changes in the fair value of that investment in other comprehensive income. This election is made by investment-by-investment basis.

As described above, financial assets not measured at amortized cost or at fair value through other comprehensive income (FVOCI) are measured at fair value through profit or loss (FVTPL). This includes all derivative financial assets. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the measurement requirements to be measured at amortized cost or at fair value through other comprehensive income (FVOCI) as at fair value through profit or loss (FVTPL) if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

The Group evaluates the objectives of business model in which financial assets are held at a portfolio level because this best reflects the way the business is managed and information is provided to management. This information considered includes:

- stated accounting policies and objective about portfolio and the operation of these policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realizing cash flows through the sale of the assets;

- how the performance of the portfolio is evaluated and reported to the Group's management;

- The risk that affects the performance of the business model (and the financial assets held within that business model) and, in particular, how those risks are managed;

- compensation to management (e.g. based on the fair value of the assets being managed or on the basis of the contractual cash flows being received); and

- the frequency, volume and timing of sales of financial assets in prior periods, the reasons for such sales and expectations about future sales activity. For this purpose, transfers of financial assets to third parties in transactions that do not meet the derecognizing requirements are not considered for sale.

A portfolio of financial assets that meets the definition of trading or whose performance is valued at fair value through profit or loss is measured at fair value through profit or loss.

Financial assets: An assessment of whether contractual cash flows are solely payments of principal and interest

The principal is defined as the fair value at the initial recognition of the financial assets. Interest is comprised of time value of money, value for the credit risk associated with principal and another cost of basic lending risk and margin.

4. Material Accounting Policies, Continued

(4) Non-derivative financial assets, Continued

When assessing whether contractual cash flows consist solely of payments for principal and interest, the Group takes into account contractual terms. If the financial assets include contractual terms that change the timing or amount of cash flows in the contract, it is necessary to determine whether the cash flows that may occur during the period of the financial assets consist solely of principal payments.

The Group considers the followings:

- conditions that change the amount or timing of cash flows;
- provision to adjust contractual nominal interest rate, including variable interest rate characteristics;
- characteristics of repayment and maturity extension; and
- terms that limit the Group's claim to cash flows arising from a particular asset.

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable compensation for early termination of the contract.

Additionally, for a financial asset acquired at a discount or premium to its contractual par value, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

Financial assets at fair value through profit or loss (FVTPL)	These assets are subsequently measured at fair value. Net gain or loss, including interest and dividend income, is recognized in profit or loss. Please refer to Note 4. (5) for derivatives designated as hedging instruments.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. Amortized cost is reduced by impairment loss. Interest income, foreign currency translation gains and losses and impairment are recognized in profit or loss. The gain or loss on derecognition is also recognized in profit or loss.
Financial liabilities at fair value through other comprehensive income (FVOCI)	These assets are subsequently measured at fair value. Interest income calculated using the effective interest method and foreign currency translation gains and losses are recognized in profit or loss. Other net gain or loss is recognized in other comprehensive income. The gain or loss accumulated in other comprehensive income is reclassified to profit or loss on derecognition.
Equity instruments at fair value through other comprehensive income (FVOCI)	These assets are subsequently measured at fair value. Dividends are recognized in profit or loss if the dividends do not clearly represent collection of investment costs. Other net gain or loss is recognized in other comprehensive income and is never reclassified to profit or loss.

4. Material Accounting Policies, Continued

(4) Non-derivative financial assets, Continued

3) Derecognition of financial assets

The Group derecognizes non-derivative financial assets when the contractual rights to the cash flows from the financial asset expire, or the Group transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in a transferred financial asset that is created or retained by the Group is recognized as a separate asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

4) Offsetting a financial asset and a financial liability

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.

(5) Derivative financial instruments, including hedge accounting

The Group holds derivative financial instruments to hedge foreign exchange and interest rate exposures. An embedded derivative, if a host contract is not a financial asset and meets specified conditions, is accounted for separately from the host.

Derivatives are measured at fair value at initial recognition. It is measured at fair value after initial recognition, and the change is generally recognized in profit or loss.

The Group designates specific derivatives as hedging instruments to hedge the variability of cash flows associated with highly probable future forecast transactions arising from changes in exchange rates and interest rates.

4. Material Accounting Policies, Continued

(5) Derivative financial instruments, including hedge accounting, Continued

At the inception of the hedge, the Group documents the purpose and strategy of risk management to perform the hedge. The Group documents the economic relationship between the hedged item and the hedging instrument, including whether changes in the cash flows of the hedged item and the hedging instrument are expected to be offset by each other.

Cash flow hedge

When derivatives are designated as cash flow hedging instruments, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in the hedging reserve in equity. The effective portion of changes in the fair value of the derivatives which recognized in other comprehensive income is limited to cumulated changes in fair value of hedged item from inception of the hedge determined based on the present value. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

The Group designates only changes in the fair value of the spot element of future exchange transactions as a hedging instrument in cash flow hedge relationship. The change in the fair value of the forward element ('forward point') of future exchange transaction is accounted for separately as cost of hedging and recognized in cost of hedging of equity.

If a hedged forecast transaction subsequently results in the recognition of a non-financial asset such as inventories, the Group removes that amount from the cash flow hedge reserve and includes it directly in the initial cost of the assets upon the recognition.

For other forecast transaction, the cumulated cash flow hedge reserves and costs of hedging are reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged expected future cash flows affect profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively.

If the hedging transaction is a transaction which recognizes non-financial items, in case the hedging accounting is discontinued, cumulated hedging reserves and cost of hedging are left in equity items until that amount is included in the cost of non-financial items when they are initially recognized. For other cash flow hedging transaction not covered in this case, cash flow hedge reserves and cost of hedging are reclassified to profit or loss as a reclassification adjustment in the periods during which the hedged expected future cash flows affect profit or loss.

If the hedged future cash flows are no longer expected to occur, then the amounts that have been accumulated in the hedging reserve and the cost of hedging reserve are immediately reclassified to profit or loss.

4. Material Accounting Policies, Continued

(6) Impairment of financial assets

1) Financial assets and contract assets

The Group recognizes loss allowance for expected credit losses on the following assets.

- Amortized cost of a financial asset
- Fair value through other comprehensive income of financial assets

The Group measures loss allowance for expected credit losses, except for the following financial assets measured at the expected credit loss of 12 months.

- Debt securities whose credit is determined to be at low risk at the end of the reporting period

- Other debt securities and bank deposits that do not have a significant increase in credit risk (i.e. default risk arising over the expected life of the financial asset)

The Group has chosen to measure the loss allowance at an amount equal to lifetime expected credit losses for the trade receivables, contract assets and lease receivables that contain a significant financing component.

When determining whether the credit risk of a financial asset has significantly increased since the initial recognition and when estimating expected credit losses, the Group considers information that can be used and reasonably supported, without undue cost or effort.

Expected credit loss is a probability weighted estimate of credit loss. Credit loss is measured as the present value of all cash deficiency (i.e. the difference between all contract cash flows that are expected to be paid and all contract cash flows that are expected to be received). Expected credit losses are discounted at the effective interest rate of the financial asset.

4. Material Accounting Policies, Continued

(6) Impairment of financial assets, Continued

3) Credit-impaired financial assets

At the end of each reporting period, the Group assesses the financial assets measured at amortized cost and other comprehensive income - whether the creditworthiness of the debt securities measured at fair value has been impaired. If there is more than one event that adversely affects the estimated future cash flows of a financial asset, the financial asset is impaired.

The evidence that the credit of a financial asset is impaired includes the following observable information:

- significant financial difficulties of issuer or borrower;

- breach of contract, such as default or delinquency;

- inevitable mitigation of initial borrowing conditions for economic or contractual reasons related to the borrower's financial difficulties;

- possibility of bankruptcy of borrowers or other possibility of financial restructuring; and

- due to financial difficulties, the active market for the financial assets is extinguished.

4) Presentation of provision for credit loss on statement of financial position

The allowance for losses on financial assets measured at amortized cost is deducted from the carrying amount of the asset.

For debt measured at fair value through other comprehensive income, the allowance for losses is recognized in other comprehensive income instead of reducing the carrying amount of the asset.

5) Write-off

If an entity does not reasonably expect to recover all or part of the contractual cash flows of a financial asset, the asset is derecognized. For individual customers, on the basis of their past experience with the recovery of similar assets, the Group removes the carrying amount if the financial asset is determined to be impaired, evaluates whether there is a reasonable expectation for the recovery of the entity's customers, and evaluates the timing and amount separately. The Group has no expectation that the proceeds will be recovered significantly. However, any financial assets that are derecognized may be subject to recovery activities in accordance with the Group's procedures for recovering the amount due.

4. Material Accounting Policies, Continued

(7) Property, plant and equipment

Property, plant and equipment are initially measured at cost and after initial recognition and are carried at cost less accumulated depreciation and accumulated impairment losses. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed. A component that is significant compared to the total cost of property, plant and equipment is depreciated over its separate useful life.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized in profit or loss.

The estimated useful lives of the Group's assets are as follows:

	Useful lives (years)
Buildings	8 ~ 30
Structures	8 ~ 30
Machinery	6 ~ 24
Vehicles	4
Right-of-use assets	2 ~ 30
Other property, plant and equipment ("the other PP&E")	4

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

4. Material Accounting Policies, Continued

(8) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

	Useful lives (years)
Computer software	5
Development costs	5
Leasehold rights	8 ~ 10
Others	5 ~ 20

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

1) Research and development

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

2) Subsequent expenditures

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

4. Material Accounting Policies, Continued

(9) Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. The Group immediately recognizes other borrowing costs as an expense. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group shall determine the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate shall be the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period shall not exceed the amount of borrowing costs incurred during that period.

(10) Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

Government grants whose primary condition is that the Group purchases, constructs or otherwise acquires long-term assets are deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the life of a depreciable asset as a reduction to depreciation expense.

Government grants which are intended to compensate the Group for expenses incurred shall be recognized as other income in profit or loss over the periods in which the Group recognizes the related costs as expenses.

4. Material Accounting Policies, Continued

(11) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, inventories, deferred tax assets and non-current assets held for sale, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset, if it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflect current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

4. Material Accounting Policies, Continued

(12) Leases

1) Right-of-use assets

The Group recognizes right-of-use assets at the commencement date of the lease. Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term. Right-of-use assets are subject to impairment.

2) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including insubstance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

3) Short-term leases and leases of low-value assets

The Group has elected to apply the practical expedient of not recognizing right-of-use assets and lease liabilities for the short-term leases with a lease term of less than 12 months and leases of low-value assets, including IT-equipment. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

4. Material Accounting Policies, Continued

(13) Non-current assets held for sale

Non-current assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as non-current assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

A non-current asset that is classified as held for sale or part of a disposal group classified as held for sale is not depreciated (or amortized).

(14) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss 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.

1) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the acquisition are recognized in profit or loss as incurred.

2) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

3) Elimination of financial liabilities

The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires). If the contractual terms of the financial liability have changed and the cash flows have changed substantially, the Group will derecognize the existing liability and recognize the new financial liability at fair value on the basis of the new contract.

On derecognition of a financial liability, the difference between the carrying amount and the consideration paid (including transferred non-cash assets or liabilities assumed) is recognized in profit or loss.

- 4. Material Accounting Policies, Continued
 - (15) Employee benefits

1) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

2) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the period in which the employees render the related service and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods, less the fair value of any related assets. Remeasurements are recognized in profit or loss in the period in which they arise.

3) Retirement benefits: defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method.

The discount rate is the yield at the reporting date on corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes all actuarial gains and losses arising from actuarial assumption changes and experiential adjustments in other comprehensive income when incurred.

When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Group recognizes an asset, to the extent of the total of cumulative unrecognized past service cost and the present value of any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

Past service costs which are the change in the present value of the defined benefits obligation for employee service in prior periods, resulting in the current period from the introduction of, or change to post-employment benefits, is recognized as an expense on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits are already vested immediately following the introduction of, or changes to, a defined benefit plan, the Group recognizes the past service cost immediately.

4. Material Accounting Policies, Continued

(16) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement shall be recognized when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement shall be treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

1) Provision for employment benefits

The Group determines the provision for employment benefits as the incentive payments based on the results of the individual performance evaluation or management assessment.

2) Provision for Renewable Portfolio Standard ("RPS")

As the Group has obligation to produce and supply certain amount of energies from renewable energy sources in accordance with the *Act on the Promotion of the Development and Use of New and Renewable Sources of Energy*, provision for the RPS is recognized at the end of reporting period to the extent of obligations not yet fulfilled as of the reporting date.

3) Provision for greenhouse gas emission

In accordance with the *Act on the Allocation and Trading of Greenhouse Gas Emission Permits*, the Group calculates carbon emissions based on annual power generation. For the portion that exceeds the free allocation received from the government, the Group recognized provision for the amount corresponding to the external purchase and additional provisions.

4) Provision for litigation

The Group recognized a provision for the litigation as an outflow of resources embodying economic benefits is probable and reliably estimable.

4. Material Accounting Policies, Continued

(17) Foreign currencies

1) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of the Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency using the reporting date's exchange rate. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currencies that the fair value was determined.

Foreign currency differences arising on retranslation of monetary items are recognized in profit or loss, except for differences arising on the retranslation of monetary items at settlement, translation of foreign operations, or a financial liability designated as cash flow hedges, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

2) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the closing rate.

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

3) Translation of net investments on foreign operations

Foreign exchange gains or losses arising from a monetary item receivable from or payable to a foreign operation, the settlement of which is neither planned nor likely to occur in the foreseeable future and which in substance is considered to form part of the net investment in the foreign operation, are recognized in other comprehensive income in the translation reserve.

4. Material Accounting Policies, Continued

(18) Equity capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares and share options are recognized as a deduction from equity, net of any tax effects.

Preferred shares are classified as equity if they are not required to be redeemed or redeemed only at the Group's decision and the payment of dividends is determined on the discretion of the Group. Dividend is recognized when it is approved at the shareholders' meeting. Preferred shares that are eligible for collection of determined or determinable amount on or after a specified date or preferred shares to be mandatorily redeemed are classified as liabilities. Related dividends are recognized in profit or loss at the point in time of occurrence as interest expenses.

When the Group repurchases its contributed capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

(19) Revenue from contracts with customers

In accordance with *KIFRS 1115 Revenue from Contracts with Customers*, the Group recognizes revenue by applying the five-step approach (Step 1: Identify the contract(s) with a customer, Step 2: Identify the performance obligations in the contract, Step 3: Determine the transaction price, Step 4: Allocate the transaction price to the performance obligations in the contract, and Step 5: Recognize revenue when the entity satisfied a performance obligation). Revenue is measured based on the consideration set forth in the contract with the customer, excluding amounts collected on behalf of third parties. The Group also recognizes revenue when control of a good or service transfers to a customer.

1) Identification of performance obligations in the contract

The Group aims to develop and operate electric power resources, power generation, transmission, conversion, distribution, and related operations.

On the other hand, the power supply is identified as a single performance obligation as a series of distinct goods or services. In addition to the power supply, the Group also performs power generation by-products, O&M and others through contracts with customers and identifies performance obligations that are distinct from each contract.

2) Variable consideration

Consideration received from customers according to contracts with customers may include variable amount. The Group estimates the variable consideration using an expected value method that it expects to better predict the consideration to be entitled to and recognizes revenue by including variable consideration in the transaction price only to those amounts that are highly probable of not reversing a significant portion of the cumulative revenue recognized when the uncertainty associated with the variable consideration is resolved.

4. Material Accounting Policies, Continued

(19) Revenue from contracts with customers, Continued

3) Performance obligations satisfied over time

The Group provides customers with services such as EPC business and O&M over time. The Group recognizes revenue based on the progress made on a reasonable basis.

The Group may recognize revenue on a percentage-of-completion basis when the Group meets one of following criteria:

- the customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity performs

- the entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or

- the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date.

4) Allocation of transaction price to performance obligations

The Group allocates the transaction price to a number of performance obligations identified in a single contract on a relative stand-alone selling price basis, and this allocation has no significant impact on the Group's revenue.

(20) Finance income and finance expenses

The Group's finance income and finance expenses consist of:

- interest income;
- interest expenses;
- dividend income;
- net gain or loss on financial assets at fair value through profit or loss;
- foreign exchange gains and losses on financial assets and financial liabilities;

- impairment losses (or reversals of impairment losses) arising from investments in debt instruments at amortized cost or fair value through other comprehensive income;

- hedge ineffectiveness recognized in profit or loss; and

- reclassified net gain or loss previously recognized in other comprehensive income under cash-flow hedging accounting for interest risk and foreign exchange risk on borrowings.

Interest income or interest expense was recognized using the effective interest rate method. Dividend income is recognized when the Group is entitled to the dividend.

The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to the gross carrying amount of the financial asset or the amortized cost of the financial liability.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

4. Material Accounting Policies, Continued

(21) Income taxes

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

1) Current tax

Current tax is the expected tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the year since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit.

Current tax asset and current tax liability are offset only when the following conditions are met:

- the Group legally holds an enforceable right to offset the recognized amount; and
- has an intention to settle in a net amount or settle the liability while realizing the asset.

2) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. A deferred tax liability is recognized for all taxable temporary differences. A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which they can be utilized. However, deferred tax is not recognized for the following temporary differences: taxable temporary differences arising on the initial recognition of goodwill, or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit or loss nor taxable income.

When future taxable income that tax deficit, tax deduction, and deductible temporary differences can be used is probable, within this scope, deferred tax assets are recognized for unused tax deficit and tax credit carry-forwards, and deductible temporary differences. The future taxable income is determined by the reversal of the temporary difference to be added. If the temporary difference to be added is not sufficient to fully recognize the deferred tax asset, the reversal of current temporary differences and the business plan of the subsidiaries of the Group are considered.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis. If there are any additional income tax expense incurred in accordance with dividend payments, such income tax expense is recognized when liabilities relating to the dividend payments are recognized.

4. Material Accounting Policies, Continued

(22) Earnings per share

KOWEPO presents basic and diluted earnings per share data for its ordinary shares. Basic earnings per share is calculated by dividing profit attributable to ordinary shareholders of KOWEPO by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held.

(23) Greenhouse gas emission rights and obligations

With the enforcement of the *Act on the Allocation and Trading of Greenhouse-Gas Emissions Permits* in 2015, the Group applies the following accounting policies for emissions rights and obligations.

1) Emissions rights

Greenhouse gas emissions rights consist of the allowances received free of charge from the government and the ones purchased. The cost of the emissions rights includes expenditures arising directly from the acquisition and any other costs incurred during normal course of the acquisition.

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 emissions rights are classified as current assets. Emissions rights recorded as intangible assets are initially measured at cost and substantially remeasured at cost less accumulated impairment losses.

Greenhouse gas emission rights are derecognized on submission to the government or when no future economic benefits are expected from its use or disposal.

2) Emissions obligations

Emissions obligations are the Group's present legal obligation to submit the emissions allowances to the government and recognized when an outflow of resources is probable and a reliable estimate can be made of the amount of the obligation. Emissions obligations are measured as the sum of the carrying amount of the allocated rights that will be submitted to the government and the best estimate of expenditure required to settle the obligation at the end of the reporting period for any excess emission. Emission liabilities are eliminated when submitting to the government.

5. Operating Segment

Group did not disclose separate business segment information because the reporting segment in accordance with KIFRS 1108 *Operating Segments* corresponds to a single segment. Sales attributable to KEPCO, the major customer, are ₩6,840,418 million and ₩8,033,556 million for each of the two years in the period ended December 31, 2023, respectively.

6. Classification of Financial Instruments

(1) Classification of financial assets as of December 31, 2023 and 2022 is as follows:

(i) As of December 31, 2023

		Financial assets at fair value through profit or loss	Financial assets at amortized cost	Financial assets at fair value through other comprehensive income	Derivative assets (applying hedge accounting)	Total
Current financial assets:			77 (00			77 (00
Cash and cash equivalents Current financial assets	₩	-	77,602	-	-	77,602
Short-term loans		-	8,560	-	-	8,560
Short-term financial						
instruments Derivative assets		- 15	34,513	-	- 78,769	34,513 78,784
Trade and other		10			10,107	
receivables, net			781,823			781,823
		15	902,498		78,769	981,282
Non-current financial assets:						
Non-current financial assets Non-current financial assets at fair value through other comprehensive income				2,235,536	_	2,235,536
Non-current financial assets at fair value		7 410		2,200,000		
through profit or loss		7,412	-	-	-	7,412
Long-term loans Non-current trade and		-	31,738	-	-	31,738
other receivables, net		-	13,050	-	-	13,050
		7,412	44,788	2,235,536		2,287,736
	₩	7,427	947,286	2,235,536	78,769	3,269,018

6. Classification of Financial Instruments, Continued

(1) Classification of financial assets as of December 31, 2023 and 2022 is as follows, Continued:

(ii) As of December 31, 2022

		Financial assets at fair value through profit or loss	Financial assets at amortized cost	Financial assets at fair value through other comprehensive income	Derivative assets (applying hedge accounting)	Total
Current financial assets:						
Cash and cash equivalents Current financial assets	₩	-	83,596	-	-	83,596
Short-term loans		-	6,248	-	-	6,248
Short-term financial instruments Derivative assets		-	43,169	-	- 59,907	43,169 59,907
Trade and other receivables, net		-	1,195,533	-	-	1,195,533
			1,328,546		59,907	1,388,453
Non-current financial assets:						
Non-current financial assets						
Non-current financial assets at fair value through other comprehensive						
income Non-current financial assets at fair value		-	-	2,283,318	-	2,283,318
through profit or loss		7,412	-	-	-	7,412
Long-term loans Non-current derivative		-	61,429	-	-	61,429
assets Non-current trade and		-	-	-	47,502	47,502
other receivables, net			9,199			9,199
		7,412	70,628	2,283,318	47,502	2,408,860
	₩	7,412	1,399,174	2,283,318	107,409	3,797,313

6. Classification of Financial Instruments, Continued

(2) Classification of financial liabilities as of December 31, 2023 and 2022 is as follows:

(i) As of December 31, 2023

In millions of Korean won		Financial liabilities at fair value through profit or loss	Financial liabilities recognized at <u>amortized cost</u>	Derivative liabilities (applying hedge accounting)	Total
Current financial liabilities:					
Trade and other payables	₩	-	704,303	-	704,303
Current financial liabilities					
Borrowings		-	105,630	-	105,630
Debentures		-	1,094,805	-	1,094,805
Derivative liabilities		88			88
		88	1,904,738	-	1,904,826
Non-current financial liabilities:					
Non-current trade and other payables		-	425,669	-	425,669
Non-current financial liabilities					
Borrowings		-	85,576	-	85,576
Debentures		-	4,438,608	-	4,438,608
Non-current derivative liabilities				4,681	4,681
			4,949,853	4,681	4,954,534
	₩	88	6,854,591	4,681	6,859,360
	-				

6. Classification of Financial Instruments, Continued

(2) Classification of financial liabilities as of December 31, 2023 and 2022 is as follows, Continued:

(ii) As of December 31, 2022

In millions of Korean won		Financial liabilities at fair value through profit or loss	Financial liabilities recognized at <u>amortized cost</u>	Derivative liabilities (applying hedge accounting)	Total
Current financial liabilities:					
Trade and other payables	₩	-	909,927	-	909,927
Current financial liabilities					
Borrowings		-	59,777	-	59,777
Debentures		-	799,904	-	799,904
Derivative liabilities		3,527	-		3,527
		3,527	1,769,608	-	1,773,135
Non-current financial liabilities:					
Non-current trade and other payables		-	498,812	-	498,812
Non-current financial liabilities					
Borrowings		-	88,642	-	88,642
Debentures		-	4,964,163	-	4,964,163
Non-current derivative liabilities		-	-	10,064	10,064
		-	5,551,617	10,064	5,561,681
	₩	3,527	7,321,225	10,064	7,334,816
	-				

6. Classification of Financial Instruments, Continued

(3) Classification of comprehensive income (loss) from financial instruments for each of the two years in the period ended December 31, 2023 is as follows:

Туре	Description		2023	2022
Financial assets at	Interest income	₩	18,326	9,244
amortized cost	Gain (loss) on foreign currency transactions and translations, net		(958)	5,087
Financial assets at fair	Gain (loss) on valuation of derivative instruments, net		(750)	1,963,95
value through other	(equity, before tax)		(47,782)	4
comprehensive	Dividend income			100 170
income			68,567	103,173
Financial assets at fair	Loss on valuation of derivative instruments, net		(73)	(3,527)
value through profit or loss	Gain on transactions of derivative instruments, net		2,533	7,647
Fair value hedge	Gain on change in the unrealized fair value of derivative			
derivative assets	instruments, net		37,420	34,130
	Loss on valuation of derivative instruments, net			
	(equity, before tax)		(1,367)	(21,717)
	Gain on transaction of derivative instruments, net		15,668	48,549
Financial liabilities	Loss on foreign currency transactions and translations, net		(61,634)	(146,050)
measured at	Interest expense of borrowings and debentures	I	(145,704)	(134,004)
amortized cost	Interest expense of lease liabilities		(11,757)	(12,441)
	Other interest expense		(88)	(53)

7. Cash and Cash Equivalents and Short-term Financial Instruments

(1) Cash and cash equivalents as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023	2022
Cash	₩	1	1
Other demand deposits Short-term financial instruments classified as cash		77,078	83,182
equivalents		523	413
	₩	77,602	83,596

(2) Short-term financial instruments restricted in use as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023	2022
Short-term financial instruments (*1) Cash and cash equivalents (*2)	₩	30,000 5,044	40,000 4,648
	₩	35,044	44,648

(*1) Restriction on withdrawal related to 'win-win growth program' for small and medium enterprises

(*2) Restriction on withdrawal related to the borrowing pledged as collateral

8. Trade and Other Receivables

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

(i) As of December 31, 2023

In millions of Korean won	G	ross amount	Allowance for doubtful accounts	Present value discount	Book value
Current assets:					
Trade receivables	₩	539,420	-	-	539,420
Other receivables		242,624	-	(221)	242,403
		782,044	-	(221)	781,823
Non-current assets:					
Trade receivables		1,278	(1,278)	-	-
Other receivables		13,942	(96)	(796)	13,050
		15,220	(1,374)	(796)	13,050
	₩	797,264	(1,374)	(1,017)	794,873

(ii) As of December 31, 2022

In millions of Korean won	_(Gross amount	Allowance for doubtful accounts	Present value discount	Book value
Current assets:					
Trade receivables	₩	1,043,538	-	-	1,043,538
Other receivables		152,214	-	(219)	151,995
		1,195,752	-	(219)	1,195,533
Non-current assets:					
Trade receivables		1,278	(1,278)	-	-
Other receivables		9,780	(95)	(486)	9,199
		11,058	(1,373)	(486)	9,199
	₩	1,206,810	(1,373)	(705)	1,204,732

8. Trade and Other Receivables, Continued

(2) Details of other receivables as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In millions of Korean won		Gross amount	Allowance for doubtful accounts	Present value discount	Book value
Current assets:					
Account receivables	₩	75,058	-	-	75,058
Accrued income		156,500	-	-	156,500
Guarantee		11,066	-	(221)	10,845
		242,624	-	(221)	242,403
Non-current assets:					
Account receivables		96	(96)	-	-
Guarantee		13,846	-	(796)	13,050
		13,942	(96)	(796)	13,050
	₩	256,566	(96)	(1,017)	255,453

(ii) As of December 31, 2022

In millions of Korean won	-	Gross amount	Allowance for doubtful accounts	Present value discount	Book value
Current assets:					
Account receivables	₩	69,035	-	-	69,035
Accrued income		66,970	-	-	66,970
Guarantee		16,209	-	(219)	15,990
	_	152,214	-	(219)	151,995
Non-current assets:	_				
Account receivables		95	(95)	-	-
Guarantee		9,685	-	(486)	9,199
	-	9,780	(95)	(486)	9,199
	₩	161,994	(95)	(705)	161,194

8. Trade and Other Receivables, Continued

(3) The aging analysis of trade and other receivables as of December 31, 2023 and 2022 is as follows:

in millions of Korean won		Trade receivables			Other receivables			
		2023		2022		2023		2022
Current	₩	539,420	₩	1,043,538	₩	256,470	₩	161,899
Past due but not impaired receivables:	_		-		_		_	
Within 60 days past due		-		-		-		-
60 to 90 days past due		-		-		-		-
90 to 120 days past due		-		-		-		-
120 days to 1 year past due		-		-		-		-
More than 1 year past due		-		-	_	-	_	-
		-	_	-	_	-	_	-
Receivables impaired individually		1,278	_	1,278		96	_	95
	₩	540,698	₩_	1,044,816	₩_	256,566	₩_	161,994

(4) Changes in allowance for doubtful accounts on trade and other receivables for each of the two years in the period ended December 31, 2023 are as follows:

in millions of Korean won		Trade receivables			Other receivables				
		2023		2022		2023		2022	
Beginning balance	₩	1,278	₩	1,278	₩	9	5₩		89
Bad debt expenses		-		-			-		-
Others (*1)		-		-			1		6
Ending balance	₩	1,278	₩	1,278	₩	9	5₩		95

(*1) Others include the effect of recognition of currency translation differences.

9. Financial Assets at Fair Value through Other Comprehensive Income

(1) Financial assets at fair value through other comprehensive income as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In millions of Korean won			_	202	23
			_	Acquisition	
	Shares	Ownership		cost	Book value
Equity securities listed:					
PT Bayan Resources TBK (*1)	1,333,333,400	4.00%	₩	80,533	2,218,187
Equity securities unlisted:					
Korea Power Exchange (*2)	1,826,275	7.14%		9,131	16,936
KEPCO UHDE(*3)	-	-		-	-
HeeMang Sunlight Power Co., Ltd.	78,600				
Ltd.		8.33%		393	393
3i Powergen Inc. (*4)	-	15.00%		1,482	-
KEPCO Bylong Australia Pty., Ltd.					
(*5)	3,537,032	2.00%		6,135	-
Fire Guarantee (*6)	40	-		20	20
			₩	97,694	2,235,536

(*1) The Group has estimated the fair value by using the quoted market prices in active markets.

(*2) The Group has estimated the fair value by using the discounted cash flow method and has recognized the difference between its fair value and book value as gain or loss on valuation of financial assets at fair value through other comprehensive income in other comprehensive income or loss.

(*3) It was liquidated for the year ended December 31, 2023.

(*4) As a result of discontinued operations, the difference between the carrying amount and the recoverable amount is recognized as an impairment loss.

(*5) Financial assets at fair value through other comprehensive income held by KOWEPO Bylong Pty., Ltd. Which is subsidiary of the Group.

(*6) Financial assets at fair value through other comprehensive income held by KOWEPO Service Co., Ltd. Which is subsidiary of the Group.

9. Financial Assets at Fair Value through Other Comprehensive Income, Continued

(1) Financial assets at fair value through other comprehensive income as of December 31, 2023 and 2022 are as follows, Continued:

(ii) As of December 31, 2022

In millions of Korean won				202	22
			_	Acquisition	
	Shares	Ownership		cost	Book value
Equity securities listed:					
PT Bayan Resources TBK (*1)	1,333,333,400	4.00%	₩	80,533	2,265,200
Equity securities unlisted:					
Korea Power Exchange (*2)	1,826,275	7.14%		9,131	17,691
KEPCO UHDE	103,230	2.40%		516	14
HeeMang Sunlight Power Co., Ltd.	78,600				
Ltd.		8.33%		393	393
3i Powergen Inc. (*3)	-	15.00%		1,482	-
KEPCO Bylong Australia Pty., Ltd.					
(*4)	3,537,032	2.00%		6,135	-
Fire Guarantee (*5)	40	-		20	20
			₩	98,210	2,283,318

(*1) For the year ended December 31, 2022, the number of shares the Group holds changed from 133,333,340 to 1,333,333,400 due to share split and the Group has estimated the fair value by using the quoted market prices in active markets.

(*2) The Group has estimated the fair value by using the discounted cash flow method and has recognized the difference between its fair value and book value as gain or loss on valuation of financial assets at fair value through other comprehensive income in other comprehensive income or loss.

(*3) As a result of discontinued operations, the difference between the carrying amount and the recoverable amount is recognized as an impairment loss.

(*4) Financial assets at fair value through other comprehensive income held by KOWEPO Bylong Pty., Ltd. which is subsidiary of the Group.

(*5) Financial assets at fair value through other comprehensive income held by KOWEPO Service Co., Ltd. which is subsidiary of the Group.

9. Financial Assets at Fair Value through Other Comprehensive Income, Continued

(2) Changes in financial assets at fair value through other comprehensive income for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won	_	Beginning balance	Valuation	Disposal	Ending balance
Equity securities listed Equity securities unlisted(*1)	₩	2,265,200 18,118	(47,013) (769)	-	2,218,187 17,349
	₩	2,283,318	(47,782)	-	2,235,536

(*1) For the year ended December 31, 2023, equity securities unlisted are carried at the amount of loss on valuation due to the liquidation of KEPCO UHDE, and the accumulated other comprehensive income of W391,398 million related thereto was reclassified as retained earnings.

(ii) For the year ended December 31, 2022

In millions of Korean won	_	Beginning balance	Valuation	Ending balance
Equity securities listed Equity securities unlisted	₩	301,320 18,044	1,963,880 74	2,265,200 18,118
	₩	319,364	1,963,954	2,283,318

10. Financial Assets at Fair Value through Profit or Loss

(1) Financial assets at fair value through profit or loss as of December 31, 2023 and 2022 are as follows:

In millions of Korean won			202	2022	
		_	Acquisition		
	Ownership		cost	Book value	Book value
Equity securities unlisted:					
Nexpo Solar and others (*1)	20.00%	₩	7,412	7,412	7,412

(*1) As financial assets at fair value through profit or loss held by Haenaneum Energy Fund which is subsidiary of the Group, it consists of Nexpo Solar and 58 others.

(2) Changes in financial assets at fair value through profit or loss for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won	_	Beginning balance	Acquisition Valuation		Ending balance
Equity securities unlisted	₩	7,412	-	-	7,412

(ii) For the year ended December 31, 2022

In millions of Korean won	_	Beginning balance	Acquisition	Valuation	Ending balance
Equity securities unlisted	₩	7,412	-	-	7,412

11. Derivatives

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

In millions of Korean won		202	23	2022		
		Current	Non-current	Current	Non-current	
Derivative assets:						
Currency forward	₩	15	-	-	-	
Currency swap		78,769	-	59,907	47,502	
	₩	78,784	-	59,907	47,502	
Derivative liabilities:						
Currency forward	₩	88	-	3,527	-	
Currency swap		-	4,681	-	10,064	
	₩	88	4,681	3,527	10,064	

(2) Currency swap contracts as of December 31, 2023 are as follows:

In millions of Korean won, and thousands of USD and CHF

			Contra	act amounts		ct interest ate	Contract exchange
Туре	Counterparty	Period	Pay (KRW)	Receive	Pay (%)	Receive (%)	rate (in won)
Cash flow hedge	BNP Paribas KB Bank	2019~2024 2019~2024	111,841 111,841	CHF 100,000 CHF 100,000	1.778 1.778	0.125 0.125	1,118.41 1,118.41
	Korea Development Bank	2022~2025	128,560	USD 100,000	3.370	4.125	1,285.60
	Woori Bank KB Bank	2022~2025 2022~2025	128,560 128,560	USD 100,000 USD 100,000	3.370 3.370	4.125 4.125	1,285.60 1,285.60

(3) Currency forward contracts as of December 31, 2023 are as follows:

In millions of Korean won and thousands of USD

Туре	Counterparty	Contract Date	Maturity Date	Receive (KRW)	Purchase (USD)	Contract exchange rate (in won)
Trading	Woori Bank	2023-11-30	2024-01-03	6,440	5,000	1,287.95
purpose	NH Bank	2023-11-30	2024-01-03	4,119	3,200	1,287.15
	Woori Bank	2023-12-20	2024-01-22	6,487	5,000	1,297.30
	Woori Bank	2023-12-27	2024-01-29	6,461	5,000	1,292.20
	Mizuho Bank	2023-12-28	2024-02-02	6,446	5,000	1,289.25
	NH Bank	2023-12-28	2024-02-02	12,882	10,000	1,288.20

Contract amounts

11. Derivatives, Continued

(4) The gain (loss) on valuation and transaction of derivatives for each of the two years in the period ended December 31, 2023 is as follows:

(i) For the year ended December 31, 2023

In millions of Korean won

Туре	Valuation gain (loss) Type in profit or loss		Transaction gain in profit or loss	Other comprehensive loss (before tax)	
Currency forward	₩	(73)	2,533	-	
Currency swap		37,420	15,668	(1,367)	
	₩	37,347	18,201	(1,367)	

(ii) For the year ended December 31, 2022

In millions of Korean won

Туре		ation gain (loss) profit or loss	Transaction gain in profit or loss	Other comprehensive loss (before tax)		
Currency forward	₩	(3,527)	7,647	-		
Currency swap		34,130	48,549	(21,717)		
	₩	30,603	56,196	(21,717)		

The loss on valuation of derivative instruments using cash flow hedge accounting is recognized as accumulated other comprehensive income amounting to Ψ 6,716 million, net of tax, as of December 31, 2023.

12. Other Financial Assets

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

In millions of Korean won		202	23	202	22		
	_	Current	Non-current	Current	Non-current		
Loans	₩	8,560	31,738	6,248	61,429		
Short-term financial instruments Derivative assets Non-current financial assets at fair		34,513 78,784	-	43,169 59,907	47,502		
value through other comprehensive income		-	2,235,536	-	2,283,318		
Non-current financial assets at fair value through profit or loss		-	7,412	-	7,412		
	₩	121,857	2,274,686	109,324	2,399,661		

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

(i) As of December 31, 2023

In millions of Korean wor		Face value	Allowance for doubtful accounts	Present value discount	Foreign exchange adjustment	Book value
Short-term loans						
Loans for tuition	₩	8,667	-	(107)	-	8,560
		8,667	-	(107)	-	8,560
Long-term loans	-					
Loans for tuition		10,836	-	(2,576)	-	8,260
Others	-	56,880	(35,210)	-	1,808	23,478
	-	67,716	(35,210)	(2,576)	1,808	31,738
	₩	76,383	(35,210)	(2,683)	1,808	40,298

(ii) As of December 31, 2022

In millions of Korean wor	ז -	Face value	Allowance for doubtful accounts	Present value discount	Foreign exchange adjustment	Book value
Short-term loans Loans for tuition	₩	6,353	-	(105)	-	6,248
	-	6,353	-	(105)	-	6,248
Long-term loans	_					
Loans for tuition		13,474	-	(2,358)	-	11,116
Others	_	53,408	(4,467)	-	1,372	50,313
	_	66,882	(4,467)	(2,358)	1,372	61,429
	₩	73,235	(4,467)	(2,463)	1,372	67,677

13. Inventories

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

In millions of Korean won		2023	2022
Raw materials Supplies Inventories in transit Others	₩	206,235 60,123 120,727 732	181,018 66,765 268,107 600
	₩	387,817	516,490

There is no loss on valuation of inventories incurred as of December 31, 2023 and 2022.

14. Non-financial assets

Non-financial assets as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		202	3	202	22
	_	Current	Non-current	Current	Non-current
Advance payments	₩	995	-	4,405	-
Prepaid expenses		21,222	3,034	15,414	2,204
Others		54,881	27,601	78,734	14,959
	₩	77,098	30,635	98,553	17,163

15. Subsidiaries

(1) Information related to the consolidated subsidiaries as of December 31, 2023 and 2022 is as follows:

	Key operating		Percen owners voting	ship or
Company	activities	Location	2023	2022
KOWEPO Australia Pty., Ltd.	Overseas resources development	Australia	100.00%	100.00%
KOWEPO International Corporation	Managing power plant	Philippines	99.99%	99.99%
PT KOWEPO Sumsel Operation and Maintenance Services	Managing power plant	Indonesia	95.00%	95.00%
KOWEPO Bylong Pty., Ltd. (*1)	Overseas resources development	Australia	100.00%	100.00%
KOWEPO Lao International	Managing power plant	Laos	100.00%	100.00%
KOWEPO Service Co., Ltd.	Managing facility	Republic of Korea	100.00%	100.00%
Haenaneum Energy Fund	Sunlight generation, ESS	Republic of Korea	99.64%	99.64%
KOWEPO Europe B.V.	Onshore wind power generation	Netherlands	100.00%	100.00%
KOWEPO Changgi Solar Power Plant Co., Ltd.	Energy supply	Republic of Korea	100.00%	100.00%
KOWEPO Holding Limited	Solar power	United Arab Emirates	100.00%	-

(*1) The ownership interest in KOWEPO Bylong Pty., Ltd. is the percentage of common share capital excluding preferred share capital which has no voting rights.

(2) KOWEPO Holding Limited was newly established for the year ended December 31, 2023. For the year ended December 31, 2022, KOWEPO Changgi Solar Power Plant Co., Ltd. was included in consolidation because the Group obtained control through disproportionate capial reduction. The Group changed the agreement after newly acquiring Seobusambo highway photovoltaics Co., Ltd. and it was classified to a joint venture from a consolidated entity due to a loss of control.

15. Subsidiaries, Continued

(3) Summary of financial information of consolidated subsidiaries as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023 is as follows:

(i) As of and for the year ended December 31, 2023

In millions of Korean won

Company		Assets	Liabilities	Sales	Net profit or loss
KOWEPO Australia Pty., Ltd.	₩	86,074	3,571	29,675	9,001
KOWEPO International Corporation		-	10	-	-
PT KOWEPO Sumsel Operation and Maintenance Services		26	260	-	-
KOWEPO Bylong Pty., Ltd.		12	142	-	(43)
KOWEPO Lao International		13,038	223	10,270	6,268
KOWEPO Service Co., Ltd.		10,300	6,584	36,421	264
Haenaneum Energy Fund		7,415	3	47	(1)
KOWEPO Europe B.V.		107	3,177	-	(44,685)
KOWEPO Changgi Solar Power Plant Co., Ltd.		46,950	40,815	7,036	2,011
KOWEPO Holding Limited		1,323	1,371	-	(49)

(ii) As of and for the year ended December 31, 2022

In millions of Korean won

Company		Assets	Liabilities	Sales	Net profit or loss
KOWEPO Australia Pty., Ltd.	₩	81,696	10,184	52,271	22,745
KOWEPO International Corporation		-	10	-	-
PT KOWEPO Sumsel Operation and Maintenance Services		25	252	-	(94)
KOWEPO Bylong Pty., Ltd.		8	94	-	(7)
KOWEPO Lao International		8,248	87	10,010	11,185
KOWEPO Service Co., Ltd.		6,266	3,130	34,031	171
Haenaneum Energy Fund		7,416	3	-	(48)
KOWEPO Europe B.V.		42,865	2,422	-	1,668
KOWEPO Changgi Solar Power Plant Co., Ltd.		48,770	44,647	3,447	(354)

(4) Significant restrictions on the Group's power over the subsidiaries as of December 31, 2023 are as follows:

Company

Nature and extent of the significant restrictions

KOWEPO Changgi Solar Power Plant Co., Ltd. Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.

16. Investments in Associates and Joint Ventures

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

(i) As of December 31, 2023

	operation	Location	ownership		cquisition cost	Book value
Associates						
Pioneer Gas Power., Ltd.	Energy supply	India	38.50%	₩	49,831	-
Eurasia Energy Holdings (*4)	Energy supply	Russia	-		-	-
Xe-Pian Xe-Namnoy Power Co., Ltd.	Energy supply	Laos	25.00%		87,426	116,378
PT. Mutiara Jawa	Energy supply	Indonesia	29.00%		2,978	5,169
Korea Offshore Wind Power Co., Ltd. (* 7) Energy supply	Republic of Korea	12.50%		26,600	23,835
Daegu Solar Power Plant Co., Ltd.	Energy supply	Republic of Korea	29.00%		1,230	2,805
Dongducheon Dream Power Co., Ltd.	Energy supply	Republic of Korea	34.01%		148,105	87,203
Solar Power Plants Happy City Co., Ltd.	Energy supply	Republic of Korea	28.00%		194	295
Shin Pyeongtaek Power Co., Ltd.	Energy supply	Republic of Korea	40.00%		72,000	145,025
KEPCO Solar Co., Ltd. (*1)	Energy supply	Republic of Korea	8.33%		16,650	17,495
KEPCO ES Co.,Ltd. (*1)	Energy supply	Republic of Korea	8.33%		25,000	25,561
Seoroseoro Sunny Power Plant Co., Ltd.	Energy supply	Republic of Korea	42.58%		706	941
Anjwa Smart Farm & Solar City Co., Ltd.	Energy supply	Republic of Korea	20.00%		5,651	7,665
Muan Solar Park Co., Ltd.	Energy supply	Republic of Korea	20.00%		4,400	6,830
Yudang Solar Co., Ltd.	Energy supply	Republic of Korea	20.00%		360	570
-					441,131	439,772
Joint ventures						
Rabigh Operation & Maintenance						
Company Limited (*2)	O&M	Saudi Arabia	40.00%		70	4,964
KIAMCO KOWEPO Bannerton						
Hold Co Pty., Ltd. (*2)	Energy supply	Australia	12.37%		4,095	3,720
Haemodum Solar Energy Co., LTd. (*2)	Energy supply	Republic of Korea	49.00%		2,940	3,122
NH-Amundi Global Infra Private Fund	05 11 5					
No. 21 (*2)	Energy supply	Republic of Korea	29.53%		19,897	21,898
Cheongna Energy Co.,Ltd. (*2)	Energy supply	Republic of Korea	50.10%		49,344	25,549
Hapcheon Floating Photovoltaic	05 11 5	·				
Plant Inc. (*2)	Energy supply	Republic of Korea	49.00%		7,512	10,348
Yeongwol Eco Wind Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		3,089	4,024
Gurae Jumin Wind Power Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		386	569
Gunsan Land Solar Co., Ltd. (*2)(*3)	Energy supply	Republic of Korea	75.29%		19,091	22,429
	Collective	·				
Capman Lynx SCA, SICAR (*2)	investment	Luxembourg	50.00%		9,601	-
Eumseong Eco Park Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		5,741	8,386
Pungbaek Wind Power Co., Ltd. (*2)	Energy supply	Republic of Korea	37.00%		7,886	7,940
Hasami Co., Ltd. (*5)	Energy supply	Republic of Korea	-		-	-
Seobusambo highway photovoltaics	05 11 5	·				
Co., Ltd. (*2)	Energy supply	Republic of Korea	80.00%		3,020	3,580
Namyangju Combined Heat	05 11 5					
And Power Co.,Ltd. (*2)(*6)	Energy supply	Republic of Korea	55.00%		3,850	3,850
Wadi Noor Solar Power (*2)(*6)	Energy supply	Oman	50.00%		847	846
	05 11 5				137,369	121,225
				₩	578,501	560,997

16. Investments in Associates and Joint Ventures, Continued

(1) Investments in associates and joint ventures as of December 31, 2023 and 2022 are as follows, Continued:

- (i) As of December 31, 2023, Continued
- (*1) It is accounted for as an associate as the Group can exercise significant influence according to the shareholders' agreement even though the Group's ownership interest is less than 20%.
- (*2) The Group accounts for its investments as investments in joint ventures since the strategic financial and operating policy decisions relating to the activities of the joint ventures require unanimous consent of the investors.
- (*3) The Group's nominal percentage of ownership over Gunsan Terrestrial Solar Power Co., Ltd. is 75.29%. As the Group is obliged to provide its dividend income to Gunsan City to the extent the dividend income exceeds the certain level of return on investment prescribed in the shareholders' agreement, the effective percentage of ownership of the Group excluding excess divident income for the year ended December, 31, 2023 is 56.91%.
- (*4) It was liquidated for the year ended December 31, 2023.
- (*5) The total amount of shares decreased due to the capital reduction with consideration incurring for the year ended December 31, 2023.
- (*6) It was newly established for the year ended December 31, 2023.

16. Investments in Associates and Joint Ventures, Continued

(1) Investments in associates and joint ventures as of December 31, 2023 and 2022 are as follows, Continued:

(ii) As of December 31, 2022

Company	Major operation	Location	Percentage of ownership	-	Acquisition cost	Book value
Associates						
Pioneer Gas Power., Ltd.	Energy supply	India	38.50%	₩	49,831	-
Eurasia Energy Holdings	Energy supply	Russia	40.00%		461	-
Xe-Pian Xe-Namnoy Power Co., Ltd.	Energy supply	Laos	25.00%		87,426	115,584
PT. Mutiara Jawa	Energy supply	Indonesia	29.00%		2,978	3,597
Korea Offshore Wind Power Co., Ltd. (*1)	Energy supply	Republic of Korea	12.50%		26,600	23,115
Daegu Solar Power Plant Co., Ltd.	Energy supply	Republic of Korea	29.00%		1,230	2,849
Dongducheon Dream Power Co., Ltd.	Energy supply	Republic of Korea	34.01%		148,105	89,300
Solar Power Plants Happy City Co., Ltd.	Energy supply	Republic of Korea	28.00%		194	278
Shin Pyeongtaek Power Co., Ltd.	Energy supply	Republic of Korea	40.00%		72,000	133,822
KEPCO Solar Co., Ltd. (*1)	Energy supply	Republic of Korea	8.33%		16,650	18,133
KEPCO ES Co.,Ltd. (*1)	Energy supply	Republic of Korea	8.33%		25,000	26,071
Seoroseoro Sunny Power Plant Co., Ltd.	Energy supply	Republic of Korea	42.58%		706	859
Anjwa Smart Farm & Solar City Co., Ltd.	Energy supply	Republic of Korea	20.00%		5,651	8,661
Muan Solar Park Co., Ltd.	Energy supply	Republic of Korea	20.00%		4,400	7,838
Yudang Solar Co., Ltd.	Energy supply	Republic of Korea	20.00%		360	586
5	35 11 5				441,592	430,693
Joint ventures						,
Rabigh Operation & Maintenance						
Company Limited. (*2)	O&M	Saudi Arabia	40.00%		70	5,113
KIAMCO KOWEPO Bannerton Hold Co	0 dilli	eddar / ilabia	1010070			0,110
Pty., Ltd. (*2)	Energy supply	Australia	12.37%		4,095	3,651
Haemodum Solar Energy Co.,Ltd. (*2)	Energy supply	Republic of Korea	49.00%		2,940	3,367
KOWEPO Changgi Solar Power	Energy supply		17.0070		2,710	0,007
Plant Co., Ltd. (*3)	Energy supply	Republic of Korea	-		_	-
NH-Amundi Global Infra Private Fund	Energy supply					
No. 21 (*2)	Energy supply	Republic of Korea	29.53%		20,061	21,723
Cheongna Energy Co., Ltd. (*2)	Energy supply	Republic of Korea	50.10%		49,344	10,758
Hapcheon Floating Photovoltaic	Energy supply		00.1070		17,011	10,700
Plant Inc. (*2)	Energy supply	Republic of Korea	49.00%		7,512	8,471
Yeongwol Eco Wind Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		3,089	3,155
Gurae Jumin Wind Power Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		386	390
Gunsan Land Solar Co., Ltd. (*2)	Energy supply	Republic of Korea	75.29%		19,091	27,544
	Collective		,0.2,770		17,071	27,011
Capman Lynx SCA, SICAR (*2)	investment	Luxembourg	50.00%		9,601	-
Eumseong Eco Park Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		5,741	5,557
Pungbaek Wind Power Co., Ltd. (*2)	Energy supply	Republic of Korea	37.00%		7,886	6,743
Hasami Co., Ltd. (*2)	Energy supply	Republic of Korea	29.00%		1,596	1,589
Seobusambo highway photovoltaics Co.,	2		27.0070		1,0,0	1,007
Ltd. (*2)(*4)	Energy supply	Republic of Korea	80.00%		3,020	3,067
	Energy suppry		00.0070		134,432	101,128
				₩	576,024	531,821
					570,024	551,021

16. Investments in Associates and Joint Ventures, Continued

(1) Investments in associates and joint ventures as of December 31, 2023 and 2022 are as follows, Continued:

- (ii) As of December 31, 2022, Continued
- (*1) It is accounted for as an associate as the Group can exercise significant influence according to the shareholders' agreement even though the Group's ownership interest is less than 20%.
- (*2) The Group accounts for its investments as investments in joint ventures since the strategic financial and operating policy decisions relating to the activities of the joint ventures require unanimous consent of the investors.
- (*3) KOWEPO Changgi Solar Power Plant Co., Ltd. was included in consolidation scope due to unequal the capital reduction with consideration incurring during the year ended December 31, 2022.
- (*4) Seobusambo highway photovoltaics Co., Ltd was excluded from the consolidation scope due to a loss of control of the Group caused by the modification of agreement during the year ended December 31, 2022.

16. Investments in Associates and Joint Ventures, Continued

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

(i) For the year ended December 31, 2023

Company	Beginni balanc			osal_	Dividends received	Share of income (loss)	Other comprehe- nsive income (loss)	Retained earnings	Ending balance
Associates									
Pioneer Gas Power., Ltd.(*1)	₩	-	-	-	-	-	-	-	-
Eurasia Energy Holdings(*2)		-	-	-	-	-	-	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd	115,5	84	-	-	-	(848)	1,642	-	116,378
PT. Mutiara Jawa	3,5	97	-	-	(459)	1,935	96	-	5,169
Korea Offshore Wind Power Co., Ltd.	23,1	15	-	-	-	720	-	-	23,835
Daegu Solar Power Plant Co., Ltd.	2,8	49	-	-	(408)	364	-	-	2,805
Dongducheon Dream Power Co., Ltd.	89,3	00	-	-	-	(2,568)	-	471	87,203
Solar Power Plants Happy City Co., Ltd.	2	78	-	-	-	17	-	-	295
Shin Pyeongtaek Power Co., Ltd.	133,8	22	-	-	(70,040)	81,258	-	(15)	145,025
KEPCO Solar Co., Ltd.	18,1	33	-	-	(1,334)	697	-	(1)	17,495
KEPCO ES Co., Ltd.	26,0	71	-	-	(790)	279	-	1	25,561
Seoroseoro Sunny Power Plant Co., Ltd.	8	59	-	-	-	82	-	-	941
Anjwa Smart Farm & Solar City Co., Ltd.	8,6	61	-	-	(1,400)	404	-	-	7,665
Muan Solar Park Co., Ltd	7,8	38	-	-	(2,680)	1,672	-	-	6,830
Yudang Solar Co., Ltd.	5	86	-	-	(100)	84	-		570
	430,6	93	-	-	(77,211)	84,096	1,738	456	439,772

16. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(i) For the year ended December 31, 2023, Continued

In millions of Korean won

Company	Beginning balance	Acquisi- tions	Disposal	Dividends received	Share of income (loss)	Other comprehe- nsive income (loss)	Retained earnings	Ending balance
Joint ventures								
Rabigh Operation & Maintenance Company Limited.	5,113	-	-	(2,995)	2,760	86	-	4,964
KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.	3,651	-	-	-	(23)	92	-	3,720
Haemodum Solar Energy Co., Ltd	3,367	-	-	(392)	147	-	-	3,122
NH-Amundi Global Infra Private Fund No. 21	21,723	928	(1,092)	(1,568)	1,907	-	-	21,898
Cheongna Energy Co.,Ltd.	10,758	-	-	-	14,791	-	-	25,549
Hapcheon Floating Photovoltaic Plant INC.	8,471	-	-	-	1,877	-	-	10,348
Yeongwol Eco Wind Co., Ltd.	3,155	-	-	-	869	-	-	4,024
Gurae Jumin Wind Power Co., Ltd.	390	-	-	-	179	-	-	569
Gunsan Land Solar Co., Ltd.	27,544	-	-	-	(5,115)	-	-	22,429
Capman Lynx SCA, SICAR.	-	-	-	-	-	-	-	-
Eumseong Eco Park Co.,Ltd.	5,557	-	-	-	2,829	-	-	8,386
Pungbaek Wind Power Co.,Ltd.	6,743	-	-	-	1,197	-	-	7,940
Hasami Co.,Ltd. (* 3)	1,589	-	(1,586)	-	(3)	-	-	-
Seobusambo highway photovoltaics Co., Ltd.	3,067	-	-	-	513	-	-	3,580
Namyangju Combined Heat And Power Co.,Ltd. (*4)		3,850	-	-	-	-	-	3,850
Wadi Noor Solar Power (*4)	-	847	-	-	-	(1)	-	846
	101,128	5,625	(2,678)	(4,955)	21,928	177	-	121,225
₩	4 531,821	5,625	(2,678)	(82,166)	106,024	1,915	456	560,997

(*1) The investment has been reduced to zero, which resulted in discontinuation of the equity method. The accumulated unrecognized loss is \#76,712 million as of December 31, 2023.

(*2) It was liquidated for the year ended December 31, 2023.

(*3) The total value of shares decreased due to the capital reduction with consideration incurring for the year ended December 31, 2023.

(*4) It was newly established for the year ended December 31, 2023.

16. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(ii) For the year ended December 31, 2022

Company	Beginning balance	Acquisi- tions	Disposal	Dividends received	Share of income (loss)	Other comprehe- nsive income (loss)	Retained earnings	Other changes	Ending balance
Associates									
	₩ -	-	-	-	-	-	-		-
Eurasia Energy Holdings(*2)		-	-	-	-	-	-	-	-
Xe-Pian Xe-Namnoy Power Co.,									
Ltd	92,441	-	-	-	15,582	7,561	-	-	115,584
PT. Mutiara Jawa	2,569	-	-	-	1,197	(169)	-	-	3,597
Korea Offshore Wind Power Co.,									
Ltd.	21,445	-	-	-	1,670	-	-	-	23,115
Daegu Solar Power Plant Co., Ltd.	2,342	-	-	(268)	775	-	-	-	2,849
Dongducheon Dream Power Co.,									
Ltd.	74,198	-	-	-	15,086	-	16	-	89,300
Solar Power Plants Happy City Co.									
Ltd.	223	-	-	-	55	-	-	-	278
Shin Pyeongtaek Power Co., Ltd.	93,074	-	-	-	40,713	-	35	-	133,822
KEPCO Solar Co., Ltd.	17,447	-	-	(117)	800	-	3	-	18,133
KEPCO ES Co.,Ltd.	26,061	-	-	(142)	144	-	8	-	26,071
Seoroseoro Sunny Power Plant									
Co., Ltd.	721	-	-	-	138	-	-	-	859
Anjwa Smart Farm & Solar City									
Co., Ltd.	6,784	-	-	-	1,877	-	-	-	8,661
Muan Solar Park Co., Ltd	6,083	-	-	(600)	2,377	(22)	-	-	7,838
Yudang Solar Co., Ltd.	565			(160)	181				586
	343,953		-	(1,287)	80,595	7,370	62	-	430,693

16. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(ii) For the year ended December 31, 2022

In millions of Korean won

Company	Beginning balance	Acquisi- tions	Disposal	Dividends received	Share of income (loss)	Other comprehe- nsive income (loss)	Retained earnings	Other changes	Ending balance
Joint ventures									
Rabigh Operation & Maintenance Company Limited.	4,071	-	-	(2,735)	3,866	(89)	-	-	5,113
KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.	3,625	-	-	-	27	(1)	-	-	3,651
Haemodum Solar Energy Co., Ltd	3,081	-	-	-	286	-	-	-	3,367
KOWEPO Changgi Solar Power Plant Co., Ltd.	4,993	-	-	-	(123)		-	(4,870)	-
NH-Amundi Global Infra Private Fund No. 21	21,456	485	(406)	(1,415)	1,603	-	-	-	21,723
Cheongna Energy Co.,Ltd.	11,199	-	-	-	(441)	-	-	-	10,758
Hapcheon Floating Photovoltaic Plant INC.	6,971	-	-	-	1,500	-	-	-	8,471
Yeongwol Eco Wind Co., Ltd.	3,196	-	-	-	(41)	-	-	-	3,155
Gurae Jumin Wind Power Co., Ltd	396	-	-	-	(6)	-	-	-	390
Gunsan Land Solar Co., Ltd.	19,317	-	-	-	8,219	8	-	-	27,544
Capman Lynx SCA, SICAR(*3)	9,976	-	-	-	(10,195)	5,173	-	(4,954)	-
Eumseong Eco Park Co., Ltd.	-	5,741	-	-	(184)	-	-	-	5,557
Pungbaek Wind Power Co., Ltd.	-	7,885	-	-	(1,142)	-	-	-	6,743
Hasami Co., Ltd.	-	1,596	-	-	(7)	-	-	-	1,589
Seobusambo highway photoboltaics Co., Ltd.	-	-	-	-	-	-	-	3,067	3,067
F	88,281	15,707	(406)	(4,150)	3,362	5,091		(6,757)	101,128
¥		15,707	(406)	(5,437)	83,957	12,461	62	(6,757)	531,821

(*1) The investment has been reduced to zero, which resulted in discontinuation of the equity method. The accumulated unrecognized loss is ₩56,877 million as of December 31, 2022.

(*2) The investment has been reduced to zero, which resulted in discontinuation of the equity method. The accumulated unrecognized loss is W203 million as of December 31, 2022.

(*3) In relation to the wind power generation business invested by Capman Lynx SCA, SICAR, the Group judged that there was objective evidence of impairment, such as a decrease in sales due to a lack of power generation, and tested an impairment evaluation on the shares of Capman Lynx SCA, SICAR. As a result, W4,954 million, which is the difference between the carrying amount and the recoverable amount, was recognized as an impairment loss and classified as an impairment loss on investments in associates and joint ventures in the statement of comprehensive income.

16. Investments in Associates and Joint Ventures, Continued

(3) The tables below provide a reconciliation of the summarized financial information presented to the carrying amount of its interest in the associates and joint ventures

(i) As of December 31, 2023

In millions of korean won	Net assets at the end of the period	Group's effective share in %	Group's share in KRW	Differences in invest- ments	Intergroup transac- tions	Unreali- zed losses	Others	Book amount
Associates								
Pioneer Gas Power., Ltd.	₩ (257,311)	38.50%	(99,058)	22,278	-	76,712	68	-
Xe-Pian Xe-Namnoy Power Co., Ltd	469,397	25.00%	117,349	305	(987)	-	(289)	116,378
PT. Mutiara Jawa	17,822	29.00%	5,169	-	-	-	-	5,169
Korea Offshore Wind Power Co., Ltd.	190,614	12.50%	23,826	9	-	-	-	23,835
Daegu Solar Power Plant Co., Ltd.	9,669	29.00%	2,805	-	-	-	-	2,805
Dongducheon Dream Power Co., Ltd.	294,848	34.01%	100,277	1,757	(2,249)	-	(12,582)	87,203
Solar Power Plants Happy City Co., Ltd.	1,045	28.00%	293	-	-	-	2	295
Shin Pyeongtaek Power Co., Ltd.	390,335	40.00%	156,134	3,559	(14,668)	-	-	145,025
KEPCO Solar Co., Ltd.	210,146	8.33%	17,495	-		-	-	17,495
KEPCO ES Co., Ltd.	306,735	8.33%	25,561	-	-	-	-	25,561
Seoroseoro Sunny Power Plant Co., Ltd.	2,163	42.58%	921	20	-	-	-	941
Anjwa Smart Farm & Solar City Co., Ltd.	34,245	20.00%	6,849	816		-	-	7,665
Muan Solar Park Co., Ltd	32,526	20.00%	6,505	325		-	-	6,830
Yudang Solar Co., Ltd	2,849	20.00%	570	-		-	-	570
Joint ventures								
Rabigh Operation & Maintenance Company Limited	12,411	40.00%	4,964	-	-	-	-	4,964
KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.	29,997	12.37%	3,711	9	-	-	-	3,720
Haemodum Solar Energy Co., Ltd	6,371	49.00%	3,122	-	-	-	-	3,122
NH-Amundi Global Infra Private Fund No. 21	72,368	29.53%	21,371	527	-	-	-	21,898
Cheongna Energy Co., Ltd.	47,107	50.10%	23,600	3,137	(1,188)	-	-	25,549
Hapcheon Floating Photovoltaic Plant Inc.	21,037	49.00%	10,309	39	-	-	-	10,348
Yeongwol Eco Wind Co., Ltd.	7,573	29.00%	2,196	1,828	-	-	-	4,024
Gurae Jumin Wind Power Co., Ltd.	1,797	29.00%	521	48		-	-	569
Gunsan Land Solar Co., Ltd.	35,587	56.91%	20,251	-	-	-	2,178	22,429
Capman Lynx SCA, SICAR	6,832	50.00%	3,416	-	-	-	(3,416)	-
Eumseong Eco Park Co., Ltd.	26,929	29.00%	7,809	577		-	-	8,386
Pungbaek Wind Power Co., Ltd.	18,526	37.00%	6,855	1,085	-	-	-	7,940
Seobusambo highway photovoltaics Co., Ltd.	4,476	80.00%	3,580	-	-	-	-	3,580
Namyangju Combined Heat And Power Co.,Ltd.	7,000	55.00%	3,850	-	-	-	-	3,850
Wadi Noor Solar Power	1,675	50.00%	837	9	-	-	-	846

16. Investments in Associates and Joint Ventures, Continued

(3) The tables below provide a reconciliation of the summarized financial information presented to the carrying amount of its interest in the associates and joint ventures, Continued

(i) As of and for year ended December 31, 2022

In millions of korean won	Net assets at the end of the year	Group's effective share in %	Group's share in KRW	Differences in invest- ments	Intergroup transac- tions	Unreali- zed losses	Others	Book amount
Associates								
Pioneer Gas Power., Ltd.	₩ (205,787)	38.50%	(79,223)	22,278	-	56,877	68	-
Eurasia Energy Holdings	(508)	40.00%	(203)	-	-	203	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd	466,385	25.00%	116,596	305	(1,028)	-	(289)	115,584
PT. Mutiara Jawa	12,402	29.00%	3,597	-	-	-	-	3,597
Korea Offshore Wind Power Co., Ltd.	184,850	12.50%	23,106	9	-	-	-	23,115
Daegu Solar Power Plant Co., Ltd.	9,823	29.00%	2,849	-	-	-	-	2,849
Dongducheon Dream Power Co., Ltd.	302,071	34.01%	102,734	1,757	(2,609)	-	(12,582)	89,300
Solar Power Plants Happy City Co., Ltd.	986	28.00%	276	-	-	-	2	278
Shin Pyeongtaek Power Co., Ltd.	363,838	40.00%	145,535	3,559	(15,272)	-	-	133,822
KEPCO Solar Co., Ltd.	217,816	8.33%	18,133	-	-	-	-	18,133
KEPCO ES Co., Ltd.	312,852	8.33%	26,071	-	-	-	-	26,071
Seoroseoro Sunny Power Plant Co., Ltd.	1,970	42.58%	839	20	-	-	-	859
Anjwa Smart Farm & Solar City Co., Ltd.	39,225	20.00%	7,845	816	-	-	-	8,661
Muan Solar Park Co., Ltd	37,565	20.00%	7,513	325	-	-	-	7,838
Yudang Solar Co., Ltd	2,929	20.00%	586	-	-	-	-	586
Joint ventures								
Rabigh Operation & Maintenance Company Limited	12,782	40.00%	5,113	-	-	-	-	5,113
KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.	29,443	12.37%	3,642	9	-	-	-	3,651
Haemodum Solar Energy Co., Ltd	6,871	49.00%	3,367	-	-	-	-	3,367
NH-Amundi Global Infra Private Fund No. 21	71,777	29.53%	21,196	527	-	-	-	21,723
Cheongna Energy Co.,Ltd.	17,596	50.10%	8,815	3,137	(1,194)	-	-	10,758
Hapcheon Floating Photovoltaic Plant Inc.	17,207	49.00%	8,432	39	-	-	-	8,471
Yeongwol Eco Wind Co., Ltd.	4,575	29.00%	1,327	1,828	-	-	-	3,155
Gurae Jumin Wind Power Co., Ltd.	1,182	29.00%	343	48	-	-	-	391
Gunsan Land Solar Co., Ltd.	36,586	75.29%	27,544	-	-	-	-	27,544
Capman Lynx SCA, SICAR	9,908	50.00%	4,954	-	-	-	(4,954)	-
Eumseong Eco Park Co.,Ltd.	17,173	29.00%	4,980	577	-	-	-	5,557
Pungbaek Wind Power Co., Ltd.	15,290	37.00%	5,657	1,086	-	-	-	6,743
Hasami Co., Ltd.	3,100	29.00%	899	690	-	-	-	1,589
Seobusambo highway photovoltaics Co., Ltd.	3,834	80.00%	3,067	-	-	-	-	3,067

16. Investments in Associates and Joint Ventures, Continued

(4) Summary of financial information of investments in associates and joint venture as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023 is as follows:

(i) As of and for year ended December 31, 2023

					Net profit
Company		Assets	Liabilities	Sales	or loss
Associates					
Pioneer Gas Power., Ltd.	₩	274,694	532,005	551	(49,745)
Xe-Pian Xe-Namnoy Power Co., Ltd.		1,370,110	900,713	171,978	(5,674)
PT. Mutiara Jawa		27,296	9,474	16,160	7,999
Korea Offshore Wind Power Co., Ltd.		334,441	143,827	40,313	6,494
Daegu Solar Power Plant Co., Ltd.		14,140	4,471	4,225	1,772
Dongducheon Dream Power Co., Ltd.		1,337,529	1,042,681	1,744,247	(8,608)
Solar Power Plants Happy City Co., Ltd.		1,618	573	575	82
Shin Pyeongtaek Power Co., Ltd.		1,222,968	832,633	1,040,219	201,635
KEPCO Solar co., Ltd.		246,273	36,127	23,234	8,367
KEPCO ES Co.,Ltd.		322,162	15,427	14,151	4,957
Seoroseoro Sunny Power Plant Co., Ltd.		6,813	4,650	1,039	193
Anjwa Smart Farm & Solar City Co., Ltd.		258,076	223,831	37,742	3,119
Muan Solar Park Co., Ltd.		204,168	171,642	31,532	8,648
Yudang Solar Co., Ltd.		20,566	17,717	3,483	420
Joint ventures					
Rabigh Operation & Maintenance					
Company Limited		40,339	27,928	31,301	6,676
KIAMCO KOWEPO Bannerton Hold Co Pty., Ltd.		30,081	84	-	(182)
Haemodum Solar Energy Co., Ltd.		21,612	15,241	2,216	299
NH-Amundi Global Infra Private Fund No. 21		72,465	97	7,569	7,080
Cheongna Energy Co.,Ltd.		428,042	380,935	119,530	29,511
Hapcheon Floating Photovoltaic Plant Inc.		79,924	58,887	12,679	4,266
Yeongwol Eco Wind Co., Ltd.		109,716	102,143	3,561	2,975
Gurae Jumin Wind Power Co., Ltd.		14,095	12,298	652	615
Gunsan Land Solar Co., Ltd.		144,434	108,848	23,523	(974)
Capman Lynx SCA, SICAR		139,262	132,430	1,427	(12,401)
Eumseong Eco Park Co., Ltd.		153,928	126,999	46,679	5,609
Pungbaek Wind Power Co., Ltd.		70,330	51,804	-	(255)
Seobusambo highway photovoltaics Co., Ltd.		9,838	5,362	1,051	624
Namyangju Combined Heat And Power Co., Ltd.		7,000	-	-	-
Wadi Noor Solar Power		70,962	69,287	-	-

16. Investments in Associates and Joint Ventures, Continued

(4) Summary of financial information of investments in associates and joint venture as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023 is as follows, Continued:

(ii) As of and for the year ended December 31, 2022

Company		Assets	Liabilities	Sales	Net profit or loss
Associates		//35013	Liubinties	Suics	011033
Pioneer Gas Power., Ltd.	₩	271,339	477,127	-	(46,290)
Eurasia Energy Holdings		648	1,156	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd.		1,371,292	904,907	174,693	61,020
PT. Mutiara Jawa		26,024	13,622	15,421	4,912
Korea Offshore Wind Power Co., Ltd.		376,285	191,435	52,560	13,820
Daegu Solar Power Plant Co., Ltd.		13,254	3,431	4,755	2,914
Dongducheon Dream Power Co., Ltd.		1,521,089	1,219,018	2,240,175	43,072
Solar Power Plants Happy City Co., Ltd.		1,788	802	558	200
Shin Pyeongtaek Power Co., Ltd.		1,203,406	839,568	957,062	100,554
KEPCO Solar Co., Ltd.		243,221	25,405	24,778	9,305
KEPCO ES Co.,Ltd.		318,955	6,103	33,638	1,725
Seoroseoro Sunny Power Plant Co., Ltd.		7,015	5,045	1,157	247
Anjwa Smart Farm & Solar City Co., Ltd.		278,807	239,581	42,477	9,672
Muan Solar Park Co., Ltd.		225,894	188,329	36,081	11,339
Yudang Solar Co., Ltd.		22,073	19,144	3,997	957
Joint ventures					
Rabigh Operation & Maintenance					
Company Limited		23,664	10,882	32,572	9,176
KIAMCO KOWEPO Bannerton Hold Co Pty., Ltd.		29,517	74	-	(260)
Haemodum Solar Energy Co., Ltd. NH-Amundi Global Infra Private Fund No. 21		22,974 71,851	16,103 74	2,556 4,850	581 5,431
Cheongna Energy Co.,Ltd.		385,936	368,340	4,850	(889)
Hapcheon Floating Photovoltaic Plant Inc.		78,768	61,561	12,705	3,061
Yeongwol Eco Wind Co., Ltd.		87,856	83,281	-	(144)
Gurae Jumin Wind Power Co., Ltd.		11,648	10,467	-	(19)
Gunsan Land Solar Co., Ltd.		158,370	121,785	28,828	12,154
Capman Lynx SCA, SICAR		112,718	102,810	504	(16,780)
Eumseong Eco Park Co., Ltd.		136,909	119,736	-	(636)
Pungbaek Wind Power Co., Ltd.		46,957	31,667	-	(3,089)
Hasami Co., Ltd.		3,100	-	-	(23)
Seobusambo highway photovoltaics Co., Ltd.		8,287	4,453	217	265

16. Investments in Associates and Joint Ventures, Continued

(5) Significant restrictions on the Group's power over associates and joint ventures are as follows:

Company	Nature and extent of the significant restrictions
Korea Offshore Wind Power Co., Ltd.	Payment of principal and interest on subordinated debt, dividends to shareholders, and payment of settlement money for Renewable Energy Supply Certificates are only possible if all conditions in the loan agreement are met and prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Daegu Solar Power Plant Co., Ltd.	Dividends to shareholders is only possible if all conditions of the loan agreement are met. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Dongducheon Dream Power Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Solar Power Plants Happy City Co., Ltd.	Dividends to shareholders is only possible if all conditions of the loan agreement are met. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Shin Pyeongtaek Power Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Seoroseoro Sunny Power Plant Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Anjwa Smart Farm & Solar City Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Muan Solar Park Co., Ltd.	Dividends to shareholders is only possible if all conditions of the loan agreement are met. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Yudang Solar Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Haemodum Solar Energy Co., Ltd.	Dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Cheongna Energy Co.,Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Hapcheon Floating Photovoltaic Plant Inc.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.

16. Investments in Associates and Joint Ventures, Continued

(5) Significant restrictions on the Group's power over associates and joint ventures are as follows:

Company	Nature and extent of the significant restrictions
Yeongwol Eco Wind Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Gurae Jumin Wind Power Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Gunsan Land Solar Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions, and according to the shareholder agreement excess dividends shall be provided to Gunsan City upon achieving a certain rate of return.
Eumseong Eco Park Co., Ltd.	Dividends to shareholders and settlements for Renewable Energy Supply Certificates are only possible if all conditions in the loan agreement are met and prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.
Pungbaek Wind Power Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders isonly possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institution.
Seobusambo highway photovoltaics Co., Ltd.	Payment of principal and interest on subordinated debt or dividends to shareholders is only possible if all conditions of the loan agreement are met or prior written consents from financial institutions are obtained. In addition, all or part of the shares held cannot be transferred without the prior written consents of financial institutions.

(6) Agreements entered into with associates and joint ventures but not recognized as of December 31, 2023 are as follows:

1) Namyangju Combined Heat And Power Co., Ltd.

According to the agreement with shareholders, the Group has an obligation to purchase the shares in the entity at fair value if Narrae Energy Co., Ltd. wishes to sell shares on the agreed exercise date. According to the agreement with shareholders, the Group has an obligation to ensure the tag-along right for Narae Energy Co., Ltd. to sell shares under the same conditions if Narae Energy Co., Ltd. becomes the largest shareholder by selling, assigning, or transferring of shares.

2) Wadi Noor Solar Power

According to the agreement with shareholders, the Group has an obligation to sell the shares in the entity at the transfer amount based on the price agreed upon by the shareholders if Nama Holding SAOC wishes to purchase the shares on the agreed exercise date.

17. Property, Plant and Equipment

(1) Property, plant and equipment as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In millions of Korean won

	-	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩	755,099	-	-	-	755,099
Buildings		1,874,988	(8,830)	(793,087)	(504)	1,072,567
Structures		1,687,229	(4,689)	(754,488)	(2,937)	925,115
Machinery		10,956,849	(52,609)	(6,120,770)	(53,767)	4,729,703
Vehicles		13,627	(20)	(11,620)	-	1,987
Equipment		176,387	-	(141,425)	(6)	34,956
Tools		35,870	(1)	(32,233)	-	3,636
Construction-in-						
progress		472,720	(348)	-	-	472,372
Right-of-use assets	_	1,125,716	(24)	(529,977)		595,715
	₩	17,098,485	(66,521)	(8,383,600)	(57,214)	8,591,150

(ii) As of December 31, 2022

		Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩	753,801	-	-	-	753,801
Buildings		1,656,426	(8,446)	(728,024)	(504)	919,452
Structures		1,506,553	(4,224)	(695,900)	(2,937)	803,492
Machinery		10,096,053	(47,468)	(5,487,794)	(53,661)	4,507,130
Vehicles		13,652	(20)	(10,277)	-	3,355
Equipment		158,604	-	(127,991)	(6)	30,607
Tools		35,004	-	(31,668)	-	3,336
Construction-in-						
progress		980,373	(12,577)	-	-	967,796
Right-of-use assets		1,117,212	(21)	(442,537)		674,654
	₩	16,317,678	(72,756)	(7,524,191)	(57,108)	8,663,623

17. Property, Plant and Equipment, Continued

(2) Changes in property, plant and equipment for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won

In minions of Rorean won	Beginning balance	Acquisition/ Capital expenditure	Disposal	Depreciation (*1)	Impairment (*2)	Others (*3)	Ending balance
Land W	753,801	-	(5)	-	-	1,303	755,099
Buildings	927,898	327	(16)	(65,132)	-	218,320	1,081,397
Less: government grants	(8,446)	-	-	478	-	(862)	(8,830)
Structures	807,716	-	-	(58,589)	-	180,677	929,804
Less: government grants	(4,224)	-	-	254	-	(719)	(4,689)
Machinery	4,554,598	75,802	(16,791)	(651,737)	(6,331)	826,771	4,782,312
Less: government grants	(47,468)	-	954	4,548	-	(10,643)	(52,609)
Vehicles	3,375	12	-	(1,634)	-	254	2,007
Less: government grants	(20)	(14)	-	14	-	-	(20)
Equipment	30,607	153	(93)	(15,453)	-	19,742	34,956
Tools	3,336	85	-	(1,697)	-	1,913	3,637
Less: government	-	-	-	-	-	(1)	(1)
Construction-in-progress	980,373	715,211	-	-	-	(1,222,864)	472,720
Less: government grants	(12,577)	-	-	-	-	12,229	(348)
Right-of-use assets	674,675	9,060	(1,103)	(89,334)	-	2,441	595,739
Less: government grants	(21)		-	1		(4)	(24)
₩	8,663,623	800,636	(17,054)	(878,281)	(6,331)	28,557	8,591,150

(*1) \\$5,509 million of depreciation expenses are recognized as construction-in-progress.

(*2) The Group calculated the actual loss in relation to the Taean IGCC gas refinery fire incident in January 2023 and recognized an amount of ₩6,331 million of loss to the property, plant and equipment due to the fire incident as impairment loss as of December 31, 2023.

(*3) Others in the amount of W28,557 million consist of W7,775 million transferred from retirement benefits expense and depreciation on property, plant and equipment to construction-in-progress, W16,240 million of capitalized interest expense, W6,458 million transferred to inventories, W4,492 million transferred to intangible assets, W2,427 million transferred from other asset restoration obligation to right-of-use assets, and W149 million of translation effect of overseas operation financial statements. The weighted average capitalization rates for the year ended December 31, 2023 is 2.72%.

17. Property, Plant and Equipment, Continued

(2) Changes in property, plant and equipment for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(ii) For the year ended December 31, 2022

In millions of Korean won

	Acquisition/			–	0 .1	Changes in	
	Beginning	Capital	Disposal	Depreciation (*1)	Others	consolidation	Ending
-	balance	expenditure	Disposal		(*2)	scope	balance
Land W	708,461	-	-	-	45,340	-	753,801
Buildings	949,954	-	-	(67,060)	45,004	-	927,898
Less: government grants	(8,885)	-	-	439	-	-	(8,446)
Structures	810,087	3,341	(140)	(53,510)	8,410	39,528	807,716
Less: government grants	(4,449)	-	-	225	-	-	(4,224)
Machinery	4,733,323	111,038	(10,058)	(624,035)	344,330	-	4,554,598
Less: government grants	(51,594)	-	118	4,008	-	-	(47,468)
Vehicles	3,784	204	-	(1,725)	1,112	-	3,375
Less: government grants	(32)	-	-	12	-	-	(20)
Equipment	31,911	214	-	(14,896)	13,378	-	30,607
Tools	3,602	253	-	(1,908)	1,389	-	3,336
Construction-in-progress	584,379	842,222	-	-	(447,403)	1,175	980,373
Less: government grants	(12,577)	-	-	-	-	-	(12,577)
Right-of-use assets	758,070	4,130	(14)	(87,504)	(7)	-	674,675
Less: government grants	(23)		-	2	-		(21)
W	8,506,011	961,402	(10,094)	(845,952)	11,553	40,703	8,663,623

(*1) $W_{2,315}$ million of depreciation expenses are recognized as construction-in-progress.

(*2) Others in the amount of ₩11,553 million consist of ₩5,483 million transferred from retirement benefits expense and depreciation on property, plant and equipment to construction-in-progress, ₩13,254 million of capitalized interest expense, ₩7,059 million transferred to intangible assets, ₩31 million transferred to assets held for sale and ₩95 million of translation effect of overseas operation financial statements. The weighted average capitalization rates for the year ended December 31, 2022 is 2.47%.

(3) For the year ended December 31, 2023, the Group recognized income of W30,578 million and expenses of W33,403 million in relation to the disposal proceeds and costs of goods generated before operating in the manner intended by management, in profit or loss.

18. Intangible Assets

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

(i) As of December 31, 2023

In millions of Korean won

	-	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Computer software	₩	61,385	(50,097)	-	11,288
Mining rights		13,986	(12,414)	-	1,572
Development costs		6,110	(4,070)	-	2,040
Leasehold rights		6,561	(3,770)	-	2,791
Others		97,788	(82,928)	(231)	14,629
	₩	185,830	(153,279)	(231)	32,320

(ii) As of December 31, 2022

		Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Computer software	₩	58,001	(45,128)	-	12,873
Mining rights		13,642	(9,977)	-	3,665
Development costs		5,115	(3,667)	-	1,448
Leasehold rights		6,561	(3,088)	-	3,473
Others		100,027	(82,571)	(231)	17,225
	₩	183,346	(144,431)	(231)	38,684

18. Intangible Assets, Continued

(2) Changes in intangible assets for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won

		Beginning balance	Acquisition/ Capital expenditure	Disposal	Amortization (*1)	Others(*2)	Ending balance
Computer software	₩	12,873	19	(17)	(4,998)	3,411	11,288
Mining rights		3,665	-	-	(2,211)	118	1,572
Development costs		1,448	-	-	(403)	995	2,040
Leasehold rights		3,473	-	-	(682)	-	2,791
Others		17,225	3,962		(354)	(6,204)	14,629
	₩	38,684	3,981	(17)	(8,648)	(1,680)	32,320

(*1) W23 million of amortization expenses are recognized as construction-in-progress.

(*2) Others in the amount of W1,680 million consist of W4,492 million transferred from construction-inprogress, W126 million resulting from translation of financial statements of overseas operations and W6,297 million transferred from Greenhouse gas emission rights.

(ii) For the year ended December 31, 2022

In millions of Korean won

	Beginning balance	Acquisition/ Capital expenditure	Amortization (*1)	Others(*2)	Changes in consolidation scope	Ending balance
Computer software W	12,328	10	(5,032)	5,564	3	12,873
Mining rights	5,286	-	(1,687)	66	-	3,665
Development costs	628	-	(226)	1,046	-	1,448
Leasehold rights	4,156	-	(683)	-	-	3,473
Others	22,058	8,030	(342)	(12,521)		17,225
₩	44,456	8,040	(7,970)	(5,845)	3	38,684

(*1) W16 million of amortization expenses are recognized as construction-in-progress.

(*2) Others in the amount of ₩5,845 million consist of ₩7,059 million transferred from construction-inprogress, ₩66 million resulting from translation of financial statements of overseas operations and ₩12,971 million transferred from Greenhouse gas emission rights.

19. Government Grants

(1) Government grants related to assets are presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset in accordance with Article 44 of Government Accounting Standards.

(2) Government grants as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023	2022
Buildings	₩	8,830	8,446
Structures		4,689	4,224
Machinery		52,609	47,468
Vehicles		20	20
Tools		1	-
Construction-in-progress		348	12,577
Right-of-use assets		24	21
	₩	66,521	72,756

(3) Changes in government grants for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

		Beginning balance	Acquisition	Offsetting	Disposal	Others	Ending balance
Buildings	₩	8,446	-	(478)	-	862	8,830
Structures		4,224	-	(254)	-	719	4,689
Machinery		47,468	-	(4,548)	(954)	10,643	52,609
Vehicles		20	14	(14)	-	-	20
Tools		-	-	-	-	1	1
Construction-in-progress		12,577	-	-	-	(12,229)	348
Right-of-use assets		21	-	(1)		4	24
	₩	72,756	14	(5,295)	(954)		66,521

19. Government Grants, Continued

(ii) For the year ended December 31, 2022

In millions of Korean won

	_	Beginning balance	Offsetting	Disposal	Ending balance
Buildings	₩	8,885	(439)	-	8,446
Structures		4,449	(225)	-	4,224
Machinery		51,594	(4,008)	(118)	47,468
Vehicles		32	(12)	-	20
Construction-in-progress		12,577	-	-	12,577
Right-of-use assets		23	(2)	-	21
	₩	77,560	(4,686)	(118)	72,756

(4) Government grants income recognized for each of the two years in the period ended December 31, 2023 are as follows:

		2023	2022	
Offset against depreciation	₩	5,295	4,685	

20. Lease

(1) Major lease contracts

In order to provide stable supply of bituminous coal, the Group has entered into a consecutive vessel charter agreement as a lease (see Note 44 (6)). On the other hand, the Group does not have the option to obtain ownership of the related vessels or the option to purchase it at a price that is expected to be sufficiently lower than fair value at the end of the agreement.

(2) Right-of-use assets as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In millions of Korean won

	_	Acquisition cost	Government grants	Accumulated depreciation	Book value
Land	₩	10,794	-	(3,313)	7,481
Buildings		2,168	-	(961)	1,207
Structures		167,564	(24)	(91,801)	75,739
Machinery		196,638	-	(82,919)	113,719
Vessels		747,777	-	(350,523)	397,254
Vehicles		775	-	(460)	315
	₩	1,125,716	(24)	(529,977)	595,715

(ii) As of December 31, 2022

	-	Acquisition cost	Government grants	Accumulated depreciation	Book value
Land	₩	9,890	-	(2,449)	7,441
Buildings		3,262	-	(1,296)	1,966
Structures		168,317	(21)	(85,025)	83,271
Machinery		186,962	-	(72,821)	114,141
Vessels		747,776	-	(280,418)	467,358
Vehicles		1,005	-	(528)	477
	₩	1,117,212	(21)	(442,537)	674,654

20. Lease, Continued

(3) Changes in right-of-use assets for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won

	 -	Beginning balance	Acquisition	Depreciation	Disposal	Others	Ending balance
Land	₩	7,441	904	(864)	-	-	7,481
Buildings		1,966	211	(276)	(698)	4	1,207
Structures		83,292	49	(7,305)	(273)	-	75,763
Less: government grants		(21)	-	1	-	(4)	(24)
Machinery		114,141	7,778	(10,540)	(97)	2,437	113,719
Vessels		467,358	-	(70,104)	-	-	397,254
Vehicles		477	118	(245)	(35)	-	315
	₩	674,654	9,060	(89,333)	(1,103)	2,437	595,715

(ii) For the year ended December 31, 2022

In millions of Korean won

	E 	Beginning balance	Acquisition	Depreciation	Disposal	Others	Ending balance
Land	₩	8,236	80	(875)	-	-	7,441
Buildings		1,985	511	(527)	(4)	1	1,966
Structures		87,907	2,723	(7,338)	-	-	83,292
Less: government grants		(23)	-	2	-	-	(21)
Machinery		122,067	441	(8,357)	(2)	(8)	114,141
Vessels		537,463	-	(70,105)	-	-	467,358
Vehicles		412	375	(302)	(8)		477
	₩_	758,047	4,130	(87,502)	(14)	(7)	674,654

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

		20	23	2022		
		Minimum lease payments (MLP)	Present value of MLP	Minimum lease payments (MLP)	Present value of MLP	
Less than 1 year	₩	93,439	92,573	93,849	93,016	
1~5 years		283,415	268,058	324,249	305,966	
More than 5 years		189,128	157,571	232,367	192,806	
	₩	565,982	518,202	650,465	591,788	

20. Lease, Continued

(5) Current portion and non-current portion of lease liabilities as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		2023	2022
Current lease liabilities	₩	92,573	93,016
Non-current lease liabilities		425,629	498,772
	₩	518,202	591,788

(6) Changes in lease liabilities for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won	2023	2022
Beginning balance	591,788	625,570
Acquisition	9,060	4,130
Interest expense	11,757	12,441
Payments	(105,027)	(92,971)
Other changes	10,624	42,618
Ending balance	518,202	591,788

(7) Details of lease liabilities, such as short-term lease, leases for which the underlying asset is of low value, were not recognized as expenses in 2023 and 2022 are as follows:

In millions of Korean won		2023	2022	
Short-term leases	₩	21,379	47,661	
Leases of low-value assets		296	937	

21. Trade and Other Payables

Trade and other payables as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		202	3	2022		
		Current	Non-current	Current	Non-current	
Trade payables	₩	188,107	-	652,910	-	
Other payables		90,903	40	125,322	40	
Accrued expenses		40,689	-	38,372	-	
Other deposits		468	-	307	-	
Dividend payables		291,563	-	-	-	
Lease liabilities		92,573	425,629	93,016	498,772	
	₩	704,303	425,669	909,927	498,812	

22. Borrowings and Debentures

(1) Details of borrowings and debentures as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023	2022
Current Liabilities:			
Short-term borrowings	₩	101,821	55,200
Current portion of long-term borrowings		3,809	4,577
Current portion of long-term debentures		1,095,364	800,190
Less: discount on debenture issuance		(559)	(286)
		1,200,435	859,681
Non-current Liabilities:			
Long-term borrowings		85,576	88,642
Debentures		4,446,820	4,974,764
Less: discount on debenture issuance		(8,212)	(10,601)
		4,524,184	5,052,805
	₩	5,724,619	5,912,486

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

Туре	Lender	Annual interest rate		der Annual interest rate		Maturity date	<u> </u>	2023	2022
Limit loans in domestic currency	KB Bank Korea Development Bank	4.84% 4.33%	Fixed rate Fixed rate	2024-01-22 2024-01-05	₩	50,000 50,000	-		
Bank overdraft	NH Bank	4.63%	Floating rate	2024-01-05		1,074	-		
in domestic currency	Woori Bank	5.34%	Floating rate	2024-01-24		747	-		
Limit loans in	KB Bank	3.94%	Fixed rate	2023-01-06		-	50,000		
domestic currency	Korea Development Bank	4.15%	Floating rate	2023-01-06		-	3,400		
Bank overdraft in domestic currency	NH Bank	4.83%	Floating rate	2023-01-06		-	1,800		
5110J					₩	101,821	55,200		

22. Borrowings and Debentures, Continued

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

- For the year ended December 31, 2023

In millions of Korean won

Lender	Description	Annual interest rate		Maturity date		2023
Korea Energy Agency	Development funds	Floating rate	3yr KTB rate - 2.25%	2024-06-15 2024-09-15 2025-06-15 2025-12-15	₩	4 16 2 16
Korea Housing Urban Guarantee Corporation	Urban Regeneration Support funds	Ū	1.80%(*1)	2034-12-22		49,779
Samsung Life Insurance Co.,Ltd.	Energy generation facilities construction funds	Fixed rate	3.77%	2023 ~ 2037		39,568
	Less: current portion				₩_	89,385 (3,809) 85,576

(*1) At the time of signing the contract, the interest rate of the Ministry of Land, Infrastructure and Transport is 1.8% per annum. If the interest rate is changed according to the fund management plan of the Ministry of Land, Infrastructure and Transport, the interest rate will change accordingly.

- For the year ended December 31, 2022

In millions of Korean won

Lender	Description	Annual ii	nterest rate	Maturity date		2022
Korea Energy Agency	Development funds	Floating rate	3yr KTB rate - 2.25%	2023-03-15 2023-06-15 2024-06-15 2024-09-15 2025-06-15 2025-12-15	₩	75 5 11 36 3 25
Korea Housing Urban Guarantee Corporation	Urban Regeneration Support funds		1.80%(*1)	2034-12-22		49,779
Samsung Life Insurance Co.,Ltd.	Energy generation facilities construction funds	Fixed rate	3.77%	2023 ~ 2037		43,285
	Less: current portion				₩_	93,219 (4,577) 88,642

(*1) At the time of signing the contract, the interest rate of the Ministry of Land, Infrastructure and Transport is 1.8% per annum. If the interest rate is changed according to the fund management plan of the Ministry of Land, Infrastructure and Transport, the interest rate will change accordingly.

22. Borrowings and Debentures, Continued

(4) Local debentures as of December 31, 2023 and 2022 are as follows:

	UT	Maturity				
Туре	Issue date	date	Annual inte	orost rato	2023	2022
Corporate bond #17-2	2012-10-22	2027-10-22	Fixed rate	3.26%	100,000	100,000
Corporate bond #18-1	2012-10-22	2023-05-07	Fixed rate	2.93%	-	120,000
Corporate bond #18-2	2013-05-07	2028-05-07	Fixed rate	3.03%	80,000	80,000
Corporate bond #19-2	2013-06-14	2023-06-14	Fixed rate	3.38%	-	100,000
Corporate bond #21	2013-10-22	2023-10-22	Fixed rate	3.67%	-	110,000
Corporate bond #22	2013-10-31	2023-10-31	Fixed rate	3.61%	-	90,000
Corporate bond #23-2	2014-10-23	2024-10-23	Fixed rate	2.82%	120,000	120,000
Corporate bond #24-2	2014-11-20	2024-11-20	Fixed rate	2.81%	110,000	110,000
Corporate bond #26-2	2015-03-05	2025-03-05	Fixed rate	2.43%	90,000	90,000
Corporate bond #27-2	2015-05-08	2025-05-08	Fixed rate	2.70%	80,000	80,000
Corporate bond #30-2	2016-01-28	2026-01-28	Fixed rate	2.10%	110,000	110,000
Corporate bond #32-2	2016-09-09	2026-09-09	Fixed rate	1.61%	110,000	110,000
Corporate bond #33-2	2017-02-22	2027-02-22	Fixed rate	2.34%	130,000	130,000
Corporate bond #35-2	2017-05-22	2027-05-22	Fixed rate	2.46%	40,000	40,000
Corporate bond #35-3	2017-05-22	2032-05-22	Fixed rate	2.59%	110,000	110,000
Corporate bond #36-2	2017-06-23	2027-06-23	Fixed rate	2.35%	70,000	70,000
Corporate bond #36-3	2017-06-23	2037-06-23	Fixed rate	2.47%	90,000	90,000
Corporate bond #37-2	2017-07-21	2027-07-21	Fixed rate	2.36%	50,000	50,000
Corporate bond #37-3	2017-07-21	2037-07-21	Fixed rate	2.47%	110,000	110,000
Corporate bond #38-1	2017-09-05	2027-09-05	Fixed rate	2.44%	50,000	50,000
Corporate bond #38-2	2017-09-05	2037-09-05	Fixed rate	2.51%	100,000	100,000
Corporate bond #39-2	2017-09-28	2047-09-28	Fixed rate	2.46%	120,000	120,000
Corporate bond #40-2	2018-04-20	2038-04-20	Fixed rate	2.81%	60,000	60,000
Corporate bond #40-3	2018-04-20	2048-04-20	Fixed rate	2.81%	70,000	70,000
Corporate bond #41-2	2018-09-14	2038-09-14	Fixed rate	2.27%	100,000	100,000
Corporate bond #41-3	2018-09-14	2048-09-14	Fixed rate	2.25%	90,000	90,000
Corporate bond #42-2	2018-11-01	2038-11-01	Fixed rate	2.25%	60,000	60,000
Corporate bond #42-3	2018-11-01	2048-11-01	Fixed rate	2.20%	20,000	20,000
Corporate bond #43-1	2020-05-28	2025-05-28	Fixed rate	1.40%	60,000	60,000
Corporate bond #43-2	2020-05-28	2040-05-28	Fixed rate	1.59%	100,000	100,000
Corporate bond #43-3	2020-05-28	2050-05-28	Fixed rate	1.62%	90,000	90,000
Corporate bond #44-1	2020-06-23	2025-06-23	Fixed rate	1.42%	90,000	90,000
Corporate bond #44-2	2020-06-23	2040-06-23	Fixed rate	1.69%	60,000	60,000
Corporate bond #45-1	2020-08-27	2025-08-27	Fixed rate	1.28%	70,000	70,000
Corporate bond #45-2	2020-08-27	2040-08-27	Fixed rate	1.68%	80,000	80,000
Corporate bond #45-3	2020-08-27	2050-08-27	Fixed rate	1.68%	80,000	80,000
Corporate bond #46-2	2020-11-05	2025-11-05	Fixed rate	1.42%	10,000	10,000
Corporate bond #46-3	2020-11-05	2050-11-05	Fixed rate	1.76%	80,000	80,000
Corporate bond #47-1	2020-12-22	2025-12-22	Fixed rate	1.51%	40,000	40,000
Corporate bond #47-2	2020-12-22	2030-12-22	Fixed rate	1.82%	50,000	50,000
Corporate bond #47-3	2020-12-22	2050-12-22	Fixed rate	1.88%	80,000	80,000
Corporate bond #48-1	2021-04-29	2024-04-29	Fixed rate	1.39%	60,000	60,000

22. Borrowings and Debentures, Continued

(4) Local debentures as of December 31, 2023 and 2022 are as follows, Continued

IN MILLIONS OF KOREAN WO)//	Maturity				
Туре	Issue date	date	Annual inte	rest rate	2023	2022
Corporate bond #48-2	2021-04-29	2026-04-29	Fixed rate	1.87%	150,000	150,000
Corporate bond #48-3	2021-04-29	2031-04-29	Fixed rate	2.18%	20,000	20,000
Corporate bond #49-1	2021-07-29	2024-07-29	Fixed rate	1.68%	110,000	110,000
Corporate bond #49-2	2021-07-29	2026-07-29	Fixed rate	1.92%	130,000	130,000
Corporate bond #49-3	2021-07-29	2031-07-29	Fixed rate	2.00%	30,000	30,000
Corporate bond #50-1	2021-11-10	2024-11-10	Fixed rate	2.36%	20,000	20,000
Corporate bond #50-2	2021-11-10	2026-11-10	Fixed rate	2.60%	60,000	60,000
Corporate bond #50-3	2021-11-10	2041-11-10	Fixed rate	2.50%	10,000	10,000
Corporate bond #51-1	2022-01-25	2025-01-24	Fixed rate	2.76%	50,000	50,000
Corporate bond #51-2	2022-01-25	2042-01-24	Fixed rate	2.78%	20,000	20,000
Corporate bond #52-1	2022-03-28	2025-03-28	Fixed rate	3.18%	90,000	90,000
Corporate bond #52-2	2022-03-28	2042-03-28	Fixed rate	3.35%	30,000	30,000
Corporate bond #52-3	2022-03-28	2052-03-28	Fixed rate	3.20%	10,000	10,000
Corporate bond #53-1	2022-05-20	2024-05-20	Fixed rate	3.52%	40,000	40,000
Corporate bond #53-2	2022-05-20	2025-05-20	Fixed rate	3.78%	120,000	120,000
Corporate bond #53-3	2022-05-20	2052-05-20	Fixed rate	3.71%	30,000	30,000
Corporate bond #54-1	2022-07-19	2024-07-19	Fixed rate	3.98%	110,000	110,000
Corporate bond #54-2	2022-07-19	2025-07-19	Fixed rate	3.97%	50,000	50,000
Corporate bond #55-1	2022-10-25	2024-10-25	Fixed rate	5.64%	40,000	40,000
Corporate bond #55-2	2022-10-25	2025-10-25	Fixed rate	5.96%	100,000	100,000
Corporate bond #56-1	2022-11-28	2024-11-28	Fixed rate	5.41%	70,000	70,000
Corporate bond #56-2	2022-11-28	2025-11-28	Fixed rate	5.29%	10,000	10,000
Corporate bond #57-1	2023-01-17	2025-01-17	Fixed rate	4.07%	70,000	-
Corporate bond #57-2	2023-01-17	2026-01-17	Fixed rate	4.04%	30,000	-
Corporate bond #58-1	2023-04-20	2026-04-20	Fixed rate	3.98%	200,000	-
Corporate bond #58-2	2023-04-20	2028-04-20	Fixed rate	4.13%	40,000	-
Corporate bond #58-3	2023-04-20	2043-04-20	Fixed rate	3.94%	20,000	-
Corporate bond #59-1	2023-07-19	2024-07-19	Fixed rate	3.96%	110,000	-
Corporate bond #59-2	2023-07-19	2026-07-19	Fixed rate	4.02%	20,000	-
Corporate bond #59-3	2023-07-19	2043-07-19	Fixed rate	4.15%	40,000	
					4,850,000	4,740,000
Less: discount on deber	nture issuance				(7,159)	(7,803)
Less: current portion					(789,478)	(419,926)
				£	↓ 4,053,363	4,312,271

22. Borrowings and Debentures, Continued

(5) Foreign debentures as of December 31, 2023 and 2022 are as follows:

In millions of Korean won, In thousands of USD, CHF

		Maturity			Foreign			
Туре	Issue date	date	Annual inte	erest rate	Currency		2023	2022
Euro bond #4	2018-06-07	2023-06-07	Fixed rate	3.750%	USD 300,000	₩	-	380,190
Swiss franc bond #2	2019-02-27	2024-02-27	Fixed rate	0.125%	CHF 200,000		305,364	274,574
Euro bond #6	2022-06-28	2025-06-28	Fixed rate	4.125%	USD 300,000		386,820	380,190
							692,184	1,034,954
Less: discount on deb	enture issuand	ce					(1,612)	(3,084)
Less: current portion							(305,327)	(379,978)
						₩	385,245	651,892

(6) Repayment schedule of borrowings and debentures as December 31, 2023 are as follows:

In millions of Korean won

		Less than		More than			
		1 year	1 - 2 years	2 - 5 years	5 years	Total	
Borrowings	₩	105,630	3,028	9,086	73,462	191,206	
Debentures		1,095,364	1,316,820	1,370,000	1,760,000	5,542,184	
	₩	1,200,994	1,319,848	1,379,086	1,833,462	5,733,390	

(7) Changes in borrowings and debentures for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won

		Beginning		Foreign exchange		Ending
	_	balance	Cash flows	rates fluctuation	Others	balance
Borrowings	₩	148,419	42,787	-	-	191,206
Debentures	_	5,764,067	(284,030)	49,720	3,656	5,533,413
	₩_	5,912,486	(241,243)	49,720	3,656	5,724,619

(ii) For the year ended December 31, 2022

		Beginning balance	Cash flows	Foreign exchange rates fluctuation	Changes in consolidation scope	Others	Ending balance
Borrowings Debentures	₩	150,282 5,321,759 5,472,041	(47,745) 366,812 319,067	5,371 72,110 77,481	40,511 (50) 40,461	3,436 3,436	148,419 5,764,067 5,912,486

23. Other Financial Liabilities

Other financial liabilities as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023		202	22
		Current	Non-current	Current	Non-current
Derivative liabilities	₩	88	4,681	3,527	10,064

24. Employment Benefits

(1) The principal assumptions used on actuarial valuation as of December 31, 2023 and 2022 are as follows:

	2023	2022
Discount rate	4.30 ~ 4.34%	5.19 ~ 5.30%
Future salary increase rate	3.00 ~ 6.13%	3.22 ~ 5.82%
Weighted average duration	7.9 ~ 10.1 years	8.8 ~ 10.7 years

(2) Details of the expense relating to its defined benefit plans for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won

	2023		2022	
Current service cost	₩	14,204	19,316	
Interest cost		6,688	4,115	
Expected return on plan assets		(2,694)	(1,341)	
	₩	18,198	22,090	

(3) Employee benefit obligations as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		2023	2022
Present value of defined benefit obligation from funded plans Fair value of plan assets	₩	158,548 (51,298)	126,098 (52,753)
Net liabilities incurred from defined benefit plans	₩	107,250	73,345

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

In millions of Korean won	2023	2022	
Beginning balance	126,098	150,019	
Current service cost	14,204	19,316	
Interest cost	6,688	4,115	
Remeasurement component	22,920	(37,599)	
Actual payments	(11,362)	(9,753)	
Ending balance W	158,548	126,098	

24. Employment Benefits, Continued

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

In millions of Korean won		2023	2022
Beginning balance	₩	52,753	51,570
Interest income		2,694	1,341
Remeasurement component		(205)	(229)
Contributions by the employers		1,171	3,088
Actual payments		(5,115)	(3,017)
Ending balance	₩	51,298	52,753

In addition, profit (loss) on accumulated remeasurement component amounting to W7,348 million and W 10,426 million has been recognized as other comprehensive loss and other comprehensive profit for the years ended December 31, 2023 and 2022, respectively.

(6) Details of fair value of plan assets as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		2023	2022	
Bank deposit Others	W	8,919 42,379	20,005 32,748	
	₩	51,298	52,753	

For each of the two years in the period ended December 31, 2023, actual returns on plan assets amounted W2,489 million and W1,112 million, respectively.

(7) Details of other long-term employee benefit liabilities as of December 31, 2023 and 2022 are as follows:

In millions of Korean won	2023		2022	
Unpaid long-service leave	₩	163	164	

(8) Remeasurement components recognized in other comprehensive income (loss) for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Change in demographic assumptions Remeasurement profit (loss) from changes in financial	₩	(4,985)	-
assumptions		(16,778)	43,153
Experience adjustments		(1,157)	(5,554)
Expected return		(205)	(229)
	₩	(23,125)	37,370

25. Provisions

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

In millions of Korean won

		202	3	202	2
	_	Current	Non-current	Current	Non-current
Provision for employment benefits	₩	44,037	-	40,868	-
Provision for RPS (*1)		-	-	-	-
Provision for green gas (*2)		1,085	-	7,640	-
Provision for litigation		-	-	10,972	-
Provision for other restoration liabilities		-	2,427	-	-
	₩	45,122	2,427	59,480	-

(*1) As the Group is obligated to produce and supply certain amount of energies from renewable energy sources in accordance with the *Act on the Promotion of the Development and Use of New and Renewable Sources of Energy*, the Group has recognized provision for renewable portfolio standard (RPS).

(*2) As the Group has a present obligation which is expected to be fulfilled by submitting emission rights to the government with regard to emission of greenhouse gas in accordance with the *Act on the Allocation and Trading of Greenhouse Gas Emission Permits,* the Group has recognized provision for green gas.

(2) Changes in provisions for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won		Beginning balance	Increase	Utilization	Others	Ending balance
Provision for employment benefits	₩	40,868	58,538	(55,369)	-	44,037
Provision for green gas Provision for litigation	vv	7,640 10,972	46,405 436	(52,960) (11,408)	-	1,085
Provision for other restoration liabilities		-	-	-	2,427	2,427
	₩	59,480	105,379	(119,737)	2,427	47,549

(ii) For the year ended December 31, 2022

In millions of Korean wo	n	Beginning balance	Increase	Utilization	Reversal	Ending balance
Provision for employment	-					
benefits	₩	36,218	46,507	(41,857)	-	40,868
Provision for RPS		-	6,254	-	(6,254)	-
Provision for green gas		137,021	19,296	(130,023)	(18,654)	7,640
Provision for litigation		10,427	545	-	-	10,972
	₩	183,666	72,602	(171,880)	(24,908)	59,480

25. Provisions, Continued

(3) Green gas emission rights and emission liabilities

(i) The amount of free allocation for each planning period and implementation year as December 31, 2023 are as follows:

In ten thousands of tons (tCO2-eq)

	3rd planning period					
	2021	2022	2023	2024	2025	Total
Free allocation	2,824	2,723	2,723	2,231	2,231	12,734

(ii) Changes in green gas emission rights for each of the two years in the period ended December 31, 2023 are as follows:

- For the year ended December 31, 2023

In ten thousands of tons (tCO2-eq), millions of won

	3rd planning period						
	202	2	202	3	202	4	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	
Beginning balance, including free allocation(*1)							
	2,890	40,132	2,791	13,500	2,231	-	
Purchase (sale)	78	6,234	111	12,272	-	-	
Submitted to the Government Borrowing	(2,968)	(46,366)	(53)	(6,594)	-	-	
(carried forward)	-	-	(62)	(11,166)	62	11,166	
Ending balance	-	-	2,787	8,012	2,293	11,166	

	Total		
	Quantity	Amount	
Beginning balance,			
including free allocation(*1)	7,912	53,632	
Purchase (sale)	189	18,506	
Submitted to the Government	(3,021)	(52,960)	
Borrowing			
(carried forward)	-		
Ending balance	5,080	19,178	

(*1) Changes, such as confirmed additional allocation and cancellation of allocation, have been reflected.

25. Provisions, Continued

(3) Green gas emission rights and emission liabilities, Continued

(ii) Changes in green gas emission rights for each of the two years in the period ended December 31, 2023 are as follows, Continued:

- For the year ended December 31, 2022

In ten thousands of tons (tCO2-eq), millions of won

3rd planning period					
202	1	2022		2023	
Quantity	Amount	Quantity	Amount	Quantity	Amount
2,824	-	2,723	-	2,723	-
457	115,269	125	32,812	68	13,500
(3,336)	(118,367)	(48)	(11,656)	-	-
55	3,098	90	18,976		-
-	-	2,890	40,132	2,791	13,500
	Quantity 2,824 457 (3,336)	2021 Quantity Amount 2,824 - 457 115,269 (3,336) (118,367)	2021 202 Quantity Amount Quantity 2,824 - 2,723 457 115,269 125 (3,336) (118,367) (48) 55 3,098 90	2021 2022 Quantity Amount Quantity Amount 2,824 - 2,723 - 457 115,269 125 32,812 (3,336) (118,367) (48) (11,656) 55 3,098 90 18,976	2021 2022 202 Quantity Amount Quantity Amount Quantity 2,824 - 2,723 - 2,723 457 115,269 125 32,812 68 (3,336) (118,367) (48) (11,656) - 55 3,098 90 18,976 -

	Total		
	Quantity	Amount	
Beginning balance,			
including free allocation(*1)	8,270	-	
Purchase (sale)	650	161,581	
Submitted to the Government	(3,384)	(130,023)	
Borrowing			
(carried forward)	145	22,074	
Ending balance	5,681	53,632	

(*1) Changes, such as confirmed additional allocation and cancellation of allocation, have been reflected.

(iii) There are no green gas emission rights provided as collateral by the Group as of December 31, 2023.

(iv) Among the green gas emission rights held by the Group, there are no emission rights held for short-term trading gains as of December 31, 2023.

(v) The estimated green gas emissions of the Group for the current implementation year is 29.29 million tons (tCO2-eq).

26. Non-financial Liabilities

Non-financial liabilities as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		202	23	2022	
	_	Current	Non-current	Current	Non-current
Advance payment	₩	26,558	-	45,403	-
Deferred revenue		289	1,001	549	653
Withholdings		6,212	-	6,598	-
Others		8,467	23,112	1,995	1,414
	₩	41,526	24,113	54,545	2,067

27. Contributed Capital

(1) Details of issued capital as of December 31, 2023 and 2022 are as follows:

In millions of Korean won, except par value and number of shares

Туре	Number of shares authorized	Number of shares issued	Par value	2023	2022
Common Stock	100,000,000	33,329,119 ₩	5,000	166,646	166,646

(2) Changes in number of outstanding capital stock for the years ended December 31, 2023 and 2022 are as follows:

Number of shares	2023	2022
Beginning balance Changes Ending balance	33,329,119	33,329,119

(3) Details of share premium as of December 31, 2023 and 2022 are as follows:

In millions of Korean won	-	2023	2022
Share premium	₩	1,106,252	1,106,252

28. Retained Earnings and Dividends Paid

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

In millions of Korean won

		2023	2022
Legal reserves (*1)	₩	80,934	75,614
Voluntary reserves		1,577,807	1,502,761
Retained earnings before appropriations		704,728	984,423
	₩	2,363,469	2,562,798

(*1) In accordance with the Commercial Law, an amount equal to at least 10% of cash dividend for each accounting period is required to be appropriated as a legal reserve until the reserve equals 50% of issued capital. The legal reserve cannot be used as a source for cash dividends and may be used to offset an accumulated deficit.

(2) Details of voluntary reserves as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		2023	2022
Reserve for the rationalization of business (*1)	₩	181	181
Reserve for investment on social overhead capital		13,000	13,000
Reserve for business expansion		1,564,626	1,489,580
	₩	1,577,807	1,502,761

(*1) Prior to 2002, KOWEPO appropriated certain tax-deductible benefits as reserve for the rationalization of business, for offsetting future deficit in accordance with the *Restriction of Special Taxation Act*. However, when the Act was amended on December 11, 2002, the Group's reserves have been changed to voluntary reserves due to deletion of related provision.

(3) Changes in retained earnings before appropriations for each of the two years in the period ended December 31, 2023 are as follows:

		2023	2022
Beginning balance	₩	984,423	581,618
Profit for the year attributed to owner of the Company		163,136	210,226
Dividend payments		(344,756)	-
Remeasurements of defined benefit liability, net of tax		(17,774)	28,743
Transfers from (to) reserves		(80,366)	163,773
Reclassified due to disposal of the financial assets at fai value through other comprehensive income	r	(391)	-
Changes in equity method retained earnings		456	63
Ending balance	₩	704,728	984,423

28. Retained Earnings and Dividends Paid, Continued

(4) Dividend payments for the year ended December 31, 2023 are as follows:

In millions of Korean won, except dividend per share and number of shares

Types of shares	Total number of shares issued	Number of treasury shares	Number of dividend shares	Dividend per share	Total of dividend
Ordinary shares	33,329,119	-	33,329,119	₩ 10,344	344,756

There are no dividend payments for the year ended December 31,2022.

(5) Changes in retained earnings in equity method for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won

		2023	2022
Beginning balance	₩	561	499
Changes		456	62
Ending balance	₩	1,017	561

(6) Changes in remeasurements components for each of the two years in the period ended December 31, 2023 are as follows:

		2023	2022
Beginning balance	₩	10,426	(18,317)
Changes		(23,125)	37,370
Income tax effect		5,351	(8,627)
Ending balance	₩	(7,348)	10,426

29. Statement of Appropriation of Retained Earnings

The statements of appropriation of retained earnings for each of the two years in the period ended December 31, 2023 are as follows:

Date of appropriation for 2023: March 28, 2024 Date of appropriation for 2022: March 22, 2023

In millions of Korean won		2023	2022
Unappropriated retained earnings			
Balance at beginning of year	₩	711,596	711,596
Profit for the year		126,519	106,361
Remeasurements gain (loss)		(18,090)	27,198
Reclassified due to disposal of the financial assets at fair		, , ,	
value through other comprehensive income		(391)	-
Interim dividend		(291,563)	-
		528,071	845,155
Transfer from voluntary reserves			
Reserves for business expansion		185,914	-
Balance at end of year before appropriation	₩	713,985	845,155
Appropriation of retained earnings			
Cash dividends		-	(53,193)
Legal reserve		(2,389)	(5,320)
Reserve for business expansion		-	(75,046)
		(2,389)	(133,559)
Unappropriated retained earnings to be carried over			
to subsequent year	₩	711,596	711,596

The statements of appropriation of retained earnings above were prepared based on the Company's separate financial statements.

30. Other Components of Equity

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

In millions of Korean won

		2023	2022
Accumulated other comprehensive income	₩	1,647,275	1,679,093
Other equity		(41,935)	(41,935)
	₩	1,605,340	1,637,158

(2) Changes in accumulated other comprehensive income (loss) for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

		Financial assets at fair value through other comprehensi- ve income valuation reserve	Reserve for gain (loss) on valuation of derivatives	Reserve for overseas operations translation credit	Shares in other comprehensive income (loss) of investments in associates and joint ventures	Total
Beginning balance Valuation loss on financial assets at fair value through	₩	1,684,017	(5,657)	(13,664)	14,397	1,679,093
other comprehensive income		(47,782)	-	-	-	(47,782)
Valuation loss on derivatives Foreign currency translation of		-	(1,367)	-	-	(1,367)
foreign operations Valuation of investments in		-	-	1,486	-	1,486
associates		-	-	-	1,915	1,915
Tax effect		13,231	308	-	-	13,539
Reclassified due to disposal of the financial assets at fair value through other						
comprehensive income		391		-	-	391
Ending balance	₩	1,649,857	(6,716)	(12,178)	16,312	1,647,275

30. Other Components of Equity, Continued

(2) Changes in accumulated other comprehensive income (loss) for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(ii) For the year ended December 31, 2022

In millions of Korean won

		Financial assets at fair value through other comprehensi- ve income valuation reserve	Reserve for gain (loss) on valuation of derivatives	Reserve for overseas operations translation credit	Shares in other comprehensive income (loss) of investments in associates and joint ventures	Total
Beginning balance Valuation gain on financial assets at fair value through	₩	173,408	10,878	(7,051)	1,936	179,171
other comprehensive income		1,963,954	-	-	-	1,963,954
Valuation loss on derivatives Foreign currency translation of		-	(21,717)	-	-	(21,717)
foreign operations		-	-	(6,613)	-	(6,613)
Valuation of investments in associates					12,461	12,461
Tax effect		(453,345)	5,182	-	-	(448,163)
Ending balance	₩	1,684,017	(5,657)	(13,664)	14,397	1,679,093
.			·			

(3) There are no changes in other equity for the years ended December 31, 2023 and 2022.

31. Sales

Details of sales for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Sales of electricity Others	₩	6,917,825 41,018	8,109,643 67,736
	₩	6,958,843	8,177,379

32. Selling and Administrative Expenses

Details of selling and administrative expenses for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Company welfare contribution fund	₩	3,293	-
Salaries		22,331	21,654
Retirement benefit expense		294	1,625
Welfare and benefit expense		2,631	2,677
Insurance expense		422	787
Depreciation		13,382	13,413
Amortization		3,947	3,304
Commission		22,198	19,735
Advertising expense		1,807	1,995
Training expense		182	120
Vehicle maintenance expense		136	163
Publishing expense		217	173
Business promotion expense		103	102
Rent expense		1,397	1,480
Telecommunication expense		726	409
Transportation expense		14	23
Taxes and dues		4,357	4,866
Expendable supplies expense		468	331
Water, light and heating expense		920	798
Repairs and maintenance expense		778	945
Ordinary development expense		18,246	17,390
Travel expense		619	487
Clothing expense		37	61
Others		3,443	2,912
	₩	101,948	95,450

33. Other Non-operating Income and Expense

(1) Other non-operating income for each of the two years in the period ended December 31, 2023 is as follows:

In millions of Korean won		2023	2022
Rental income Gains from assets contributed	₩	4,936 1,509	5,849 27
	₩	6,445	5,876

(2) Other non-operating expenses for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Donations Other bad debt expenses	₩	16,199 30,757	14,365 4,473
	₩	46,956	18,838

34. Other Income (Loss)

Details of other income and loss for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Gain on disposal of property, plant, and			
equipment	₩	79	117
Gain on foreign currency translation		1,326	8,028
Gain on foreign currency transaction		14,668	13,514
Other gains		37,571	39,426
Loss on disposal of property, plant, and equipment		(15,732)	(9,914)
Impairment loss on property, plant and		(10,702)	
equipment		(6,331)	-
Loss on disposal of intangible assets		-	-
Loss on foreign currency translation		(255)	(1,631)
Loss on foreign currency transaction		(18,236)	(40,495)
Other losses		(34,050)	(8,941)
	₩	(20,960)	104

35. Finance Income

(1) Finance income for each of the two years in the period ended December 31, 2023 is as follows:

In millions of Korean won		2023	2022
Interest income	₩	18,326	9,244
Dividend income		68,567	103,173
Gain on valuation of derivatives		37,435	39,620
Gain on transaction of derivatives		25,517	68,699
Gain on foreign currency translation		469	6,981
Gain on foreign currency transaction		-	233
	₩	150,314	227,950

(2) Interest income included in finance income for each of the two years in the period ended December 31, 2023 is as follows:

In millions of Korean won		2023	2022
Cash and cash equivalents Loans and receivables	₩	13,335 4,314	5,083 3,209
Other financial instruments		4	516
Trade and other receivables		673	436
	₩	18,326	9,244

36. Finance Expenses

(1) Finance expenses for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Interest expense Loss on valuation of derivatives	₩	157,549 88	146,499 9,017
Loss on transaction of derivatives		7,316	12,503
Loss on foreign currency translation		48,263	84,008
Loss on foreign currency transaction		12,300	43,585
	₩	225,516	295,612

(2) Interest expenses included in finance expenses for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won	2023	2022
Short term borrowings	695	3,604
Long term borrowings	2,441	1,723
Debentures	158,808	141,932
Trade and other payables	88	53
Lease liabilities	11,757	12,441
	173,789	159,753
Less: capitalized borrowing costs	(16,240)	(13,254)
W	157,549	146,499

37. Income Tax Expenses (benefits)

(1) Components of income tax expenses (benefits) for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won	-	2023	2022
Current income tax expenses (benefits)			
Current income tax	₩	18,185	31,560
Adjustment for prior period		118	141
Income tax charged directly to equity		18,890	(456,790)
	-	37,193	(425,089)
Deferred income tax expenses (benefits)	_		
Generation and realization of temporary differences		(26,650)	452,337
Amount due to tax deficits, tax credits and temporary			
differences that were not recognized in the past	_	(4,595)	(9,514)
	_	(31,245)	442,823
Income tax expenses	₩	5,948	17,734

(2) A reconciliation between income before income tax and income tax expense for each of the two years in the period ended December 31, 2023 is as follows:

In millions of Korean won		2023	2022
Profit before income tax expenses	₩	169,084	228,008
Income tax expenses in accordance with statutory tax rate		39,058	55,178
Adjustments			
Effects of the application of accumulative tax rate		(462)	(462)
Effects of non-deductible expenses		(10,864)	(5,745)
Effects of tax credits or exemptions		(17,307)	(21,864)
Amount due to tax deficits, tax credits and temporary differences			
that were not recognized in the past		(4,595)	(9,514)
		(33,228)	(37,585)
Adjustment for prior period		118	141
Income tax expenses	₩	5,948	17,734
Average effective tax rate		3.52%	7.78%

37. Income Tax Expenses (benefits), Continued

(3) Income tax recognized in other comprehensive income for each of the two years in the period ended December 31, 2023 is as follows:

In millions of Korean won	-	2023	2022
Net change in the non-current financial assets at fair value through other comprehensive income, net of tax Profit on valuation of derivatives using cash flow hedge	₩	13,231	(453,345)
accounting, net		308	5,182
Remeasurements of defined benefit obligations	₩-	<u> </u>	(8,627) (456,790)

(4) Recognized deferred income tax assets (liabilities) in the statements of financial position for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

		Balance as of January 1, 2023	Amounts recognized in profit or loss	Amounts recognized in other comprehensive income (loss)	Balance as of December 31, 2023
Deferred tax on temporary differences					
Long-term employee benefits	₩	17,387	2,372	5,351	25,110
Cash flow hedges		(21,766)	4,360	308	(17,098)
Property, plant and equipment		(200,763)	24,981	-	(175,782)
Intangible assets		54	8	-	62
Inventories		3,519	(2,434)	-	1,085
Financial instruments at fair value through					
other comprehensive income (loss)		(509,702)	(115)	13,231	(496,586)
Foreign currency translation		25,255	(5,298)	-	19,957
Other provision		(4,065)	18	-	(4,047)
Others		12,575	(22,456)		(9,881)
		(677,506)	1,436	18,890	(657,180)
Unused tax deficit and tax credit carry					
forward		21,286	8,403	-	29,689
Donation carryforward			2,516		2,516
Total	₩	(656,220)	12,355	18,890	(624,975)

37. Income Tax Expenses (benefits), Continued

(ii) For the year ended December 31, 2022

In millions of Korean won				Amounts recognized in	
	-	Balance as of January 1, 2022	Amounts recognized in profit or loss	other comprehensive income (loss)	Balance as of December 31, 2022
Deferred tax on temporary differences					
Long-term employee benefits	₩	23,769	2,245	(8,627)	17,387
Cash flow hedges		(21,420)	(5,528)	5,182	(21,766)
Property, plant and equipment		(247,913)	47,150	-	(200,763)
Intangible assets		56	(2)	-	54
Inventories		1,242	2,277	-	3,519
Financial instruments at fair value through					
other comprehensive income		(56,395)	38	(453,345)	(509,702)
Foreign currency translation		19,598	5,657	-	25,255
Other provision		(4,240)	175	-	(4,065)
Others	_	45,241	(32,666)	-	12,575
		(240,062)	19,346	(456,790)	(677,506)
Unused tax deficit and tax credit carry					
forward	_	26,665	(5,379)	-	21,286
Total	₩	(213,397)	13,967	(456,790)	(656,220)

(5) The details of deductible temporary differences not recognized as deferred tax assets as of December 31, 2023 are as follows:

In millions of Korean won		2023	
Investments in associates, and others	₩	147,269	

(6) Deferred tax liabilities presented in the statement of financial position of are as follows:

In millions of Korean won	2023		2022	
Deferred income tax assets	₩	732	1,846	
Deferred income tax liabilities		(625,707)	(658,065)	

38. Expenses Classified by Nature

Expenses classified by nature for each of the two years in the period ended December 31, 2023 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won		Selling and administrative		
	_	expenses	Cost of sales	Total
Raw materials used	₩	-	5,021,510	5,021,510
Company welfare contribution fund		3,293	-	3,293
Salaries		22,331	255,992	278,323
Retirement benefit expense		294	25,338	25,632
Welfare and benefit expense		2,631	25,083	27,714
Insurance expense		422	14,058	14,480
Depreciation		13,382	859,390	872,772
Amortization		3,947	4,678	8,625
Commission		22,198	13,946	36,144
Advertising expense		1,807	924	2,731
Training expense		182	466	648
Vehicle maintenance expense		136	112	248
Publishing expense		217	267	484
Business promotion expense		103	222	325
Rent expense		1,397	20,379	21,776
Telecommunication expense		726	278	1,004
Transportation expense		14	30	44
Taxes and dues		4,357	33,011	37,368
Expendable supplies expense		468	2,335	2,803
Water, light and heating expense		920	426	1,346
Repairs and maintenance expense		778	251,465	252,243
Ordinary development expense		18,246	15,454	33,700
Travel expense		619	839	1,458
Clothing expense		37	556	593
Survey and analysis expense		-	132	132
Others		3,443	110,281	113,724
	₩_	101,948	6,657,172	6,759,120

38. Expenses Classified by Nature, Continued

Expenses classified by nature for each of the two years in the period ended December 31, 2023 are as follows, Continued:

(ii) For the year ended December 31, 2022

In millions of Korean won		Selling and administrative expenses	Cost of sales	Total
	-			
Raw materials used	₩	-	6,407,608	6,407,608
Salaries		21,654	236,331	257,985
Retirement benefit expense		1,625	34,608	36,233
Welfare and benefit expense		2,677	23,311	25,988
Insurance expense		787	12,727	13,514
Depreciation		13,413	830,224	843,637
Amortization		3,304	4,650	7,954
Commission		19,735	17,163	36,898
Advertising expense		1,995	540	2,535
Training expense		120	494	614
Vehicle maintenance expense		163	121	284
Publishing expense		173	229	402
Business promotion expense		102	261	363
Rent expense		1,480	20,252	21,732
Telecommunication expense		409	246	655
Transportation expense		23	71	94
Taxes and dues		4,866	30,473	35,339
Expendable supplies expense		331	2,461	2,792
Water, light and heating expense		798	368	1,166
Repairs and maintenance expense		945	206,018	206,963
Ordinary development expense		17,390	19,075	36,465
Travel expense		487	771	1,258
Clothing expense		61	624	685
Survey and analysis expense		-	104	104
Others	_	2,912	4,044	6,956
	₩_	95,450	7,852,774	7,948,224

39. Earnings per Share

(1) Basic earnings per share for each of the two years in the period ended December 31, 2023 are as follows:

In Korean won		2023	2022	
Basic earnings per share	₩	4,895	6,308	

Since the Group does not own dilutive securities, basic earnings per share are identical to dilutive earnings per share.

(2) Profit attributable to controlling interest and weighted average number of common shares outstanding for each of the two years in the period ended December 31, 2023 are as follows:

In millions of won, except for number of share		2023	2022	
Profit attributable to controlling interest	₩	163,136	210,226	
Weighted average number of common shares		33,329,119	33,329,119	

40. Risk Management

(1) Capital risk management

The Group manages its capital to ensure that it will be able to continue as a going concern while maximizing the return to shareholder through the optimization of the debt and equity balance. The capital structure of the Group consists of net debt (offset by cash and bank balances) and equity. The Group's overall capital risk management strategy remains unchanged from that of the prior period.

Details of the Group's capital management accounts as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		2022	
Total borrowings and debentures	₩	5,724,619	5,912,486
Cash and cash equivalents		77,602	83,596
Net borrowings and debentures		5,647,017	5,828,890
Total shareholder's equity	₩	5,241,695	5,472,842
Debt to equity percentage		107.73%	106.51%

(2) Financial risk management

The Group is exposed to various risks related to its financial instruments, such as market risk (foreign currency risk, interest rate risk and price risk) and credit risk. The Group monitors and manages the financial risks relating to the operations of the Group through internal risk reports which analyses exposures by the degree and magnitude of risks. The Group uses derivative financial instruments for certain hedge risk exposures. The Group's overall financial risk management strategy remained unchanged from the prior period.

40. Risk Management, Continued

(2) Financial risk management, Continued

1) Credit risk

Credit risk is the risk of a financial loss to the Group when a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises primarily from the Group's sales activities, loans and receivables, derivative instruments. In addition, credit risk exposure may exist within financial guarantees and unused line of credits. The Group transacts with banks and financial institutions with excellent credit rating, so the credit risk from financial institutions is limited. In case of ordinary customers, the Group evaluates the customers' credit worthiness considering their financial statements, past experience and other factors.

a) Credit risk management

Electricity sales, the main operations of the Group are the necessity for daily life and industrial activities of Korean nationals, and have importance as one of the national key industries. The Group uses publicly available information and its own internal data related to trade receivables, to rate its major customers and to measure the credit risk that a counter party will default on a contractual obligation. For the incurred but not recognized loss, it is measured considering overdue period.

b) Impairment and allowance account

In accordance with the Group policies, individual material financial assets are assessed on a regular basis, trade receivables that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Value of the acquired collateral (including the confirmation of feasibility) and estimated collectable amounts are included in this assessment. Allowance for bad debts assessed on a collective basis are recognized for (i) the group of assets which individually are not material and (ii) incurred but not recognized losses that are assessed using statistical methods, judgment and past experience.

Book values of the financial assets represent the maximum exposure of the credit risk. Details of the Group's level of maximum exposure of the credit risk as of December 31, 2023 and 2022 are as follows:

In millions of Korean won 2023 2022 Cash and cash equivalents ₩ 77,602 83,596 40,298 Loans 67,677 Short-term financial instruments 34,513 43,169 Derivative assets (trading) 15 Derivative assets (hedge accounting) 107,409 78,769 Trade and other receivables 794,873 1,204,732

As of the reporting date, there are no financial assets and non-financial assets that were acquired through the exercise of the right of collateralized assets and reinforcement of credit arrangement.

As of the reporting date, the total guarantee amount to be assumed by the Group when the event of financial guarantees occurs in accordance with the financial guarantee contracts is $\frac{1}{2}$ 91,030 million (Note 41).

2) Market risk

Market risk is the risk that the Group's fair values of the financial instruments or future cash flows are affected by the changes in the market. Market risk consists of interest rate risk, currency risk and other price risk.

40. Risk Management, Continued

(2) Financial risk management, Continued

3) Sensitivity analysis

a) Major assets and liabilities with uncertainties in underlying assumptions

① Defined benefit obligation

A sensitivity analysis of defined benefit obligation assuming a 1% increase or decrease in the actuarial assumptions as of December 31, 2023 and 2022 is as follows:

In millions of Korean won

			2023		2022	
			1%	1%	1%	1%
Туре	Accounts	_	Increase	Decrease	Increase	Decrease
Future salary increase	Increase (decrease) in					
rate	defined benefit obligation	₩	16,241	(14,083)	13,892	(11,958)
Discount rate	Increase (decrease) in					
DISCOUNTIALE	defined benefit obligation		(14,526)	17,107	(12,165)	14,407

b) Management judgment affected by uncertainties in underlying assumptions

① Foreign currency risk

The Group undertakes transactions denominated in foreign currencies; consequently, exposures to currency exchange rate fluctuations arise. The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In thousands of foreign currencies

	USD	CHF	EUR	JPY	GBP	AUD	SEK
Assets							
Cash and cash equivalents	7,223	-	-	-	-	-	-
Trade and other receivables	23,813	-	30	-	-	-	-
Short-term financial							
instruments	3,500	-	-	-	-	-	-
Long-term loans	18,099	-	-		-	-	
	52,635	-	30	-	-	-	-
Liabilities							
Trade and other payables	(400,720)	-	-	(1,942,830)	-	-	(259)
Debentures	(300,000)	(200,000)	-	-	-	-	-
	(700,720)	(200,000)	-	(1,942,830)	-	-	(259)
Net exposure in foreign currency	(648,085)	(200,000)	30	(1,942,830)	-	-	(259)

Risk Management, Continued 40.

- (2) Financial risk management, Continued
- 3) Sensitivity analysis, Continued
- b) Management judgment affected by uncertainties in underlying assumptions, Continued
- 1 Foreign currency risk, Continued
- (ii) As of December 31, 2022

In thousands of foreign currencies

	USD	CHF	EUR	JPY	AUD	IDR
Assets						
Cash and cash equivalents	18,151	-	-	-	-	-
Trade and other receivables	38,782	-	20	-	-	-
Short-term financial instruments	2,500	-	-	-	-	-
Long-term loans	18,099	-	-	-	-	-
	77,532	-	20		-	-
Liabilities						
Trade and other payables	(584,689)	-	-	(866,955)	-	-
Debentures	(600,000)	(200,000)	-	-	-	-
	(1,184,689)	(200,000)		(866,955)		
Net exposure in foreign currency	(1,107,157)	(200,000)	20	(866,955)	-	

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

> 10% Decrease

> > 168,588

168,588

In millions of Korean won	202	23	202	22
	10% Increase	10% Decrease	10% Increase	
Increase (decrease) of profit before income tax	₩ (115,869)	•	(168,588)	
Increase (decrease) of shareholder's equity	(115,869)	115,869	(168,588)	

The sensitivity analysis above is conducted for monetary assets and liabilities denominated in foreign currencies other than functional currency, without consideration of hedge effect of related derivatives, as of December 31, 2023 and 2022.

To manage its foreign currency risk related to foreign currency denominated receivables and payables, the Group has a policy to enter into currency swap agreements. In addition, to manage its foreign currency risk related to foreign currency denominated expected sales transactions and purchase transactions, the Group enters into cross-currency forward agreements.

When derivatives are traded for hedging purpose, the Group negotiates the terms of the derivatives contract to meet the conditions for hedging. In order to hedge the exchange risk of payment of payables and collection of receivables in foreign currencies, the exposure period until the time of cash flow forecasts for transactions up to the point of settlement of payables and receivables is included. These forecast transactions are highly likely to occur, and the balance of currency swap contracts depends on the level and exchange rates of the expected payables and receivables in foreign currencies.

40. Risk Management, Continued

(2) Financial risk management, Continued

- 3) Sensitivity analysis, Continued
- b) Management judgment affected by uncertainties in underlying assumptions, Continued
- 1) Foreign currency risk, Continued

There is an economic relationship between the hedged items and hedging instruments since the terms of currency swap contract is consistent with the terms of forecast transactions. Since the risk of the Group's currency swap contract is consistent to hedged item, the hedging relationship is set to 1:1. At the end of the reporting period, the Group's hedging instruments is hedging against the risk of hedged items.

② Interest rate risk

The Group is exposed to interest rate risk due to its borrowing with floating interest rates. A 1% increase or decrease is used when reporting interest rate risk internally to key management personnel which represents management's assessment of the reasonably possible change in interest rates.

The Group's borrowings and debentures with floating interest rates as of December 31, 2023 and 2022 are as follows:

In millions of Korean won	-	2023	2022
Short-term borrowings Long-term borrowings	₩	1,821 49,817	5,200 49,934
	W	51,638	55,134

A Sensitivity analysis on the Group's borrowings and debentures assuming a 1% increase or decrease in interest rates for the years ended December 31, 2023 and 2022 is as follows:

In millions of Korean won

	_	2023		2022	
		1%	1%	1%	1%
		Increase	Decrease	Increase	Decrease
Increase(decrease) of profit before income tax	₩	(516)	516	(551)	551
Increase(decrease) of shareholders' equity		(516)	516	(551)	551

4) Liquidity risk

The Group has established an appropriate liquidity risk management framework for the management of the Group's short, medium and long-term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

In addition, the Group has established credit lines on its trade financing and bank overdrafts, and through payment guarantees it has received, it maintains an adequate credit (borrowing) line. In addition, in case of major construction investment, the Group has the ability to use reserve cash or utilize long-term borrowings.

40. Risk Management, Continued

(2) Financial risk management, Continued

4) Liquidity risk, Continued

The following table shows the details of maturities of non-derivative financial liabilities as of December 31, 2023 and 2022. This table, based on the undiscounted cash flows of the non-derivative financial liabilities including estimated interests, has been prepared based on the respective liabilities' earliest maturity date.

(i) As of December 31, 2023

In millions of Korean won		Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Borrowings and debentures	₩	1,346,747	1,430,909	1,547,348	2,390,323	6,715,327
Trade and other payables Financial guarantee contract (*1)		705,169 20,300	94,818	188,637 -	189,127 70,730	1,177,751 91,030
	₩	2,072,216	1,525,727	1,735,985	2,650,180	7,984,108

(*1) This is the total amount of guarantee the Group would bear in the event of a financial guarantee event.

(ii) As of December 31, 2022

In millions of Korean won		Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Borrowings and debentures Trade and other payables	₩	1,005,752 910,760	1,082,847 92,470	2,448,303 231,818	2,420,276 232,367	6,957,178 1,467,415
Financial guarantee contract (*1)		20,300	-	-	-	20,300
	₩	1,936,812	1,175,317	2,680,121	2,652,643	8,444,893

(*1) This is the total amount of guarantee the Group would bear in the event of a financial guarantee event.

As the Group manages liquidity on a net asset and net liability basis, it is necessary to include information about non-derivative financial assets in order to understand liquidity risk management.

40. Risk Management, Continued

(2) Financial risk management, Continued

4) Liquidity risk, Continued

The expected maturities for non-derivative financial assets as of December 31, 2023 and 2022 in detail are as follows:

(i) As of December 31, 2023

In millions of Korean won

	Less than 1 year	1-5 years	Over 5 years	Uncertain	Total
₩	77,602	-	-	-	77,602
	-	-	-	2,235,536	2,235,536
	-	-	-	7,412	7,412
	8,667	34,314	-	-	42,981
	34,513	-	-	-	34,513
	782,044	13,846	-	-	795,890
₩	902,826	48,160	-	2,242,948	3,193,934
		<u>1 year</u>	1 year years ₩ 77,602 - - - - 8,667 34,314 34,513 - 782,044 13,846	1 year years 5 years ₩ 77,602 - - - - - - - - - - 8,667 34,314 - - 34,513 - - - 782,044 13,846 - -	1 year years 5 years Uncertain ₩ 77,602 - - - - - - 2,235,536 - - - 2,235,536 - - - 7,412 8,667 34,314 - - 34,513 - - - 782,044 13,846 - -

(ii) As of December 31, 2022

		Less than 1 year	1-5 years	Over 5 years	Uncertain	Total
Cash and cash equivalents	₩	83,596	-		-	83,596
Financial instruments at fair value						
through other comprehensive income		-	-	-	2,283,318	2,283,318
Financial instruments at fair value						
through profit or loss		-	-	-	7,412	7,412
Loans		6,353	63,787	-	-	70,140
Short-term financial instruments		43,169	-	-	-	43,169
Trade and other receivables		1,195,753	9,684		-	1,205,437
	₩	1,328,871	73,471	-	2,290,730	3,693,072

40. Risk Management, Continued

(2) Financial risk management, Continued

4) Liquidity risk, Continued

Derivative liabilities classified by maturity periods which from reporting date to maturity date of contract as of December 31, 2023 and 2022 are as follows:

(i) As of December 31, 2023

In millions of Korean won

	Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Net settlement					
-Trading purpose W	-	-	-	-	-
Gross settlement	-	-	-	-	-
-Trading purpose	88	-	-	-	88
-Hedge accounting purpose	-	4,681	-	-	4,681
₩	88	4,681	-	-	4,769

(ii) As of December 31, 2022

Total
-
3,527
10,064
13,591

40. Risk Management, Continued

(3) Fair value risk

The fair value of the Group's actively-traded financial instruments (i.e. FVTPL, FVOCI, etc.) is based on the traded market-price as of the reporting period end. The fair value of the Group's financial assets is the amount which the asset could be exchanged for or the amount a liability could be settled for.

The fair values of financial instruments where no active market exists or where quoted prices are not otherwise available are determined by using valuation techniques. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. If there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, the Group uses that technique.

For trade receivables and payables, the Group considers the carrying value, net of impairment, as fair value. While for disclosure purposes, the fair value of financial liabilities is estimated by discounting a financial instrument with similar contractual cash flows using the effective interest method.

1) Fair value and book value of financial assets and liabilities as of December 31, 2023 and 2022 are as follows:

In millions of Korean won		202	3	202	2022	
	-	Book value	Fair value	Book value	Fair value	
Assets recognized at fair value Financial assets at fair value through other						
comprehensive income Financial assets at fair value through profit or loss Derivatives assets (trading)	₩	2,235,536 7,412 15	2,235,536 7,412 15	2,283,318 7,412	2,283,318 7,412	
Derivatives assets (hedge accounting)		78,769	78,769	107,409	107,409	
	₩	2,321,732	2,321,732	2,398,139	2,398,139	
Assets carried at amortized cost						
Cash and cash equivalents	₩	77,602	77,602	83,596	83,596	
Trade and other receivables		794,873	794,873	1,204,732	1,204,732	
Loans		40,298	40,298	67,677	67,677	
Short-term financial instruments		34,513	34,513	43,169	43,169	
	₩	947,286	947,286	1,399,174	1,399,174	
Liabilities recognized at fair value						
Derivatives liabilities (trading)						
	₩	88	88	3,527	3,527	
Derivatives liabilities (hedge accounting)	_	4,681	4,681	10,064	10,064	
	₩.	4,769	4,769	13,591	13,591	
Liabilities carried at amortized cost						
Trade and other payables	₩	1,129,972	1,129,972	1,408,739	1,408,739	
Borrowings		191,206	191,206	148,419	148,419	
Debentures		5,533,413	5,063,130	5,764,067	4,995,835	
	₩	6,854,591	6,384,308	7,321,225	6,552,993	
	-					

40. Risk Management, Continued

(3) Fair value risk, Continued

2) The interest rates used to discount estimated cash flows, when applicable, are based on the government yield curve at the reporting date plus an adequate credit spread.

The discount rates used for calculating fair value as of December 31, 2023 and 2022 are as follows:

Туре	2023 (%)	2022 (%)
Derivatives	2.25 ~ 2.83	2.78 ~ 3.17
Debentures	1.65 ~ 5.22	2.04 ~ 5.40

3) Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique. The level of hierarchy of fair value is as follows:

	The significance of input variables
Level 1	Quoted (unadjusted) prices in active markets for identical assets or liabilities
Level 2	Other techniques for which all inputs which have a significant effect on the recorded fair
	value are observable, either directly or indirectly
Level 3	Techniques which use inputs which have a significant effect on the recorded fair value that
	are not based on observable market data

Fair values of financial instruments by hierarchy level as of December 31, 2023 and 2022, respectively, are as follows:

(i) As of December 31, 2023

		Level 1	Level 2	Level 3	Total
Financial assets at fair value:	-				
Financial assets at fair value through other					
comprehensive income	₩	2,218,187	-	17,349	2,235,536
Financial assets at fair value through profit or loss		-	-	7,412	7,412
Derivative assets held for trading		-	15	-	15
Derivative assets held for hedging	_	-	78,769	-	78,769
	₩	2,218,187	78,784	24,761	2,321,732
Financial liabilities at fair value:	-				
Derivative liabilities held for trading	₩	-	88	-	88
Derivative liabilities held for hedging		-	4,681	-	4,681
	₩	-	4,769	-	4,769

40. Risk Management, Continued

(3) Fair value risk, Continued

3) Fair value hierarchy, Continued

(ii) As of December 31, 2022

In millions of Korean won

	_	Level 1	Level 2	Level 3	Total
Financial assets at fair value:	-				
Financial assets at fair value through other					
comprehensive income	₩	2,265,200	-	18,118	2,283,318
Financial assets at fair value through profit or loss		-	-	7,412	7,412
Derivative assets held for hedging	_	-	107,409	-	107,409
	₩	2,265,200	107,409	25,530	2,398,139
Financial liabilities at fair value:	-				
Derivative liabilities held for trading	₩	-	3,527	-	3,527
Derivative liabilities held for hedging		-	10,064	-	10,064
	₩	-	13,591	-	13,591
	₩_	-	13,591	-	13,591

The fair value of financial instruments not traded in an active market is determined using valuation techniques.

The Group determined the fair value of its financial assets measured at fair value through other comprehensive income through the discounted cash flow, and used assumptions such as weighted average capital cost of 5.62% and permanent growth rate of 0% to determine for value. If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

There were no transfers between levels 1 and 2 for recurring fair value measurements during the year.

Changes in level 3 for recurring fair value measurements for each of the two years in the period ended December 31, 2023 are as follows:

(i) As of December 31, 2023

In millions of Korean won	-	Beginning balance	Valuation	Disposal	Ending balance
Financial assets at fair value through other comprehensive income Financial assets at fair value through profit or loss	₩	18,118 7,412 25,530	(769) (769)	-	17,349 7,412 24,761
(ii) As of December 31, 2022					
In millions of Korean won		Beginning balance	Valuation	Ending balance	_
Financial assets at fair value through other comprehensive income Financial assets at fair value through profit or loss	₩	18,044 7,412	74	18,118 - 7,412	
	₩	25,456	74	25,530	_

41. Related Party Transactions

(1) The nature of the Group's relationship with the related parties as of December 31, 2023 is as follows:

Control relationship	Related party
Parent company	Korea Electric Power Corporation
Associates	Pioneer Gas Power, Ltd. Xe-Pian Xe-Namnoy Power Co., Ltd. PT. Mutiara Jawa Korea Offshore Wind Power Co., Ltd. Daegu Solar Power Plant Co., Ltd. Dongducheon Dream Power Co., Ltd. Solar Power Plants Happy City Co., Ltd. Shin Pyeongtaek Power Co., Ltd. KEPCO ES Co.,Ltd. KEPCO Solar Co., Ltd. Seoroseoro Sunny Power Plant Co., Ltd. Anjwa Smart Farm & Solar City Co., Ltd. Muan Solar Park Co., Ltd. Yudang Solar Co., Ltd.
Joint ventures	Rabigh Operation & Maintenance Company Limited KIAMCO KOWEPO Bannerton Hold Co Pty., Ltd. Haemodum Solar Energy Co., Ltd. NH-Amundi Global Infra Private Fund No.21 Hapcheon Floating Photovoltaic Plant Inc. Cheongna Energy Co., Ltd. Yeongwol Eco Wind Co., Ltd. Gurae Jumin Wind Power Co., Ltd. Gunsan Land Solar Co., Ltd. CapMan Lynx SCA, SICAR Eumseong Eco Park Co., Ltd. Pungbaek Wind Power Co., Ltd. Seobusambo highway photovoltaics Co., Ltd. Namyangju Combined Heat And Power Co.,Ltd Wadi Noor Solar Power
Other related party	Korea Hydro & Nuclear Power Co., Ltd. Korea South-East Power Co., Ltd. Korea Midland Power Co., Ltd. Korea Southern Power Co., Ltd. Korea East-West Power Co., Ltd. KEPCO Engineering & Construction Company Inc. KEPCO KPS Co., Ltd. KEPCO KDN Co., Ltd. KEPCO Nuclear Fuel Co., Ltd. Korea Gas Corporation Korea Electronic Power Industrial Development Co., Ltd. Korea Development Bank KEPCO Bylong Australia Pty., Ltd. PT Bayan Resources TBK Etc.

41. Related Party Transactions, Continued

(2) Significant transactions with associates for each of the two years in the period ended December 31, 2023 are as follows:

		Sales and others		Purchase and others		
Related parties		2023	2022	2023	2022	
Korea Electric Power Corporation	₩	7,044,257	8,343,181	111,709	83,144	
Korea Hydro & Nuclear Power Co., Ltd.		-	-	25	21	
Korea Southern Power Co., Ltd.		2,795	3,383	197	125	
Korea Midland Power Co., Ltd.			74	-	-	
KEPCO Engineering & Construction						
Company Inc.		-	-	3,913	8,634	
KEPCO KPS Co., Ltd.		1,550	2,117	102,175	91,852	
KEPCO KDN Co., Ltd.		-	-	23,291	17,581	
Cheongna Energy Co., Ltd.		22,320	29,654	60	80	
Korea Offshore Wind Power Co., Ltd.		156	263	3,307	5,179	
Daegu Solar Power Plant Co., Ltd.		408	260	2,559	2,644	
Dongducheon Dream Power Co., Ltd.		479	164	-	4,080	
Solar Power Plants Happy City Co., Ltd.		-	-	228	266	
Rabigh Operation & Maintenance Company						
Limited		2,994	3,005	-	-	
Korea Gas Corporation		5,125	2,569	2,135,195	2,820,923	
Korea Electronic Power Industrial			,	, ,	,, -	
Development Co., Ltd.		3,558	3,298	50,276	48,242	
Korea Power Exchange		· _	· _	3,749	4,970	
Shin Pyeongtaek Power Co., Ltd.		83,961	13,342	746	233	
Muan Solar Park Co., Ltd		2,680	600	16,554	17,052	
Yudang Solar Co., Ltd.		100	160	1,860	1,915	
Anjwa Smart Farm & Solar City Co., Ltd.		2,067	774	17,333	16,942	
Seoroseoro Sunny Power Plant Co., Ltd.		-	-	232	166	
CapMan Lynx SCA, SICAR		1,840	1,670	-	-	
Xe-Pian Xe-Namnoy Power Co., Ltd.		2,742	2,203	-	-	
KEPCO ES Co., Ltd.		790	142	-	-	
KEPCO Solar Co., Ltd.		1,334	117	38	638	
PT. Mutiara Jawa		1,045	136	-	-	
Haemodum Solar Energy Co., Ltd.		420	34	262	214	
NH-Amundi Global Infra Private Fund No.21		1,568	1,415	-	-	
PT Bayan Resources TBK		68,567	103,448	-	-	
Gunsan Land Solar Co., Ltd.		683	502	486	533	
Hapcheon Floating Photovoltaic Plant Inc.		246	478	3,396	2,526	
Seobusambo highway photovoltaics Co., Ltd.		11	-	11	-	
Eumseong Eco Park Co., Ltd.		-	-	27,765	-	
Korea Development Bank		20,648	47,168	1,589	14,868	
	₩	7,272,344	8,560,157	2,506,956	3,142,828	
	_			· · · · · · · · · · · · · · · · · · ·		

41. Related Party Transactions, Continued

(3) Receivables and payables arising from the related party transactions as of December 31, 2023 and 2022 are as follows:

		_	Receiv		Payables	
Company name	Туре		2023	2022	2023	2022
Korea Electric Power Corporation	Trade receivables	₩	503,604	1,020,592	-	
	Non-trade receivables and others		174,153	81,831	-	
	Trade payables		-	-	9,178	5,946
	Non-trade payables and others		-	-	292,078	2,875
Korea Southern Power Co., Ltd.	Non-trade receivables and others		2	654	-	
	Non-trade payables and others		-	-	314	29
Korea East-West Power Co., Ltd.	Non-trade receivables and others		2	-	-	
KEPCO KPS Co., Ltd.	Non-trade receivables and others		21	230	-	
	Non-trade payables and others		-	-	13,236	1,374
KEPCO KDN Co., Ltd.	Non-trade receivables and others		-	1,500	-	
	Non-trade payables and others		-	-	4,121	1,875
KEPCO Engineering & Construction Company Inc.	Non-trade payables and others		-	-	1,105	
Korea Power Exchange	Non-trade payables and others		-	-	105	
Cheongna Energy Co., Ltd.	Trade receivables		13,514	17,021	-	
Korea Offshore Wind Power Co., Ltd.	Trade receivables		77	-	-	
Rabigh Operation & Maintenance Company						
Limited	Non-trade receivables		26	26	-	
Pioneer Gas Power Ltd.	Non-trade payables and others		-	-	-	502
Shin Pyeongtaek Power Co., Ltd.	Non-trade receivables and others		4,607	742	-	
	Non-trade payables and others		-	-	385	90
Korea Gas Corporation	Non-trade receivables and others		12,375	658	-	
	Trade payables		-	-	752	453,510
	Non-trade payables and others		-	-	1,377	1,293
Korea Electronic Power Industrial	Trade receivables		126	126	-	
Development Co., Ltd.	Non-trade payables and others		-	-	1,177	
Xe-Pian Xe-Namnoy Power Co., Ltd.	Non-trade receivables and others		6,277	4,091	-	
-	Loans		23,337	22,937	-	
Capman Lynx SCA, SICAR (*1)	Loans		35,210	31,629	-	
KEPCO ES Co.,Ltd.	Trade receivables		_	-	-	
	Non-trade receivables		790	-	-	
KEPCO Solar Co., Ltd.	Non-trade receivables		869	-	-	
Seobusambo highway photovoltaics Co., Ltd.	Non-trade receivables and others		3	-	-	
Hapcheon Floating Photovoltaic Plant Inc.	Non-trade receivables and others		68	-	-	
PT Bayan Resources TBK	Non-trade receivables		22,131	44,505	-	
Gunsan Land Solar Co., Ltd.	Non-trade receivables and others		295	138	-	
Anjwa Smart Farm & Solar City Co., Ltd.	Deferred revenue and others			-	1,296	921
Daegu Solar Power Plant Co., Ltd.	Non-trade payables and others		-	-	-	2
Dongducheon Dream Power Co., Ltd.	Non-trade receivables and others		104		-	
PT. Mutiara Jawa	Non-trade receivables and others		444	37		
Korea Development Bank	Derivative assets		-	59,907	-	
	Derivative liabilities		-	-	1,574	3,358
	Accrued expenses and others		-	-	18	. 1
	·	₩	798,035	1,286,624	326,716	471,776

(*1) The Group recognizes the full allowance for doubtful accounts for loans to Capman Lynx SCA, SICAR.

41. Related Party Transactions, Continued

(4) Details of bituminous coal transactions(*1) with the related parties for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won	20	23	2022			
Related parties		Loans and others	Borrowings and others	Loans and others	Borrowings and others	
Korea Midland Power Co., Ltd.	₩	-	-	-	13,168	
Korea Southern Power Co., Ltd.		-	-	57,802	30,864	
	₩	-	-	57,802	44,032	

(*1) Translations above are non-monetary exchange transactions without commercial substance between the related parties.

(5) Details of LNG swap transactions(*1) with the related parties for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		20	23	2022		
Related parties		Loans and others	Borrowings and others	Loans and others	Borrowings and others	
Shin Pyeongtaek Power Co., Ltd.	₩	51,008	64,565	-	-	

(*1) Translations above are non-monetary exchange transactions without commercial substance between the related parties.

(6) The details of loans from associates as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

Туре	Company name	December 31, 2022	Foreign exchange adjustment, etc.	December 31, 2023
Associate	Xe-Pian Xe-Namnoy			
	Power Co., Ltd.	22,937	400	23,337
Joint venture	Capman Lynx SCA, SICAR (*1)	31,629	3,581	35,210

(*1) The Group recognizes the full allowance for doubtful accounts for loans to Capman Lynx SCA, SICAR.

41. Related Party Transactions, Continued

(7) The details of borrowings from associates as of December 31, 2023 and 2022 are as follows:

In millions of Korean won

		December 31,			December 31,
Туре	Company name	2022	Borrowing	Repayment	2023
Other related parties	Korea Development Bank	3,400	368,240	(321,640)	50,000

(8) Derivatives with associates as of December 31, 2023 are as follows:

In millions of Korean won, In thousands of USD

Туре		Contract	Am	ount	Intere	Exchange	
	Counterparty	period	Sell	Buy	Sell	Buy	rate
Hedging	Korea Development Bank	2022 ~2025	KRW 128,560	USD 100,000	3.370%	4.125%	1,285.60

(9) The salaries and other compensations to the key members of management for each of the two years in the period ended December 31, 2023 are as follows:

Туре		2023	2022
Short-term employee benefits	₩	734	683
Retirement and severance benefits		42	41

41. Related Party Transactions, Continued

(10) Guarantees provided to the related parties as of December 31, 2023 are as follows:

In millions of Korean won, In thousands of USD, SAR

Provider	Related Parties	Type of guarantee	Amount	Guarantee
Korea Western Power Co., Ltd.	Cheongna Energy Co., Ltd.	Investments in associate pledged as collateral	KRW 25,549	KB Bank, etc.
Korea Western Power Co., Ltd.	Dongducheon Dream Power Co., Ltd.	Investments in associate pledged as collateral(*1)	KRW 50,682	KB Bank, etc.
Korea Western Power Co., Ltd.	Dongducheon Dream Power Co., Ltd.	Borrowing payment guarantees	KRW 20,300	Hanyang Securities Co.,Ltd.
Korea Western Power Co., Ltd.	Daegu Solar Power Plant Co., Ltd.	Investments in associate pledged as collateral	KRW 2,805	Korea Development Bank
Korea Western Power Co., Ltd.	PT Mutiara Jawa	Investments in associate pledged as collateral	KRW 5,169	Woori Bank
Korea Western Power Co., Ltd.	Rabigh Operation & Maintenance Company Limited	Contract performance guarantees, etc.	SAR 11,200	National Bank of Kuwait
Korea Western Power Co., Ltd.	Xe-Pian Xe-Namnoy Power Co., Ltd.	Investments in associate pledged as collateral	KRW 116,378	Krung Thai Bank
Korea Western Power Co., Ltd.	Xe-Pian Xe-Namnoy Power Co., Ltd	Guarantees of Impounding bonus (*2)	USD 5,000	SK ecoplant Co., Ltd.
Korea Western Power Co., Ltd.	Solar Power Plants Happy City Co., Ltd.	Investments in associate pledged as collateral	KRW 295	NH Bank
Korea Western Power Co., Ltd.	Shin Pyeongtaek Power Co., Ltd.	Investments in associate pledged as collateral	KRW 145,025	KB Bank, etc.
Korea Western Power Co., Ltd.	Korea Offshore Wind Power Co., Ltd.	Investments in associate pledged as collateral	KRW 23,835	Woori Bank, etc.
Korea Western Power Co., Ltd.	Haemodum Solar Energy Co., Ltd	Investments in associate pledged as collateral	KRW 3,122	NH Bank
Korea Western Power Co., Ltd.	Seoroseoro Sunny Power Plant Co., Ltd.	Investments in associate pledged as collateral	KRW 941	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Muan Solar Park Co., Ltd	Investments in associate pledged as collateral	KRW 6,830	Industrial Bank of Korea, etc.
Korea Western Power Co., Ltd.	Yudang Solar Co., Ltd.	Investments in associate pledged as collateral	KRW 570	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Anjwa Smart Farm & Solar City Co., Ltd.	Investments in associate pledged as collateral	KRW 7,665	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Hapcheon Floating Photovoltaic Plant Inc.	Investments in associate pledged as collateral	KRW 10,348	NH Bank, etc.
Korea Western Power Co., Ltd.	Yeongwol Eco Wind Co., Ltd.	Investments in associate pledged as collateral	KRW 4,024	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Gurae Jumin Wind Power Co., Ltd.	Investments in associate pledged as collateral	KRW 569	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Gunsan Land Solar Co., Ltd.	Investments in associate pledged as collateral	KRW 22,429	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Seobusambo highway photovoltaics Co., Ltd.	Investments in associate pledged as collateral	KRW 3,580	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Eumseong Eco Park Co., Ltd.	Investments in associate pledged as collateral	KRW 8,386	Kyobo Life Insurance Co., Ltd, etc.
Korea Western Power Co., Ltd.	Pungbaek Wind Power Co., Ltd.	Investments in associate pledged as collateral	KRW 7,940	HANWHA LIFE INSURANCE CO., LTD., etc.
Korea Western Power Co., Ltd.	Wadi Noor Solar Power	Guarantees for equity bridge loan	USD 54,855	DBS Bank

(*1) Dongducheon Dream Power Co., Ltd.'s common stock and convertible preferred stocks held by the consolidated group were provided as collateral to financial institutions.

(*2) Xe-Pian Xe-Namnoy Power Co., Ltd. entered into the agreement to pay incentives to SK ecoplant Co.,Ltd. when the impoundment occurs upon the completion of the hydropower project. In case that Xe-Pian Xe-Namnoy Power Co., Ltd. becomes unable to pay the incentives to SK ecoplant Co.,Ltd, the Group provides guarantees for payment up to USD 5,000,000.

41. Related Party Transactions, Continued

(11) Cheongna Energy Co., Ltd., a joint venture, operates integrated energy transportation and distributions and has outstanding borrowings from the financial institutions. In relation to the borrowings, the Group entered into the supplemental funding agreement for Cheongna Energy Co., Ltd. According to the agreement, the Group is required to fund through subordinated borrowing or all shareholders of Cheongna Energy Co., Ltd. are required to raise the additional funds based on the shareholders' equity ratios when Cheongna Energy Co., Ltd. is unable to repay the principal and interest amounts.

(12) Shin Pyeongtaek Power Co., Ltd, which is a related party of the Group, is engaged in sales of electric power and has a loan from financial institutions. As of December 31, 2023, the Group has entered into a supplementary funding agreement with Shin Pyeongtaek Power Co., Ltd. Accordingly, in the event that Shin Pyeongtaek Power Co., Ltd. has insufficient funds, or if there is any investor who cannot make a supplemental funding, the strategic investors of Shin Pyeongtaek Power Co., Ltd. including the Group must make an additional funding through equity investment or providing a subordinated loans in proportion to their ownership percentage. In addition, if there is such an investor who cannot make a supplemental funding among strategic investors, the alternative investor must acquire all the shares of those investors in accordance with the agreement. If an alternative investor fails to take over all the shares, a strategic investor, including the Group, is required to acquire the shares.

(13) As of December 31, 2023, Korea Offshore Wind Power Co., Ltd., an associate, operates marine wind power generating facility and its construction. It has entered into project financing agreement with Woori Bank and etc.. The Group has provided stocks of Korea Offshore Wind Power Co., Ltd. to creditors for collateral. The Group also has entered into funding agreement through subordinated borrowings for any excessive operating expense.

(14) As of December 31, 2023, Yudang Solar Co., Ltd., an associate, has constructed and operated a 7,988.76KW solar power plant and 29,223.32KW power storage facility in Dongsan-ri, Heongyeong-myeon, Muan-gun, Jeollanam-do. If KEB Hana Bank, a lender and agent bank, determines that a cause for implementation of supplemental funding has occurred and requests to provide insufficient fund to investors, each investor is obliged to provide the amount in proportion to their ownership percentage from the requested amounts through additional investment or subordinated borrowings.

(15) As of December 31, 2023, Yeongwol Eco Wind Co., Ltd., a joint venture, plans to build a 42MW wind power plant in Gurae-ri, Yeongwol-gun, Gangwon-do to generate electric power. In the event that KEB Hana Bank Co., a lender and agent bank, requests to fulfill the obligation to provide funds due to additional investments exceeding expected total costs during the construction, each investor is obliged to provide the requested amount in cash.

(16) As of December 31, 2023, Gurae Jumin Wind Power Co., Ltd., a joint venture, plans to build a 4.2MW wind power plant in Gurae-ri, Yeongwol-gun, Gangwon-do to generate electric power. In the event that KEB Hana Bank Co., a lender and agent bank, requests to fulfill the obligation to provide funds due to additional investments exceeding expected total costs during the construction, each investor is obliged to provide the requested amount in cash.

(17) As of December 31, 2023, Gunsan Land Solar Co., Ltd., a joint venture, has constructed and operated a 99MW solar power plant in Area of reclaimed water in Osikdo-dong, Gunsan-si, Jeollabuk-do to generate electric power. According to the shareholder agreement, after the construction period ends, Gunsan Land Solar Co., Ltd. shall procure up to 80% of the total project cost as a citizen investment and provide a 7% rate of return on the citizen investment, with a maximum of 80%. In the case of additionally procuring the under-recruited portion of the citizen's investment with debt capital, it is obliged to provide the city with the difference between the 7% return on the citizen's investment corresponding to the under-recruitment and the cost of additional debt capital to the city of Gunsan.

41. Related Party Transactions, Continued

(18) As of December 31, 2023, Seobusambo highway photovoltaics Co., Ltd., a joint venture, has constructed and operates a 7.672 MW-size solar power plant at 129, Bongan-ri, Janggun-myeon, Sejong-si and 13 other areas. If KEB Hana Bank, a lender and agent bank, determines that a cause for implementation of supplemental funding has occurred and requests investors to provide additional fund, each investor is obliged to provide the amount in proportion to their ownership percentage out of the total amount requested through additional investments or subordinated borrowings.

Statements of Cash Flows 42.

(1) Significant non-cash investing and financing transactions for each of the two years in the period ended December 31, 2023 are as follows:

In millions of Korean won		2023	2022
Transfer of long-term borrowings and debentures to current portion	₩	1,098,614	780,510
Transfer of construction-in-progress to property, plant and equipment		1,253,379	466,156
Transfer of acquisition cost of property, plant and equipment to			
payables		27,475	(33,976)
Acquisition of right-of-use assets		9,060	4,130
Decrease (increase) in receivables related to receipt of dividend		20,309	(44,505)
Increase in payables related to payments of dividend		291,563	-

(2) Details of changes in liabilities arising from current financial activities in 2023 and 2022 are as follows:

(i) For the year ended December 31, 2023

In millions of Korean won				1	_		
		Designation					
Туре		Beginning balance	Cash flow	Acquisition	exchange rate	Others	2023
Borrowings	_₩	148,419	42,787	- Acquisition	-		191,206
Debentures		5,764,067	(284,030)	-	49,720	3,656	5,533,413
Lease liabilities		591,788	(93,270)	9,060	10,624	-	518,202
Derivative assets		(93,818)	74,581	-	-	(54,778)	(74,015)
Dividend payable			(53,193)			344,756	291,563
	₩	6,410,456	(313,125)	9,060	60,344	293,634	6,460,369

(ii) For the year ended December 31, 2022

In millions of Korean	won							
Beginning Cash					Fluctuati- on of foreign exchange	Changes in consolidati-		
Туре		balance	flow	Acquisition	rate	on scope	Others	2022
Borrowings	₩	150,282	(47,745)	-	5,371	40,511	-	148,419
Debentures		5,321,759	366,812	-	72,110	(50)	3,436	5,764,067
Lease liabilities		625,570	(80,530)	4,130	42,618	-	-	591,788
Derivative assets		(88,512)	61,722	-	-	-	(67,028)	(93,818)
	₩	6,009,099	300,259	4,130	120,099	40,461	(63,592)	6,410,456

43. Commitments for Expenditure

The commitments for acquisition of property, plant and equipment as of December 31, 2023 are as follows:

In millions of Korean won

Description		Amounts	Balance
Service of designing Taean units (#9,10)	₩	112,909	12,468
Service of designing Gimpo cogeneration construction Purchase of gas turbine and attached equipment for Gimpo		18,369	5,041
cogeneration construction Purchase of steam turbine, HRSG and POWER BLOCK for Gimpo		123,496	15,603
cogeneration construction		220,864	214
Construction of Gimpo cogeneration		211,372	13,960
Service of designing Gumi compound construction Purchase of gas turbine and attached equipment for Gumi natural		18,656	11,484
gas power plant Purchase of heat recovery steam generator and attached	l	197,983	193,578
equipment for Gumi natural gas power plant		65,918	45,299
Construction of Gumi natural gas power plant Installation of natural gas supply equipment for Gumi natural gas		210,393	173,350
power plant Service of designing Taean#2 fuel conversion alternative		70,620	61,799
construction Service of basic designing Namyangju Wangsuk District Group		18,680	15,433
Energy		4,436	4,436
	₩	1,273,696	552,665

44. Commitments and Contingencies

(1) Ongoing litigations and claims related with contingent liabilities as of December 31, 2023 and 2022 are as follows:

	2023		2022			
	Number of			Number of		
	cases		Claim amount	cases		Claim amount
As the defendant		9₩	2,800	12	₩	21,000
As the plaintiff		9	284,100	9		313,500

44. Commitments and Contingencies, Continued

(2) Credit lines provided by financial institutions as of December 31, 2023 are as follows:

In millions of Korean won, In thousands of USD

Description	Financial Institutions	Currency	Limited amount	Exercised amount
Foreign currency payment guarantee	NH Bank	USD	8,700	5,270
Contract performance guarantee	KEB Hana Bank	OMR	6,250	6,250
Commitments on Bank-overdraft	NH Bank	KRW	200,000	1,074
Loan limit	Mizuho Bank	USD	100,000	-
	Korea Development Bank	USD	57,000	-
	DBS Bank	USD	50,000	-
	KB Bank	USD	70,000	-
	Korea Development Bank	KRW	50,000	50,000
	KB Bank	KRW	60,000	50,000
	NH Bank	KRW	5,000	-
	KB Bank	KRW	4,000	-
	Woori Bank	KRW	5,000	-
	Shinhan Bank	KRW	5,000	-
	IBK Bank	KRW	5,000	-
	KEB Hana Bank	KRW	45,000	39,569
	Samsung Life Insurance co., Ltd	KRW	1,000	747
Certification of payment on L/C	Shinhan Bank	USD	60,000	963
	NH Bank	USD	83,000	-

As of December 31, 2023, the Group has entered into a credit agreement for derivatives trading with NH Bank, KEB Hana Bank, and Woori Bank as ancillary to currency swap transactions.

(3) As of December 31, 2023, the Group has a loan agreement of KRW 45,000 million with the lenders such as Samsung Life Insurance Co., Ltd. In relation to this financial agreement, the Group provides the entire stock of KOWEPO Changgi Solar Power Plant Co., Ltd. and business-related tangible assets held by the parent as collateral to the lenders. In addition, if there is a shortage of expenses in case of various civil complaints and insurance accidents occurring in the course of business, the parent company may provide additional investment or subordinated conditional loans to its subsidiary, KOWEPO Changgi Solar Power Plant Co., Ltd. There is a replenishment obligation to provide the insufficient funds in a way.

(4) As of December 31, 2023, KOWEPO Holding Limited, a subsidiary, has invested in the construction of a 500MW solar power project in Manah, Oman. If HSBC Bank, the representative bank of a lender, requests to fulfill the obligation to provide funds during the construction, the Company may provide additional investments to its subsidiary, KOWEPO Holding Limited. There is a replenishment obligation to provide the insufficient funds in a way.

44. Commitments and Contingencies, Continued

(5) Main raw material purchase agreements as of December 31, 2023 are as follows:

Raw materials	Supplier	Contract period	Annual contract amount (thousand tons, thousand kℓ))
Bituminous coal	Australia	2023.01~2025.12	6,802
	Indonesia	2023.01~2026.12	4,090
	Russia	2023.01~2025.12	4,340
	South Africa	2023.01~2026.12	1,100
	USA	2023.01~2024.06	450
	Canada	2023.07~2024.06	220
			17,002
LNG	Korea Gas Corporation Korea Gas Corporation	2007~2033 2015~2025	Determined annually Determined annually
	GS ENERGY SINGAPORE TRADING PTE LTD	2023~2026	823
Oil	DK Refine Co., Ltd., Onsan Palnt	2023.08~2023.12	18

(6) Details of long-term marine transportation commitments for the safe transport of bituminous coal as of December 31, 2023 are as follows:

Shipping company	Ship name	Contract period
NYK	Frontier Lodestar	2013.02~2028.10
H-LINE	HL Balikpapan	2011.07~2026.06
H-LINE	Hyundai Leader	2016.04~2031.03
H-LINE	HL Taean	2018.05~2036.04
SK Shipping Co., Ltd.	K. Western Dream	2016.03~2028.02
SK Shipping Co., Ltd.	K. Taean	2018.10~2036.09
Hansung Line Co., Ltd.	Western Marine	2012.01~2026.12
Daebo International Shipping Co., Ltd.	Glovis Daylight	2015.12~2030.11
Wooyang Shipping Co., Ltd	Wooyang Venus	2016.07~2026.06
Five Ocean Corporation	F. Ocean	2016.12~2026.11

(7) As described in Note 41, the Group provides financial supports including the debt repayment guarantees to related parties.

(8) For stable supply of bituminous coal, the Group has entered into a basic bituminous coal swap agreement which is a non-monetary exchange agreement with no commercial substance.

45. Uncertainty of the effects of Ukraine crisis

The armed conflict in Ukraine, which began in February 2022, and the international community's sanctions against Russia related thereto, are not only applicable to companies that are subject to sanctions, but also to companies directly or indirectly doing business with Ukraine or Russia, and directly or indirectly to the industry or economy of Ukraine or Russia. It can indirectly affect the companies it is exposed to. The Group cannot reasonably estimate the future financial impact of the Ukraine crisis.

46. Events After the Reporting Period

The Group issued corporate bonds for the purpose of use for operating funds and facility funds. The details of the issuance are as follows:

	1		Annual interest		
Classification	Issuance date	Maturity date	rate (%)		Amount
Corporate bond #60-1	2024-01-16	2026-01-16	3.669	₩	150,000
Corporate bond #60-2	2024-01-16	2029-01-16	3.725		50,000
Corporate bond #60-3	2024-01-16	2044-01-16	3.740		20,000
Corporate bond #61-1	2024-01-25	2025-01-24	3.535		100,000
Corporate bond #61-2	2024-01-25	2027-01-25	3.730		40,000
Corporate bond #61-3	2024-01-25	2044-01-25	3.823		10,000
				₩	370,000