

MONTHLY KOREA ENERGY TRENDS

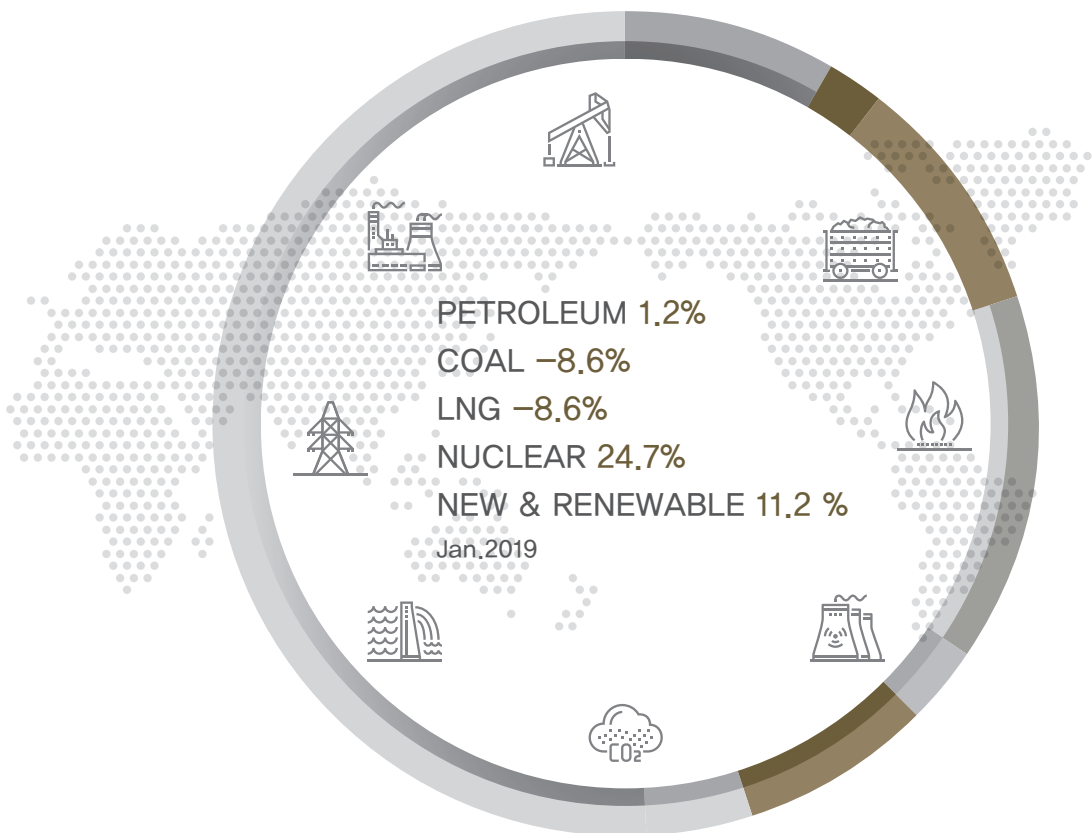


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1. The Economy and the Industry

- **The production index of mining and manufacturing industries remained the same as the previous month in January despite increased production index of semiconductors and automobiles, as the index declined in the basic chemical materials and iron & steel sectors.**
 - The production index of semiconductors posted a year-on-year growth of 8.4%. Its inventory, however, increased amid plunging export values (-23.3%) and falling export & shipment volume, which was partly due to the delayed purchase and inventory adjustment of global IT companies.
 - The production index of automobiles and the operating ratio index went up by 8.1% and 13.6% respectively, as growing popularity of the recently launched SUV and eco-friendly vehicles led to increased domestic sales and export, especially to the U.S. and EU.
 - The production index of refined petroleum products and basic chemical materials dropped (by 1.2% and 3.3%) on a year-on-year basis, as their export value declined amid plunging oil prices.
 - The production index of iron & steel products went down by 2.6% year-on-year, as its export volume decreased amid global trade restrictions.
- **The service production index rose by 2.3% year-on-year (in January), led by the wholesale & retail and health & social welfare service sectors.**

► Trend in major economic and industrial indicators

	2016	2017	2018p				2019p
			M1		M11	M12	M1
GDP (trillion won)	1 509.8 (2.9)	1 556.0 (3.1)	- -	1 597.5 (2.7)	- -	420.2 (3.1)	- -
Total export (\$billion, customs clearance basis)	495.4 (-5.9)	573.7 (15.8)	49.2 (22.3)	604.9 (5.4)	51.5 (3.6)	48.2 (-1.7)	46.2 (-6.2)
Industrial production index (2015=100)	102.3 (2.3)	104.6 (2.2)	103.6 (4.9)	105.8 (1.2)	109.4 -	106.7 (1.1)	103.6 -
Semi-conductors	125.3 (25.3)	138.9 (10.8)	137.3 (-2.7)	167.0 (20.3)	172.1 (18.4)	170.3 (10.9)	148.8 (8.4)
Basic compound	104.6 (4.6)	110.4 (5.5)	116.5 (2.6)	110.4 -	101.7 (-6.4)	110.4 (-5.6)	112.7 (-3.3)
Steel	101.3 (1.3)	102.9 (1.7)	105.6 (2.9)	99.8 (-3.1)	100.3 (-1.2)	97.5 (-5.8)	102.9 (-2.6)
Cars	97.6 (-2.4)	95.0 (-2.7)	88.9 (2.0)	93.7 (-1.4)	106.7 (3.0)	98.9 (20.3)	96.1 (8.1)
Mining and manufacturing production index (2015=100)	98.9 (-1.1)	98.1 (-0.9)	97.0 (3.6)	98.4 (0.3)	101.3 (-0.3)	98.3 (1.6)	97.0 -
Service production index (2015=100)	102.6 (2.6)	104.5 (1.8)	103.0 (3.5)	106.7 (2.1)	107.5 (1.2)	115.4 (1.4)	105.4 (2.3)
Wholesale & Retail	102.6 (2.6)	103.3 (0.8)	101.6 (1.1)	104.8 (1.4)	108.9 (0.6)	109.4 -	104.9 (3.2)

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

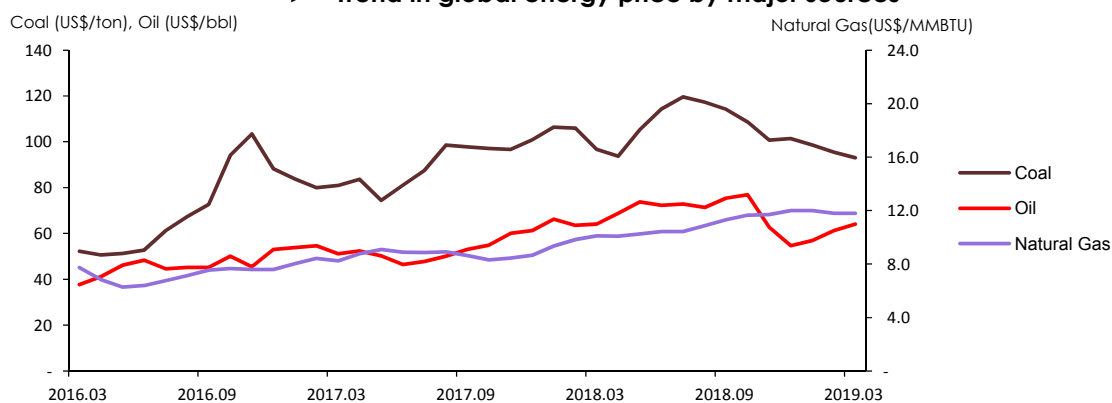
- **Global oil price increased by 4.4% in March from the previous month, following the oil output reduction in OPEC countries and the power outages in Venezuela.**
 - In February, OPEC's crude oil production and the export volume decreased, driving up global oil prices. In March, its crude output fell to 30.4 million b/d, the lowest level since Feb, 2015, and the export volume dropped by 0.77 million b/d to 23.0 million b/d than a month earlier.
 - Venezuela's crude oil output declined sharply because major oil production facilities were shut down after two massive power outages (3.7, 3.25), and the U.S. imposed economic sanctions on Venezuela.
 - The Trump administration is likely to adjust the number of countries with an exemption from Iranian oil sanctions and the import quotas, after the scheduled exemption period ends on May 2nd, which was a contributing factor for the oil price increase.
- **Global coal price decreased by 3.7% (in March) from the previous month, as the demand was hit by China's import ban as well as global economic woes.**

► Trend in global energy prices

	2017	2018				2019			
			M1	M2	M3	M1	M2	M3	
Crude oil (US\$/bbl)	53.0 (22.4)	68.6 (29.5)	66.3 (23.0)	63.5 (16.3)	64.1 (25.3)	57.0 (-14.1)	61.3 (-3.5)	64.0 (-0.0)	
Natural gas (US\$/MMBTU)	8.6 (16.8)	10.7 (24.0)	9.3 (16.2)	9.8 (16.8)	10.1 (22.6)	12.0 (28.5)	11.8 (20.2)	11.8 (16.8)	
Coal (US\$/ton)	88.6 (33.8)	107.0 (20.9)	106.5 (27.1)	106.0 (32.5)	96.7 (19.5)	98.6 (-7.4)	95.4 (-9.9)	93.1 (-3.7)	

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 1.9% and 2.1% respectively in March from the previous month amid the global oil price increase.**

- Gasoline and diesel prices rebounded in March, after it continued a downward slide for five months as a result of the government's fuel tax cut from November, 2018 and a sharp drop in global oil price in December, 2018.

□ **Propane and butane prices were flat in March, compared to the previous month, despite the upward trend of the global prices.**

- Domestic prices of propane and butane remained at the same level as the previous month, even though the global prices were up 2.3% and 11.9% respectively in February, because E1 and SK Gas—domestic LPG importers—fixed the prices.¹

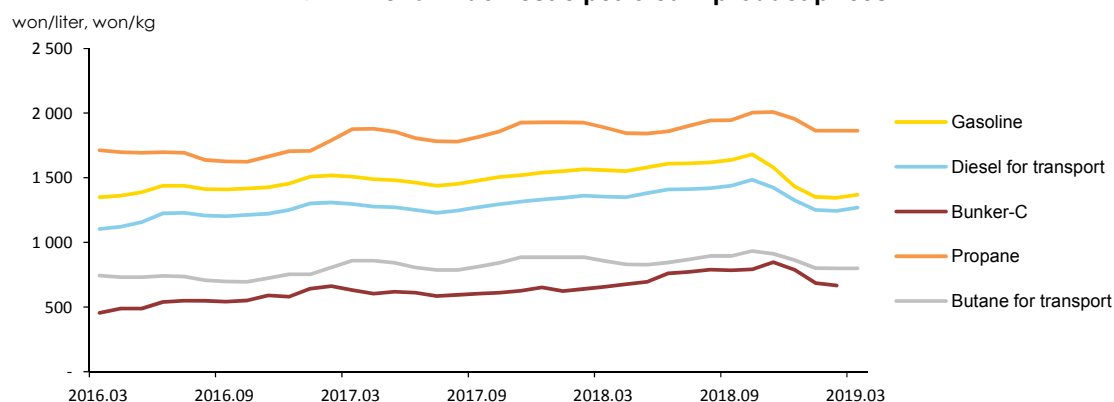
► Trend in domestic energy prices

	2017	2018				2019			
			M1	M2	M3		M1	M2	M3
Gasoline (won/liter)	1 491.3 (6.3)	1 581.3 (6.0)	1 551.8 (2.9)	1 564.6 (3.2)	1 557.9 (3.4)	1 351.2 (-12.9)	1 343.8 (-14.1)	1 369.5 (-12.1)	
Diesel for transport (won/liter)	1 282.5 (8.4)	1 391.9 (8.5)	1 344.9 (3.4)	1 360.4 (4.0)	1 354.6 (4.4)	1 249.4 (-7.1)	1 242.9 (-8.6)	1 269.2 (-6.3)	
Bunker-C (won/liter)	619.3 (18.9)	735.0 (18.7)	621.7 (-3.3)	638.7 (-3.3)	656.5 (4.2)	685.9 (10.3)	665.8 (4.3)	-	
Propane (won/kg)	1 833.8 (8.5)	1 920.5 (4.7)	1 929.2 (13.0)	1 926.3 (7.7)	1 886.8 (0.6)	1 864.4 (-3.4)	1 863.3 (-3.3)	1 863.6 (-1.2)	
Butane for transport (won/liter)	826.5 (12.6)	874.6 (5.8)	885.3 (17.7)	886.0 (10.0)	857.2 (-0.2)	801.3 (-9.5)	798.7 (-9.9)	797.5 (-7.0)	

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



¹ Domestic LPG importers determine domestic LPG price based on the global price of the previous month and also after consideration of other factors including the exchange rates and relative prices of competing fuels.

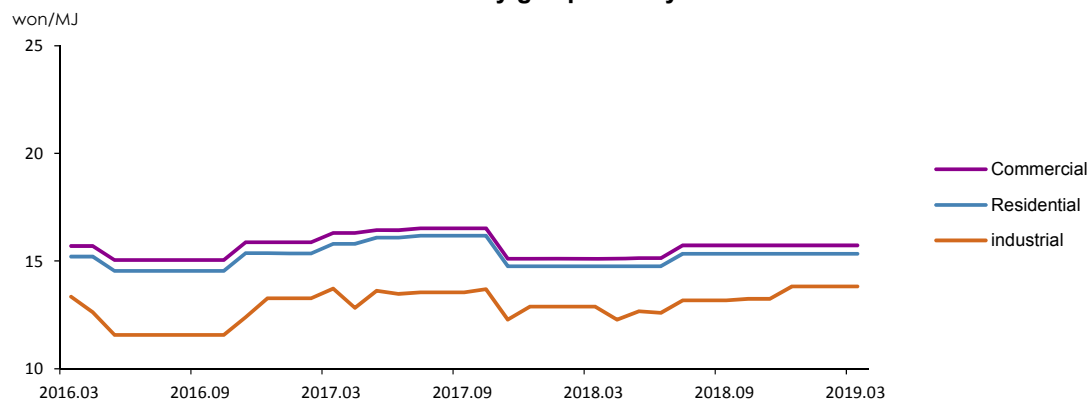
□ **City gas price remained stagnant in March compared to the previous month, as a result of the 4th price freeze since July, 2018.**

- City gas prices for residential and industrial use have been flat for nine and four consecutive months respectively, as the prices were fixed again in March, while global LNG price that reflects global oil price in a few months' interval remained stagnant recently.

□ **Heat energy price remained the same as the previous month, because of the fixed city gas price.**

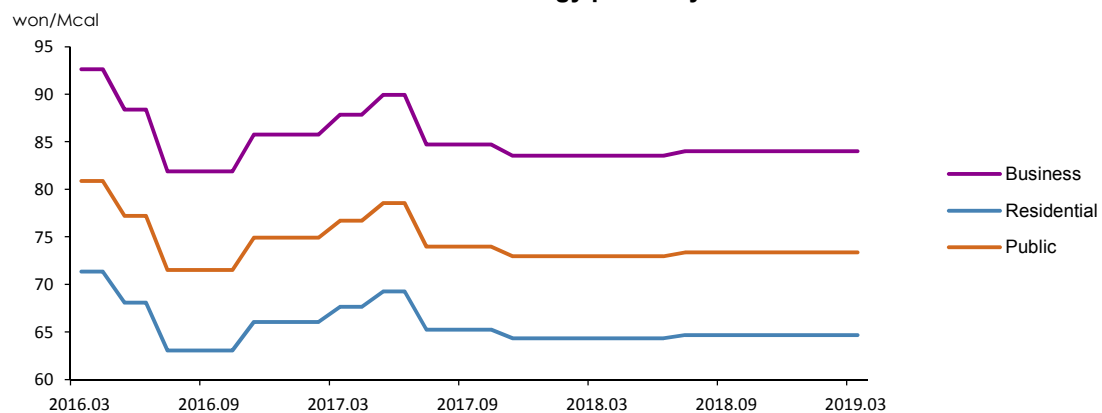
- Korea District Heating Corporation's heat energy price is linked to city gas price according to the fuel cost pass-through scheme, and the actual fuel cost is reflected in the heat energy price once a year (LNG for over 100MW, city gas for under 100MW).

► 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 price 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 prices are based on flat price for heating (additional tax, base charge excluded)

Source: Korea District Heating Corporation.

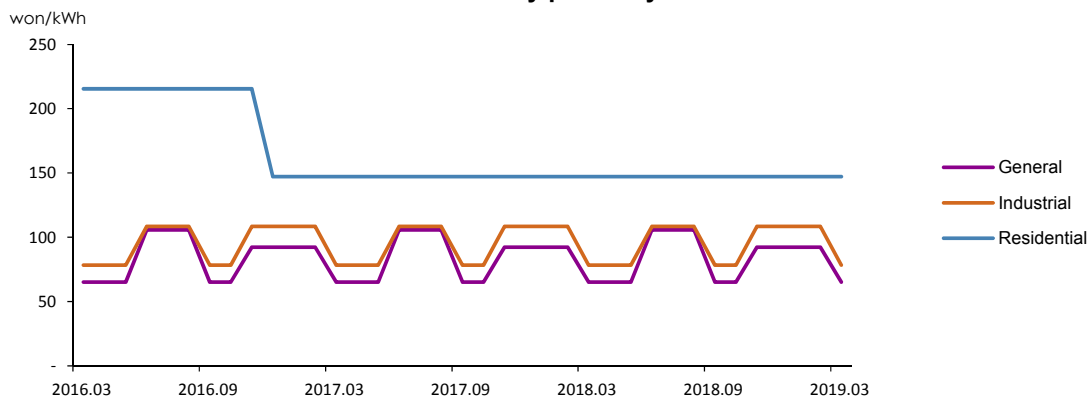
□ Electricity prices ² declined in March from a month earlier, as the prices for industrial and general use were adjusted for the spring/autumn season.

- Electricity prices for industrial and general use fell by 27.6% and 29.4% respectively due to the seasonal price change from winter (Nov-Feb) to spring/autumn (Mar-May/Sept-Oct).
- Electricity price for residential use has been at the same level, since the reform of the progressive pricing scheme, which was implemented after 2016's extreme heatwaves.

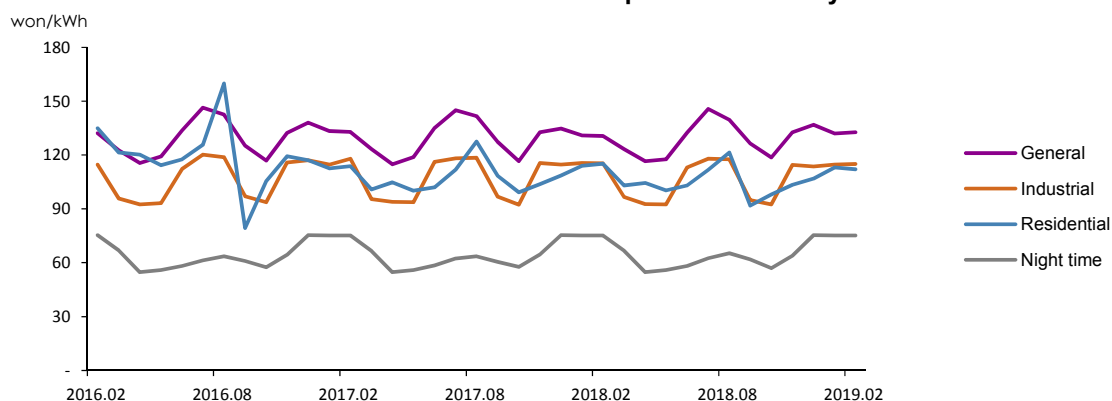
□ The unit sales price of electricity for industrial and general use were up 0.3% and 0.6% respectively in February from the previous month, while that for residential use was down 1.0%.

- The unit sales price of residential electricity, which is progressively priced, posted a slight decline, as warmer weather than the previous month led to decreased power use for heating.

► Trend in electricity prices by end-use sectors



► Trend in unit sales price of electricity



² 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 went up by 3.4% year-on-year in January, led by petroleum products and bituminous coal, although the import volume of crude oil and LNG declined.**
 - The import volume of crude oil fell by 6.7% due to the decreased input to refineries, while there has been an inventory build-up of over 20% for three consecutive months.
 - As for the petroleum products, the import volume of naphtha was up 8.6% owing to the rapidly growing input to basic petrochemical facilities, and that of LPG surged by 30.6%, especially propane, while the import volume of bunker-C has plunged for two months in a row.
 - The import volume of LNG dropped by 7.5% despite much increased import from Australia and the U.S., because the amount of LNG imported from Qatar fell dramatically (28.4%).
 - The foreign energy dependence including nuclear energy stood at 93.8%, and energy share of the total import value fell by 0.8%p year-on-year to 24.7%.

► Trend in energy trade and domestic production

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Import volume							
Crude oil (Mbbl)	1 078.1 (5.1)	1 118.2 (3.7)	99.8 (6.6)	1 116.3 (-0.2)	95.3 (0.7)	93.0 (-6.9)	93.1 (-6.7)
Petroleum product (Mbbl)	334.6 (8.7)	314.5 (-6.0)	27.5 (4.1)	341.2 (8.5)	28.5 (17.7)	32.1 (22.6)	30.2 (9.5)
Bituminous coal (Mton)	118.5 (-0.8)	131.5 (11.0)	11.6 (-3.4)	131.5 (0.0)	11.7 (16.7)	10.4 (-5.7)	12.9 (11.3)
Anthracite (Mton)	9.4 (5.4)	7.0 (-25.7)	0.6 (-19.8)	8.1 (16.0)	0.9 (44.9)	0.8 (27.6)	0.5 (-15.6)
LNG (Mton)	33.5 (0.3)	37.5 (12.2)	4.1 (-3.8)	44.0 (17.3)	3.9 (17.5)	4.7 (13.1)	3.8 (-7.5)
Import volume (Mtoe)	321.9 (2.7)	339.7 (5.5)	31.0 (-0.5)	354.1 (4.2)	30.6 (9.6)	31.6 (2.7)	32.1 (3.4)
Import value (billion US\$, CIF)	80.9 (-21.2)	109.5 (35.2)	11.7 (23.4)	146.0 (33.3)	13.7 (42.5)	12.4 (12.2)	11.1 (-4.9)
Energy share of total import value (%)	19.9	22.9	25.6	27.3	29.2	28.2	24.7
Foreign energy dependence (%)*	94.6	93.9	94.5	93.5	93.7	94.2	93.8
Domestic production							
Hydropower (TWh)	6.6 (14.5)	7.0 (5.5)	0.5 (-8.9)	7.3 (4.0)	0.5 (17.2)	0.6 (27.9)	0.6 (14.6)
Anthracite (Mton)	1.7 (-2.2)	1.5 (-14.0)	0.1 (-1.6)	1.2 (-19.2)	0.1 (-22.0)	0.1 (-36.1)	0.1 (-20.0)
Natural gas (Mton)	0.1 (-18.0)	0.3 (120.5)	0.0 (-6.3)	0.2 (-10.4)	0.0 (-22.0)	0.0 (-17.5)	0.0 (-75.7)
Renewable energy (Mtoe)	13.6 (5.7)	15.8 (16.7)	1.4 (7.5)	17.5 (10.5)	1.4 (6.4)	1.5 (3.5)	1.6 (11.2)

Note: p means provisional, () is year-on-year growth rates (%), *Foreign energy dependence (%) including Nuclear energy
Source: Monthly Energy Statistics

4. Energy Consumption

- **Total Primary Energy Supply (“TPES”) fell by 1.7% year-on-year in January due to the decreased use of coal and gas, although the use of nuclear energy and petroleum increased.**
 - Petroleum consumption posted a year-on-year growth of 1.2% despite decreased use of naphtha, as the industrial LPG consumption surged, and also, the petroleum consumption grew in the transport and commercial sectors, helped by fuel tax cut ³and oil price drop.
 - Coal consumption fell sharply by 8.6% year-on-year, as bituminous coal consumption declined in the steelmaking sector partly due to weak performance of the iron & steel business, and as the consumption decreased in the power generation sector as well amid increasing preventive maintenance and limited operation of power plants as a means of reducing fine dust.
 - Gas consumption plunged by 8.6%; the consumption declined in the power generation sector due to growing use of hydro & renewable energy along with stagnant growth of power demand; it declined in the city gas production sector as well due to warm weather and higher price.
- **Total Final Consumption (“TFC”) dropped by 0.3% year-on-year, led by the industrial and buildings sectors, even though the transport sector used more energy.**
 - Industrial energy use decreased by 1.5% year-on-year, especially in the petrochemical and primary metals sectors.
 - Transport energy use went up by 7.1% year-on-year, led by the road transport sector, partly due to the temporary fuel tax cut.
 - Energy use in buildings fell by 2.2% amid decreased number of heating degree days (-11.8%, -73.3degree days) and increased city gas and heat energy prices.

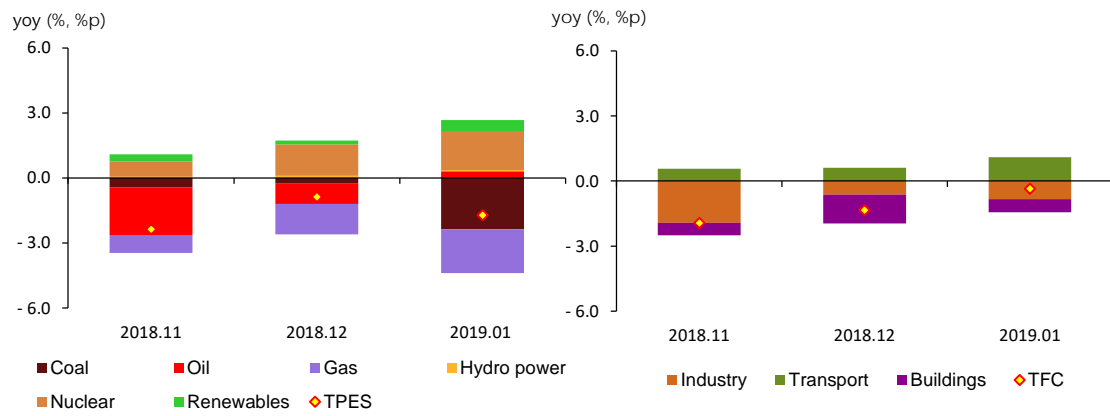
► Energy consumption trend

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Total energy (Mtoe)	293.4	302.1	29.5	307.3	25.5	28.8	29.0
	(2.4)	(2.9)	(6.3)	(1.7)	(-2.4)	(-0.9)	(-1.7)
- Non-energy oil&coal excluded	212.0	215.4	22.1	221.4	18.7	21.4	21.8
	(3.2)	(1.6)	(8.0)	(2.8)	(-0.5)	(0.2)	(-1.4)
Final energy (Mtoe)	225.1	233.9	22.8	237.9	19.8	22.1	22.7
	(3.3)	(3.9)	(6.5)	(1.7)	(-1.9)	(-1.3)	(-0.3)

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

³ The government announced a temporary fuel tax cut of 15% on gasoline, diesel, LPG and butane for six months period (2018.11.6).

► The growth rates of total and final energy consumption & energy consumption trend by energy source and end-use sectors



5. Coal

□ Coal consumption fell by 8.6% year-on-year in January, as the industrial and power generation sectors burned less coal.

- Coal consumption decreased in the power generation sector owing to a base effect, increased daily average of preventive maintenance (0.3GW, 180.2%) and the upper limit on power output⁴(2019.1.13~15) as a means of fine dust mitigation.
- Industrial coal consumption dropped by nearly 10%, because bituminous coal use fell more sharply in the steelmaking sector.
- Coal consumption in buildings declined, owing to the continuously growing use of other energy sources (petroleum, gas) and increased number of heating degree days.

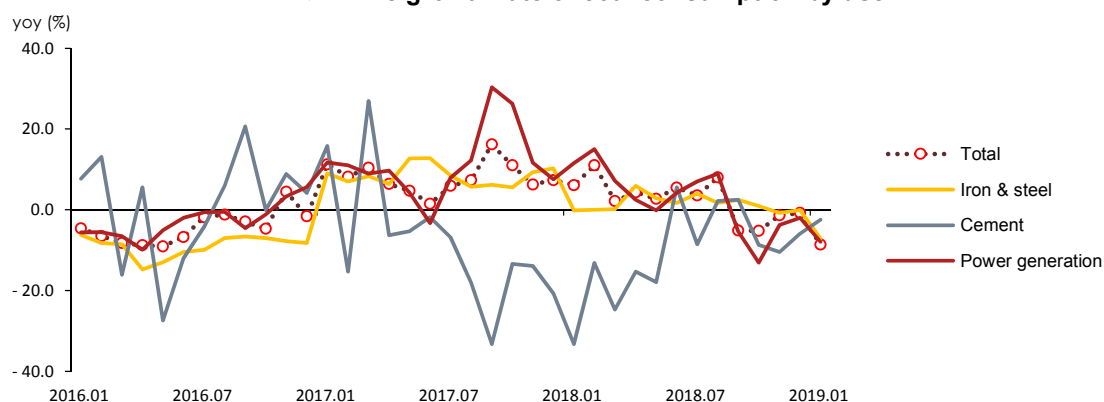
► Coal consumption trend

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Coal (Mton)	129.3	139.8	13.5	143.2	11.6	12.7	12.3
	(-4.3)	(8.1)	(6.1)	(2.5)	(-1.4)	(-0.8)	(-8.6)
Industry	47.8	49.3	4.2	50.5	4.4	4.4	3.8
	(-6.6)	(3.2)	(-3.6)	(2.6)	(4.4)	(2.2)	(-9.6)
Buildings	1.3	1.1	0.1	0.9	0.2	0.1	0.1
	(-14.8)	(-14.0)	(-6.3)	(-15.7)	(-30.0)	(-16.8)	(-21.0)
Power generation	80.3	89.4	9.1	91.8	7.0	8.2	8.4
	(-2.7)	(11.3)	(11.5)	(2.6)	(-3.8)	(-2.0)	(-7.9)

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

Source: Monthly Energy Statistics

► The growth rate of coal consumption by use



⁴ If an ultrafine particle watch is issued and its concentration is expected to surpass $50 \mu\text{g}/\text{m}^3$ the next day, coal-fired power plants are to be operated at 80% of the rated capacity from the following day.

6. Petroleum

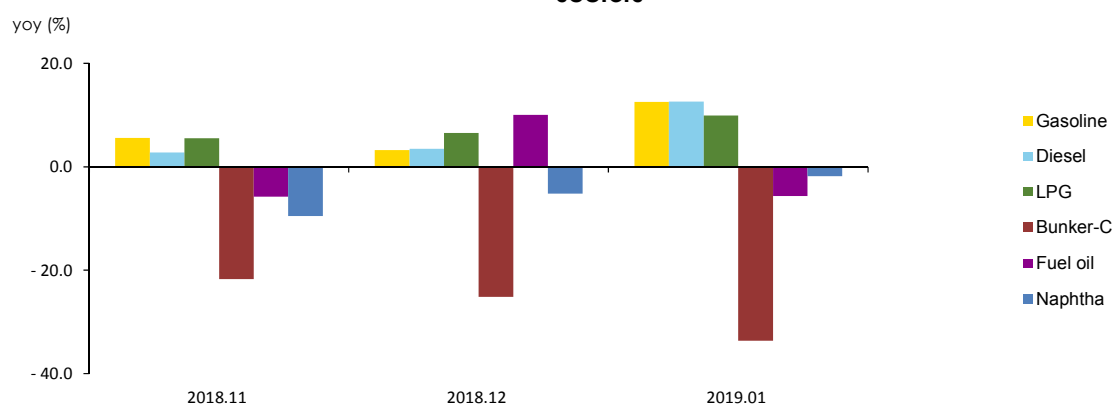
- **Petroleum consumption posted a year-on-year growth of 1.2% in January despite stagnant consumption growth in the industrial and buildings sectors, as it surged in the transport sector.**
 - Industrial petroleum use grew by mere 1.2% on a year-on-year basis, even though the use of energy oil (including LPG used as raw material) was up 10.7%, because the use of non-energy oil including naphtha fell by 1.3%.
 - Transport petroleum use rapidly increased, especially in the road transport sector, as petroleum product prices recorded a sharp year-on-year drop due to global oil price fall and fuel tax cut.
 - Petroleum use in buildings slightly decreased compared to the same period last year because of warmer weather than usual.

► Trend in petroleum product consumption by end-use sectors

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Petroleum (Mbbl)	921.1	937.1	83.8	83.2	76.0	83.2	84.8
	(8.0)	(1.7)	(4.9)	(-2.2)	(-5.2)	(-2.2)	(1.2)
Industry	542.6	567.0	49.5	49.1	44.3	49.1	49.7
	(8.3)	(4.5)	(2.4)	(-2.6)	(-8.3)	(-2.6)	(0.4)
Transport	300.5	303.2	24.8	26.6	26.2	26.6	26.7
	(5.8)	(0.9)	(6.5)	(3.4)	(3.0)	(3.4)	(7.6)
Buildings	56.3	56.4	7.5	6.7	5.0	6.7	7.5
	(5.2)	(0.3)	(16.8)	(-7.0)	(-13.7)	(-7.0)	(-0.4)
Power generation	21.8	10.5	2.0	0.8	0.5	0.8	1.0
	(48.7)	(-51.9)	(8.2)	(-53.4)	(-26.6)	(-53.4)	(-51.4)

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

► The growth rates of petroleum product consumption & the consumption by end-use sectors



7. Gas

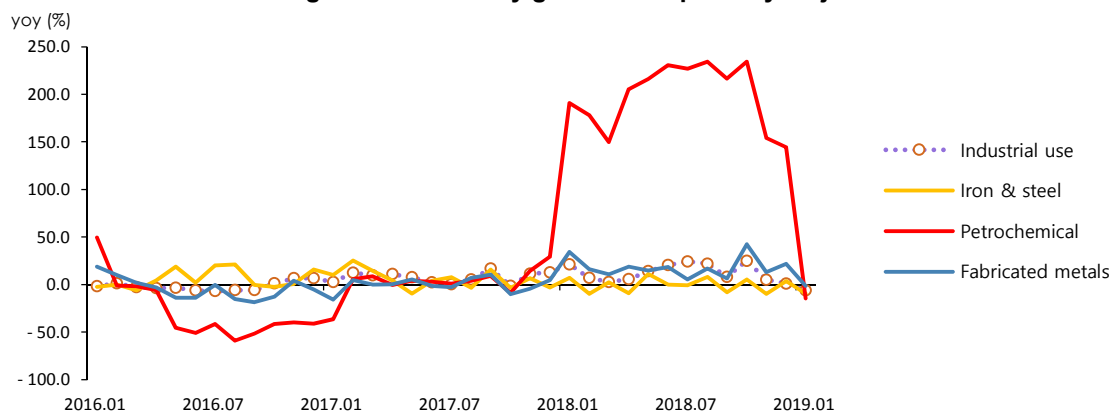
- **Natural gas consumption decreased by 8.6% year-on-year in January, as the consumption declined in the power generation and city gas production sectors due to a base effect.**
 - Gas use for electricity generation decreased due to the base effect of a surge during the same month last year and much-increased nuclear generation (24.7%). Gas use for city gas production has been down for three consecutive months owing to the falling demand in the end-use sectors.
- **City gas consumption dropped by 4.6% year-on-year (in January) due to the consumption decline in both of the industrial and buildings sectors.**
 - Industrial city gas consumption fell by 6.2%, as the consumption decreased in the petrochemical and primary metals sectors (-14.6%, -9.5%).
 - City gas consumption in buildings declined as well, especially in the commercial and residential buildings (-7.9%, -3.2%), because of decreased heating demand amid higher average temperature (2.4°C, nationwide) and increased city gas price.

► Trend in natural gas and city gas consumption

	2016	2017	2018p				2019p
			M1		M11	M12	M1
LNG (Mton)	34.9	36.4	5.3	40.9	3.5	4.7	4.9
	(4.4)	(4.3)	(24.0)	(12.4)	(-4.5)	(-6.2)	(-8.6)
Power generation	15.5	15.6	1.9	18.0	1.4	1.7	1.7
	(6.4)	(0.6)	(30.3)	(15.6)	(-7.9)	(-10.3)	(-8.2)
City gas production	17.4	18.4	3.0	19.8	1.8	2.7	2.8
	(2.7)	(5.8)	(17.6)	(7.7)	(-4.2)	(-3.0)	(-7.7)
City gas (bm³)	21.3	22.6	3.5	24.2	2.1	3.0	3.4
	(2.3)	(6.3)	(16.6)	(7.2)	(1.3)	(-4.9)	(-4.6)
Industry	7.2	7.8	0.9	8.7	0.8	0.8	0.9
	(-1.4)	(7.7)	(21.2)	(12.1)	(5.0)	(1.2)	(-6.2)
Buildings	12.8	13.6	2.5	14.3	1.2	2.0	2.4
	(5.0)	(6.0)	(15.7)	(5.2)	(-0.6)	(-7.3)	(-4.2)

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 consumption rose by 0.6% year-on-year in January, led by the industrial sector, although the consumption fell in the buildings sector.

- Industrial power use increased on a year-on-year basis on the back of growing demand from the fabricated metals and petrochemical sectors, although the primary metals industry used less electricity.
- Commercial use of electricity decreased from the same month last year amid decreased number of heating degree days (-73.3degree days, -11.8%), driving down the total power use in buildings, although the residential sector used more power, partly due to the increased supply of heating devices during last year's cold winter.

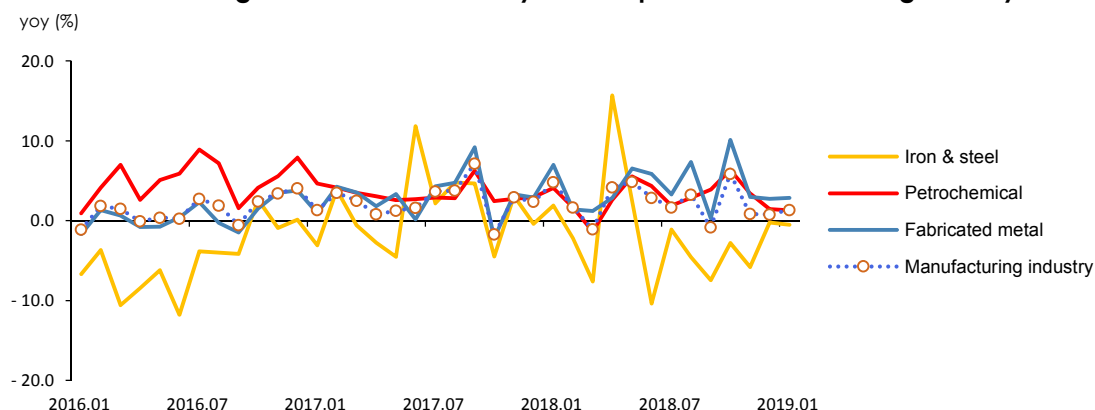
► Trend in electricity consumption by end-use sectors

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Electricity (TWh)	497.0	507.7	48.4	526.1	41.9	45.3	48.6
	(2.8)	(2.2)	(7.0)	(3.6)	(1.5)	(-1.0)	(0.6)
Industry	270.0	276.7	24.7	283.7	23.6	24.4	25.1
	(1.6)	(2.5)	(5.1)	(2.5)	(1.1)	(0.7)	(1.5)
Transport	2.7	2.9	0.3	3.0	0.2	0.3	0.3
	(21.3)	(6.5)	(11.1)	(3.6)	(-1.6)	(-2.1)	(-1.0)
Buildings	224.4	228.2	23.4	239.5	18.1	20.7	23.3
	(4.0)	(1.7)	(9.0)	(4.9)	(2.0)	(-2.9)	(-0.4)
Residential	66.2	66.5	6.1	70.7	5.4	5.7	6.2
	(3.7)	(0.5)	(5.5)	(6.3)	(2.7)	(1.0)	(1.8)
Commercial	127.4	130.4	14.0	136.4	10.1	11.9	13.9
	(4.0)	(2.3)	(10.5)	(4.6)	(2.0)	(-4.5)	(-1.2)

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

Source: Monthly energy statistics

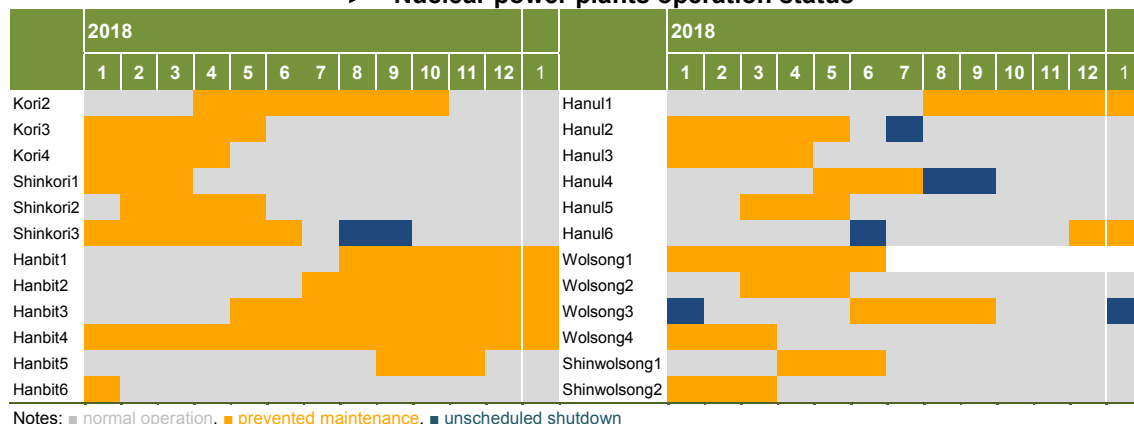
► The growth rate of electricity consumption in manufacturing industry



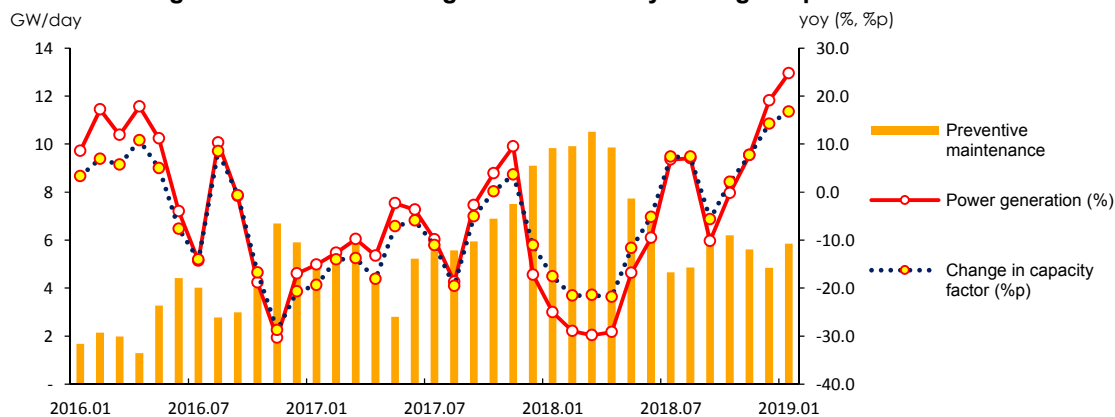
9. Nuclear

- The total nuclear generation recorded a year-on-year growth of 24.7% in January along with increased capacity factors at nuclear power plants.
- The average capacity factors went up by 16.8%p to 75.4% on a year-on-year basis owing to the base effect and decreased number of nuclear reactors that were shut for maintenance.
- Accordingly, nuclear energy share of the total generation was up 4.8%p year-on-year to 23.2%.

► Nuclear power plants operation status



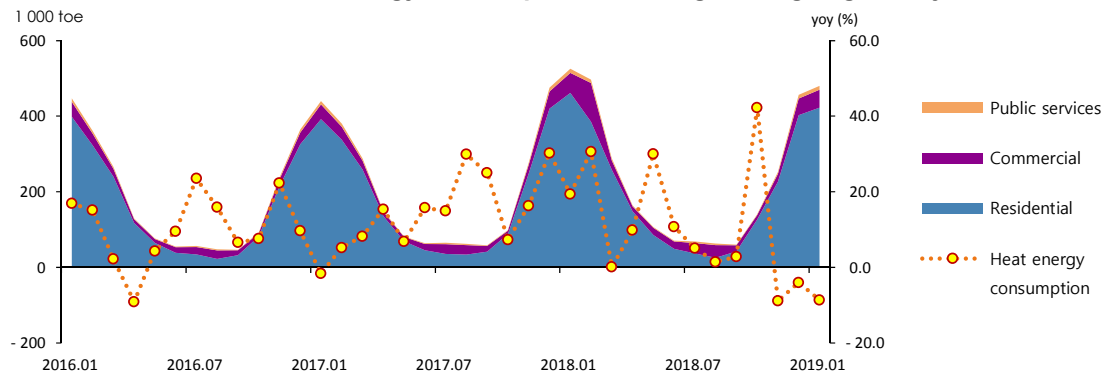
► The growth rate of nuclear generation & daily average of preventive maintenance



10. Heat and Renewable energy

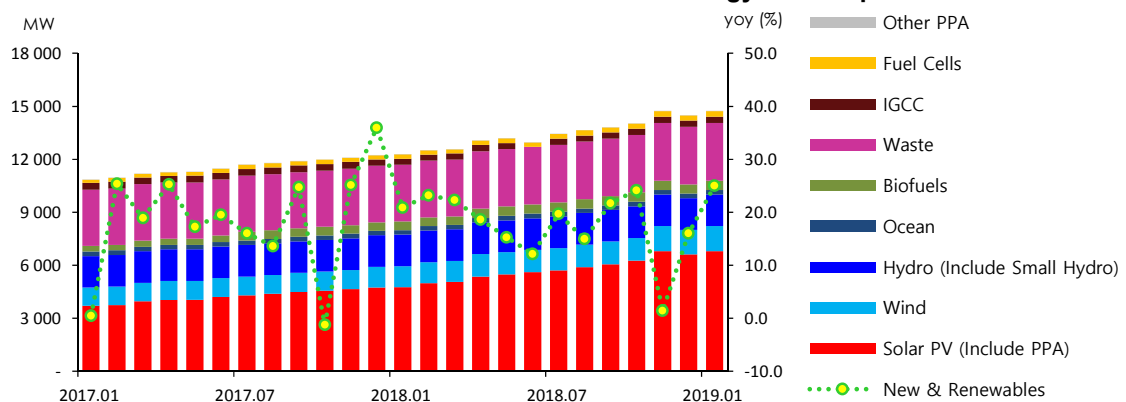
- **Heat energy consumption fell by 8.6% year-on-year in January because of the warmer winter than the previous year.**
 - Heat energy consumption has decreased for three months in a row, as the number of heating degree days fell sharply (-73.3degree days, -11.8%) during the relatively mild winter than last year.
- **Renewable & other energy consumption went up by 11.5% year-on-year (in January) despite the shutdown of IGCC plants, backed by increased final use of renewable & other energy sources.**
 - Renewable generation was up 9.0% thanks to the growing use of solar PV, wind energy and fuel cells, although some IGCC plants were temporarily shut down.
 - The final use of renewable & other energy sources grew decently, as the consumption increased in the buildings and industrial sectors, and as the use of biodiesel increased following the fuel tax cut and accordingly increased demand for diesel.

► 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 was down 1.5% year-on-year in January, as the consumption decreased in the petrochemical and primary metals sectors.**

- Energy use declined in the petrochemical sector, especially naphtha, and continued its downward slide in the primary metals sector due to weak performance of iron & steel business. Meanwhile, energy use increased in the fabricated metals sector backed by vigorous production of semiconductors and automobiles.

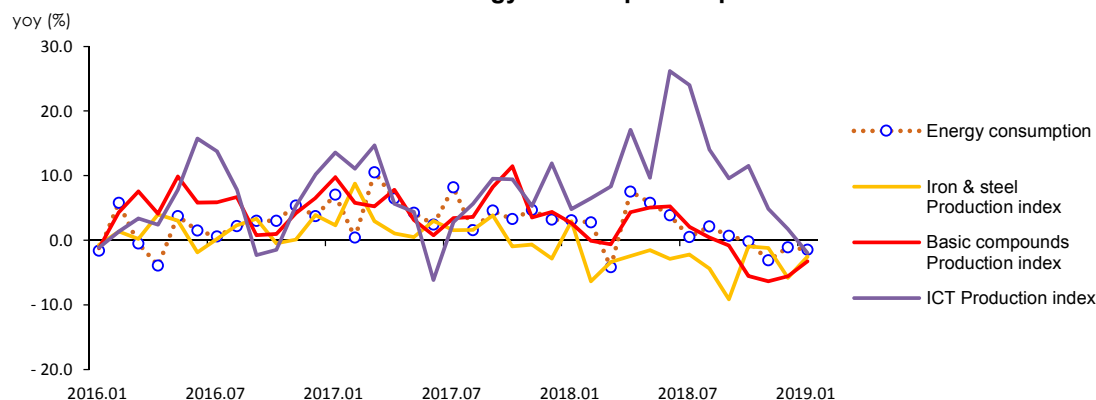
► Trend in the industrial energy consumption

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Industry (Mtoe)	137.8	144.3	12.8	146.3	12.0	12.8	12.6
	(1.9)	(4.7)	(3.1)	(1.4)	(-3.1)	(-1.1)	(-1.5)
Petrochemical	65.9	70.4	6.3	71.4	5.6	6.2	6.3
	(6.7)	(6.7)	(4.3)	(1.4)	(-4.9)	(-1.3)	(-0.9)
- Naphtha	52.7	56.2	4.9	55.3	4.3	4.8	4.9
	(4.7)	(6.6)	(2.6)	(-1.6)	(-9.5)	(-5.2)	(-1.8)
Iron & Steel	28.1	35.0	2.6	30.4	2.5	2.6	2.4
	(-8.0)	(24.4)	(-13.4)	(-13.1)	(-15.8)	(-14.2)	(-6.5)
-Coking coal	23.4	25.3	2.2	25.7	2.1	2.2	2.0
	(-9.0)	(8.0)	(-0.1)	(1.6)	(-0.7)	(-0.0)	(-7.1)
Fabricated metal	10.6	10.8	1.1	11.5	1.0	1.1	1.1
	(0.4)	(1.9)	(12.9)	(6.2)	(4.4)	(7.2)	(2.1)
Share of feedstock (%)	58.8	59.9	58.1	58.6	57.1	58.0	57.4

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

Source: Monthly Energy Statistics

► Industrial energy consumption & production index



12. Transport

- **Transport energy use grew by 7.1% year-on-year in January, as the road transport sector, which makes the largest contribution to the total energy use, consumed more energy due to a price effect.**
 - Energy use for road transport grew rapidly due to the price effect from the global oil price drop and temporary fuel tax cut.
 - Energy use for aviation showed a downward trend due to the base effect of a sharp increase (22.6%) during the same month last year in addition to a drop in international cargo volume (-2.3%).
 - Energy use for domestic navigation fell by nearly 15% on a year-on-year basis, as the import volume decreased (-5.3%, national flag vessels), and the transshipment volume plunged (import - 7.7%, export -24.5%, national flag vessels).

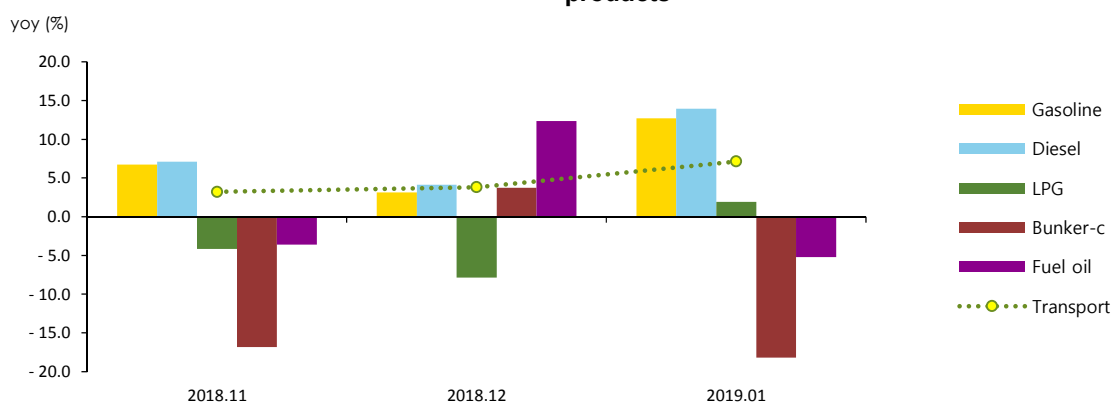
► The growth rate of petroleum consumption in the transport sector

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Transport (Mtoe)	42.3	42.8	3.5	3.8	3.7	3.8	3.8
	(6.1)	(1.2)	(7.1)	(3.8)	(3.2)	(3.8)	(7.1)
Road	33.9	34.1	2.7	3.0	3.0	3.0	3.0
	(4.9)	(0.5)	(5.8)	(2.9)	(6.5)	(2.9)	(11.6)
Navigation	3.4	3.5	0.3	0.3	0.3	0.3	0.3
	(13.8)	(5.8)	(-1.1)	(3.0)	(-18.5)	(3.0)	(-14.7)
Aviation	4.7	4.8	0.4	0.4	0.4	0.4	0.4
	(9.1)	(3.2)	(22.6)	(12.3)	(-3.7)	(12.3)	(-5.2)
Rail	0.3	0.3	0.0	0.0	0.0	0.0	0.0
	(8.3)	(2.5)	(12.3)	(-4.7)	(4.8)	(-4.7)	(0.2)

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



13. Buildings

□ **Energy use in buildings dropped by 5.1% year-on-year in January, as warm winter days resulted in decreased energy use for heating.**

- Energy use in buildings fell for three consecutive months, especially city gas, kerosene and heat (-4.2%, -7.0%, -8.6%), due to warm weather and increased prices of city gas and heat energy.
- In residential buildings, city gas, kerosene and heat energy use fell during warm winter days, while electricity use rose by 1.8% partly due to the increased supply of electrical heating appliances during last year's cold winter.
- Energy use in commercial buildings continued its downward trend despite increased production index of the wholesale & retail and restaurant & accommodation sectors; by energy sources, city gas, electricity and heat energy use declined (-7.9%, -1.2%, -10.6%), while LPG and diesel use increased (6.3%, 1.9%).
- As for the contribution of each energy source to the downward trend of energy use in buildings, city gas made the largest contribution(-1.7%p), followed by heat energy and kerosene.

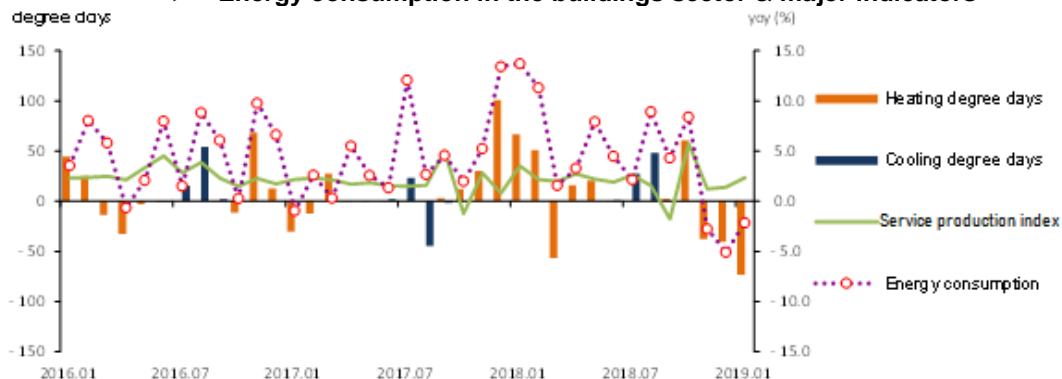
► Energy consumption trend in the buildings sector

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Buildings (Mtoe)	45.0	46.8	6.5	49.1	4.1	5.6	6.3
	(5.2)	(4.2)	(13.7)	(4.8)	(-2.8)	(-5.1)	(-2.2)
Residential	21.7	22.5	3.7	23.5	2.1	3.1	3.6
	(5.5)	(3.7)	(15.1)	(4.7)	(-4.4)	(-7.0)	(-3.1)
Commercial	17.1	17.4	2.1	18.1	1.4	1.8	2.0
	(3.5)	(2.2)	(11.8)	(4.1)	(-1.8)	(-3.0)	(-2.7)
Public · others	6.2	6.9	0.7	7.4	0.6	0.7	0.8
	(8.7)	(11.0)	(12.5)	(6.6)	(1.0)	(-1.5)	(4.4)
Heating degree days	2 386.8	2 517.1	621.7	2 597.8	298.2	522.3	548.4
	(3.9)	(5.5)	(12.0)	(3.2)	(-11.2)	(-7.2)	(-11.8)
Cooling degree days	154.1	132.7	-	209.0	-	-	-
	(87.2)	(-13.9)	-	(57.5)	-	-	-

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

Source: Monthly Energy Statistics

► Energy consumption in the buildings sector & major indicators



14. Transformation

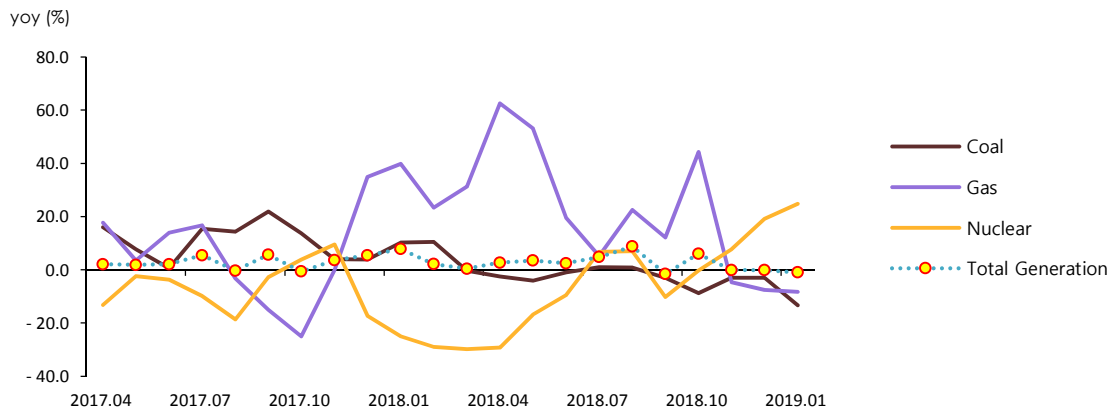
- The total energy input for power generation declined by 2.0% year-on-year in January, as the use of major energy sources decreased except nuclear and renewable energy.
 - Energy input for baseload generation posted a year-on-year drop despite increased use of nuclear energy owing to the decreased coal-fired power generation, and energy input for gas & oil-fired generation decreased due to the growing use of hydropower and other renewable sources.
 - As for the power generation mix, coal made up the largest share (38.2%), followed by gas (27.5%), nuclear energy (23.2%), renewable & others (10.1%) and oil (1.0%).
 - The average capacity factors at nuclear, coal and gas power plants recorded 75.4%, 73.3% and 51.7% respectively.

► Energy consumption in the power generation sector

	2016	2017	2018p				2019p
			M1		M11	M12	M1
Input (Mtoe)	110.9	111.2	10.6	113.3	9.1	10.2	10.4
	(0.8)	(0.2)	(5.0)	(1.9)	(-1.3)	(-0.1)	(-2.0)
Coal	49.2	52.8	5.4	54.2	4.2	4.8	4.9
	(-2.8)	(7.4)	(11.8)	(2.7)	(-3.9)	(-2.1)	(-8.1)
Oil	3.0	1.2	0.3	1.3	0.0	0.1	0.1
	(50.1)	(-59.5)	(12.3)	(4.0)	(-35.6)	(-66.9)	(-62.9)
Gas	20.5	20.7	2.5	23.9	1.8	2.2	2.3
	(6.3)	(0.9)	(30.1)	(15.6)	(-7.8)	(-10.2)	(-8.2)
Nuclear	34.2	31.6	2.1	28.4	2.6	2.6	2.6
	(-1.7)	(-7.5)	(-25.0)	(-10.1)	(7.7)	(19.1)	(24.7)
Hydro/other renewables	4.0	4.8	0.4	5.4	0.4	0.5	0.5
	(17.4)	(19.3)	(7.3)	(11.9)	(12.4)	(14.6)	(16.1)

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

	2016	2017				2018			
			2Q	3Q	4Q		2Q	3Q	4Q
GDP (trillion won)	1 509.8 (2.9)	1 556.0 (3.1)	389.6 (2.8)	392.6 (3.8)	407.6 (2.8)	1 597.5 (2.7)	400.6 (2.8)	400.3 (2.0)	420.2 (3.1)
Private consumption	725.4 (2.5)	744.3 (2.6)	181.0 (2.4)	186.8 (2.6)	190.7 (3.4)	765.4 (2.8)	186.1 (2.8)	191.5 (2.5)	195.5 (2.5)
Facilities investment	138.8 (-1.0)	159.1 (14.6)	42.0 (17.9)	39.1 (16.3)	40.6 (8.6)	156.6 (-1.6)	40.8 (-3.0)	36.2 (-7.4)	39.5 (-2.7)
Construction investment	233.4 (10.3)	251.1 (7.6)	67.1 (8.5)	67.0 (8.0)	67.6 (3.8)	241.0 (-4.0)	66.1 (-1.5)	61.0 (-8.9)	63.6 (-5.9)
Consumer price index (2015=100)	101.0	102.9	102.7	103.3	103.0	104.5	104.2	104.8	104.9
USD to KRW exchange rate (won)	1 160.8	1 131.0	1 129.4	1 132.3	1 107.5	1 100.2	1 079.0	1 121.5	1 127.4
Benchmark rate (%)	1.4	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.7
Coincident composite index (2015=100)	103.3	107.2	106.9	107.6	108.2	109.4	109.4	109.6	109.8
Mining & manufacturing production index (2015=100)	102.3	104.6	105.6	105.3	105.0	105.8	107.5	105.1	109.7
Manufacturing operation ratio index (2015=100)	98.9	98.1	99.4	98.9	97.1	98.4	100.6	97.0	101.3
Average temperature	13.6	13.1	18.1	24.1	7.3	13.0	17.8	24.8	7.4
- year-on-year difference	0.2	- 0.5	- 0.1	- 0.4	- 1.6	- 0.1	- 0.3	0.7	0.1
Heating degree days	2 386.8 (3.9)	2 517.1 (5.5)	143.7 (0.2)	2.9 (1350.0)	993.9 (16.8)	2 597.8 (3.2)	179.7 (25.1)	5.0 (72.4)	975.9 (-1.8)
Cooling degree days	154.1 (87.2)	132.7 (-13.9)	2.4 (300.0)	130.3 (-15.1)	- -	209.0 (57.5)	3.5 (45.8)	205.5 (57.7)	- -
Energy intensity	0.20 (-0.5)	0.19 (-0.1)	0.18 (-0.6)	0.19 (-0.6)	0.20 (1.3)	0.19 (-0.9)	0.18 (0.9)	0.19 (0.2)	0.19 (-4.1)
Per capita consumption									
oil (bbl)	18.0 (7.5)	18.2 (1.5)	4.3 (1.6)	4.6 (2.2)	4.8 (0.7)	18.0 (-1.3)	4.4 (2.5)	4.5 (-1.6)	4.5 (-5.6)
Electricity (MWh)	9.7 (2.4)	9.9 (1.9)	2.3 (0.7)	2.5 (3.4)	2.4 (2.2)	10.2 (3.1)	2.4 (3.2)	2.7 (4.4)	2.5 (0.9)
City gas (1 000 m ³)	0.4 (1.9)	0.4 (6.0)	0.1 (5.0)	0.1 (4.9)	0.1 (10.7)	0.5 (6.7)	0.1 (7.5)	0.1 (7.9)	0.1 (1.9)
Total energy (toe)	5.7 (2.0)	5.9 (2.7)	1.4 (1.9)	1.4 (2.9)	1.5 (3.9)	6.0 (1.2)	1.4 (3.3)	1.5 (1.7)	1.5 (-1.6)

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				2019		
			M11	M12	M1		M11	M12	M1
Industrial production index									
All industry	103.1 (3.1)	105.7 (2.6)	108.2 (1.8)	115.9 (-0.5)	103.9 (4.6)	107.2 (1.4)	108.4 (0.2)	116.4 (0.4)	104.7 (0.8)
Mining & manufacturing	102.3 (2.3)	104.6 (2.2)	109.4 (-0.3)	105.5 (-5.0)	103.6 (4.9)	105.8 (1.2)	109.4 -	106.7 (1.1)	103.6 -
Iron & steel	101.3 (1.3)	102.9 (1.7)	101.5 (-0.7)	103.5 (-2.8)	105.6 (2.9)	99.8 (-3.1)	100.3 (-1.2)	97.5 (-5.8)	102.9 (-2.6)
Cement	108.2 (8.2)	110.0 (1.7)	119.2 (-5.2)	106.1 (-9.2)	79.1 (-8.4)	100.1 (-9.0)	110.4 (-7.4)	91.2 (-14.0)	80.0 (1.1)
Basic compound	104.6 (4.6)	110.4 (5.5)	108.6 (3.5)	116.9 (4.4)	116.5 (2.6)	110.4 -	101.7 (-6.4)	110.4 (-5.6)	112.7 (-3.3)
Transport equipment	97.6 (-2.4)	95.0 (-2.7)	103.6 (-6.2)	82.2 (-29.4)	88.9 (1.9)	93.7 (-1.4)	106.7 (3.0)	98.9 (20.3)	96.1 (8.1)
Electric & electronic	102.8 (2.8)	105.5 (2.6)	117.7 (3.8)	110.3 (-3.2)	100.8 (7.7)	105.2 (-0.3)	115.6 (-1.8)	113.1 (2.5)	99.3 (-1.5)
Service	102.6 (2.6)	104.5 (1.8)	106.2 (2.8)	113.8 (0.8)	103.0 (3.5)	106.7 (2.1)	107.5 (1.2)	115.4 (1.4)	105.4 (2.3)
Operating ratio index									
Manufacturing	98.9 (-1.1)	98.1 (-0.9)	101.6 (-2.2)	96.8 (-6.6)	97.0 (3.6)	98.4 (0.3)	101.3 (-0.3)	98.3 (1.5)	97.0 -
Iron & steel	100.7 (0.7)	102.3 (1.5)	101.1 (-0.4)	102.5 (-2.9)	104.8 (2.9)	98.8 (-3.4)	100.1 (-1.0)	97.2 (-5.2)	102.7 (-2.0)
Cement	106.9 (6.9)	107.4 (0.4)	117.8 (-4.8)	104.9 (-8.6)	79.2 (-6.3)	108.9 (1.4)	122.4 (3.9)	102.7 (-2.1)	105.3 (33.0)
Basic compound	103.3 (3.3)	107.1 (3.6)	104.7 (1.5)	112.0 (2.1)	111.1 (0.1)	104.9 (-2.0)	96.2 (-8.1)	104.5 (-6.7)	106.6 (-4.1)
Transport equipment	93.8 (-6.2)	87.6 (-6.6)	95.6 (-9.6)	75.6 (-31.2)	83.7 (3.2)	90.2 (2.9)	102.9 (7.6)	95.4 (26.2)	95.1 (13.6)
Electric & electronic	101.8 (1.8)	102.5 (0.7)	114.7 (1.7)	104.8 (-6.4)	97.7 (5.3)	100.3 (-2.1)	109.9 (-4.2)	105.5 (0.7)	95.5 (-2.3)

Note: p means provisional
Source: Monthly energy statistics

International Energy Prices

	2017	2018					2019			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Crude oil (USD/bbl)										
WTI	51.0 (17.6)	64.8 (27.1)	62.9 (21.1)	63.7 (21.0)	62.2 (16.3)	62.8 (26.4)	54.9 (-12.7)	51.6 (-19.0)	55.0 (-11.6)	58.2 (-7.3)
Dubai	53.2 (28.9)	69.4 (30.5)	63.9 (20.3)	66.2 (23.3)	62.7 (15.3)	62.7 (22.5)	63.5 (-0.5)	59.1 (-10.7)	64.6 (3.0)	66.9 (6.7)
Brent	54.8 (21.7)	71.5 (30.5)	67.2 (22.9)	69.1 (24.6)	65.7 (17.4)	66.7 (27.0)	63.9 (-4.9)	60.2 (-12.8)	64.4 (-2.0)	67.0 (0.5)
Unit value of import (C&F)	53.3 (29.9)	71.4 (34.0)	65.5 (21.5)	64.9 (23.6)	66.9 (21.4)	64.9 (19.6)	63.3 (-3.3)	61.9 (-4.5)	63.0 (-5.9)	65.1 (0.4)
LNG										
From Indonesia (USD/MMBTU)	8.6 (16.7)	10.7 (24.0)	9.8 (18.5)	9.3 (16.2)	9.8 (16.8)	10.1 (22.6)	11.9 (21.7)	12.0 (28.5)	11.8 (20.2)	11.8 (16.8)
Unit value of import (USD/ton, CIF)	416.3 (16.7)	526.3 (26.4)	486.3 (17.8)	453.2 (9.8)	517.3 (23.7)	488.5 (19.8)	588.7 (21.1)	587.0 (29.5)	614.2 (18.7)	564.8 (15.6)
Bituminous coal (USD/ton)										
From Australia	88.5 (33.9)	107.0 (20.9)	103.0 (26.3)	106.5 (27.1)	106.0 (32.5)	96.7 (19.5)	95.7 (-7.1)	98.6 (-7.4)	95.4 (-9.9)	93.1 (-3.7)
Unit value of import (CIF)	104.3 (51.5)	113.6 (8.9)	113.9 (6.5)	111.3 (6.8)	111.0 (4.6)	119.5 (8.2)	109.9 (-3.5)	106.3 (-4.4)	110.6 (-0.4)	112.9 (-5.5)
Petroleum product (USD/bbl)										
Gasoline	68.1 (21.2)	79.9 (17.4)	77.6 (14.2)	78.7 (13.2)	77.0 (10.0)	77.1 (20.0)	67.2 (-13.4)	61.0 (-22.4)	66.3 (-13.9)	74.4 (-3.5)
Kerosene	65.3 (23.6)	84.8 (29.8)	80.0 (24.2)	81.0 (24.3)	80.0 (20.9)	79.0 (27.6)	76.5 (-4.4)	71.8 (-11.3)	77.9 (-2.7)	79.8 (1.1)
Diesel	66.4 (25.2)	84.9 (27.9)	79.4 (21.3)	81.9 (24.1)	78.1 (15.9)	78.4 (24.2)	77.5 (-2.4)	72.6 (-11.3)	78.9 (1.0)	81.0 (3.4)
Bunker-C	49.7 (40.2)	65.2 (31.3)	57.6 (17.9)	58.9 (15.9)	57.0 (15.0)	57.0 (23.4)	62.6 (8.7)	57.8 (-1.8)	63.9 (12.1)	66.2 (16.2)
Propane	467.5 (44.6)	542.1 (16.0)	531.7 (11.9)	590.0 (35.6)	525.0 (2.9)	480.0 (-)	453.3 (-14.7)	430.0 (-27.1)	440.0 (-16.2)	490.0 (2.1)
Butane	501.7 (41.0)	539.2 (7.5)	513.3 (-9.1)	570.0 (15.2)	505.0 (-15.8)	465.0 (-22.5)	470.0 (-8.4)	420.0 (-26.3)	470.0 (-6.9)	520.0 (11.8)
Naphtha	53.8 (26.6)	67.0 (24.5)	63.4 (17.1)	66.1 (19.4)	61.2 (8.7)	62.9 (24.1)	56.0 (-11.6)	51.7 (-21.9)	56.4 (-7.9)	60.1 (-4.5)

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	2017			2018p				2019p
			M11	M12	M1		M11	M12	
Coal (Mton)	129.3 (-4.3)	139.8 (8.1)	11.8 (6.3)	12.8 (7.4)	13.5 (6.1)	143.2 (2.5)	11.6 (-1.4)	12.7 (-0.8)	12.3 (-8.6)
- Coking coal excluded	95.8 (-2.5)	103.5 (7.9)	8.8 (5.3)	9.6 (6.4)	10.3 (8.2)	106.4 (2.8)	8.6 (-1.6)	9.6 (-1.0)	9.4 (-9.0)
Oil (Mbbbl)	921.1 (8.0)	937.1 (1.7)	80.2 (0.8)	85.1 (-0.9)	83.8 (4.9)	929.3 (-0.8)	76.0 (-5.2)	83.2 (-2.2)	84.8 (1.2)
- Non-energy oil excluded	454.9 (11.3)	443.7 (-2.5)	37.9 (-3.6)	41.0 (-5.7)	41.1 (7.5)	444.4 (0.2)	37.7 (-0.5)	41.4 (1.0)	42.6 (3.8)
LNG (Mton)	34.9 (4.4)	36.4 (4.3)	3.7 (3.7)	5.0 (24.9)	5.3 (24.0)	40.9 (12.4)	3.5 (-4.5)	4.7 (-6.2)	4.9 (-8.6)
Hydro (TWh)	6.6 (14.5)	7.0 (5.5)	0.5 (2.9)	0.5 (-2.8)	0.5 (-8.9)	7.3 (4.0)	0.5 (17.2)	0.6 (27.9)	0.6 (14.6)
Nuclear (TWh)	162.0 (-1.7)	148.4 (-8.4)	11.3 (9.5)	10.4 (-17.3)	9.8 (-25.0)	133.5 (-10.1)	12.2 (7.7)	12.4 (19.1)	12.3 (24.7)
Others (Mtoe)	13.6 (5.7)	15.8 (16.7)	1.3 (16.8)	1.4 (19.2)	1.4 (7.5)	17.5 (10.5)	1.4 (6.4)	1.5 (3.5)	1.6 (11.2)
TPES (Mtoe)	293.4 (2.4)	302.1 (2.9)	26.1 (4.3)	29.1 (4.9)	29.5 (6.3)	307.3 (1.7)	25.5 (-2.4)	28.8 (-0.9)	29.0 (-1.7)
- Non-energy oil excluded	235.5 (1.8)	240.7 (2.2)	20.9 (4.1)	23.6 (5.2)	24.2 (7.2)	247.1 (2.7)	20.7 (-0.5)	23.6 (0.2)	23.8 (-1.9)
- Non-energy oil&coal excluded	212.0 (3.2)	215.4 (1.6)	18.7 (3.6)	21.4 (4.7)	22.1 (8.0)	221.4 (2.8)	18.7 (-0.5)	21.4 (0.2)	21.8 (-1.4)

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

Share of TPES by Sources

(unit: %)

	2016	2017		2018p				2019p	
				M11	M12	M1		M11	M12
Coal	27.7	28.5	27.7	27.1	28.0	28.7	27.9	27.1	26.0
- Coking coal excluded	19.7	20.2	19.6	19.5	20.6	20.3	19.7	19.5	19.0
Oil	40.1	39.5	39.3	37.4	36.2	38.4	38.0	36.8	37.1
- non-energy oil excluded	20.3	19.2	19.1	18.5	18.3	18.9	19.3	18.7	19.1
LNG	15.5	15.7	18.4	22.6	23.5	17.4	18.0	21.4	21.9
Hydro	0.5	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.4
Nuclear	11.6	10.5	9.2	7.6	7.1	9.3	10.2	9.2	9.0
Others	4.6	5.2	5.0	4.9	4.9	5.7	5.5	5.1	5.5
TPES	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	2017	2018p				2019p		
			M11	M12	M1		M11	M12	M1
Industry	137.8 (1.9)	144.3 (4.7)	12.4 (4.7)	12.9 (3.2)	12.8 (3.1)	146.3 (1.4)	12.0 (-3.1)	12.8 (-1.1)	12.6 (-1.5)
Transport	42.3 (6.1)	42.8 (1.2)	3.6 (2.5)	3.6 (-2.9)	3.5 (7.1)	42.6 (-0.5)	3.7 (3.2)	3.8 (3.8)	3.8 (7.1)
Residential-commercial	38.7 (4.6)	39.9 (3.0)	3.6 (4.0)	5.2 (12.9)	5.7 (13.9)	41.7 (4.4)	3.5 (-3.4)	4.9 (-5.6)	5.6 (-3.0)
Public	6.2 (8.7)	6.9 (11.0)	0.6 (14.0)	0.7 (16.9)	0.7 (12.5)	7.4 (6.6)	0.6 (1.0)	0.7 (-1.5)	0.8 (4.4)
TFC	225.1 (3.3)	233.9 (3.9)	20.2 (4.4)	22.4 (4.6)	22.8 (6.5)	237.9 (1.7)	19.8 (-1.9)	22.1 (-1.3)	22.7 (-0.3)
Coal (Mton)	49.0 (-6.8)	50.4 (2.7)	4.5 (-1.5)	4.5 (7.0)	4.4 (-3.7)	51.5 (2.2)	4.6 (2.5)	4.5 (1.5)	3.9 (-10.0)
Oil (Mbbbl)	899.3 (7.3)	926.6 (3.0)	79.5 (1.7)	83.4 (-0.3)	81.8 (4.8)	917.8 (-0.9)	75.5 (-5.1)	82.4 (-1.1)	83.8 (2.5)
Electricity (TWh)	497.0 (2.8)	507.7 (2.2)	41.3 (2.6)	45.8 (5.2)	48.4 (7.0)	526.1 (3.6)	41.9 (1.5)	45.3 (-1.0)	48.6 (0.6)
City gas (Bm³)	21.3 (2.3)	22.6 (6.3)	2.1 (8.2)	3.1 (18.0)	3.5 (16.6)	24.2 (7.2)	2.1 (1.3)	3.0 (-4.9)	3.4 (-4.6)
Heat-others (1 000 toe)	13.1 (4.2)	15.0 (14.0)	1.3 (14.8)	1.6 (21.1)	1.7 (9.8)	16.4 (9.3)	1.3 (2.2)	1.6 (0.1)	1.7 (4.0)

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

Share of the Total Final Consumption by Sources

(unit: %)

	2016	2017	2018p				2019p		
			M11	M12	M1		M11	M12	M1
Industry	61.2	61.7	61.4	57.6	56.2	61.5	60.7	57.7	55.5
Transport	18.8	18.3	17.8	16.2	15.4	17.9	18.7	17.1	16.5
Residential-commercial	17.2	17.1	17.9	23.0	25.2	17.5	17.6	22.0	24.5
Public	2.8	3.0	2.9	3.2	3.2	3.1	3.0	3.2	3.4
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	14.3	14.3	14.4	13.2	12.6	14.3	15.0	13.5	11.5
Oil	50.8	50.4	50.4	47.4	45.5	49.0	48.7	47.4	46.8
Electricity	19.0	18.7	17.6	17.6	18.2	19.0	18.2	17.6	18.4
City gas	10.1	10.3	11.0	14.7	16.3	10.9	11.4	14.2	15.7
Heat-others	5.8	6.4	6.5	7.1	7.3	6.9	6.7	7.2	7.6

Note: p means provisional
Source: Monthly Energy Statistics

Statistics on Energy Production Facilities

	2016	2017	2018p		2019p	
			M11	M12	M1	M1
Total capacity (GW)	105.9	116.9	116.3	116.9	116.4	119.1
	-	(10.4)	(12.6)	(10.4)	(18.6)	(12.5)
Nuclear	23.1	22.5	22.5	22.5	22.5	21.9
	-	(-2.5)	(3.7)	(-2.5)	(3.7)	(-5.5)
Bituminous coal	30.9	36.1	36.2	36.1	36.1	36.4
	-	(16.8)	(21.2)	(16.8)	(37.6)	(17.7)
Gas	32.6	37.9	37.5	37.9	37.4	37.9
	-	(16.0)	(14.9)	(16.0)	(16.2)	(16.0)
Refinery capacity (mil BPSD)	3.1	3.1	3.1	3.1	3.1	3.1
	-	(0.2)	(0.2)	(0.2)	(1.5)	(1.5)

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

Statistics on Energy Consumption

	2016	2017	2018p		2019p	
			M11	M12	M1	M1
The number of household demanding city gas (mil)	18.0	18.6	18.4	18.6	18.7	19.1
	(3.4)	(3.3)	(3.0)	(3.3)	(3.4)	(3.1)
Registered cars (mil)	21.8	22.5	22.5	22.5	22.6	23.2
	(3.9)	(3.3)	(3.4)	(3.3)	(3.2)	(3.0)
- gasoline	10.1	10.4	10.4	10.4	10.4	10.6
	(2.9)	(2.7)	(2.9)	(2.7)	(2.6)	(2.5)
- diesel	9.2	9.6	9.5	9.6	9.6	9.9
	(6.4)	(4.4)	(4.6)	(4.4)	(4.3)	(3.7)
- LPG	2.2	2.1	2.1	2.1	2.1	2.0
	(-4.0)	(-2.9)	(-2.9)	(-2.9)	(-3.0)	(-3.3)
- hybrid	0.2	0.3	0.3	0.3	0.3	0.4
	(37.6)	(37.6)	(37.6)	(37.6)	(37.6)	(30.9)

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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