

KEEI

MONTHLY KOREA ENERGY TRENDS

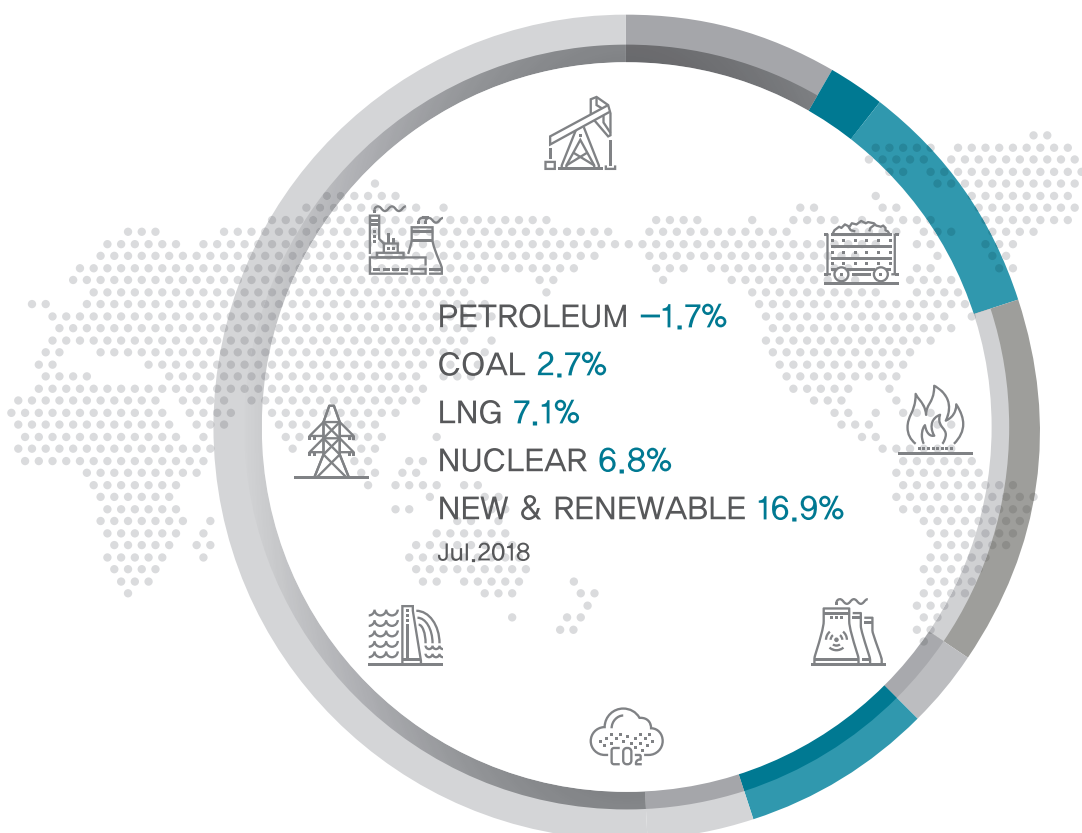


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1. The Economy and the Industry

- **The total export value went up by 6.2% on a year-on-year basis in July despite weak performance of the shipbuilding and automobile industries, because the semi-conductor and iron & steel industries posted strong growth in export revenue.**
 - The export value of semi-conductors grew by 31.6%, surpassing the \$10billion mark for three consecutive months on the back of strong demand for server DRAM and continuously expanding memory capacity of IT devices. The rate of growth, however, slowed, as the spot price fell slightly from the previous month.
 - The export value of petrochemicals rose by 24.4%, as the product unit price increased in sync with oil price trend, and as the demand also increased following the commissioning of new facilities.
 - The export value of petroleum products increased by 45.2% year-on-year, especially diesel and jet oil, due to the upward trend in global oil prices.
 - The export value of iron & steel products grew by 33.7% after four-month decline, helped by high level of unit prices and the project-based export of steel frames (\$600million), even though the export volume decreased amid increased import regulations.
 - The export value of automobiles dropped by 13.7%, because the export to the U.S. has been continuously falling (-13.1%) and plunged in major European countries such as the UK and Germany.
 - The export value of vessels continued its downward slide, partly due to the base effect of outstanding performance in the same month last year and decreased backlog of orders.
- **The manufacturing production index was up 0.9%, led by the semi-conductor and basic chemical material sectors, and the service production index was up 2.1%.**
 - The manufacturing production index rebounded from the previous month's decline, as the production increased in the ICT sector, mainly semi-conductors, and the basic chemical material sector (1.9%), although the production declined in the automobile (-11.9%) and iron & steel (-1.1%) sectors.
 - The ICT production index posted a year-on-year growth of 13.9%, despite decreased production index of audio & visual equipment (-30.6%) and computer (-4.0%), as the index surged in the semi-conductor sector (24.0%) and also increased in the broadcasting & communications equipment sector (9.0%).
 - The service production index has been up for nine months in a row, led by the wholesale & retail (2.2%) and health & social welfare (3.4%) sectors, even though the index continued to decline in the restaurant & accommodations (-0.8%) and real estate & leasing (-2.9%) sectors.

► Trend in major economic and industrial indicators

	2016	2017p	2018p			2018p		
			M5	M6	M7	M5	M6	M7
GDP (trillion won)	1 509.8	1 556.0	-	389.6	-	-	400.6	-
	(2.9)	(3.1)	-	(2.8)	-	-	(2.8)	-
Total export (\$billion, customs clearance basis)	495.4	573.7	44.9	51.3	48.8	50.7	51.1	51.9
	(-5.9)	(15.8)	(13.1)	(13.4)	(19.4)	(12.9)	(-0.3)	(6.2)
Semi-conductors	62.9	62.2	5.6	5.7	5.6	8.8	9.7	9.5
	(0.4)	(-1.1)	(2.5)	(-2.6)	(1.7)	(56.7)	(69.9)	(69.6)
Petroleum products	26.5	35.0	2.8	2.4	2.7	3.9	4.1	3.9
	(-17.3)	(32.3)	(28.2)	(4.9)	(1.8)	(41.5)	(69.1)	(43.9)
Cars	40.2	41.7	3.5	3.8	3.6	3.5	3.5	3.1
	(-12.3)	(3.8)	(4.5)	(2.3)	(8.5)	(-0.8)	(-9.9)	(-13.7)
Mining and manufacturing production index (2015=100)	102.3	104.2	104.3	105.4	104.8	106.3	105.5	105.3
	(2.3)	(1.8)	(1.8)	(1.2)	(1.6)	(1.9)	(0.1)	(0.5)
ICT	107.0	110.9	108.4	103.2	109.0	116.3	121.3	124.2
	(7.0)	(3.6)	(2.7)	(-5.7)	(-2.0)	(7.3)	(17.5)	(13.9)
Service industry production index (2015=100)	102.6	104.5	104.5	106.0	103.5	106.9	107.8	105.7
	(2.6)	(1.8)	(1.8)	(1.5)	(1.4)	(2.3)	(1.7)	(2.1)

Note: Figures are based on the real price of 2010, P means provisional, () is year-on-year growth rates (%)

Source: Korea International Trade Association, Korea Statistical Information Service

2. Energy Prices

Global energy prices

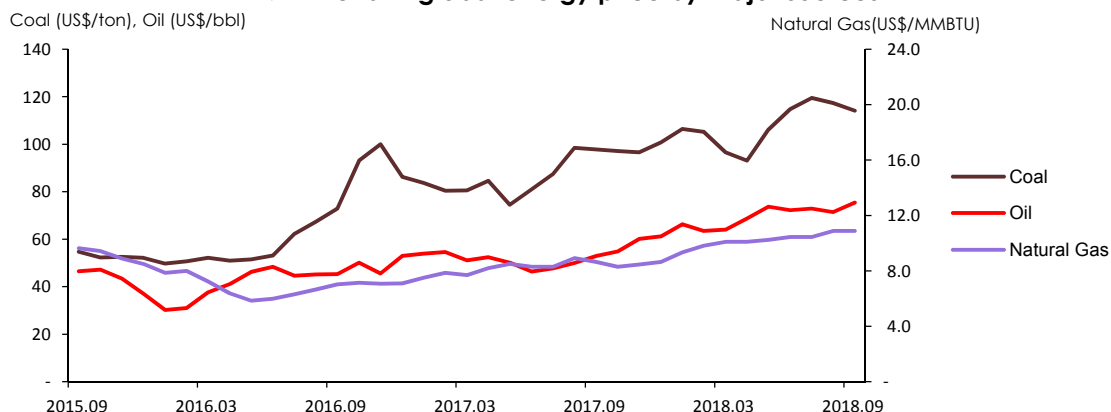
- **Global oil price rose by 5.7% from the previous month in September, seemingly influenced by concerns over oil supply shortages because of the renewed US economic sanctions on Iran.**
 - The global oil price increased amid mounting worries over possible oil supply shortages, as the U.S. re-imposed sanctions on the Iranian oil supply, and the OPEC & non-OPEC joint Ministerial Monitoring Committee (JMMC) rejected additional production increase.
 - Meanwhile, the global oil price increase was limited by the interest rate increase in the U.S. and rising concerns over global economic slowdown amid intensifying trade disputes between the U.S. and China.
- **Global coal price was still high, despite a slight fall, while natural gas price was stagnant at \$11/MMBTU.**
 - Global coal price slightly decreased according to the seasonal drop in coal demand for power generation, in addition to the growing coal production in Indonesia.

► Trend in global energy prices

	2016	2017				2018		
			M7	M8	M9	M7	M8	M9
Crude oil (US\$/bbl)	43.3 (-15.2)	53.0 (22.4)	47.8 (7.1)	50.1 (10.7)	53.0 (17.1)	72.9 (52.5)	71.4 (42.6)	75.5 (42.4)
Natural gas (US\$/MMBTU)	6.9 (-32.6)	8.3 (20.3)	8.3 (31.2)	8.9 (33.7)	8.6 (22.7)	10.4 (25.9)	10.9 (22.0)	10.9 (25.9)
Coal (US\$/ton)	65.9 (14.7)	88.6 (34.4)	87.5 (40.5)	98.6 (46.3)	97.8 (34.2)	119.6 (36.6)	117.3 (19.0)	114.2 (16.7)

Note: Global oil price is the average of the three benchmarks; Brent, Dubai, WTI, Natural gas and coal prices are based on Japan's LNG importing price from Indonesia (CIF) and the price of Australian coal. () is year-on-year growth rates (%)
Source: www.petronet.co.kr, World Bank(Commodity Markets)

► Trend in global energy price by major sources



Domestic energy prices

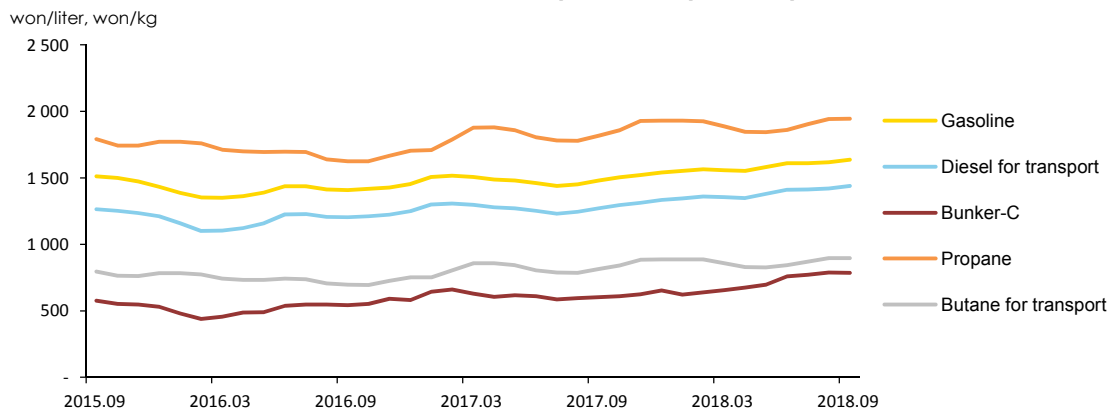
- **Gasoline and diesel prices went up by 1.2% and 1.4% respectively in September, as global oil price grew rapidly from the previous month.**
 - The domestic prices of gasoline and diesel recorded the highest price level since Jan, 2015 after five consecutive months of growth (May-Sept) in line with continuously rising global oil price.
- **Propane and butane prices stayed at the prior month's level, despite increased global prices, in order to enhance the price competitiveness.**
 - The domestic LPG price, which reflects the global price (Saudi Aramco's supply price) of the previous month, maintained the level of the prior month in September, even though the global propane and butane prices rose by 4.5% and 4.4% in August than a month ago.

► Trend in domestic energy prices

	2016	2017				2018		
			M7	M8	M9	M7	M8	M9
Gasoline (won/liter)	1 402.9 (-7.1)	1 491.4 (6.3)	1 438.6 (0.1)	1 451.8 (2.8)	1 479.7 (5.1)	1 610.9 (12.0)	1 618.3 (11.5)	1 637.6 (10.7)
Diesel for transport (won/liter)	1 182.9 (-9.0)	1 282.6 (8.4)	1 229.8 (0.1)	1 244.9 (3.1)	1 271.0 (5.7)	1 411.9 (14.8)	1 419.1 (14.0)	1 438.9 (13.2)
Bunker-C (won/liter)	521.1 (-14.9)	619.4 (18.9)	584.6 (6.8)	594.1 (8.6)	603.1 (11.4)	771.5 (32.0)	788.6 (32.7)	784.4 (30.1)
Propane (won/kg)	1 689.7 (-6.2)	1 833.7 (8.5)	1 780.9 (5.2)	1 779.4 (8.6)	1 815.8 (11.7)	1 902.9 (6.9)	1 942.9 (9.2)	1 945.2 (7.1)
Butane for transport (won/liter)	733.9 (-9.0)	826.4 (12.6)	786.6 (6.9)	785.5 (11.2)	813.4 (16.8)	869.1 (10.5)	894.8 (13.9)	895.4 (10.1)

Note: Gasoline, diesel and butane prices are based on charging station prices, Bunker-C price is based on dealership price, propane price is based on sales shop price. () is year-on-year growth rates (%)
Source: www.opinet.co.kr

► Trend in domestic petroleum product prices

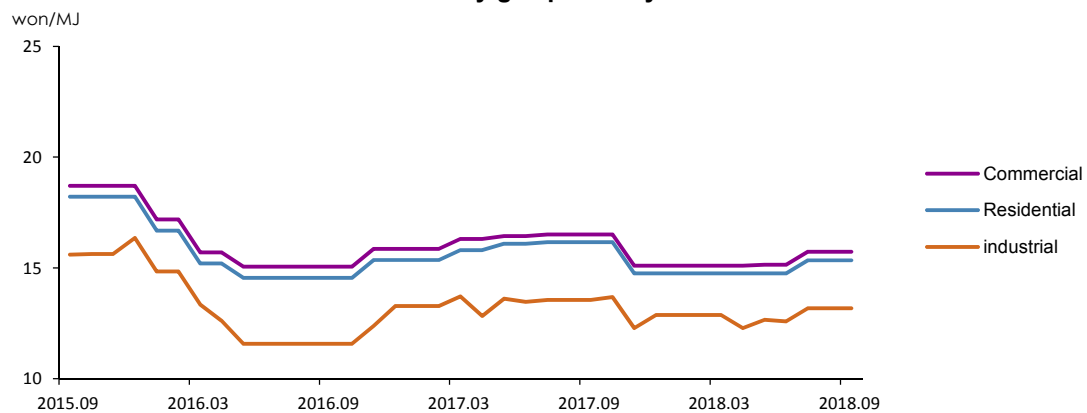


□ **City gas price was stagnant (in September) compared to the previous month, because the price of LNG, which is used as raw material, was almost flat.**

- City gas prices for commercial, residential and industrial use rose by 3.9%, 4.0% and 4.7% respectively in August, as the LNG importing price increased in July due to the global oil price increase during H1 2018.
- On a year-on-year basis, however, city gas prices for commercial, residential and industrial use fell by 4.8%, 5.1% and 2.7% respectively in September, because the prices sharply declined in Nov, 2017 (-9.3% in Seoul) after Korea Gas Corp. collected all accounts receivables.

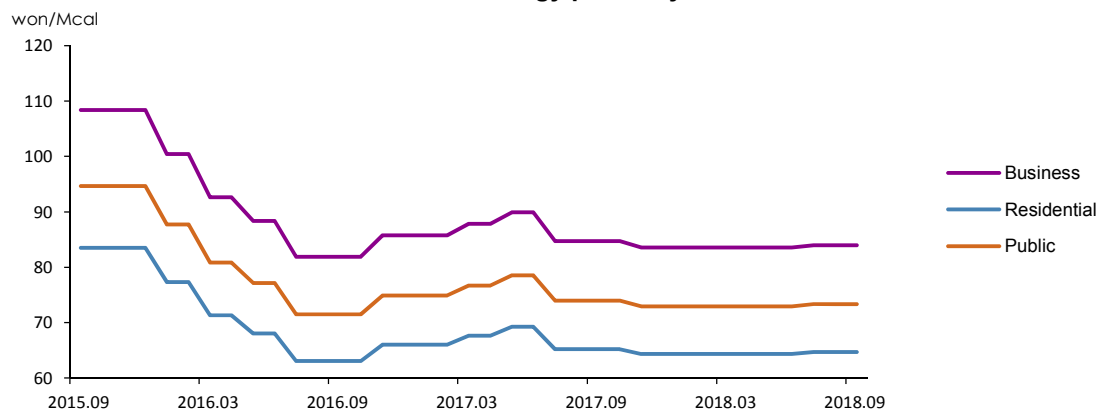
□ **Heat energy price was flat as well, as city gas price maintained the prior month's level.**

► Trend in city gas prices by end-use sectors



Note: Instead of volume(M³), calorie (MJ) has been used as the unit of measurement in the city gas rate system since July 2012. Figures before that are converted based on standard calorie (additional tax, base charge excluded)

► Trend in heat energy prices by end-use sectors



Note: The rates are based on flat rate for heating (additional tax, base charge excluded)
Source: Korea District Heating Corporation.

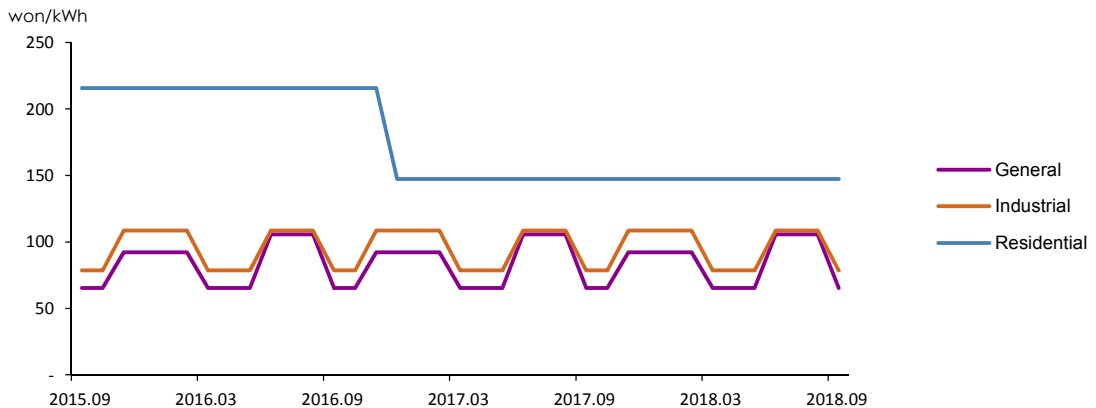
□ **Electricity prices ¹fell sharply in September following the seasonal price change (spring/winter) for industrial and general use.**

- Electricity prices for industrial and general use, which change by season, declined by 27.6% and 38.3% respectively from the previous month, as the prices were adjusted from summer (June-Aug) to spring/autumn (Mar-May, Sept to Oct) season.
- Electricity price for residential use returned to the original level in September after a temporary cut (July-Aug) during extremely hot days.

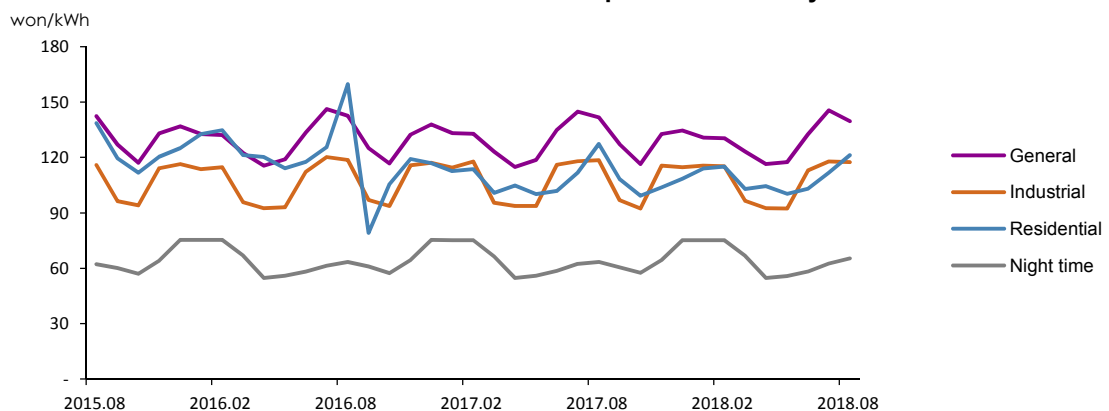
□ **The unit sales price of electricity for residential use rose sharply, while the prices declined in the case of general and industrial use.**

- The unit sales price of electricity for residential use went up by 8.6% because of growing power demand amid scorching heat waves and the progressive pricing scheme, while that for general and industrial use fell by 4.1% and 0.3% than a month ago.

► **Trend in electricity prices by end-use sectors**



► **Trend in unit sales price of electricity**



¹ The electricity prices by end-use sectors refer to the prices for residential use ([high voltage], the 2nd stage electricity rates), general use ([A], low voltage) and Industrial use ([B], high voltage B middle load).

3. Energy Supply

- **The total energy import volume was up 3.1% year-on-year in July, especially crude oil, petroleum products and LNG.**
 - The crude oil import went up by 3.3% partly due to larger input to refineries, and the share of the Middle Eastern crude oil (70.8%) fell by 14.7%p year-on-year as a result of the diversification of importing sources, with the focus placed on the U.S. crude oil.
 - The import volume of petroleum products was up over 10%, driven by growing naphtha and LPG import, although the import of bunker-C was down 4.4%.
 - The LNG import volume slightly increased in July, especially from Qatar and Oman, posting six consecutive months of growth.
 - The foreign energy dependence including nuclear energy fell by 0.8%p year-on-year to 93.7% in July thanks to the increased renewable generation. The energy share of the total import value rose by 6.3%p to 27.3% with larger energy import volume.
 - The importing price of crude oil was up 58.0% year-on-year to \$75.2/bbl in July, LNG up 27.2% to \$519.5/ton, bituminous coal up 11.1% to \$110.4/ton.

► Trend in energy trade and domestic production

	2016	2017p	2018p				
			M1~7	M7	M1~7	M6	M7
Import volume							
Crude oil (Mbbl)	1 078.1 (5.1)	1 118.2 (3.7)	636.3 (2.3)	93.6 (3.9)	654.1 (2.8)	98.0 (12.2)	96.7 (3.3)
Petroleum product (Mbbl)	334.6 (8.7)	314.5 (-6.0)	185.1 (-3.2)	25.5 (-13.8)	196.7 (6.3)	28.5 (1.8)	28.6 (11.9)
Bituminous coal (Mton)	118.5 (-0.8)	131.5 (11.0)	76.1 (15.9)	10.9 (13.2)	76.7 (0.8)	10.2 (-8.6)	10.8 (-0.7)
Anthracite (Mton)	9.4 (5.4)	7.0 (-25.7)	4.5 (-12.5)	0.7 (-32.1)	4.7 (3.5)	0.8 (54.3)	0.6 (-16.6)
LNG (Mton)	33.5 (0.3)	37.6 (12.3)	22.4 (20.3)	2.7 (41.0)	25.4 (13.7)	3.7 (8.3)	2.7 (1.2)
Import volume (Mtoe)	321.9 (2.7)	338.7 (5.2)	196.2 (7.0)	28.1 (7.0)	205.6 (4.8)	29.0 (4.6)	28.9 (3.1)
Import value (billion US\$, CIF)	80.9 (-21.2)	109.5 (35.2)	62.3 (45.0)	8.1 (19.2)	81.7 (31.0)	12.8 (47.3)	12.3 (51.6)
Domestic production							
Hydropower (TWh)	6.6 (14.5)	7.0 (5.4)	3.9 (-1.4)	0.6 (-29.4)	4.2 (9.2)	0.7 (29.8)	0.8 (26.4)
Anthracite (Mton)	1.7 (-2.2)	1.5 (-13.9)	0.9 (-8.2)	0.1 (-19.0)	0.8 (-15.7)	0.1 (-20.8)	0.1 (-25.2)
Natural gas (Mton)	0.1 (-18.0)	0.3 (120.5)	0.2 (175.5)	0.0 (79.1)	0.2 (-7.7)	0.0 (-6.4)	0.0 (-12.2)
Renewable energy (Mtoe)	13.6 (5.7)	15.0 (10.2)	8.7 (10.2)	1.2 (8.3)	9.7 (12.1)	1.4 (8.3)	1.4 (16.9)

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

4. Energy Consumption

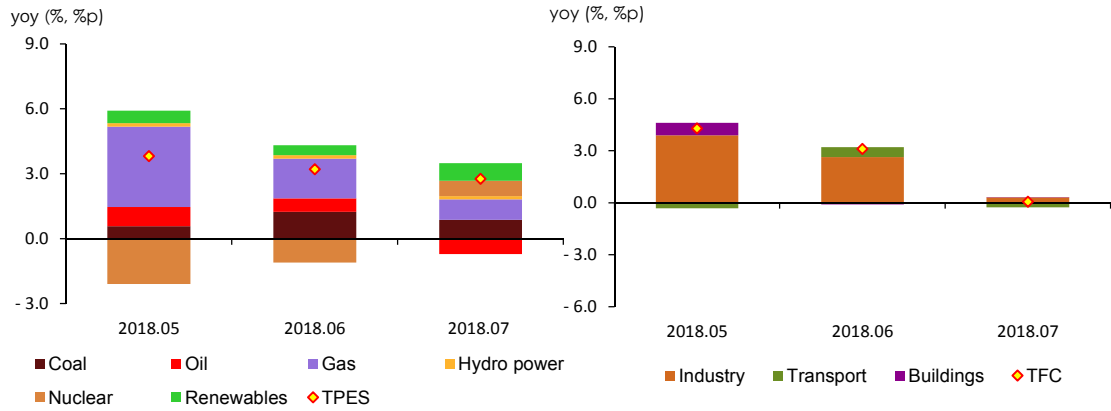
- **Total Primary Energy Supply (“TPES”) increased by 2.8% year-on-year in July despite decreased petroleum consumption, as coal, gas and nuclear energy consumption all increased.**
 - Coal consumption has increased for 19 consecutive months due to the ongoing effect of the construction of a new plant, although the industrial coal consumption declined, especially anthracite and in the cement production sector.
 - Petroleum consumption declined by 1.7% despite growing demand from the power generation sector, as the consumption declined in the industrial, transport and buildings sectors.
 - Gas consumption has increased for nine months in a row, led by the power generation and city gas production sectors.
 - Nuclear generation rebounded by 6.8% after eight-month decline, owing to the base effect of a surge in preventive maintenance in the same month last year (46.5%) and the restart of some reactors.
 - Gas and coal made the largest contributions (both 0.9%p) to the growth in TPES, followed by renewable energy (0.8%p), nuclear energy (0.7%p) and petroleum (-0.7%).
- **Total Final Consumption (“TFC”) increased slightly by 0.1% year-on-year (in July), led by the industrial and buildings sectors, though the consumption declined in the transport sector.**
 - Industrial energy use grew at much slower pace, as the growth of electricity consumption slowed with reduced outputs of iron & steel products, continuously decreasing automobile production and slower growth in semi-conductor export, and as the use of naphtha and petroleum declined.
 - Transport energy use was down 1.3% and fell mostly in the domestic navigation and aviation sectors, though the road transport sector consumed more energy.
 - Total energy consumption in buildings went up by 0.2% on the back of growing energy demand for cooling amid extremely hot weather. Meanwhile, city gas and petroleum consumption in buildings decreased.
 - The growth rate of electricity consumption fell sharply (-4.5%p), as the industrial consumption grew more slowly, especially in the petrochemical and fabricated metals sectors, and as the consumption in buildings grew at slower pace due to the base effect of the surge in power use during the same month last year.

► Energy consumption trend

	2016	2017p		2018p			
			M1~7	M7	M1~7	M6	M7
Total energy (Mtoe)	293.4	300.6	173.2	24.9	178.6	23.6	25.6
	(2.4)	(2.5)	(2.2)	(4.5)	(3.2)	(3.2)	(2.8)
Final energy (Mtoe)	225.1	232.4	134.9	18.8	138.7	18.4	18.8
	(3.3)	(3.3)	(3.8)	(8.0)	(2.8)	(3.1)	(0.1)

Note: p means provisional, () is year-on-year growth rates
Source: Monthly Energy Statistics (KEEI)

► The growth rates of TPES & TFC, energy consumption trend by energy sources and end-use sectors



5. Coal

□ Coal consumption went up by 2.8% year-on-year in July, led by the transformation sector, although the consumption declined in the industrial sector.

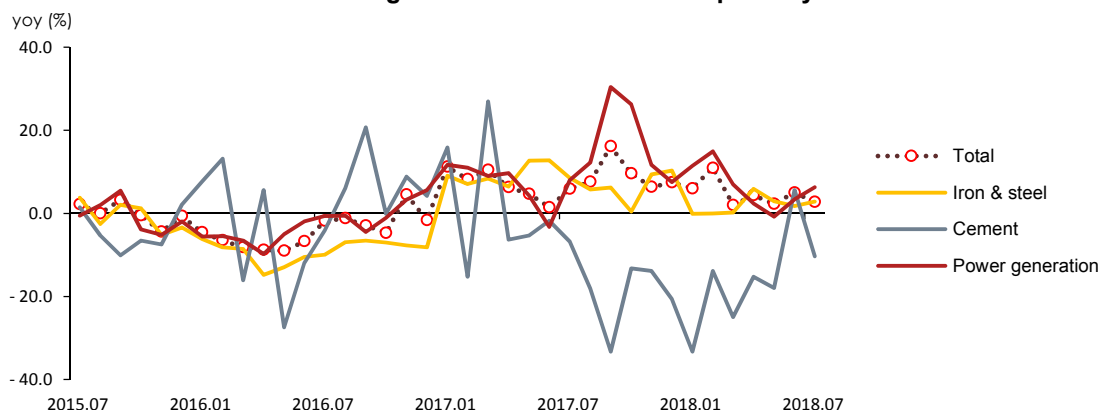
- Coal consumption was up 6.3% in the transformation sector with the effect of increased installed capacity (1.7GW, 4.7%).
- Industrial coal consumption showed a downward trend even with decent growth in bituminous coal use for steel making, owing to the sharp drop in the industrial anthracite use and the bituminous coal use for cement production.

► Coal consumption trend

	2016	2017p			2018p		
			M1~7	M7	M1~7	M6	M7
Coal (Mton)	129.3	139.6	78.8	12.4	82.5	10.8	12.7
	(-4.3)	(8.0)	(7.0)	(5.9)	(4.7)	(5.0)	(2.7)
Industry	47.8	49.1	28.8	4.4	29.3	4.3	4.2
	(-6.6)	(2.9)	(6.9)	(2.6)	(1.6)	(7.5)	(-3.8)
Buildings	1.3	1.1	0.4	0.0	0.4	0.0	0.0
	(-14.8)	(-14.1)	(-19.0)	(-42.9)	(-9.4)	-	(37.5)
Power generation	80.3	89.4	49.6	8.0	52.9	6.5	8.5
	(-2.7)	(11.3)	(7.3)	(8.0)	(6.7)	(3.4)	(6.3)

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

► The growth rate of coal consumption by use



6. Petroleum

□ Petroleum consumption declined by 1.7% year-on-year in July due to a drop in final consumption.

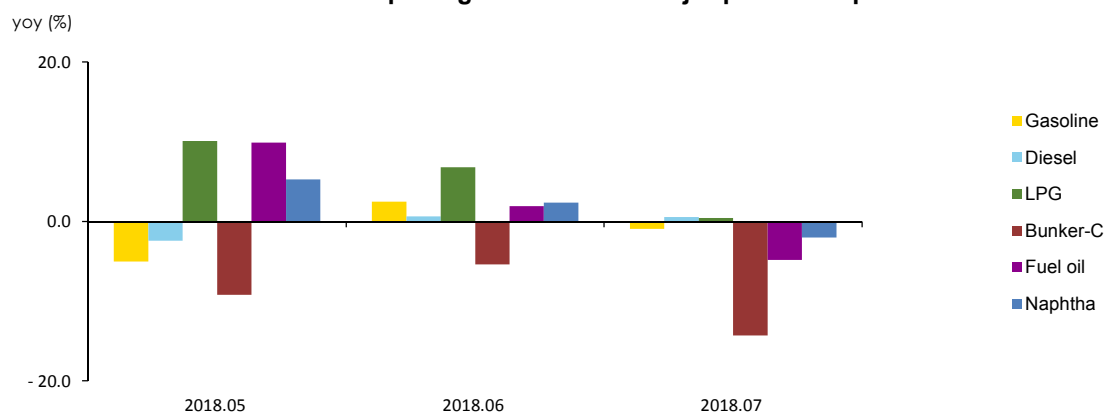
- Industrial petroleum consumption started to decrease despite increased LPG consumption, as the use of major petroleum products declined.
- Petroleum consumption for transport fell by 2.2%, as the use of major petroleum products all declined except diesel, driving down the total petroleum consumption, together with the industrial sector.
- Petroleum consumption in buildings has been down for two straight months, kerosene and LPG in particular, as the prices and temperatures increased.

► Trend in petroleum product consumption by end-use sectors

	2016	2017p			2018p		
			M1~7	M7	M1~7	M6	M7
Petroleum (Mbbl)	921.1	936.7	536.8	79.1	545.4	75.7	77.8
	(8.0)	(1.7)	(2.7)	(8.6)	(1.6)	(1.8)	(-1.7)
Industry	542.6	567.0	323.7	48.4	329.1	45.8	47.8
	(8.3)	(4.5)	(6.0)	(10.7)	(1.7)	(2.1)	(-1.2)
Transport	300.5	302.9	174.5	26.8	175.5	26.0	26.2
	(5.8)	(0.8)	(2.1)	(9.0)	(0.5)	(1.9)	(-2.2)
Buildings	56.3	56.4	31.8	3.1	33.0	3.4	2.9
	(5.2)	(0.3)	(-0.3)	(16.2)	(3.8)	(-4.9)	(-8.0)
Power generation	21.8	10.5	6.7	0.8	7.8	0.6	0.9
	(48.7)	(-51.9)	(-53.8)	(-57.5)	(15.9)	(12.4)	(14.7)

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

► The consumption growth rates of major petroleum products



7. Gas

□ Natural gas production went up by 7.1% year-on-year in July, driven by soaring demand for city gas production.

- Gas consumption for power generation rose by mere 0.5%, despite growing power demand, because of increased baseload generation (coal + nuclear), and its share of the total generation fell by 0.1%p to 24.4%.
- Gas consumption for city gas production has grown by over 10% for three consecutive months due to rapidly growing city gas consumption.

□ City gas consumption posted a year-on-year growth of 7.0%, as the consumption largely increased in the industrial sector, though it declined in the buildings sector.

- Industrial city gas consumption rose by more than 20%, because stronger price competitiveness led to a surge in city gas consumption in the petrochemical sector.
- City gas consumption increased in the residential buildings while sharply decreased in the commercial buildings, and consequently, the overall consumption in buildings fell by over 10%.

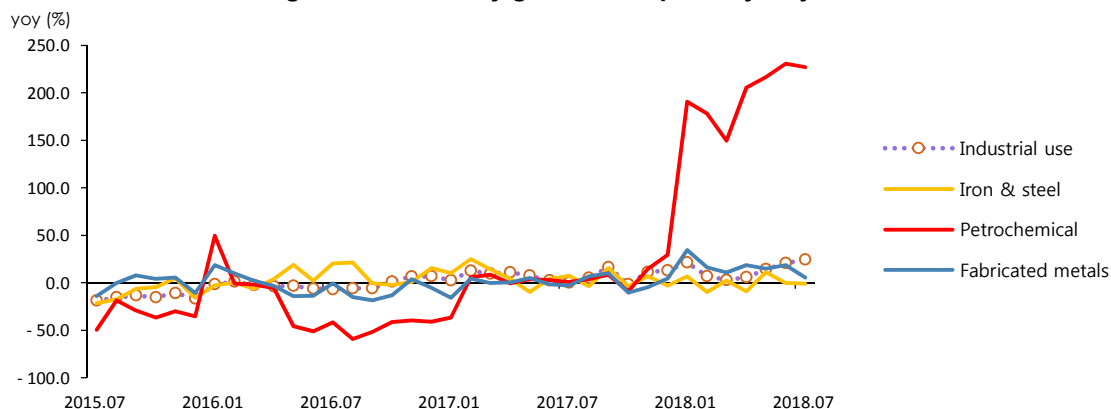
► Trend in natural gas and city gas consumption

	2016	2017p	2018p				
			M1~7	M7	M1~7	M6	M7
LNG (Mton)	34.9	36.1	21.0	2.5	24.7	2.6	2.7
	(4.4)	(3.5)	(3.7)	(5.5)	(17.5)	(14.2)	(7.1)
Power generation	15.5	15.4	8.9	1.5	11.0	1.5	1.5
	(6.4)	(-0.6)	(5.7)	(10.6)	(23.5)	(15.5)	(0.5)
City gas production	17.4	18.4	10.9	0.9	12.0	1.0	1.0
	(2.7)	(5.8)	(2.2)	(-1.3)	(10.9)	(12.1)	(14.2)
City gas (bm³)	21.3	22.6	13.9	1.1	14.8	1.2	1.2
	(2.3)	(6.2)	(3.9)	(0.4)	(6.1)	(5.5)	(7.0)
Industry	7.2	7.8	4.5	0.5	5.1	0.7	0.7
	(-1.4)	(7.6)	(6.7)	(0.2)	(13.1)	(20.6)	(24.4)
Buildings	12.8	13.6	8.7	0.5	9.0	0.5	0.4
	(5.0)	(6.0)	(2.9)	(0.3)	(3.0)	(-9.1)	(-10.3)

Note: p means provisional, () is year-on-year growth rates (%)

Source: Monthly Energy Statistics

► The growth rate of city gas consumption by major industries



8. Electricity

□ Electricity use increased by 1.9% year-on-year in July due to the slower consumption growth in the industrial and buildings sectors.

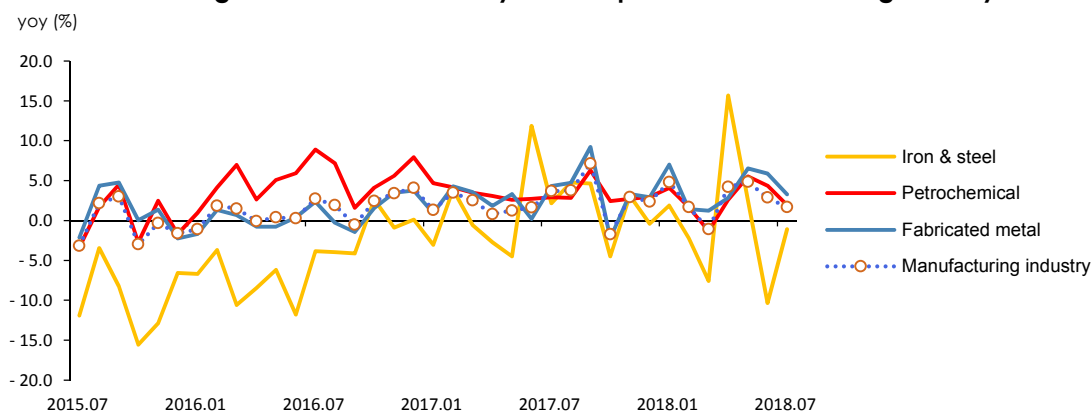
- Industrial electricity consumption rose by less than 2%, despite increased number of work days (0.5), as the consumption grew more slowly in the petrochemical and fabricated metals industries while continued to decline in the primary metals industry.
- Electricity consumption in buildings rapidly increased with increased number of heat wave days and tropical nights. On a year-on-year basis, however, the consumption grew by mere 2.0%, owing to the base effect of near 10% growth in the same month last year.

► Trend in electricity consumption by end-use sectors

	2016	2017p			2018p		
			M1~7	M7	M1~7	M6	M7
Electricity (TWh)	497.0	507.7	294.6	43.2	305.7	41.0	44.0
	(2.8)	(2.2)	(1.9)	(6.5)	(3.8)	(3.5)	(1.9)
Industry	270.0	276.7	160.5	23.6	164.8	23.0	24.1
	(1.6)	(2.5)	(2.3)	(3.8)	(2.7)	(2.1)	(1.8)
Transport	2.7	2.8	1.6	0.3	1.7	0.2	0.3
	(21.3)	(4.9)	(3.2)	(9.1)	(6.9)	(2.6)	(1.7)
Buildings	224.4	228.3	132.5	19.3	139.2	17.8	19.7
	(4.0)	(1.7)	(1.4)	(9.8)	(5.0)	(5.3)	(2.0)

Notes: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

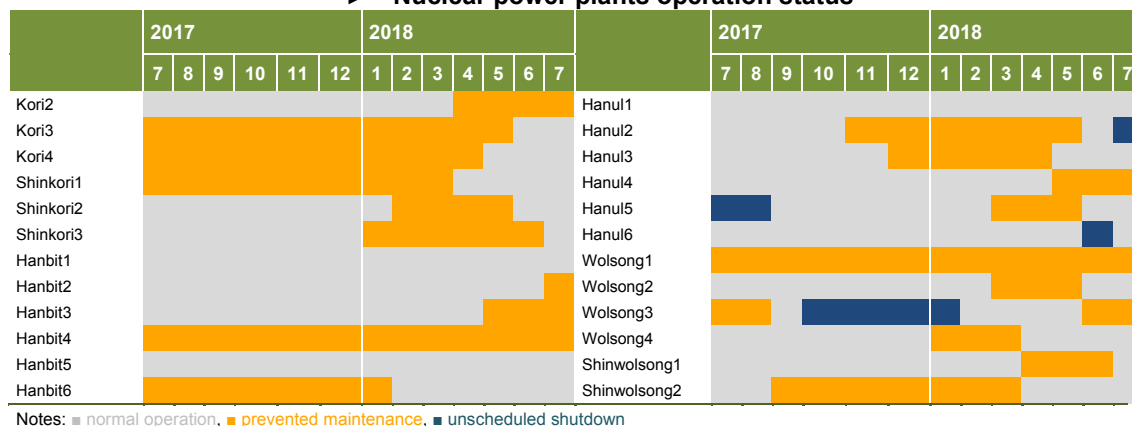
► The growth rate of electricity consumption in manufacturing industry



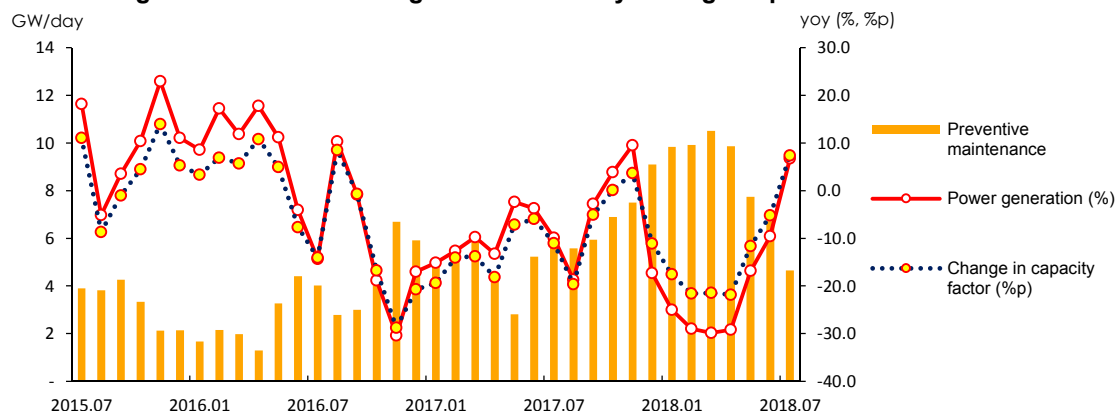
9. Nuclear energy

- Nuclear generation recorded a year-on-year growth of 6.8% in July, as the average capacity factor increased as a result of decreased preventive maintenance on daily average.
 - The daily average of preventive maintenance declined (-1.2GW, -21.0%), which is attributable to the base effect of the rapid growth during the same month last year (1.9GW, 46.5%) and the restart of some reactors.
 - The capacity factor at nuclear power plants was up 7.4%p year-on-year, and the total generation rebounded after eight-month decline.

► Nuclear power plants operation status



► The growth rate of nuclear generation & daily average of preventive maintenance



10. Heat and Renewable energy

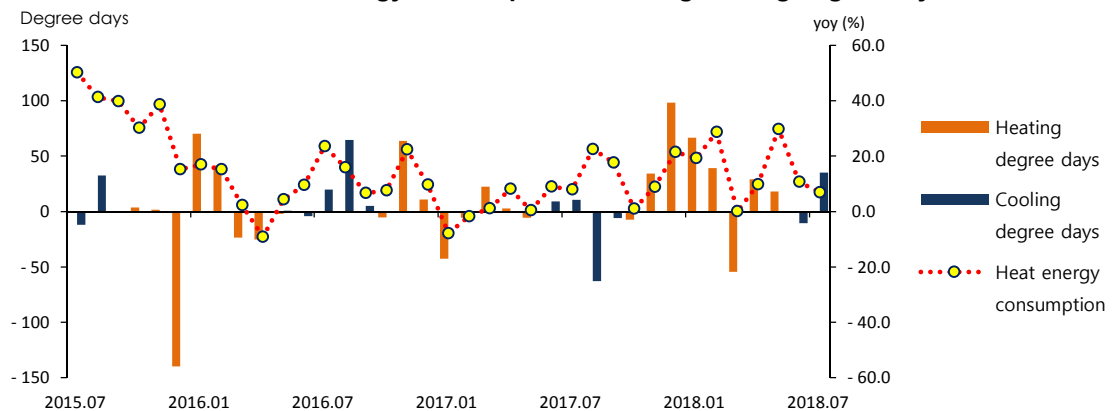
□ **Heat energy consumption grew by 6.9% in July on a year-on-year basis on growing cooling demand along with increased number of cooling degree days.**

- The average temperature increased with scorching heatwaves (27.8°C in Seoul), and accordingly, heat energy consumption for cooling increased mostly in the commercial and public sectors with increased number of cooling degree days (35.2).

□ **Renewable & other energy consumption grew by 17.9% (in July) on a year-on-year basis due to the base effect and increased renewable generation from newly built facilities.**

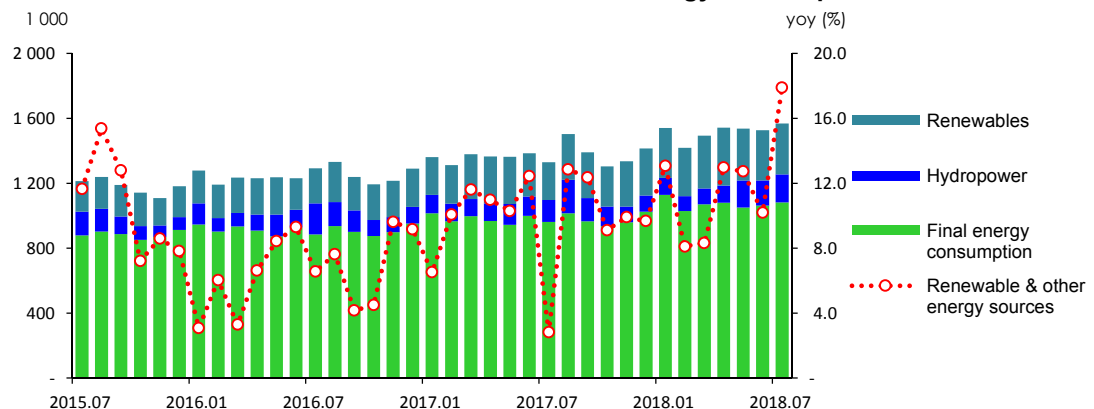
- Renewable energy generation (except hydro) was up 35.0% even after the shutdown of IGCC plants, because more power was generated from solar PV, bio-energy and waste energy. The renewable's share of TFC went up by 16.9%, led by the industrial and transport sectors.
- The total hydropower generation (807.6GWh) rose by 26.4% due to the base effect of a sharp fall during the same month last year (-28.7%).

► Heat energy consumption & heating/cooling degree days



※ Note: The total heat energy consumption is estimated based on the total supply from district heating & cooling companies (KEA's collective energy business). Previously, the figure reflected the monthly supply data of only three energy companies (KDHC, GS Power, SH Corp.).

► Trend in renewable and other energy consumption



11. Industry

□ Industrial energy consumption went up by mere 0.5% year-on-year in July, as the consumption slowed down in the petrochemical and fabricated metals industries.

- Industrial energy consumption was almost flat on a year-on-year basis, even though the number of work days (0.5) increased compared to the same month last year, because naphtha use declined in the petrochemical industry and the growth of electricity consumption was slower in the fabricated metals industry.

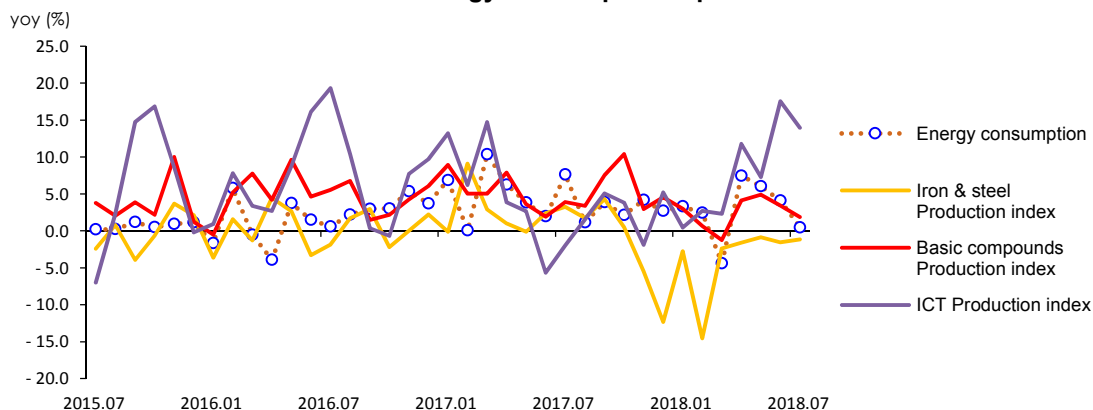
► Trend in the industrial energy consumption

	2016	2017p	2018p				
			M1~7	M7	M1~7	M6	M7
Industry (Mtoe)	137.8	143.6	82.8	12.2	85.0	12.0	12.3
	(1.9)	(4.2)	(5.3)	(7.6)	(2.7)	(4.1)	(0.5)
Petrochemical	65.9	68.9	39.5	5.9	41.4	5.7	6.0
	(6.7)	(4.4)	(5.5)	(8.3)	(4.8)	(6.8)	(2.2)
- Naphtha	52.7	56.2	32.1	4.8	32.4	4.4	4.7
	(4.7)	(6.6)	(6.8)	(12.5)	(1.1)	(2.4)	(-2.0)
Iron & Steel	28.1	30.0	17.4	2.6	17.6	2.5	2.6
	(-8.0)	(6.7)	(7.6)	(7.3)	(1.5)	(0.3)	(2.2)
-Coking coal	23.4	25.2	14.5	2.2	14.8	2.1	2.3
	(-9.0)	(7.5)	(8.8)	(8.0)	(1.9)	(1.7)	(2.8)
Fabricated metal	10.6	10.8	6.3	0.9	6.7	0.9	0.9
	(0.4)	(1.8)	(1.6)	(4.5)	(5.7)	(7.2)	(1.5)
Share of feedstock (%)	58.8	60.2	59.7	60.4	58.7	58.6	59.9

Note: p means provisional, () is year-on-year growth rates (%)

Source: Monthly Energy Statistics

► Industrial energy consumption & production index



12. Transport

□ **Transport energy use fell by 1.3% year-on-year in July because of less energy use in the domestic navigation and aviation sectors, though more energy was consumed for road transport.**

- Energy use for road transport has increased for two consecutive months with increased diesel consumption, though gasoline and LPG consumption decreased.
- Energy use for domestic navigation decreased as a result of a drop in coastal transport and higher bunker-C price, leading the downward slide in transport energy use.
- Energy use for aviation showed downward trend, as the number of domestic flights (-0.9%), passengers (-4.9%) and air freight volume (-7.5%) all decreased.

► The growth rate of petroleum consumption in the transport sector

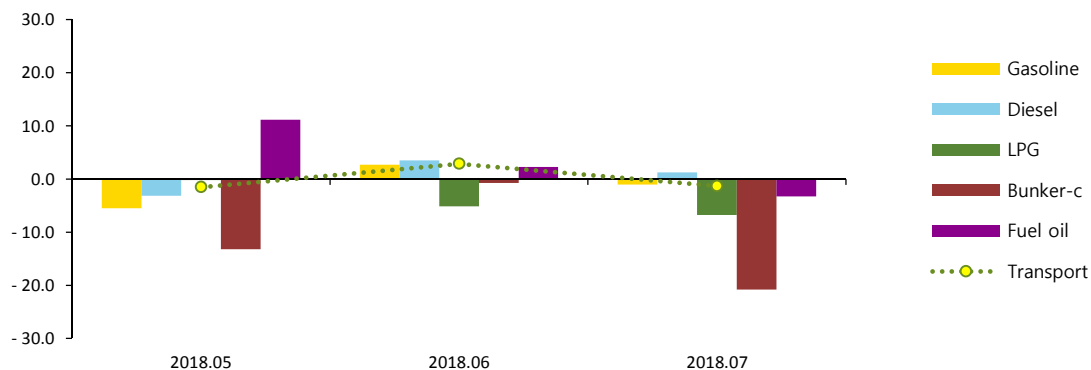
	2016	2017p	2018p				
			M1~7	M7	M1~7	M6	M7
Transport (Mtoe)	42.3	42.7	24.6	3.8	24.9	3.7	3.7
	(6.1)	(1.1)	(2.4)	(9.3)	(1.2)	(2.8)	(-1.3)
Road	33.9	34.0	19.6	3.0	20.0	3.0	3.0
	(4.9)	(0.3)	(1.7)	(9.3)	(2.1)	(4.3)	(1.0)
Navigation	3.4	3.5	2.1	0.3	1.8	0.2	0.2
	(13.8)	(5.7)	(9.8)	(3.3)	(-13.2)	(-11.5)	(-21.1)
Aviation	4.7	4.8	2.7	0.4	2.9	0.4	0.4
	(9.1)	(3.3)	(2.5)	(14.5)	(6.1)	(2.1)	(-3.4)
Rail	0.3	0.3	0.2	0.0	0.2	0.0	0.0
	(8.3)	(2.4)	(-1.6)	(2.8)	(5.2)	(-1.4)	(3.0)

Note: p means provisional, () is year-on-year growth rates (%)

Source: Monthly Energy Statistics

► The growth rate of energy consumption in the transport sector & major petroleum products

yoy (%)



13. Buildings

□ **Energy consumption in buildings went up by no more than 0.2% in July, even though energy use for cooling increased due to extremely hot weather, because city gas consumption declined.**

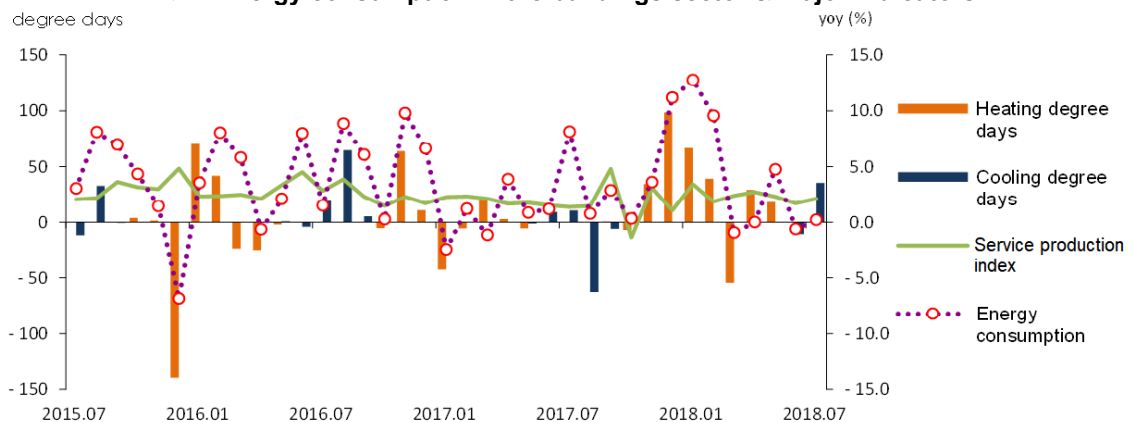
- Electricity and heat energy consumption increased in buildings (2.0%, 6.9%) according to growing cooling demand amid scorching heatwave and increased cooling degree days. However, city gas and petroleum consumption declined (-8.0%, -10.3%), limiting the growth of the total energy use in buildings.
- As for the energy use in residential buildings, kerosene and diesel use dropped by 18.3% and 1.2% respectively affected by oil price increase, but electricity and city gas use grew by 2.4% and 7.4%.
- Energy consumption in commercial buildings slid by 3.4% despite increased electricity and heat energy consumption (2.5%, 11.8%), because LPG and city gas consumption declined (-11.3%, -25.6%) with sluggish restaurant & accommodation businesses.

► Energy consumption trend in the buildings sector

	2016	2017p		2018p		M1~7	M6	M7
Buildings (Mtoe)	45.0	46.1	27.4	2.8	28.7	2.7	2.8	2.8
	(5.2)	(2.4)	(1.0)	(8.1)	(4.8)	(-0.6)	(0.2)	
Residential	21.7	22.4	13.4	0.9	14.5	1.0	1.0	
	(5.5)	(3.2)	(0.6)	(5.7)	(8.3)	(5.1)	(2.5)	
Commercial	17.1	17.3	10.2	1.4	10.3	1.2	1.3	
	(3.5)	(1.7)	(1.3)	(6.8)	(0.4)	(-2.4)	(-3.4)	
Public-others	6.2	6.4	3.7	0.5	3.9	0.5	0.5	
	(8.7)	(1.8)	(1.7)	(18.0)	(4.3)	(-7.1)	(6.1)	

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

► Energy consumption in the buildings sector & major indicators



14. Transformation

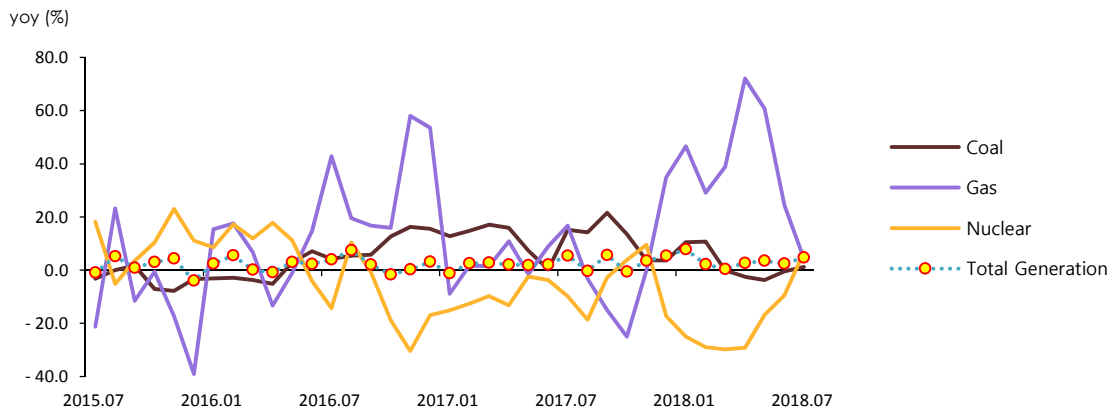
- The total energy input for power generation increased by 6.2% in July on a year-on-year basis, and coal and nuclear energy took the lead.
 - Nuclear generation bounced back after eight consecutive months of fast decline, while the growth of gas generation slowed down to stagnation.
 - Consequently, nuclear energy share of the total generation exceeded that of gas for the first time since October 2017.

► Energy consumption in the power generation sector

	2016	2017p	2018p				
			M1~7	M7	M1~7	M6	M7
Input (Mtoe)	110.9	110.9	63.8	9.8	65.3	8.7	10.4
	(0.8)	(-0.0)	(-1.7)	(-0.6)	(2.5)	(2.5)	(6.2)
Coal	49.2	52.8	29.3	4.7	31.3	3.8	5.0
	(-2.8)	(7.4)	(3.5)	(4.4)	(6.8)	(3.3)	(6.1)
Oil	3.0	1.2	0.8	0.1	0.8	0.1	0.1
	(50.1)	(-59.5)	(-61.0)	(-60.2)	(6.6)	(5.7)	(13.8)
Gas	20.5	20.5	11.8	2.0	14.5	1.9	2.0
	(6.3)	(-0.0)	(6.2)	(11.1)	(23.3)	(15.5)	(0.4)
Nuclear	34.2	31.6	19.2	2.6	15.6	2.4	2.8
	(-1.7)	(-7.5)	(-8.9)	(-9.0)	(-19.2)	(-9.5)	(6.8)
Hydro/other renewables	4.0	4.7	2.7	0.4	3.1	0.5	0.5
	(17.4)	(16.4)	(14.0)	(-9.9)	(18.0)	(20.4)	(31.8)

Notes: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

► Change in capacity factor and share of power generation by major energy sources



*Capacity factor is the ratio of actual energy produced to the amount of energy produced from continuous operation at full rated power

<Appendix> Major Indicators & Statistics of Energy Supply and Demand

Major Statistics & Indicators of the Economy

	2015	2016	2017				2018		
			4Q	1Q	2Q		4Q	1Q	2Q
GDP (trillion won)	1 466.8 (2.8)	1 509.8 (2.9)	396.5 (2.6)	366.2 (2.9)	389.6 (2.8)	1 556.0 (3.1)	407.6 (2.8)	376.4 (2.8)	400.6 (2.8)
Private consumption	707.5 (2.2)	725.4 (2.5)	184.5 (1.4)	185.8 (2.1)	181.0 (2.4)	744.3 (2.6)	190.7 (3.4)	192.4 (3.5)	186.1 (2.8)
Facilities investment	140.3 (4.7)	138.8 (-1.0)	37.4 (3.3)	37.3 (16.1)	42.0 (17.9)	159.1 (14.6)	40.6 (8.6)	40.1 (7.3)	40.8 (-3.0)
Construction investment	211.5 (6.6)	233.4 (10.3)	65.1 (11.9)	49.5 (11.3)	67.1 (8.5)	251.1 (7.6)	67.6 (3.8)	50.4 (1.8)	66.1 (-1.5)
Consumer price index (2015=100)	100.0	101.0	101.5	102.7	102.7	102.9	103.1	104.0	104.3
USD to KRW exchange rate (won)	1 131.0	1 160.8	1 156.4	1 154.9	1 129.4	1 131.0	1 107.5	1 072.7	1 079.0
Benchmark rate (%)	1.6	1.4	1.3	1.3	1.3	1.3	1.4	1.5	1.5
Coincident composite index (2015=100)	100.0	103.3	104.5	105.9	106.8	107.0	107.9	108.5	109.1
Mining & manufacturing production index (2015=100)	100.0	102.3	108.4	103.2	104.3	104.2	104.3	100.9	105.0
Manufacturing operation ratio index (2015=100)	100.0	98.2	101.4	95.9	98.3	97.1	96.0	92.7	99.3
Average temperature	13.6	13.6	8.0	1.4	18.9	13.0	6.7	0.8	18.1
- year-on-year difference	0.2	- 0.0	- 0.6	0.1	- 0.2	- 0.6	- 1.3	- 0.6	- 0.8
Heating degree days	2 459.1 (-1.7)	2 589.7 (5.3)	935.3 (8.0)	1 487.5 (-1.7)	138.6 (-1.6)	2 687.6 (3.8)	1 060.9 (13.4)	1 538.9 (3.5)	185.4 (33.8)
Cooling degree days	151.8 (21.1)	238.1 (56.9)	- n.a	- n.a	18.2 (78.4)	188.1 (-21.0)	- n.a	- n.a	7.7 (-57.7)
Energy intensity	0.20 (-1.2)	0.20 (-0.5)	0.19 (-0.1)	0.22 (-0.9)	0.18 (-0.7)	0.19 (-0.5)	0.19 (0.8)	0.22 (-0.3)	0.18 (0.9)
Per capita consumption									
oil (bbl)	16.7 (3.7)	18.0 (7.4)	4.7 (6.8)	4.6 (1.4)	4.3 (1.7)	18.2 (1.5)	4.8 (0.7)	4.6 (0.3)	4.5 (3.1)
Electricity (MWh)	9.5 (0.7)	9.7 (2.3)	2.4 (3.0)	2.6 (1.0)	2.3 (0.7)	9.9 (1.8)	2.4 (2.2)	2.7 (4.1)	2.4 (3.3)
City gas (1 000 m ³)	0.4 (-6.4)	0.4 (1.8)	0.1 (7.2)	0.2 (3.4)	0.1 (4.9)	0.4 (5.8)	0.1 (10.5)	0.2 (7.4)	0.1 (2.2)
Total energy (toe)	5.6 (1.0)	5.7 (1.9)	1.5 (1.9)	1.5 (1.6)	1.3 (1.7)	5.9 (2.3)	1.5 (3.3)	1.6 (2.1)	1.4 (3.4)

Note: Figures are based on the real price of 2010, p means provisional, () is year-on-year growth rates (%)
Source: BOA Economic statistics system, Monthly Energy Statistics

The Index of Production & Operating Ratio by Sectors

(2015=100)

	2016	2017					2018			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industrial production index										
All industry	103.1 (3.2)	105.5 (2.3)	104.2 (3.1)	105.0 (2.4)	108.9 (2.0)	104.3 (2.4)	105.3 (1.1)	106.8 (1.7)	109.1 (0.2)	105.7 (1.3)
Mining & manufacturing	102.3 (2.3)	104.2 (1.8)	103.9 (3.1)	104.3 (1.8)	105.4 (1.2)	104.8 (1.6)	102.7 (-1.1)	106.3 (1.9)	105.5 (0.1)	105.3 (0.5)
Iron & steel	100.2 (0.2)	100.7 (0.4)	101.5 (2.5)	104.3 (-0.1)	102.7 (2.4)	104.7 (3.3)	98.0 (-3.4)	103.4 (-0.9)	101.1 (-1.6)	103.5 (-1.1)
Cement	108.3 (8.3)	109.9 (1.4)	110.1 (6.2)	128.7 (8.2)	110.7 (-9.2)	102.4 (-2.8)	100.3 (-8.9)	114.8 (-10.8)	115.8 (4.6)	102.5 (0.1)
Basic compound	104.8 (4.8)	110.4 (5.4)	109.0 (5.2)	109.6 (3.6)	105.2 (1.9)	112.0 (3.9)	111.6 (2.4)	115.0 (4.9)	108.8 (3.4)	114.1 (1.9)
Transport equipment	97.7 (-2.3)	94.9 (-2.9)	99.3 (-0.8)	97.1 (-2.7)	101.9 (-2.9)	99.5 (-0.3)	91.1 (-8.2)	97.0 (-0.1)	93.4 (-8.3)	87.7 (-11.9)
Electric & electronic	103.3 (3.3)	106.4 (3.0)	103.5 (3.5)	105.4 (5.4)	109.1 (5.4)	103.6 (4.2)	101.6 (-1.8)	103.2 (-2.1)	104.1 (-4.6)	102.7 (-0.9)
Service	102.6 (2.6)	104.5 (1.8)	102.8 (1.9)	104.5 (1.8)	106.0 (1.5)	103.5 (1.4)	105.2 (2.3)	106.9 (2.3)	107.8 (1.7)	105.7 (2.1)
Operating ratio index										
Manufacturing	98.2 (-1.8)	97.1 (-1.2)	97.3 (-1.0)	98.4 (-2.7)	99.6 (-2.4)	98.3 (-1.3)	96.3 (-1.0)	100.2 (1.8)	99.4 (-0.2)	98.9 (0.6)
Iron & steel	99.9 (-0.1)	101.0 (1.0)	101.2 (2.4)	103.9 (-0.1)	102.5 (2.4)	104.3 (3.1)	98.8 (-2.4)	101.5 (-2.3)	99.9 (-2.5)	102.2 (-2.0)
Cement	107.0 (7.0)	107.6 (0.5)	107.6 (4.7)	125.2 (6.6)	107.8 (-10.5)	99.8 (-3.9)	107.9 (0.3)	125.6 (0.3)	127.5 (18.3)	113.4 (13.6)
Basic compound	103.6 (3.6)	107.2 (3.4)	106.3 (3.3)	107.1 (2.1)	102.3 (0.2)	108.3 (1.5)	107.1 (0.8)	110.1 (2.8)	105.0 (2.6)	109.1 (0.7)
Transport equipment	94.2 (-5.8)	89.7 (-4.8)	94.0 (-3.0)	91.7 (-5.2)	96.3 (-4.8)	94.3 (-2.1)	88.9 (-5.4)	95.3 (3.9)	91.8 (-4.7)	86.2 (-8.6)
Electric & electronic	102.2 (2.2)	102.8 (0.5)	100.9 (1.8)	101.7 (0.8)	105.8 (3.9)	100.1 (1.1)	95.8 (-5.1)	99.1 (-2.6)	98.4 (-7.0)	96.7 (-3.4)

Note: p means provisional
Source: Monthly Energy Statistics

International Energy Prices

	2016	2017					2018			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Crude oil (USD/bbl)										
WTI	43.3 (-11.2)	51.0 (17.6)	49.5 (19.7)	46.7 (4.2)	48.1 (7.3)	49.9 (10.3)	66.8 (34.9)	70.6 (51.2)	67.9 (41.2)	70.1 (40.5)
Dubai	41.2 (-18.8)	53.2 (28.9)	51.1 (31.5)	47.6 (11.9)	50.2 (15.1)	53.7 (23.8)	70.1 (37.1)	73.1 (53.7)	72.5 (44.3)	77.2 (43.9)
Brent	45.0 (-16.0)	54.8 (21.7)	52.6 (22.3)	49.2 (5.6)	51.9 (10.0)	55.5 (17.5)	72.7 (38.2)	75.0 (52.5)	73.8 (42.4)	79.1 (42.5)
Unit value of import (C&F)	41.0 (-23.0)	53.3 (29.9)	51.7 (32.4)	47.5 (3.2)	48.8 (11.4)	51.9 (18.4)	70.5 (36.5)	75.1 (58.1)	75.1 (53.8)	76.4 (47.4)
LNG										
From Indonesia (USD/MMBTU)	6.9 (-32.6)	8.3 (20.2)	8.2 (20.5)	8.3 (31.2)	8.9 (33.7)	8.6 (22.7)	10.3 (24.8)	10.4 (25.9)	10.9 (22.0)	10.9 (25.9)
Unit value of import (USD/ton, CIF)	356.7 (-35.0)	416.3 (16.7)	415.9 (19.4)	408.4 (33.7)	426.0 (28.7)	421.4 (19.4)	508.3 (22.2)	519.5 (27.2)	532.3 (25.0)	559.8 (32.8)
Bituminous coal (USD/ton)										
From Australia	65.9 (14.5)	88.6 (34.5)	85.4 (50.5)	87.5 (40.5)	98.6 (46.3)	97.8 (34.2)	108.2 (26.6)	119.6 (36.6)	117.3 (19.0)	114.2 (16.7)
Unit value of import (CIF)	68.9 (-6.8)	104.3 (51.5)	104.6 (69.1)	101.6 (63.2)	92.7 (45.7)	94.4 (41.3)	113.4 (8.4)	112.3 (10.5)	110.1 (18.7)	116.4 (23.3)
Petroleum product (USD/bbl)										
Gasoline	56.2 (-19.1)	68.1 (21.2)	66.2 (22.8)	61.8 (19.2)	67.5 (24.5)	70.5 (21.5)	82.8 (25.1)	83.1 (34.6)	84.8 (25.7)	92.0 (30.5)
Kerosene	52.8 (-18.3)	65.3 (23.6)	62.9 (25.1)	59.8 (9.6)	63.1 (17.8)	68.1 (24.1)	85.9 (36.6)	87.4 (46.2)	87.3 (38.3)	96.6 (41.9)
Diesel	53.0 (-20.4)	66.4 (25.1)	64.1 (27.2)	61.5 (11.7)	64.3 (18.9)	69.4 (25.7)	86.1 (34.3)	86.9 (41.3)	88.5 (37.7)	98.9 (42.6)
Bunker-C	35.4 (-21.6)	49.7 (40.2)	47.9 (49.4)	46.1 (23.7)	47.3 (26.9)	50.7 (28.4)	65.4 (36.4)	70.4 (52.7)	69.1 (46.1)	77.6 (53.1)
Propane	323.3 (-22.3)	468.8 (45.0)	430.0 (39.7)	345.0 (16.9)	420.0 (47.4)	480.0 (62.7)	540.6 (25.7)	555.0 (60.9)	580.0 (38.1)	600.0 (25.0)
Butane	355.8 (-18.5)	500.8 (40.7)	476.7 (41.1)	365.0 (17.7)	460.0 (58.6)	500.0 (56.3)	541.7 (13.6)	570.0 (56.2)	595.0 (29.3)	635.0 (27.0)
Naphtha	42.5 (-19.0)	53.8 (26.6)	51.0 (25.7)	45.7 (9.8)	50.3 (26.1)	54.9 (29.6)	69.3 (36.0)	72.1 (57.8)	71.5 (42.2)	78.1 (42.2)

Note: 1. () is year-on-year growth rates(%)

2. Gasoline type is 95RON, diesel is 0.001%, Bunker-C is high-sulfur oil(180cst/3.5%), for propane and butane, CP is reference value

Source: www.petronet.co.kr, IMF (primary commodity price), Monthly Energy Statistics

Total Primary Energy Supply (TPES)

	2016	2017p					2018p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal (Mton)	129.3 (-4.3)	139.6 (8.0)	78.8 (7.0)	10.7 (4.7)	10.3 (1.5)	12.4 (5.9)	82.5 (4.7)	10.9 (2.3)	10.8 (5.0)	12.7 (2.7)
- Coking coal excluded	95.8 (-2.5)	103.5 (8.0)	57.9 (6.2)	7.7 (1.9)	7.3 (-2.6)	9.2 (5.1)	61.3 (5.8)	7.8 (2.0)	7.7 (6.4)	9.5 (2.7)
Oil (Mbbbl)	921.1 (8.0)	936.7 (1.7)	536.8 (2.7)	76.6 (1.2)	74.4 (2.5)	79.1 (8.6)	545.4 (1.6)	78.6 (2.6)	75.7 (1.8)	77.8 (-1.7)
- Non-energy oil excluded	454.9 (11.3)	443.3 (-2.5)	255.2 (-0.7)	36.4 (-0.3)	35.8 (4.0)	37.3 (5.4)	262.1 (2.7)	36.7 (0.7)	36.6 (2.2)	36.7 (-1.7)
LNG (Mton)	34.9 (4.4)	36.1 (3.5)	21.0 (3.7)	2.1 (0.1)	2.3 (4.9)	2.5 (5.5)	24.7 (17.5)	2.7 (31.7)	2.6 (14.2)	2.7 (7.1)
Hydro (TWh)	6.6 (14.5)	7.0 (5.4)	3.9 (-1.4)	0.6 (-4.4)	0.6 (9.1)	0.6 (-29.4)	4.2 (9.2)	0.8 (30.5)	0.7 (29.8)	0.8 (26.4)
Nuclear (TWh)	162.0 (-1.7)	148.4 (-8.4)	90.3 (-9.7)	13.7 (-2.4)	12.5 (-3.7)	12.2 (-9.9)	73.0 (-19.2)	11.4 (-16.8)	11.3 (-9.5)	13.1 (6.8)
Others (Mtoe)	13.6 (5.7)	15.0 (10.2)	8.7 (10.2)	1.2 (12.0)	1.3 (12.7)	1.2 (8.3)	9.7 (12.1)	1.4 (10.9)	1.4 (8.3)	1.4 (16.9)
TPES (Mtoe)	293.4 (2.4)	300.6 (2.5)	173.2 (2.2)	23.4 (1.7)	22.9 (2.0)	24.9 (4.5)	178.6 (3.2)	24.2 (3.8)	23.6 (3.2)	25.6 (2.8)
- Non-energy oil excluded	235.5 (1.8)	239.2 (1.6)	138.1 (1.3)	18.3 (1.4)	18.1 (2.2)	19.7 (2.7)	143.4 (3.8)	19.0 (3.8)	18.8 (3.8)	20.5 (4.0)
- Non-energy oil&coal excluded	212.0 (3.2)	214.0 (0.9)	123.6 (0.5)	16.3 (0.1)	16.0 (1.0)	17.5 (2.1)	128.6 (4.1)	16.9 (3.9)	16.6 (4.0)	18.2 (4.1)

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

Share of TPES by Sources

(unit: %)

	2016	2017p					2018p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal	27.7	28.6	28.1	28.3	28.0	30.6	28.5	27.8	28.3	30.6
- Coking coal excluded	19.7	20.3	19.7	19.4	18.7	21.8	20.2	19.0	19.2	21.8
Oil	40.1	39.7	39.5	41.8	41.4	40.4	38.8	41.1	40.7	38.6
- non-energy oil excluded	20.3	19.3	19.2	20.3	20.4	19.5	19.1	19.6	20.1	18.7
LNG	15.5	15.7	15.8	11.7	12.9	13.2	18.1	14.8	14.3	13.8
Hydro	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.7	0.7	0.7
Nuclear	11.6	10.5	11.1	12.5	11.6	10.4	8.7	10.0	10.2	10.9
Others	4.6	5.0	5.0	5.3	5.5	4.8	5.4	5.6	5.8	5.5
TPES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: p means provisional
Source: Monthly Energy Statistics

Total Final Consumption (TFC)

(Unit: Mtoe)

	2016	2017p					2018p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	137.8 (1.9)	143.6 (4.2)	82.8 (5.3)	11.7 (3.8)	11.5 (2.0)	12.2 (7.6)	85.0 (2.7)	12.4 (6.0)	12.0 (4.1)	12.3 (0.5)
Transport	42.3 (6.1)	42.7 (1.1)	24.6 (2.4)	3.7 (2.9)	3.6 (7.5)	3.8 (9.3)	24.9 (1.2)	3.6 (-1.5)	3.7 (2.8)	3.7 (-1.3)
Residential-commercial	38.7 (4.6)	39.7 (2.6)	23.7 (0.9)	2.3 (0.0)	2.2 (3.4)	2.3 (6.3)	24.8 (4.9)	2.4 (5.4)	2.2 (1.0)	2.3 (-1.0)
Public	6.2 (8.7)	6.4 (1.8)	3.7 (1.7)	0.5 (5.2)	0.5 (-7.1)	0.5 (18.0)	3.9 (4.3)	0.5 (1.4)	0.5 (-7.1)	0.5 (6.1)
TFC	225.1 (3.3)	232.4 (3.3)	134.9 (3.8)	18.2 (3.2)	17.8 (2.9)	18.8 (8.0)	138.7 (2.8)	18.9 (4.3)	18.4 (3.1)	18.8 (0.1)
Coal (Mton)	49.0 (-6.8)	50.2 (2.5)	29.2 (6.4)	4.1 (5.4)	4.1 (9.7)	4.4 (2.4)	29.6 (1.4)	4.4 (7.2)	4.4 (7.5)	4.2 (-3.8)
Oil (Mbbbl)	899.3 (7.3)	926.3 (3.0)	530.1 (4.3)	75.9 (2.4)	73.9 (3.6)	78.3 (10.3)	537.6 (1.4)	78.1 (2.9)	75.1 (1.7)	76.9 (-1.8)
Electricity (TWh)	497.0 (2.8)	507.7 (2.2)	294.6 (1.9)	38.7 (1.3)	39.7 (0.0)	43.2 (6.5)	305.7 (3.8)	40.5 (4.6)	41.0 (3.5)	44.0 (1.9)
City gas (Bm ³)	21.3 (2.3)	22.6 (6.2)	13.9 (3.9)	1.3 (3.1)	1.2 (2.5)	1.1 (0.4)	14.8 (6.1)	1.4 (7.7)	1.2 (5.5)	1.2 (7.0)
Heat-others (1 000 toe)	13.1 (4.2)	14.0 (7.0)	8.2 (5.9)	1.0 (7.4)	1.1 (7.8)	1.0 (8.7)	9.1 (10.7)	1.1 (12.6)	1.1 (6.5)	1.1 (12.2)

Note: p means provisional, () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

Share of the Total Final Consumption by Sources

(unit: %)

	2016	2017p					2018p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	61.2	61.8	61.4	64.4	64.5	65.0	61.3	65.5	65.1	65.3
Transport	18.8	18.4	18.3	20.3	20.2	20.2	18.0	19.1	20.2	19.9
Residential-commercial	17.2	17.1	17.5	12.8	12.3	12.3	17.9	12.9	12.1	12.2
Public	2.8	2.7	2.8	2.5	3.0	2.5	2.8	2.4	2.7	2.6
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	14.3	14.3	14.3	15.0	15.2	15.5	14.1	15.3	15.6	15.1
Oil	50.8	50.7	50.0	53.2	52.8	53.0	49.2	52.2	52.0	51.9
Electricity	19.0	18.8	18.8	18.3	19.2	19.8	19.0	18.4	19.2	20.1
City gas	10.1	10.2	10.8	7.8	6.9	6.3	11.2	8.0	7.0	6.7
Heat-others	5.8	6.0	6.1	5.6	5.9	5.4	6.6	6.1	6.1	6.1

Note: p means provisional
Source: Monthly Energy Statistics

Statistics on Energy Production Facilities

	2015	2016	2017				2018p		
				M5	M6	M7	M5	M6	M7
Total capacity (GW)	97.6 (4.8)	105.9 (8.4)	116.9 (19.7)	111.3 (16.3)	113.7 (18.8)	113.4 (17.1)	117.8 (19.0)	117.2 (18.5)	117.5 (17.3)
Nuclear	21.7 (4.8)	23.1 (6.4)	22.5 (3.7)	23.1 (11.6)	22.5 (8.8)	22.5 (3.7)	22.5 (3.7)	21.9 (0.6)	21.9 (0.6)
Bituminous coal	26.2 (1.1)	30.9 (18.0)	36.1 (37.8)	31.7 (22.4)	34.7 (34.0)	34.7 (34.0)	36.3 (37.5)	36.3 (37.5)	36.4 (33.2)
Gas	32.2 (6.5)	32.6 (1.2)	37.9 (17.4)	36.6 (15.0)	36.6 (15.0)	36.7 (15.1)	37.9 (16.1)	37.9 (16.1)	37.9 (16.1)
Refinery capacity (mil BPSD)	3.1 (3.7)	3.1 -	3.1 -	3.1 -	3.1 -	3.1 -	3.1 (0.2)	3.1 (0.2)	3.1 (0.2)

Note: () is year-on-year growth rates (%)
Source: The monthly report on major electric power statistics

Statistics on Energy Consumption

	2015	2016	2017				2018p		
				M5	M6	M7	M5	M6	M7
The number of household demanding city gas (mil)	17.4 (3.0)	18.0 (3.4)	18.6 (3.3)	18.1 (3.2)	18.2 (3.3)	18.2 (3.2)	18.8 (3.4)	18.8 (3.3)	18.8 (3.3)
Registered cars (mil)	21.0 (4.3)	21.8 (3.9)	22.5 (3.3)	22.1 (3.5)	22.2 (3.4)	22.3 (3.4)	22.8 (3.2)	22.9 (3.1)	22.9 (3.1)
- gasoline	9.8 (2.3)	10.1 (2.9)	10.4 (2.7)	10.2 (3.0)	10.3 (2.9)	10.3 (2.8)	10.5 (2.6)	10.5 (2.5)	10.5 (2.5)
- diesel	8.6 (8.6)	9.2 (6.4)	9.6 (4.4)	9.3 (5.1)	9.4 (4.8)	9.4 (4.8)	9.7 (4.1)	9.8 (4.1)	9.8 (4.1)
- LPG	2.3 (-3.4)	2.2 (-4.0)	2.1 (-2.9)	2.1 (-3.5)	2.1 (-3.4)	2.1 (-3.3)	2.1 (-3.2)	2.1 (-3.3)	2.1 (-3.3)
- hybrid	0.2 (31.3)	0.2 (37.6)	0.3 (37.6)	0.2 (35.2)	0.3 (34.3)	0.3 (34.6)	0.3 (36.6)	0.3 (34.6)	0.3 (33.2)

Note: () is year-on-year growth rates (%)
Source: Monthly Energy Statistics

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KEEI Monthly Korea Energy Trends is designed to be used for energy policy and market strategy in the government and industrial sector by analyzing and providing energy economic indicators in Korea.

This report is written by the Energy Demand and Supply Division of the Center for Energy Information and Statistics in cooperation with the Energy Statistics Research Division of KEEI and other related research divisions.

The energy economic indicators included in this report will be constantly updated until further confirmation.

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