

Sustainability Performance - Economy

Sales and Operating Income by Business Segment

(Unit: KRW 100 million)

Classification	2014		2015		2016		
	Sales	Percent of sales	Sales	Percent of sales	Sales	Percent of sales	
Sales	Petroleum	490,563	74%	352,997	73%	283,699	72%
	Chemical	126,352	19%	92,880	19%	76,865	19%
	Lubricant	29,818	5%	26,188	5%	25,358	6%
	Petroleum development, etc.	11,874	2%	11,499	2%	9,283	2%
Operating income		Operating income	Percent of operating profit	Operating income	Percent of operating profit	Operating income	Percent of operating profit
	Petroleum	-9,990	—	12,991	66%	19,391	60%
	Chemical	3,592	—	4,310	22%	9,187	28%
	Lubricant	2,899	—	2,947	15%	4,683	15%
	Petroleum development, etc.	1,672	—	-451	-2%	-978	-3%

Distribution of Economic Value

(Unit: KRW 100 million)

Field	Recipient	Expenditure/Investment	2014	2015	2016
Economy	Corporation	R&D ¹⁾	1,344	1,654	1,453
		Acquisition of tangible assets ²⁾	16,417	4,609	6,345
	Investors	Total cash dividend	-	4,474	5,965
Society	Employees	Salaries ³⁾	8,969	11,653	11,116
	Suppliers	Purchase of suppliers products	7,446	7,436	9,536
	Community	Social contribution investments	306	84	416
	Government	Corporate tax ⁴⁾	4,494	4,072	5,193

1) Based on Annual Report 2016

2) Based on each year's consolidated audit report, note 10-(2) refers to items in book value of tangible assets labeled 'acquired.'

3) Based on each year's consolidated audit report, note 23 refers to the item under cost by category labeled 'employee wages.'

4) Based on Annual Report 2016's consolidated cash flow statement in consolidated financial statement

Key Sustainability Performance - SHE

Energy Consumption

(Unit: MWh, KRW million)

Energy Target for 2020

9.5% reduce in comparison to 2020 BAU

	Classification	2014	2015	2016
Total energy consumption³⁾	Petroleum, chemical and lubricant business sector(Incheon, Ulsan) ¹⁾	42,201,340	41,752,039	40,629,371
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics) ²⁾	859,238	1,049,949	992,839
	Total	43,060,578	42,801,988	41,622,210
Fuel	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	31,253,273	29,778,056	29,553,247
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	741,828	827,383	900,466
	Total	31,995,101	30,605,439	30,453,713
Electricity	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	9,512,487	10,085,171	9,920,573
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	585,192	715,626	733,489
	Total	10,097,679	10,800,797	10,654,062
Steam	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	7,202,515	7,408,737	6,975,112
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	-	-	-
	Total	7,202,515	7,408,737	6,975,112
Non-renewable energy consumption	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	5,766,935	5,519,925	5,819,561
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	467,782	493,060	641,116
	Total	6,234,717	6,012,985	6,460,677
Total energy consumption cost	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	2,504,694	2,185,690	1,656,636
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	50,325	48,205	44,411
	Total	2,555,019	2,233,895	1,701,047

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

3) Total energy consumption: fuel·electricity·steam purchase – non-renewable energy consumption

GHG Emissions

(Unit: tCO₂eq)

Greenhouse Gas Target for 2020

9.5% reduce in comparison to 2020 BAU

Classification		2014	2015	2016
Total GHG emissions (Scope 1 + Scope 2)	Petroleum, chemical and lubricant business sector(Incheon, Ulsan) ¹⁾	12,261,843	12,742,702	12,550,646
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics) ²⁾	238,358	291,274	293,185
	Total	12,500,201	13,033,976	12,843,831
Total direct emissions (Scope 1)	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	9,896,681	10,386,561	10,358,002
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	135,819	152,634	164,675
	Total	10,032,500	10,539,195	10,522,677
Total indirect emissions (Scope 2)	Petroleum, chemical and lubricant business sector(Incheon, Ulsan)	2,365,162	2,356,141	2,192,644
	R&D, logistics and other business sector(Seosan, Jeungpyeong, Cheongju, Daedeok, Logistics)	102,539	138,640	128,510
	Total	2,467,701	2,494,781	2,321,154

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

Water

(Unit: m³)

Total Volume Target of Water Usage 2020

52,368,645m³

Classification		2014	2015	2016
Total volume of water usage	Petroleum, chemical and lubricant business sector ¹⁾	49,152,836	48,840,236	50,778,337
	R&D, logistics and other business sector ²⁾	1,105,935	914,648	941,523
	Total	50,258,771	49,754,884	51,719,860
Usage of municipal water supplies	Petroleum, chemical and lubricant business sector	49,152,836	48,840,236	50,778,337
	R&D, logistics and other business sector	1,096,212	904,883	926,839
	Total	50,249,048	49,745,119	51,705,176
Usage of groundwater (freshwater)	Petroleum, chemical and lubricant business sector	0	0	0
	R&D, logistics and other business sector	8,873	8,969	13,768
	Total	8,873	8,969	13,768
Usage of rainwater	Petroleum, chemical and lubricant business sector	0	0	0
	R&D, logistics and other business sector	850	796	916
	Total	850	796	916

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

Waste

(Unit: metric tonnes – based on a dried form)

Target of Total
Waste for 2020**103,715** metric tonnesTarget of Recycling
Ratio for 2020**67.5%**

	Classification	2014	2015	2016
Total volume of waste generated	Petroleum, chemical and lubricant business sector ¹⁾	90,197	84,661	96,021
	R&D, logistics and other business sector ²⁾	13,787	13,547	15,193
	Total	103,983	98,208	111,214
Discharge Volume by Treatment Method				
In-house treatment (landfill)	Petroleum, chemical and lubricant business sector	299	0	0
	R&D, logistics and other business sector	0	0	0
	Total	299	0	0
Outsourced volume (incinerator / landfill)	Petroleum, chemical and lubricant business sector	38,017	31,058	38,233
	R&D, logistics and other business sector	2,345	1,867	1,361
	Total	40,362	32,925	39,593
Outsourced volume (Recycled)	Petroleum, chemical and lubricant business sector	51,881	53,603	57,788
	R&D, logistics and other business sector	11,442	11,680	13,833
	Total	63,323	65,284	71,621
Waste recycle rate	Petroleum, chemical and lubricant business sector	57.5%	63.3%	60.2%
	R&D, logistics and other business sector	83.0%	86.2%	91.0%
	Total	60.9%	66.5%	64.4%
Waste Discharge by Type				
Designated waste³⁾	Petroleum, chemical and lubricant business sector	29,690	33,338	29,835
	R&D, logistics and other business sector	11,458	11,045	12,525
	Total	41,148	44,383	42,360
General waste⁴⁾	Petroleum, chemical and lubricant business sector	60,506	51,323	66,186
	R&D, logistics and other business sector	2,329	2,502	2,668
	Total	62,835	53,825	68,854

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

3) Designated waste: As waste stipulated by the Presidential Decree from the Korean government, designated waste refers to any hazardous material that contaminate the surrounding environment such as waste oil and waste acid in "industrial wastes", which are generated in the "factory" stipulated in article 2-1 of the Industrial Placement and Factory Construction Act.

4) General waste: Waste generated from a business site except for designated waste and construction waste

Air Pollutant Emissions Volume

(Unit: metric tonnes)

	Classification	2014	2015	2016	Note
NOx emissions³⁾	Petroleum, chemical and lubricant business sector ¹⁾	9,180	8,546	8,188	
	R&D, logistics and other business sector ²⁾	0	0	0	Insignificant volume generated
	Total	9,180	8,546	8,188	

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

3) Any NOx emissions which are generated by business trips and commuting by employees are not included.

(Unit: metric tonnes)

	Classification	2014	2015	2016	Note
SOx emissions³⁾	Petroleum, chemical and lubricant business sector ¹⁾	3,743	3,911	4,085	
	R&D, logistics and other business sector ²⁾	0	0	0	Insignificant volume generated
	Total	3,743	3,911	4,085	

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

3) Any SOx emissions which are generated by business trips and commuting by employees are not included.

(Unit: metric tonnes)

	Classification	2014	2015	2016	Note
VOC emissions³⁾	Petroleum, chemical and lubricant business sector ¹⁾	377	385	359	
	R&D, logistics and other business sector ²⁾	0	0	0	Insignificant volume generated
	Total	377	385	359	

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

3) All VOC emissions which are generated from non-methane VOC's and stationary sources are included.

(Unit: metric tonnes)

	Classification	2014	2015	2016	Note
Amount of hydrocarbon emissions	Petroleum, chemical and lubricant business sector ¹⁾	0	0	0	
	R&D, logistics and other business sector ²⁾	0	0	0	
	Total	0	0	0	

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

(Unit: metric tonnes)

	Classification	2014	2015	2016	Note
Methane	Petroleum, chemical and lubricant business sector ¹⁾	1,862	1,995	2,024	
	R&D, logistics and other business sector ²⁾	4	7	6	
	Total	1,866	2,002	2,030	

1) Petroleum, chemical and lubricant business sector: SK energy(Ulsan), SK global chemical(Ulsan), SK lubricants(Ulsan), SK incheon petrochem(Incheon)

2) R&D, logistics and other business sector: Battery production line(Seosan), Battery and circuit material production line(Jeungpyeong, Cheongju), Global Technology(Daedeok R&D Park), Logistics Center

**Lost-Time Incident Rate(LTIR) Target
for 2020¹⁾**

0.32

1) Integrated target including all employees and suppliers(cases per million working hours)

Occupational safety and health

(Unit: case, cases per million working hours)

Classification		2014	2015	2016
Case of fatality	Employees	1	-	-
	Suppliers	-	-	-
	Total	1	-	-
Lost-Time Incident Rate (LTIR)	Employees	0.51	0.39	0.32
	Suppliers	0.97	0.71	0.54
	Total	0.80	0.56	0.46
Total Recordable Incidents Rate(TRIR)	Employees	1.03	0.86	0.64
	Suppliers	1.52	1.27	0.68
	Total	1.34	1.08	0.66
Occupational Illness Frequency Rate(OIFR)		-	-	0.08

Process safety

(Unit: %, cases per million working hours)

Classification	2014	2015	2016
Unplanned Capacity Loss(UCL)	0.21	0.07	0.24
Rate of safety accidents in the process(Tier 1)	0.03	-	0.03

Key Sustainability Performance – Society

Employee Status by Category¹⁾

(Unit: Person)

Target of Training Hours Per Employee
for 2020²⁾

40 hours

Category		Number of people(ratio)		
		2014	2015	2016
Total number of people ³⁾		6,338(100%)	5,820(100%)	6,045(100%)
Employment type	Regular	6,231(98.3%)	5,744(98.7%)	5,915(97.8%)
	Temporary contract	107(1.7%)	76(1.3%)	130(2.2%)
Gender	Male	5,623(88.7%)	5,171(88.8%)	5,388(89.1%)
	Female ⁴⁾	715(11.3%)	649(11.2%)	657(10.9%)
Age	Under 30	734(11.6%)	589(10.1%)	522(8.6%)
	30 to 50 years of age	4,263(67.3%)	3,826(65.7%)	3,687(61.0%)
	50 years or over	1,341(21.2%)	1,405(24.1%)	1,836(30.4%)
Minorities	Disabled	130(2.1%)	94(1.6%)	94(1.6%)
	Patriots and veterans	329(5.2%)	301(5.2%)	265(4.4%)

1) Except for executives and advisors

2) Training hours per employee in 2016(base year)(27.3 hours)

3) Except for locally recruited employees in overseas business sites

4) The rate of females at the administrative position in 2016 was 4% compared to the total number of people at the administrative position.

Use of Childcare Leave and Rate of Return

(Unit: Person)

Classification		2014	2015	2016
Number of employees who used childcare leave	Male	2	4	2
	Female	61	65	65
Number of employees returning from childcare leave who worked at least 12 months following return	Male	-	1	2
	Female	25	39	48

Ratio of Labor Union Membership

Classification	Ratio
Ratio of labor union/collective bargaining applied	49.6%

Social Contribution Activities

(Unit: KRW 100 million)

Target of Local Community Investment
Ratio for 2020

75.0%

Classification	2014	2015	2016
Expenses for social contribution activities	306	84	416 ¹⁾

1) The amount of community investment in the total expenses for social contribution in 2016 was 60.8%.

Performance of Volunteer Groups

Company	Number of activities	Hours	Number of volunteer teams	Participants
SK innovation	194	11,365.5	17	1,398
SK energy	1,108	20,067	31	2,369
SK global chemical	284	3,991.5	7	949
SK lubricants	62	1,343.5	3	247
SK incheon petrochem	147	6,442	8	581
SK trading international	9	713.5	1	66
Total	1,804	43,923	67	5,610

Current Status of Major Donations¹⁾

Institution for support	Program	Institution for support	Program
Korea Handball Federation	Supporting training for the Olympics and reinforcing the capabilities of instructors and athletes	Korean Foundation for Advanced Studies	Providing academic support and fostering remarkable human resources
Community Chest of Korea	Donation for helping neighbors	Korea Association of Senior Welfare Centers	Supporting a volunteer program for senior citizens living alone
UN Global Compact Korea	Paying UNGC annual fee	The Happiness Foundation	Supporting underfunded children, vitalizing the ecosystem for social enterprises and cultivating social entrepreneurs
Incheon Human Resource Development & Scholarship Foundation	Local human resources cultivation program	Prosynergy	Social enterprise for developing local communities in Peru
Korea Disaster Relief Association	Supporting the restoration of flood damage in Ulsan		
ChildFund Korea	Campaign to find lost family members		

1) In accordance with "Article 31 Limitations of Donation of Chapter 6 in the Political Fund Act", political donations are prohibited in Korea. To comply with this law, SK innovation reflects such content to the in-company regulations. Accordingly, there was no separate political donation in 2016.

Total Number of Suppliers

(Unit: Number of suppliers – companies, Amount of product purchase – KRW 100 million)

Classification	2014	2015	2016
Number of suppliers		5,312	5,336
Amount of product purchase	7,446	7,436	9,536
Local ¹⁾ suppliers' purchases (amount)	3,710	3,767	4,833
Local ¹⁾ suppliers' purchases (percentage)	50%	51%	51%

1) Limited to the Republic of Korea

Mutual Growth Fund Contribution

(Unit: KRW 100 million)

Classification	2014	2015	2016	
Mutual Growth Fund Contribution	SK innovation	270	120	120
	SK global chemical	220	220	220
	Total	490	340	340

Current Status of Corporate Tax Payment¹⁾

(Unit: KRW 100 million)

Classification		Sales	Operating profit	Corporate tax paid
Country	Korea	438,959	33,829	4,752
	Netherlands	4,476	29	-
	U.S.	14,955	△53	140
	Spain	3,498	145	34
	Singapore	162,953	△106	180
	U.K.	37,909	△216	△2
	Indonesia	2,480	176	23
	Japan	4,930	13	7
	China	14,526	36	52
	Russia	483	△58	-
	Others(consolidated)	△289,964	△1,512	7
	Total	395,205	32,283	5,193
Region	Korea	438,959	33,829	4,752
	Asia	184,889	119	262
	Europe	46,366	△100	32
	Others	△275,009	△1,565	147
		Total	395,205	32,283

1) It is regional information on the consolidated target(based on the location), and internal transactions between consolidated targets is adjusted and reflected in the category of others.