

SK E&S Co., Ltd. and Subsidiaries

**Consolidated Interim Financial Statements
June 30, 2017 and 2016**

SK E&S Co., Ltd. and Subsidiaries
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June 30, 2017 and 2016

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Report on Review of Interim Financial Statements
(English Translation of a Report Originally Issued in Korean)

To the Shareholder and Board of Directors
SK E&S Co., Ltd.

Reviewed Financial Statements

We have reviewed the accompanying consolidated interim financial statements of SK E&S Co., Ltd. and its subsidiaries (collectively referred to as the "Group"). These consolidated interim financial statements consist of the consolidated interim statement of financial position of the Group as of June 30, 2017, and the related consolidated interim statements of profit or loss, comprehensive income for the three-month and six-month periods ended June 30, 2017 and 2016, and the consolidated interim statements of changes in equity and cash flows for the six-month periods ended June 30, 2017 and 2016, and a summary of significant accounting policies and other explanatory notes, expressed in Korean won.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated interim financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS") 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of consolidated interim financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to issue a report on these consolidated interim financial statements based on our review.

We conducted our review in accordance with quarterly and semi-annual review standards established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe the accompanying consolidated interim financial statements are not presented fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

Other Matters

We have audited the consolidated statement of financial position of the Group as of December 31, 2016, and the related consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows for the year then ended, in accordance with Korean Standards on Auditing. We expressed an unqualified opinion on those financial statements, not presented herein, in our audit report dated March 10, 2017. The consolidated statement of financial position as of December 31, 2016, presented herein for comparative purposes, is consistent, in all material respects, with the above audited consolidated statement of financial position as of December 31, 2016.

Review standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to review such financial statements may differ from those generally accepted and applied in other countries.

The signature is written in a cursive, handwritten style. It reads "Samil PricewaterhouseCoopers". The word "Samil" is written in a larger, more prominent script, while "PricewaterhouseCoopers" is written in a smaller, more uniform script.

Seoul, Korea

August 11, 2017

This report is effective as of August 11, 2017, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
June 30, 2017 and December 31, 2016

<i>(in thousands of Korean won)</i>	Notes	June 30, 2017 (Unaudited)	December 31, 2016
Assets			
Non-current assets			
Property, plant and equipment	7	₩ 5,000,274,862	₩ 4,728,039,898
Investment properties		96,411,485	96,451,635
Intangible assets	7	752,173,941	701,486,419
Investments in joint ventures and associates	8	839,052,059	786,654,463
Deferred tax assets		11,759,324	11,980,793
Available-for-sale financial assets	4	90,051,091	89,351,789
Derivative assets	4	840,502	2,974,680
Other financial assets		45,701,955	25,470,023
Other assets		8,704,587	11,717,919
		<u>6,844,969,806</u>	<u>6,454,127,619</u>
Current assets			
Inventories		49,599,941	52,950,085
Trade receivables		423,608,001	620,985,415
Derivative assets	4	1,622,423	1,121,287
Other financial assets		27,681,289	18,894,033
Other assets		82,564,790	108,022,471
Cash and cash equivalents		660,644,574	558,483,039
		<u>1,245,721,018</u>	<u>1,360,456,330</u>
Total assets		<u>₩ 8,090,690,824</u>	<u>₩ 7,814,583,949</u>
Liabilities			
Non-current liabilities			
Borrowings	4,9	₩ 2,933,615,892	₩ 2,782,556,437
Derivative liabilities	4	6,574,271	7,598,957
Other financial liabilities		5,356,581	5,353,454
Deferred tax liabilities		120,284,147	105,416,011
Net defined benefit liabilities	10	18,131,537	6,543,855
Unearned revenue		372,059,795	346,404,251
Other liabilities		2,875,556	2,931,790
		<u>3,458,897,779</u>	<u>3,256,804,755</u>
Current liabilities			
Trade payables		389,204,116	788,375,777
Derivative liabilities	4	5,188,921	4,249,142
Other financial liabilities		266,789,777	161,959,649
Other liabilities		45,085,886	20,084,682
Current income tax liabilities		54,734,864	24,667,452
Borrowings	4,9	833,431,967	549,507,796
		<u>1,594,435,531</u>	<u>1,548,844,498</u>
Total liabilities		<u>5,053,333,310</u>	<u>4,805,649,253</u>
Share capital		221,058,960	221,058,960
Share premium		420,107,124	420,107,124
Retained earnings		949,971,401	878,188,234
Other components of equity		1,002,329,248	1,052,991,840
Equity attributable to owners of the Controlling Company		<u>2,593,466,733</u>	<u>2,572,346,158</u>
Non-controlling interests		<u>443,890,781</u>	<u>436,588,538</u>
Total equity		<u>3,037,357,514</u>	<u>3,008,934,696</u>
Total liabilities and equity		<u>₩ 8,090,690,824</u>	<u>₩ 7,814,583,949</u>

The above consolidated interim statements of financial position should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Interim Statements of Profit or Loss
Three-Month and Six-Month Periods Ended June 30, 2017 and 2016

		Periods Ended June 30			
(in thousands of Korean won, except per share amounts)	Notes	2017 (Unaudited)		2016 (Unaudited)	
		Three months	Six months	Three months	Six months
Revenue	5,6,14	₩ 1,153,796,060	₩ 2,819,198,660	₩ 709,174,008	₩ 2,308,800,616
Cost of sales		955,490,082	2,345,512,258	590,341,344	1,969,406,405
Gross profit		198,305,978	473,686,402	118,832,664	339,394,211
Selling and administrative expenses		116,314,997	228,341,577	109,626,393	223,885,222
Operating profit		81,990,981	245,344,825	9,206,271	115,508,989
Other income		27,554,001	50,409,112	16,986,113	44,523,407
Other expenses		9,393,854	16,026,437	5,588,822	12,999,228
Share of profit(loss) of associates	8	54,317,380	75,223,232	25,339,528	21,134,726
Finance income		1,766,967	22,274,812	2,464,295	7,263,853
Finance expenses		27,681,325	52,949,325	11,452,600	20,414,607
Profit before income tax		128,554,150	324,276,219	36,954,785	155,017,140
Income tax expense	11	25,311,166	66,461,346	8,089,193	35,051,614
Profit for the period		₩ 103,242,984	₩ 257,814,873	₩ 28,865,592	₩ 119,965,526
Profit attributable to:					
Owners of the Controlling Company		₩ 96,925,897	₩ 241,667,445	₩ 23,779,153	₩ 106,014,075
Non-controlling interests		6,317,087	16,147,428	5,086,439	13,951,451
Earnings per share attributable to the equity holders of the Controlling Company during the period					
Basic and diluted earnings per share		₩ 2,321	₩ 5,787	₩ 569	₩ 2,539

The above consolidated interim statements of profit or loss should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Interim Statements of Comprehensive Income
Three-Month and Six-Month Periods Ended June 30, 2017 and 2016

		Periods Ended June 30			
	Notes	2017		2016	
		(Unaudited)		(Unaudited)	
		Three months	Six months	Three months	Six months
Profit for the period		₩ 103,242,984	₩ 257,814,873	₩ 28,865,592	₩ 119,965,526
Other comprehensive income					
Items that will not be reclassified subsequently to profit or loss:					
Remeasurements of net defined benefit liabilities	10	(57,787)	(3,397,958)	(1,006,915)	(4,053,715)
Items that will be reclassified subsequently to profit or loss:					
Change in value of available-for-sale financial assets	4	251,542	199,543	(71,025)	198,179
Share of other comprehensive income of associates		(16,572,548)	(12,924,441)	(32,570,548)	(33,807,639)
Exchange differences on translation of foreign operations		11,033,843	(43,271,648)	5,771,040	(4,614,745)
Cash flow hedges		1,574,208	4,118,743	(4,867,658)	(10,944,727)
Total comprehensive income for the period		₩ 99,472,242	₩ 202,539,112	₩ (3,879,514)	₩ 66,742,879
Attributable to:					
Owners of the Controlling Company		₩ 94,112,985	₩ 187,619,955	₩ (8,067,603)	₩ 53,970,274
Non-controlling interests		5,359,257	14,919,157	4,188,089	12,772,605
Total comprehensive income for the period		₩ 99,472,242	₩ 202,539,112	₩ (3,879,514)	₩ 66,742,879

The above consolidated interim statements of comprehensive income should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Interim Statements of Changes in Equity
Six-Month Periods Ended June 30, 2017 and 2016

(in thousands of Korean won)

Notes	Attributable to owners of the Controlling Company					Non-controlling interests	Total equity
	Share capital	Share premium	Retained earnings	Other components of equity	Total		
Balance at January 1, 2016	₩ 221,058,960	₩ 420,107,124	₩ 956,677,398	₩ 1,081,415,120	₩ 2,679,258,602	₩ 345,110,355	₩ 3,024,368,957
Comprehensive income							
Profit for the period	-	-	106,014,075	-	106,014,075	13,951,451	119,965,526
Remeasurements of the net defined benefit liability	-	-	(4,066,271)	-	(4,066,271)	12,556	(4,053,715)
Change in value of available-for-sale financial assets	-	-	-	198,179	198,179	-	198,179
Share of other comprehensive income of associates	-	-	-	(32,794,467)	(32,794,467)	(1,013,172)	(33,807,639)
Exchange differences on translation of foreign operations	-	-	-	(4,436,515)	(4,436,515)	(178,229)	(4,614,744)
Cash flow hedges	-	-	-	(10,944,727)	(10,944,727)	-	(10,944,727)
Total comprehensive income for the period	-	-	101,947,804	(47,977,530)	53,970,274	12,772,606	66,742,880
Transactions with owners of the Controlling Company							
Cash dividends	12	-	(216,117,268)	-	(216,117,268)	(1,297,799)	(217,415,067)
Issuance of hybrid bonds	-	-	-	-	-	71,500,000	71,500,000
Interest paid on hybrid bonds	-	-	(16,465,137)	-	(16,465,137)	(4,372,890)	(20,838,027)
Others	-	-	258,175	40,096	298,271	(336,273)	(38,002)
Total transactions with owners of the Controlling Company	-	-	(232,324,230)	40,096	(232,284,134)	65,493,038	(166,791,096)
Balance at June 30, 2016 (Unaudited)	₩ 221,058,960	₩ 420,107,124	₩ 826,300,972	₩ 1,033,477,686	₩ 2,500,944,742	₩ 423,375,999	₩ 2,924,320,741
Balance at January 1, 2017	₩ 221,058,960	₩ 420,107,124	₩ 878,188,234	₩ 1,052,991,840	₩ 2,572,346,158	₩ 436,588,538	₩ 3,008,934,696
Comprehensive income							
Profit for the period	-	-	241,667,445	-	241,667,445	16,147,428	257,814,873
Remeasurements of the net defined benefit liability	-	-	(3,335,218)	-	(3,335,218)	(62,739)	(3,397,957)
Change in value of available-for-sale financial assets	-	-	-	199,544	199,544	-	199,544
Share of other comprehensive income of associates	-	-	-	(12,469,186)	(12,469,186)	(455,255)	(12,924,441)
Exchange differences on translation of foreign operations	-	-	-	(42,561,372)	(42,561,372)	(710,276)	(43,271,648)
Cash flow hedges	-	-	-	4,118,742	4,118,742	-	4,118,742
Total comprehensive income for the period	-	-	238,332,227	(50,712,272)	187,619,955	14,919,158	202,539,113
Transactions with owners of the Controlling Company							
Cash dividends	12	-	(150,843,589)	-	(150,843,589)	(1,297,799)	(152,141,388)
Interest paid on hybrid bonds	-	-	(16,041,744)	-	(16,041,744)	(5,982,843)	(22,024,587)
Others	-	-	336,273	49,680	385,953	(336,273)	49,680
Total transactions with owners of the Controlling Company	-	-	(166,549,060)	49,680	(166,499,380)	(7,616,915)	(174,116,295)
Balance at June 30, 2017 (Unaudited)	₩ 221,058,960	₩ 420,107,124	₩ 949,971,401	₩ 1,002,329,248	₩ 2,593,466,733	₩ 443,890,781	₩ 3,037,357,514

The above consolidated interim statements of changes in equity should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Interim Statements of Cash Flows
Six-Month Periods Ended June 30, 2017 and 2016

(in thousands of Korean won)	Notes	Six-Month Period Ended June 30	
		2017	2016
		(Unaudited)	(Unaudited)
Cash flows from operating activities			
Cash generated from operations			
Profit for the period	₩	257,814,873	₩ 119,965,526
Adjustments to reconcile net income			
to net cash provided by operating activities		172,458,238	125,830,952
Changes in operating assets and liabilities		(162,150,313)	(89,080,516)
		268,122,798	156,715,962
Interest received		2,910,241	2,426,388
Interest paid		(51,024,788)	(39,127,973)
Dividends received		6,179,898	10,084,786
Income tax paid		(15,834,991)	(66,979,259)
Net cash inflow from operating activities		210,353,158	63,119,904
Cash flows from investing activities			
Disposal of property, plant and equipment	7	4,106,126	3,253,747
Disposal of intangible assets	7	302,000	1,058,330
Disposal of investments in joint ventures and associates		-	1,422,479
Disposal of available-for-sale financial assets	4	93,194	8,417,000
Decrease in other financial assets		212,479	19,501
Purchases of property, plant and equipment	7	(321,957,690)	(383,004,084)
Purchases of intangible assets	7	(90,160,471)	(67,055,211)
Purchases of investments in joint ventures and associates		-	(10,000,000)
Purchases of available-for-sale financial assets	4	(522,032)	(374,083)
Increase in other financial assets		(22,363,882)	(647,648)
Decrease in other assets		36,090,662	42,147,473
Net cash outflow from investing activities		(394,199,614)	(404,762,496)
Cash flows from financing activities			
Proceeds from borrowings	9	915,900,460	477,421,910
Repayments of borrowings	9	(454,001,215)	(17,904,107)
Issuance of hybrid bonds		-	71,500,000
Cash dividends	12	(152,141,388)	(217,415,067)
Interest paid on hybrid bonds		(22,024,587)	(20,838,028)
Others		(121,519)	(317,395)
Net cash inflow from financing activities		287,611,751	292,447,313
Changes in cash and cash equivalents from currency translation		(1,603,760)	(452,878)
Net increase (decrease) in cash and cash equivalents		102,161,535	(49,648,157)
Cash and cash equivalents at the beginning of period		558,483,039	419,890,899
Cash and cash equivalents at the end of period		₩ 660,644,574	₩ 370,242,742

The above consolidated interim statements of cash flows should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2017 and 2016, and December 31, 2016

1. General Information

SK E&S Co., Ltd. (the “Controlling Company” or the “Company”) was established on January 13, 1999, as a holding company of city gas companies and engages in city gas, power generation, mass energy, renewable energy and foreign resource development. As of June 30, 2017, the Company’s share capital amounts to ₩221,058,960 thousand and the Company is wholly owned by SK Holdings Co., Ltd.

1.1 Subsidiaries

As of June 30, 2017, there is no significant changes in subsidiary details and its percentage of ownership comparing to those as of December 31, 2016.

2. Significant Accounting Policies

2.1 Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS). The accompanying consolidated interim financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The Group’s consolidated interim financial statements for the six-month period ended June 30, 2017, have been prepared in accordance with Korean IFRS 1034, *Interim Financial Reporting*. These interim financial statements have been prepared in accordance with Korean IFRS which is effective or has been early adopted as of June 30, 2017.

(a) New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2017. The adoption of these amendments did not have any material impact on the financial statements.

- Amendments to Korean IFRS 1007 *Statement of Cash Flows*
- Amendments to Korean IFRS 1012 *Income Tax*

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

Certain new accounting standards and interpretations that have been published that are not mandatory for annual reporting period commencing January 1, 2017 and have not been early adopted by the Group are set out below.

- Amendments to Korean IFRS 1102 *Share-based Payment*
- Korean IFRS 1109 *Financial Instruments*
- Korean IFRS 1115 *Revenue arising from contracts with customers*

The Group will apply Korean IFRS 1115 *Revenue from Contracts with Customers* issued on

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November 6, 2015 for annual reporting periods beginning on or after January 1, 2018, and earlier application is permitted. This standard replaces Korean IFRS 1018 *Revenue*, Korean IFRS 1011 *Construction Contracts*, Interpretation 2031 *Revenue-Barter Transactions Involving Advertising Services*, Interpretation 2113 *Customer Loyalty Programs*, Interpretation 2115 *Agreements for the Construction of Real Estate* and Interpretation 2118 *Transfers of assets from customers*.

The new standard is based on the principle that revenue is recognized when control of a good or service transfers to a customer so the notion of control replaces the existing notion of risks and rewards. A new five-step process must be applied before revenue from contract with customer can be recognized:

- Identify contracts with customers
- Identify the separate performance obligation
- Determine the transaction price of the contract
- Allocate the transaction price to each of the separate performance obligations, and
- Recognize the revenue as each performance obligation is satisfied.

As of June 30, 2017, the Group neither prepared for internal management process nor began to adjust accounting system in relation to implementation of Korean IFRS 1115. Also, the Group did not analyze the financial effects of applying the standard. The Group plans to analyze the financial effects of applying the standard and disclose the result of the analysis in the notes on the financial statements as of September 30, 2017.

2.2 Accounting Policies

Significant accounting policies and estimates adopted in the preparation and presentation of the consolidated interim financial statements are consistent with the accounting policies and estimates adopted for the annual consolidated financial statements for the year ended December 31, 2016, except the changes due to the application of amendment and enactments of standards described in Note 2.1 (a) and the one described below.

2.2.1 Income tax

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual tax rate is applied to the pre-tax income for the interim period.

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3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results.

Critical accounting estimates and assumptions used for preparing the consolidated interim financial statements are consistent with prior year's accounting estimates and assumptions except for the estimate method used to determine income tax expense.

4. Fair Value

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

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

The following table presents the Group's financial assets that are measured at fair value as of June 30, 2017 and December 31, 2016:

<i>(in thousands of Korean won)</i>	2017			
	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets	₩ -	₩ -	₩ 21,478,250	₩ 21,478,250
Derivative assets	-	2,462,925	-	2,462,925
Derivative liabilities	-	(11,763,191)	-	(11,763,191)

<i>(in thousands of Korean won)</i>	2016			
	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets	₩ -	₩ -	₩ 21,215,000	₩ 21,215,000
Derivative assets	-	4,095,966	-	4,095,966
Derivative liabilities	-	(11,848,099)	-	(11,848,099)

There are no significant changes in business and economic environments that could influence the fair value of financial assets and liabilities of the Company for the six-month period ended June 30, 2017. The classification of financial instruments is identical to the previous classification as of December 31, 2016.

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Details of derivative instruments as of June 30, 2017, are as follows:

<i>(in thousands of Korean won)</i>		Assets		Liabilities		Gain(Loss) on valuation		Other comprehensive income (loss)
Currency forward ¹	₩	1,386,935	₩	3,749,129	₩	(6,458,161)	₩	-
Interest rate swap ²		-		7,468,984		-		2,102,064
Commodity swaps ³		1,068,478		315,726		595,413		944,449
Others ⁴		7,512		229,352		389,976		1,072,230

¹ The currency forward is to hedge long term borrowing in foreign currency of USD 98,000(2016 : USD 70,000) thousand and short- term borrowing in foreign currency of USD 99,241(2016 : USD 25,149) thousand in order to avoid risk in fluctuation of currency exchange.

² The interest rate swap exchanges a floating interest for a fixed interest to hedge an interest rate risk of a borrowing of ₩400,000,000 thousand of Narae Energy Service Co., Ltd. which will be redeemed in installments over ten years.

³ The commodity swaps are to hedge cash flow risks derived from the LNG purchase agreements of CAILIP Gas Marketing and Prism Energy International Pte., Ltd.(formerly, SK LNG Trading Pte., Ltd.).

⁴ The derivatives to fix the sales price of Equity Gas in advance related to the investment in the North American gas field of CAILIP Gas Marketing, LLC.

The following table presents the valuation techniques for recurring fair value measurements categorized within Level 3 of the fair value hierarchy:

<i>(in thousands of Korean won)</i>	Fair value	Valuation techniques
Hana Land Chip Private Real Estate No.33	₩ 10,202,100	Net Asset Value per Share
Plus Future Plan Private Securities Investment Trust No.5	10,276,150	Net Asset Value per Share
SK Mutual Funds	1,000,000	Net Asset Value per Share
	<u>₩ 21,478,250</u>	

The following table presents the changes in Level 3 instruments for the six-month periods ended June 30, 2017 and 2016:

<i>(in thousands of Korean won)</i>	2017	2016
Beginning balance	₩ 21,215,000	₩ 21,224,750
Gain(loss) recognized as other comprehensive income	263,250	261,450
Ending balance	<u>₩ 21,478,250</u>	<u>₩ 21,486,200</u>

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The following table presents available-for-sale financial assets measured at cost as of June 30, 2017 and December 31, 2016:

<i>(in thousands of Korean won)</i>	2017	2016
SK Technology Innovation Company	₩ 2,808,024	₩ 2,808,024
KNOC Ferghana Ltd.	80	80
Contemporary Painting Art Trust No.1	495,041	495,041
Sejung21 Co., Ltd.	358,917	358,917
Construction Guarantee Cooperative	82,597	82,597
Hana Power Generation Infra PEF No.1	59,000,000	59,000,000
Plant & Mechanical contractors financial cooperative of Korea	40,862	40,862
Jeonnam Dragons Football Club	50,000	50,000
Powertel TRS Co., Ltd.	1	1
Prostar Energy Infra Fund	5,697,101	5,253,139
Government bond and others	40,217	40,217
HOWON Co., Ltd.	-	7,910
	₩ 68,572,840	₩ 68,136,788

The range of reasonable fair value estimates of SK Technology Innovation Company shares and other investments is significant and the probabilities of the various estimates cannot be reasonably assessed; therefore, these instruments are measured at cost. The Group does not have any plans to dispose of the above-mentioned equities in the near future. These instruments will be measured at fair value when the Group develops a reliable estimate of the fair value.

Fair value and book amount of financial liabilities as of June 30, 2017 and December 31, 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017		2016	
	Book amount	Fair value	Book amount	Fair value
Financial liabilities				
Borrowings	₩ 3,767,047,858	₩ 3,897,776,720	₩ 3,332,064,232	₩ 3,412,007,924

Other financial liabilities whose book amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

5. Seasonality of Business

The city gas sales, which is the major operating activity of the Group, is concentrated in the winter season (from December to March of the following year). Accordingly, the results of the Group's operating activities during the six-month period ended June 30, 2017, may not be indicative of the results for the full year 2017.

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6. Operating Segment Information

The Group has determined the operating segments based on the information reviewed by the Group's chief operating decision maker. For the purposes of allocating resources and assessing performance, chief operating decision maker reviews the information based on segment profit before income tax.

The Group's operating segments consist of electric power, LNG, city gas and other segments as of June 30, 2017. The segment information for the six-month periods ended June 30, 2017 and 2016, is stated after considering the distribution of intra-company transactions, adjustments of depreciation cost, interest income, interest expense, share of profit(loss) and profit before tax. Assets and liabilities of each operating segment are excluded as such information has not been provided regularly to the chief operating decision maker.

The following table presents segment profit (loss) for the three-month and six-month periods ended June 30, 2017 and 2016:

(in thousands of Korean won)	Six-month period ended June 30, 2017					
	Electric power	LNG	City gas	Other segments	Adjustment for consolidation	Total
Total segment revenue	₩ 870,698,108	₩ 321,613,004	₩ 1,908,704,822	₩ -	₩ (281,817,274)	₩ 2,819,198,660
Inter-segment revenue	-	(281,817,274)	-	-	281,817,274	-
Net-segment revenue	870,698,108	39,795,730	1,908,704,822	-	-	2,819,198,660
Segment profit(loss) before income tax	54,246,443	122,052,013	118,207,654	29,770,109	-	324,276,219

(in thousands of Korean won)	Three-month period ended June 30, 2017					
	Electric power	LNG	City gas	Other segments	Adjustment for consolidation	Total
Total segment revenue	₩ 507,655,271	₩ 149,618,866	₩ 627,798,506	₩ -	₩ (131,276,583)	₩ 1,153,796,060
Inter-segment revenue	-	(131,276,583)	-	-	131,276,583	-
Net-segment revenue	507,655,271	18,342,283	627,798,506	-	-	1,153,796,060
Segment profit(loss) before income tax	15,255,240	62,970,261	23,437,811	26,890,838	-	128,554,150

(in thousands of Korean won)	Six-month period ended June 30, 2016					
	Electric power	LNG	City gas	Other segments	Adjustment for consolidation	Total
Total segment revenue	₩ 409,419,065	₩ 254,620,711	₩ 1,882,236,449	₩ -	₩ (237,475,609)	₩ 2,308,800,616
Inter-segment revenue	-	(237,475,609)	-	-	237,475,609	-
Net-segment revenue	409,419,065	17,145,102	1,882,236,449	-	-	2,308,800,616
Segment profit(loss) before income tax	(2,318,249)	55,550,515	91,391,421	26,890,838	-	155,017,140

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(in thousands of Korean won)	Three-month period ended June 30, 2016					
	Electric power	LNG	City gas	Other segments	Adjustment for consolidation	Total
Total segment revenue	₩ 146,768,006	₩ 94,697,472	₩ 556,234,833	₩ -	₩ (88,526,303)	₩ 709,174,008
Inter-segment revenue	-	(88,526,303)	-	-	88,526,303	-
Net-segment revenue	146,768,006	6,171,169	556,234,833	-	-	709,174,008
Segment profit(loss) before income tax	(8,575,941)	15,567,626	19,516,091	10,447,009	-	36,954,785

Breakdown of the Group's revenue for the three-month and six-month periods ended June 30, 2017 and 2016, are as follows:

(in thousands of Korean won)	2017				2016	
	Three months		Six months		Three months	Six months
	₩		₩		₩	
Sales-Finished Goods	525,046,694		909,172,960		151,855,823	417,695,653
Sales-Trading	621,960,693		1,896,082,513		553,490,426	1,879,519,974
Sales-Others	5,026,991		10,404,176		2,073,939	8,059,941
Revenue-Rental	1,761,682		3,539,011		1,753,820	3,525,048
	₩ 1,153,796,060		₩ 2,819,198,660		₩ 709,174,008	₩ 2,308,800,616

Revenues of ₩ 847,749,695 thousand (2016: ₩ 390,461,407 thousand) for the six-month period ended June 30, 2017, which are more than 10% of the Group revenue, are derived from Korea Power Exchange, and these revenues are attributable to the electric power segment.

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7. Property, Plant and Equipment, and Intangible Assets

Changes in property, plant and equipment for the six-month periods ended June 30, 2017 and 2016, are as follows:

(in thousands of Korean won)	2017						
	Beginning balance	Acquisitions	Disposals	Reclas- sification	Depreciation	Net exchange differences	Ending balance
Land	₩ 658,215,051	₩ 1,400,875	₩ (1,805,788)	₩ 7,714,665	₩ -	₩ -	₩ 665,524,803
Buildings	150,695,598	784,053	(297,990)	178,905,042	(5,312,772)	-	324,773,931
Structures	119,295,364	83,320	-	259,706,926	(8,768,297)	-	370,317,313
Machinery	659,575,478	532,134	(1,770,197)	1,645,366,553	(52,489,978)	-	2,251,213,990
Vehicles	6,446,412	1,284,408	(116,165)	-	(656,604)	(3,335)	6,954,716
Tools and equipment	13,139,282	2,381,249	(5,259)	2,426,510	(3,174,238)	(18,523)	14,749,021
Pipelines	1,011,641,623	10,990,897	(100,027)	33,471,447	(45,050,449)	-	1,010,953,491
Others	237,624,206	83,588,089	(20)	-	(27,037,952)	(13,612,676)	280,561,647
Construction- in- progress	1,871,406,884	332,967,152	-	(2,127,846,943)	-	(1,301,143)	75,225,950
	<u>₩ 4,728,039,898</u>	<u>₩ 434,012,177</u>	<u>₩ (4,095,446)</u>	<u>₩ (255,800)</u>	<u>₩ (142,490,290)</u>	<u>₩ (14,935,677)</u>	<u>₩ 5,000,274,862</u>
(in thousands of Korean won)	2016						
	Beginning balance	Acquisitions	Disposals	Reclas- sification	Depreciation	Net exchange differences	Ending balance
Land	₩ 657,700,319	₩ 313,197	₩ (18,562)	₩ (42,918)	₩ -	₩ -	₩ 657,952,036
Buildings	132,131,776	1,532,277	(720,220)	(1,166,885)	(2,359,577)	-	129,417,371
Structures	132,237,011	-	-	(5,518,610)	(4,344,112)	-	122,374,289
Machinery	711,780,348	490,319	(1,254,585)	(13,526,879)	(25,487,672)	-	672,001,531
Vehicles	6,952,594	729,050	(159,159)	-	(884,469)	(353)	6,637,663
Tools and equipment	13,683,983	1,025,932	(162,444)	211,341	(3,224,864)	(2,142)	11,531,806
Pipelines	984,116,351	11,759,494	(124,192)	35,224,426	(44,455,359)	-	986,520,720
Others	118,127,149	36,183,750	(4,726)	78,619,273	(16,077,413)	(2,193,754)	214,654,279
Construction- in- progress	1,522,944,969	330,923,869	-	(102,880,465)	-	(210,061)	1,750,778,312
	<u>₩ 4,279,674,500</u>	<u>₩ 382,957,888</u>	<u>₩ (2,443,888)</u>	<u>₩ (9,080,717)</u>	<u>₩ (96,833,466)</u>	<u>₩ (2,406,310)</u>	<u>₩ 4,551,868,007</u>

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Changes in intangible assets for the six-month periods ended June 30, 2017 and 2016, are as follows:

(in thousands of Korean won)	2017						
	Beginning balance	Acquisitions	Disposals	Reclas-sification	Amortization	Net exchange differences	Ending balance
Development costs	₩ 380,991	₩ 644	₩ -	₩ 255,800	₩ (72,948)	₩ -	₩ 564,487
Goodwill	42,801,147	-	-	-	-	-	42,801,147
Exploration and evaluation assets	628,581,459	88,515,581	-	-	-	(36,027,868)	681,069,172
Industrial property rights	75,385	-	(17,389)	-	(6,448)	-	51,548
Memberships	15,265,185	1,468,662	(312,500)	-	-	-	16,421,347
Others	14,382,252	139,284	-	-	(3,255,296)	-	11,266,240
	₩ 701,486,419	₩ 90,124,171	₩ (329,889)	₩ 255,800	₩ (3,334,692)	₩ (36,027,868)	₩ 752,173,941

(in thousands of Korean won)	2016						
	Beginning balance	Acquisitions	Disposals	Reclas-sification	Amortization	Net exchange differences	Ending balance
Development costs	₩ 612,478	₩ -	₩ -	₩ 65,000	₩ (75,071)	₩ -	₩ 602,407
Goodwill	42,801,147	-	-	-	-	-	42,801,147
Exploration and evaluation assets	494,025,784	64,660,793	-	-	-	(4,034,830)	554,651,747
Industrial property rights	89,315	-	-	12,116	(12,047)	-	89,384
Memberships	14,951,171	1,846,243	(1,260,305)	(7,910)	(13,000)	-	15,516,199
Others	19,621,813	564,375	-	72,975	(3,796,786)	-	16,462,377
	₩ 572,101,708	₩ 67,071,411	₩ (1,260,305)	₩ 142,181	₩ (3,896,904)	₩ (4,034,830)	₩ 630,123,261

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8. Investments in Joint Ventures and Associates

Details of investments in joint ventures and associates as of June 30, 2017 and December 31, 2016, are as follows:

(in thousands of Korean won)	Location	Percentage of ownership(%)	Closing month	2017			2016		
				Acquisition cost	Net asset value	Book value	Acquisition cost	Net asset value	Book value
Joint ventures									
Boryeong LNG Terminal Co., Ltd.	Korea	50.00	Dec.	₩110,000,000	₩ 82,552,896	₩111,289,312	₩110,000,000	₩ 76,269,957	₩105,006,373
China Gas-SK E&S LNG Trading Ltd.	Hong Kong	50.00	Mar.	1,189,110	1,126,313	1,126,313	1,189,110	1,231,358	1,231,358
				111,189,110	83,679,209	112,415,625	111,189,110	77,501,315	106,237,731
Associates									
China Gas Holdings Ltd. ¹	Hong Kong	15.72	Mar.	471,451,662	463,911,412	697,684,417	471,451,662	416,568,433	649,234,675
Global Opportunities Fund	Cayman Islands	20.70	Dec.	10,000,000	1,186,034	1,186,034	10,000,000	2,909,324	2,909,324
Shinan Green Energy Co., Ltd.	Korea	22.22	Dec.	8,559,000	7,520,262	8,288,362	8,559,000	7,481,193	8,249,294
Busan Green Energy Co., Ltd.	Korea	28.50	Dec.	14,312,700	13,373,351	13,373,351	14,312,700	13,564,868	13,564,868
Gemini Partners Pte., Ltd.	Singapore	20.00	Dec.	7,889,084	2,868,698	6,104,270	7,889,084	3,223,000	6,458,571
				512,212,446	488,859,757	726,636,434	512,212,446	443,746,818	680,416,732
				₩623,401,556	₩572,538,966	₩839,052,059	₩623,401,556	₩521,248,133	₩786,654,463

¹ Although the Group holds less than 20% ownership, the Group exercises significant influence as the Group's director can exercise its vote at the Board of Directors of this entity, accordingly, the Group classified this entity as associates.

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Changes in investments in joint ventures and associates for the six-month periods ended June 30, 2017 and 2016, are as follows:

(in thousands of Korean won)	2017				
	Beginning balance	Disposal and dividends received	Share of profit(loss) of associates	Other changes in equity	Ending balance
Joint ventures					
Boryeong LNG Terminal Co., Ltd	₩ 105,006,373	₩ -	₩ 6,282,939	₩ -	₩ 111,289,312
China Gas-SK E&S LNG Trading Ltd.	1,231,358	-	(27,464)	(77,581)	1,126,313
Associates					
China Gas Holdings Ltd.	649,234,675	(5,772,356)	71,268,611	(17,046,513)	697,684,417
Global Opportunities Fund	2,909,324	-	(1,723,290)	-	1,186,034
Shinan Green Energy	8,249,294	-	(46,552)	85,620	8,288,362
Busan Green Energy	13,564,868	-	(191,517)	-	13,373,351
Gemini Partners Pte., Ltd.	6,458,571	-	(339,495)	(14,806)	6,104,270
	₩ 786,654,463	₩ (5,772,356)	₩ 75,223,232	₩ (17,053,280)	₩ 839,052,059

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(in thousands of Korean won)	2016							
	Beginning balance	Acquisition	Disposal and dividends received	Share of profit(loss) of associates	Other changes in equity	Reversal of impairment loss	Classification as assets held-for sale	Ending balance
Joint ventures								
Boryeong LNG Terminal Co., Ltd	₩ 97,397,052	₩ 10,000,000	₩ -	₩ (1,320,253)	₩ (50,227)	₩ -	₩ -	₩ 106,026,572
China Gas-SK E&S LNG Trading Ltd.	1,189,110	-	-	16,368	(18,556)	-	-	1,186,922
Associates								
Wuhan Zhongran – SK E&S Gas Group Co., Ltd. ¹	3,658,320	-	-	350,292	(130,742)	-	(3,877,870)	-
China gas-SK E&S HK Co., Ltd. ²	2,520,023	-	-	(1,504,478)	(402,794)	762,861	(1,375,612)	-
China Gas Holdings Ltd.	675,534,327	-	(5,984,236)	23,317,321	(43,998,033)	-	-	648,869,379
Global Opportunities Fund	3,893,304	-	-	(913,040)	-	-	-	2,980,264
Shinan Green Energy Co., Ltd.	6,051,158	-	-	108,081	(33,565)	-	-	6,125,674
Busan Green Energy Co., Ltd.	14,261,516	-	-	(463,350)	-	-	-	13,798,166
Gemini Partners Pte., Ltd.	7,889,082	-	-	(641,556)	188,067	-	-	7,435,593
	₩ 812,393,892	₩ 10,000,000	₩ (5,984,236)	₩ 18,949,385	₩ (44,445,850)	₩ 762,861	₩ (5,253,482)	₩ 786,422,570

¹ Wuhan SK-Sino Natural Gas Group Ltd. changed its name as Wuhan Zhongran – SK E&S Gas Group Co., Ltd. for the year ended December 31, 2016.

² SK E&S - SINO HongKong Co., Ltd. changed its name as China gas-SK E&S HK Co., Ltd. for the year ended December 31, 2016.

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9. Borrowings

Borrowings as of June 30, 2017 and December 31, 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017	2016
Non-current		
Bank borrowings	₩ 1,348,710,952	₩ 1,167,328,987
Debentures	1,584,904,940	1,615,227,450
	₩ 2,933,615,892	2,782,556,437
Current		
Bank borrowings	₩ 493,613,800	₩ 289,595,262
Debentures	339,818,166	259,912,534
	833,431,966	549,507,796
	₩ 3,767,047,858	₩ 3,332,064,233

Details of bank borrowings as of June 30, 2017 and December 31, 2016, are as follows:

<i>(in thousands of Korean won)</i>	Creditors	2017	Non-Current	Current
		Interest rate(%)		
Loans for exploration of petroleum	Korea National Oil Corporation	0.75	₩ 27,306,305	₩ -
Loans for construction of pipelines	Kookmin Bank and others	1.75	16,539,000	-
Loans for a safety management business	NH Bank and others	1.75	920,000	419,000
Loans for energy rationalization	KEB Hana Bank and others	1.75	3,789,600	-
CP borrowings	Samsung Securities	1.51	-	99,962,767
Loans for facility	Korea Development Bank and others	CD 90days+1.14	361,564,518	37,480,681
PF borrowings	Korea Development Bank and others	2.63 - 4.45	587,893,407	3,772,120
General borrowings	Woori Bank and others	1.76 - 3.19	-	136,500,722
Borrowings in foreign currency	Korea Exim Bank and others	Libor(3M) +0.95 - 1.74	350,698,122	215,478,510
			₩1,348,710,952	₩ 493,613,800

<i>(in thousands of Korean won)</i>	Creditors	2016	Non-Current	Current
		Interest rate(%)		
Loans for exploration of petroleum	Korea National Oil Corporation	0.75	₩ 28,957,239	₩ -
Loans for construction of pipelines	Kookmin Bank and others	1.75	16,539,000	-
Loans for a safety management business	KEB Hana Bank and others	1.75	1,121,150	442,350
Loans for energy rationalization	KEB Hana Bank and others	1.75	3,811,200	-
CP borrowings	KB Investment & Securities Co., Ltd.	1.69	-	99,978,331
Loans for facility	Korea Development Bank and others	CD 90days+1.14	386,442,267	12,500,000
PF borrowings	Korea Development Bank and others	2.63-4.45	320,333,562	-
General borrowings	Korea Development Bank and others	1.67-2.49	84,595,000	176,674,581

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Borrowings in foreign currency	Korea Exim Bank and others	Libor(3M) +0.95 - 1.74	325,529,569	-
			<u>₩1,167,328,987</u>	<u>₩ 289,595,262</u>

Under a PF arrangement, the Group provided its subsidiaries' issued shares, cash and cash equivalents, insurance contractual rights and PP&E to PF syndicate as collaterals (Notes 13 and 14).

Details of debentures as of June 30, 2017 and December 31, 2016, are as follows:

(in thousands of Korean won)	Bonds	2017			Non-current	Current
		Issuance date	Maturity date	Interest rate(%)		
SK E&S Co., Ltd.	Public offering bonds No.8-3	2010.10.08	2017.10.08	4.35	₩ -	₩ 60,000,000
	Public offering bonds No.10-1	2013.02.26	2018.02.26	3.02	-	200,000,000
	Public offering bonds No.10-2	2013.02.26	2020.02.26	3.18	100,000,000	-
	Public offering bonds No.11-2	2013.10.04	2018.10.04	3.46	100,000,000	-
	Public offering bonds No.11-3	2013.10.04	2020.10.04	3.65	50,000,000	-
	Public offering bonds No.12-1	2016.08.29	2019.08.29	1.48	100,000,000	-
	Public offering bonds No.12-2	2016.08.29	2021.08.29	1.60	140,000,000	-
	Public offering bonds No.12-3	2016.08.29	2023.08.29	1.70	100,000,000	-
	Public offering bonds No.13-1	2017.04.12	2022.04.12	2.39	150,000,000	-
	Public offering bonds No.13-2	2017.04.12	2024.04.12	2.62	50,000,000	-
	Public offering bonds No.13-3	2017.04.12	2027.04.12	2.88	50,000,000	-
	Public offering bonds No.1-1	2015.03.18	2022.03.18	2.53	100,000,000	-
	Public offering bonds No.1-2	2015.03.18	2025.03.18	2.92	190,000,000	-
Paju Energy Service Co., Ltd.	Public offering bonds No.1-3	2015.03.18	2027.03.18	3.01	60,000,000	-
	Public offering bonds No.2-1	2015.09.04	2022.09.04	2.54	50,000,000	-
	Public offering bonds No.2-2	2015.09.04	2025.09.04	2.77	50,000,000	-
Wirye Energy Service Co., Ltd.	Public offering bonds No.2-3	2015.09.04	2027.09.04	2.97	50,000,000	-
	Public offering bonds No.1-1	2014.12.09	2024.12.09	3.45	200,000,000	-
	Public offering bonds No.1-2	2014.12.09	2026.12.09	3.68	50,000,000	-
Narae Energy Service Co., Ltd.	Public offering bonds No.1	2013.02.13	2018.02.13	3.28	-	80,000,000
					<u>1,590,000,000</u>	<u>340,000,000</u>
	Less: Discount on bonds				<u>(5,095,060)</u>	<u>(181,834)</u>
					<u>₩ 1,584,904,940</u>	<u>₩ 339,818,166</u>

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(in thousands of Korean won)	Bonds	2016			Non-current	Current
		Issuance date	Maturity date	Interest rate(%)		
SK E&S Co., Ltd.	Public offering bonds No.8-3	2010.10.08	2017.10.08	4.35	₩ -	₩ 60,000,000
	Public offering bonds No.9-2	2012.04.13	2017.04.13	4.03	-	200,000,000
	Public offering bonds No.10-1	2013.02.26	2018.02.26	3.02	200,000,000	-
	Public offering bonds No.10-2	2013.02.26	2020.02.26	3.18	100,000,000	-
	Public offering bonds No.11-2	2013.10.04	2018.10.04	3.46	100,000,000	-
	Public offering bonds No.11-3	2013.10.04	2020.10.04	3.65	50,000,000	-
	Public offering bonds No.12-1	2016.08.29	2019.08.29	1.48	100,000,000	-
	Public offering bonds No.12-2	2016.08.29	2021.08.29	1.60	140,000,000	-
	Public offering bonds No.12-3	2016.08.29	2023.08.29	1.70	100,000,000	-
Paju Energy Service Co., Ltd.	Public offering bonds No.1-1	2015.03.18	2022.03.18	2.53	100,000,000	-
	Public offering bonds No.1-2	2015.03.18	2025.03.18	2.92	190,000,000	-
	Public offering bonds No.1-3	2015.03.18	2027.03.18	3.01	60,000,000	-
	Public offering bonds No.2-1	2015.09.04	2022.09.04	2.54	50,000,000	-
	Public offering bonds No.2-2	2015.09.04	2025.09.04	2.77	50,000,000	-
	Public offering bonds No.2-3	2015.09.04	2027.09.04	2.97	50,000,000	-
Wirye Energy Service Co., Ltd.	Public offering bonds No.1-1	2014.12.09	2024.12.09	3.45	200,000,000	-
	Public offering bonds No.1-2	2014.12.09	2026.12.09	3.68	50,000,000	-
Narae Energy Service Co., Ltd.	Public offering bonds No.1	2013.02.13	2018.02.13	3.28	80,000,000	-
					1,620,000,000	260,000,000
Less: Discount on bonds					(4,772,550)	(87,466)
					₩ 1,615,227,450	₩ 259,912,534

10. Net Defined Benefit Liabilities

Details of net defined benefit liabilities as of June 30, 2017 and December 31, 2016, are as follows:

(in thousands of Korean won)	2017	2016
Present value of defined benefit obligations	₩ 139,874,281	₩ 128,115,660
Fair value of plan assets	(121,742,744)	(121,571,805)
Net defined benefit liabilities	₩ 18,131,537	₩ 6,543,855

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Changes in the present values of defined benefit obligations for the six-month periods ended June 30, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017	2016
Beginning balance	₩ 128,115,660	₩ 115,203,155
Current service costs	7,520,266	6,989,903
Interest costs	1,492,281	1,368,715
Remeasurements	3,716,039	4,571,646
Benefits paid	(2,948,062)	(2,810,242)
Increase due to transfer	1,978,097	3,456,296
Ending balance	₩ 139,874,281	₩ 128,779,473

Changes in the fair value of plan assets for the six-month periods ended June 30, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017	2016
Beginning balance	₩ 121,571,805	₩ 110,183,794
Interest income	1,600,779	1,435,145
Remeasurements	(615,505)	(318,134)
Benefits paid	(2,604,868)	(4,381,611)
Increase due to transfer	1,790,533	3,348,414
Ending balance	₩ 121,742,744	₩ 110,267,608

11. Income Tax

Income tax expense was calculated based on the best estimated weighted average annual corporate tax rate for the entire fiscal period. Estimated average annual tax rate of the year ending December 31, 2017, is 20.5%. The estimated tax rate for the period ended June 30, 2016, was 22.6%.

12. Dividends

The dividends of the Controlling Company in respect of the year ended December 31, 2016, were ₩ 150,843,589 thousand(2015: ₩ 216,117,268 thousand) that were paid in March 2017.

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13. Contingencies and Commitments

Details of commitments on borrowings as of June 30, 2017, are as follows:

*(in thousands of Korean won, in
thousands of US dollars)*

	Financial institution	Details		Amount of Limit
SK E&S Co., Ltd.	KEB Hana Bank	Line of Credit	₩	20,000,000
	Kookmin Bank and others	Consumer loans		52,000,000
	KEB Hana Bank and others	Line of Credit		290,000,000
	Samsung Securities	CP		100,000,000
	Korea Exim Bank and others	Line of Credit	USD	260,000
	Korea Development Bank and others	Derivative contract	USD	198,225
Gangwon City Gas Co., Ltd.	NH Bank and others	Bank overdrafts	₩	8,000,000
	Kookmin Bank and others	Line of Credit		20,000,000
Ko-one Energy Service Co., Ltd.	Woori Bank	Consumer loans		30,000,000
	Shinhan Bank	Bank overdrafts		5,000,000
Busan City Gas Co., Ltd.	Kookmin Bank	Line of Credit		5,000,000
Yeongnam Energy Service Co., Ltd.	NH Bank and others	Bank overdrafts		15,000,000
	Kookmin Bank and others	Consumer loans		30,000,000
Chungcheong Energy Service Co., Ltd.	Citibank Korea and others	Bank overdrafts		16,000,000
	Woori Bank and others	Consumer loans		25,000,000
Jeonnam City Gas Co., Ltd.	NH Bank and others	Bank overdrafts		15,000,000
	NH Bank	Bank overdrafts		7,000,000
Jeonbuk Energy Service Co., Ltd.	Kookmin Bank	Line of Credit		5,000,000
	Korea Development Bank and others	PF contract		310,000,000
Paju Energy Service Co., Ltd.	Korea Development Bank and others	PF contract		700,000,000
Narae Energy Service Co., Ltd.	Woori Bank and others	Facility loan		400,000,000
	Woori Bank and others	Derivative contract		400,000,000
	Kookmin Bank	Consumer loans		2,000,000
Prism Energy International Pte., Ltd. (formerly, SK LNG Trading J.ARON&COMPANY(SINGAPORE) Pte., Ltd.)	Citibank Singapore and others	Letter of Credit	USD	215,000
	PTE and others	Derivative contract	USD	119,000
SK E&S Americas, Inc.	Korea Exim Bank	Line of Credit	USD	160,000
SK E&S Australia Pty Ltd.	Bank of America	Line of Credit	USD	50,000
	DBS Bank	Line of Credit	USD	90,000
CILIP Gas Marketing, LLC	Barclays Bank PLC and others	Derivative contract	USD	201,000
			₩	2,455,000,000
			USD	1,293,225

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Details of payment guarantees provided by and to the Group as of June 30, 2017, are as follows:

<i>(in thousands of Korean won)</i>	Provided by	Beneficiary	Guaranteed by	Details	Amounts
Payment guarantees	Seoul Guarantee Insurance Co., Ltd.	SK E&S Co., Ltd.	-	Performance guarantee	₩ 392,713
		Yeongnam Energy Service Co., Ltd.	-	Maintenance performance guarantee and license guarantee	1,053,285
		Ko-one Energy Service Co., Ltd.	-	Performance guarantee	535,121
		Busan City Gas Co., Ltd.	-	Management and operation of group energy facilities and others	1,117,157
		Jeonbuk Energy Service Co., Ltd.	-	Maintenance performance guarantee and performance guarantee	43,760
		Jeonnam City Gas Co., Ltd.	-	Gas rate guarantee and maintenance performance guarantee	4,730,854
		Chungcheong Energy Service Co. Ltd.	-	Maintenance performance guarantee and execution of construction	875,195
		Paju Energy Service Co., Ltd.	-	Deposit guarantee for management of construction safety and others	14,153,891
		Wirye Energy Service Co., Ltd.	-	Management of group safety and others	4,380,262
		Narae Energy Service Co., Ltd.	-	Performance guarantee	66,561
Fund supplement	SK E&S Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	Holders of public offering bonds PF syndicate	Principle and related interest on borrowing PF contract	360,000,000 Excess costs
Performance guarantee	SK Holdings Co., Ltd.	SK E&S Co., Ltd.	FLNG Liquefaction 3, LLC	Usage of liquefaction	Service fee
	Prism Energy International Pte., Ltd.(formerly, SK LNG Trading Pte., Ltd.)	SK Shipping Co., Ltd.	HHIENS1 Shipholding S.A.	BBCHP	Charterage
			HHIENS2 Shipholding S.A.	BBCHP	Charterage

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Details of significant pending litigations as of June 30, 2017, are as follows:

(in thousands of Korean won)

The Group as a plaintiff	Defendant	Details	Amounts	Progress
Ko-one Energy Service Co., Ltd.	Industrial Bank of Korea	Compensation for non-performance and damages	₩ 10,000,000	Second trial
SK E&S Co., Ltd.	Head of Seoul customs office	Cancellation of tariff imposition	2,251,754	First trial
The Group as a defendant	Plaintiff	Details	Amounts	Progress
Busan City Gas Co., Ltd.	Korea Veterans Health Service	Claim for return of payment on over-measuring	3,248,236	First trial

The outcome of these pending litigations and the effects on the financial statements cannot be reasonably determined as of June 30, 2017.

Blank notes and checks provided by the Group as collaterals as of June 30, 2017, are as follows:

	Provided to	Type	Quantity	Purpose
SK E&S Co., Ltd.	Korea National Oil Corporation	Blank notes	3	Collateral for long-term borrowings
SK E&S Co., Ltd.	Korea National Oil Corporation	Blank check	6	Collateral for long-term borrowings
Gangwon City Gas Co., Ltd.	Korea Gas Corporation	Blank check	1	Collateral for natural gas supply agreement

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Assets pledged as collaterals by the Group as of June 30, 2017, are as follows:

(in thousands of Korean won)

Collateral	Provided by	Provided to	Book Value	Details
Property, plant and equipment	Gangwon City Gas Co., Ltd.	Korea Development Bank	₩ 6,382,509	Borrowings
Land and buildings	Jeonnam City Gas Co., Ltd.	Dongbu insurance Co., Ltd. and others	4,793,370	Deposits received
Investment properties	Busan City Gas Co. Ltd.	Megamart Co., Ltd. and others	70,653,191	Deposits and borrowings
Cash and cash equivalents	Paju Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	111,759,100	PF borrowings
Property, plant and equipment	Paju Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	1,535,670,455	PF borrowings
Long-term financial instruments	Wirye Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	36,129,915	PF borrowings
Property, plant and equipment	Wirye Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	738,060,344	PF borrowings
Long-term financial instruments	Narae Energy Service Co., Ltd.	Korea Development Bank and others	22,073,933	Facility loans
Property, plant and equipment	Narae Energy Service Co., Ltd.	Korea Development Bank and others	630,893,961	Facility loans

Details of collaterals provided by the Controlling Company in relation to PF borrowings and facility loans as of June 30, 2017, are as follows:

	Beneficiary	Secured assets	Amount	Provided to
Subsidiaries	Paju Energy Service Co., Ltd.	Equity securities of Paju Energy Service Co., Ltd.	₩ 550,000,000	Korea Development Bank and others, the Project Financing syndicate
	Wirye Energy Service Co., Ltd.	Equity securities of Wirye Energy Service Co., Ltd.	228,481,660	Korea Development Bank and others, the Project Financing syndicate
	Narae Energy Service Co., Ltd.	Equity securities of Narae Energy Service Co., Ltd.	192,348,308	Korea Development Bank and Woori Bank
Joint venture	Boryeong LNG Terminal Co., Ltd.	Equity securities of Boryeong LNG Terminal Co., Ltd.	110,000,000	Woori Bank and others, the Project Financing syndicate
Associates	Busan Green Energy	Equity securities of Busan Green Energy	13,373,351	Shinhan Bank and others, the Project Financing syndicate

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The details of commitments as of June 30, 2017, are as follows:

Commitment	Company	Counterparty	Contract period
Long-term natural gas supply agreement ¹	Gangwon City Gas Co., Ltd. and seven other subsidiaries	Korea Gas Corporation	-
Agreement to purchase LNG	SK E&S Co., Ltd.	Tangguh PSC Contractor Parties	2006.1~2025.12
Gas turbine maintenance and repair agreement	SK E&S Co., Ltd.	GE International Inc.	2004.6~2026.12 (Estimate)
Natural gas storage and vaporization service agreement	SK E&S Co., Ltd.	Posco Co., Ltd.	2005.6~2025.12
Lease agreement on the power generator and pylon site	SK E&S Co., Ltd.	Posco Co., Ltd.	2003.8~2028.12
Heat supply contract	Wirye Energy Service Co., Ltd.	Korea District Heating Corporation	Until completion date of Peak Load Boiler
Long-term Maintenance Program	Paju Energy Service Co., Ltd.	Siemens AG and others	2014.6~2031.6 (Estimate)
Long-term Maintenance Program	Wirye Energy Service Co., Ltd.	Siemens AG and others	2015.1~2032.1 (Estimate)
Long-term Maintenance Program	Narae Energy Service Co., Ltd.	Doosan Heavy Industries & Construction Co., Ltd	12 years from 2012
Natural gas storage and liquefaction service agreement	SK E&S LNG, LLC	FLNG Liquefaction 3, LLC	20 years from 2019
Natural gas storage and vaporization service agreement	SK E&S Co., Ltd Wirye Energy Service Co., Ltd., Paju Energy Service Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	20 years from 2017
Use of pipe facility	Wirye Energy Service Co., Ltd., Paju Energy Service Co., Ltd.	Korea Gas Corporation	20 years from 2017
Use of pipelines	SK E&S LNG, LLC	Kinder Morgan, Inc.	20 years from 2019
Agreement to purchase LNG	Prism Energy International Pte., Ltd (formerly, SK LNG Trading Pte. Ltd.)	Chevron Australia Pty Ltd and others	2017.1~2022.3
Long-term chartering agreement	Prism Energy International Pte., Ltd (formerly, SK LNG Trading Pte. Ltd.)	SK Shipping Co., Ltd.	20 years from delivery date

¹ The supply quantities are determined annually, and the supply price of natural gas is approved by the Minister of Trade, Industry and Energy.

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The details of purchasing construction contracts as of June 30, 2017, are as follows:

(in thousands of Korean won)

Contract	Company	Counterparty	Contract period	Contract amount
Construction of facilities of accessing power transmission	Wirye Energy Service Co., Ltd.	Korea Electric Power Corporation	2015.8 ~ 2018.4	8,472,000
Construction of LNG pipelines	Wirye Energy Service Co., Ltd.	Hanyang ENG Co., Ltd. and others	2015.7 ~ 2017.11	20,760,000
Construction of shifting gas pipelines of military unit	Wirye Energy Service Co., Ltd.	Hanyang ENG Co., Ltd. and others	2017.4 ~ 2017.11	1,799,900
EPC contract	Paju Energy Service Co., Ltd.	SK Engineering & Construction Co., Ltd.	2014.6 ~ 2017.12	1,232,194,000

The details of resource development contracts as of June 30, 2017, are as follows:

(in thousands of US dollars)

Contact	Company	Counterparty	Percentage of ownership(%)	Contract amount	Executing amount
Australian Barossa-Caldita Gas field	SK E&S Australia Pty Ltd.	ConocoPhillips Company and others	37.5	USD 310,000	USD 280,000
USA Woodford field	DewBlaine Energy, LLC	Continental Resources, Inc.	49.9	USD 360,000	USD 235,389

Apart from the above contract amount, the Group has the obligation to pay the development costs corresponding to the percentage of ownership.

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14. Related Party Transactions

As of June 30, 2017, the Controlling Company is SK Holdings Co., Ltd.

Sales and purchases with related parties for the six-month periods ended June 30, 2017 and 2016, are as follows:

	2017		
	Sales and others	Purchase and others	Acquisition of tangible and intangible assets
<i>(in thousands of Korean won)</i>			
Controlling company			
SK Holdings Co., Ltd.	₩ 82,374	₩ 8,927,284	₩ 209,349
Joint venture			
Boryeong LNG Terminal Co., Ltd.	127,700	53,108,878	-
Other related parties			
SK Innovation Co., Ltd.	4,751,210	3,432,868	-
SK Networks Company Limited	75,149	2,323,180	-
SK Engineering & Construction Co., Ltd.	421,875	-	72,451,477
SK hynix Inc.	10,617,136	-	-
SKC LTD.	3,008,221	-	-
M&Service Co., Ltd.	-	2,937,435	-
SK Energy Co., Ltd.	22,639,166	101,006	-
SK Telecom Co., Ltd. and others	1,615,551	3,882,513	183,868
	₩ 43,338,382	₩ 74,713,164	₩ 72,844,694

	2016			
	Sales and others	Purchase and others	Acquisition of tangible and intangible assets	Equity contributions in cash
<i>(in thousands of Korean won)</i>				
Controlling company				
SK Holdings Co., Ltd.	₩ 30,419	₩ 10,602,173	₩ 169,272	₩ -
Joint venture				
Boryeong LNG Terminal Co., Ltd.	511,315	-	-	10,000,000
Other related parties				
SK Innovation Co., Ltd.	4,496,944	3,042,647	-	-
SK Networks Company Limited	91,219	2,642,506	56,659	-
SK Engineering & Construction Co., Ltd.	262,702	-	199,552,722	-
SK hynix Inc.	11,847,781	-	-	-
SKC LTD.	3,435,268	-	-	-
M&Service Co., Ltd.	-	3,283,189	-	-
SK Energy Co., Ltd.	21,111,028	90,670	-	-
SK Telecom Co., Ltd. and others	1,555,318	3,953,526	30,753	-
	₩ 43,341,994	₩ 23,614,711	₩ 199,809,406	₩ 10,000,000

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Details of receivables and payables with related parties as of June 30, 2017 and December 31, 2016, are as follows:

(in thousands of
Korean won)

	2017			2016			
	Trade receivables	Other receivables	Other liabilities	Trade receivables	Other receivables	Trade payables	Other liabilities
Controlling company							
SK Holdings Co., Ltd.	₩ -	₩ -	₩ 1,232,519	₩ 4,253	₩ 126	₩ -	₩ 2,189,566
Joint venture							
Boryeong LNG Terminal Co., Ltd.	-	17,412,693	-	-	134,113	-	-
Other related parties							
SK Innovation Co., Ltd.	740,235	504,645	148,261	793,439	-	-	206,583
SK Networks Company Limited	-	160,000	965,770	11,102	160,117	-	1,045,133
SK Engineering & Construction Co., Ltd.	46	14,327	-	37,403	14,557	-	9,485,394
M&SERVICE Co., Ltd.	756,231	-	-	-	-	-	579,285
SK hynix Inc.	509,750	-	-	2,137,532	855	-	-
SKC LTD.	-	-	403,226	278,196	-	-	-
SK Energy Co. Ltd.	1,848,863	1,485	-	4,309,730	685	-	386
SK Shipping Co., Ltd.	-	20,375,831	-	-	21,615,847	-	-
SK Telecom Co., Ltd. and others	199	59,238	528,074	2,201	24,425	215	1,102,549
	<u>₩ 3,855,324</u>	<u>₩ 38,528,219</u>	<u>₩ 3,277,850</u>	<u>₩ 7,573,856</u>	<u>₩ 21,950,725</u>	<u>₩ 215</u>	<u>₩ 14,608,896</u>

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Compensation for key management of the Controlling Company for the six-month periods ended June 30, 2017 and 2016, consists of:

<i>(in thousands of Korean won)</i>	2017	2016
Salaries	₩ 2,445,196	₩ 2,089,945
Post-employment benefits	2,149,332	523,229
Share-based payment	49,680	-
	<u>₩ 4,644,208</u>	<u>₩ 2,613,174</u>

Key management includes executive directors and members of the executive committee.

As of June 30, 2017, the Controlling Company provides financial support agreements, payment guarantees and performance guarantees for subsidiaries, joint venture and associates (Note 13).