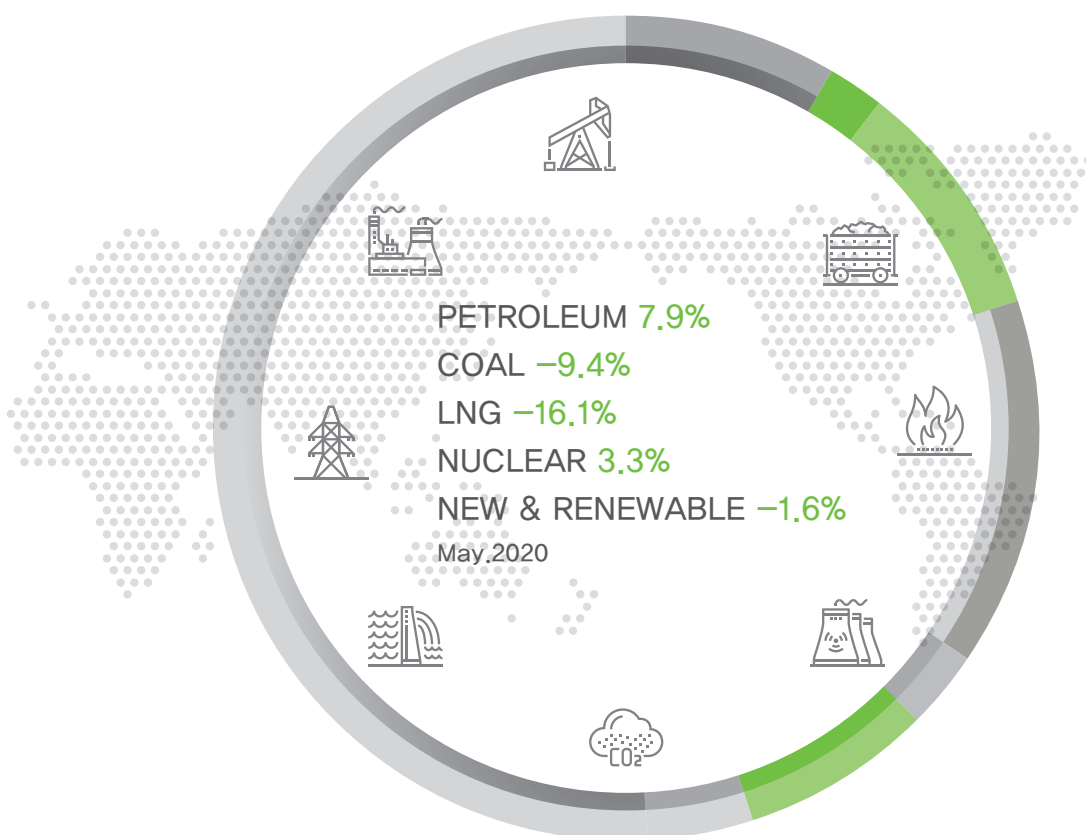


KEEI

MONTHLY KOREA ENERGY TRENDS

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KOREA ENERGY ECONOMICS INSTITUTE



This publication is derived from Energy Demand & Supply Statistics issued until May 2020 and Energy Price Statistics issued until July 2020.

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1. The Economy and the Industry

- ☐ **The mining & manufacturing production index fell by 9.8% year-on-year in May, as the production continuously declined in all major industries except the semiconductor sector.**
 - The semiconductor production index posted a year-on-year growth of 27.1%, and its export value rose by 7.0%, as a result of growing export demand for semiconductors used in servers and personal computers due to increased remote working and online education, though the export of semiconductors used in smartphones remained stagnant due to weak smartphone sales in the global market.
 - The production index of basic chemical materials was down 8.5% year-on-year, as its export declined due to weak demand from global downstream industries such as automobile and smartphone amid the COVID-19 pandemic.
 - The iron & steel production index dropped by 16.3% year-on-year, as its export declined (-22.6%) due to increased supply from China and weak performance of the industries that are major source of demand such as automobile and shipbuilding, which were affected by the COVID-19 outbreak.
 - The automobile production index fell by 35.7% and the number of automobiles produced fell by 36.9%, as the number of automobiles exported was down 57.5% year-on-year in line with falling demand in major markets including the US and Europe amid the COVID-19 pandemic.
- ☐ **The service production index dropped by 4.0% year-on-year (in May) due to the impact of COVID-19, especially the businesses that provide face-to-face services.**
 - The service production index decreased, led by face-to-face service providers, but the rate of decline was slower, as the number of confirmed cases grew more slowly, and the eased "distancing in daily life" measure was imposed from May 6.

► Major economic and industrial indicators

	2019p	2020p					
		M1~5	M5	M1~5	M3	M4	M5
GDP (trillion won)	1 849.0 (2.0)	437.2 (1.8)	- -	443.2 (1.4)	443.2 (1.4)	- -	- -
Total export (\$billion, customs clearance basis)	539.9 (-10.7)	227.1 (-7.5)	45.7 (-9.8)	201.4 (-11.3)	46.2 (-1.7)	36.3 (-25.6)	34.8 (-23.8)
Industrial production index (2015=100)	106.3 (-0.0)	103.1 (-1.2)	108.2 (0.7)	103.0 (-0.1)	113.8 (7.7)	101.5 (-5.0)	97.6 (-9.8)
Semi-conductors	188.1 (11.7)	158.2 (4.9)	177.7 (12.1)	212.9 (34.6)	231.6 (45.3)	192.8 (17.3)	225.8 (27.1)
Basic compound	107.5 (-2.6)	106.4 (-4.7)	103.3 (-10.0)	102.9 (-3.3)	104.6 (-4.3)	95.9 (-6.7)	94.5 (-8.5)
Steel	98.3 (-2.2)	99.3 (-1.9)	101.8 (-3.0)	93.4 (-5.9)	99.3 (-2.1)	92.5 (-7.7)	85.2 (-16.3)
Cars	93.1 (-0.9)	94.9 (3.0)	101.1 (3.3)	78.1 (-17.7)	101.7 (4.1)	81.7 (-19.7)	65.0 (-35.7)
Service production index (2015=100)	108.4 (1.4)	106.2 (1.3)	109.5 (2.2)	103.4 (-2.7)	103.3 (-5.0)	101.1 (-6.1)	105.1 (-4.0)
Wholesale & Retail	104.6 (-0.4)	103.8 (-0.4)	108.1 (1.2)	99.4 (-4.3)	100.9 (-6.5)	97.6 (-7.5)	103.2 (-4.5)
Restaurant & Accommodation	97.5 (-1.0)	95.1 (-1.0)	100.7 (-0.5)	78.4 (-17.6)	64.2 (-32.5)	72.4 (-24.6)	86.7 (-13.9)

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

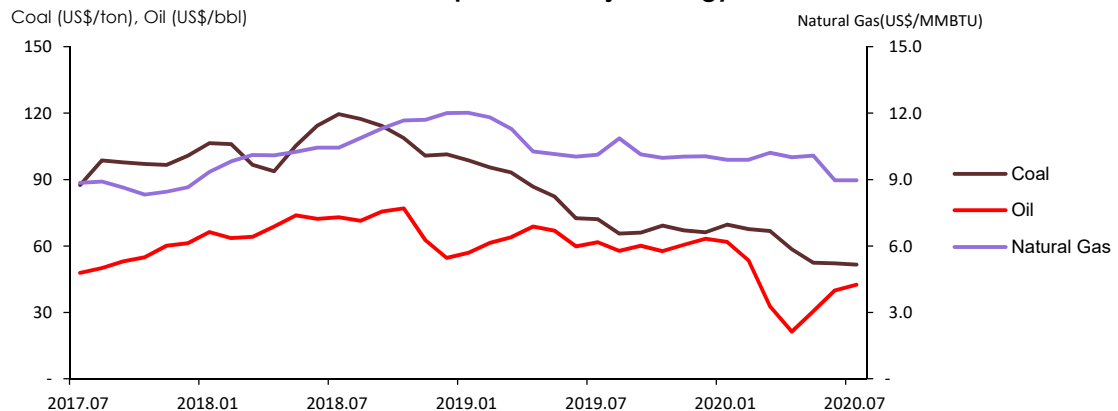
- **Global oil price was up 6.2% in July from the previous month amid the expectation of global petroleum demand recovery, while it was down 31.2% on a year-on-year basis.**
 - Global oil price posted a month-on-month growth, as major energy research institutes revised up their petroleum demand forecasts, EU countries agreed on an economic stimulus plan, and the US crude inventory decreased, though the growth was partially offset by the factors such as lower level of oil output reduction by OPEC+ members from August and surging cases of COVID-19.

► Global energy prices

	2018	2019				2020		
			M5	M6	M7	M5	M6	M7
Crude oil (US\$/bbl)	68.6 (29.5)	61.6 (-10.2)	66.9 (-9.4)	59.8 (-17.2)	61.7 (-15.4)	30.5 (-54.4)	40.0 (-33.2)	42.4 (-31.2)
Natural gas (US\$/MMBTU)	10.7 (24.0)	10.6 (-1.1)	10.1 (-1.0)	10.0 (-3.8)	10.1 (-3.0)	10.1 (-0.7)	9.0 (-10.7)	9.0 (-11.4)
Coal (US\$/ton)	107.0 (20.9)	77.9 (-27.3)	82.3 (-21.8)	72.5 (-36.6)	72.1 (-39.7)	52.5 (-36.2)	52.2 (-28.0)	51.6 (-28.5)

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)

► Global prices of major energy sources



Domestic energy prices

☐ Gasoline and diesel prices increased in July from the previous month in line with the global oil price increase, while the prices fell by around 10% on a year-on-year basis.

- The prices of gasoline and diesel at gas stations were up 2.8% and 3.1% respectively in July from a month ago with the expectation that global petroleum demand will rebound, and as global oil price increased following the EU members' agreement on the economic stimulus plan.
- Bunker-C price was up 2.5% in June from the prior month reflecting the global oil price increase, but it fell by 42.1% on a year-on-year basis, as its demand declined following the International Maritime Organization (IMO)'s environmental regulation.

☐ Propane and butane prices increased in July from the previous month in line with the global price trend, while the prices decreased on a year-on-year basis.

- Domestic propane and butane prices rose by 0.6% and 1.4% respectively in July from the previous month, as domestic LPG suppliers raised their prices by KRW10-20/kg, after Saudi Aramco's global propane and butane prices increased (2.9%, 3.0%) in June.

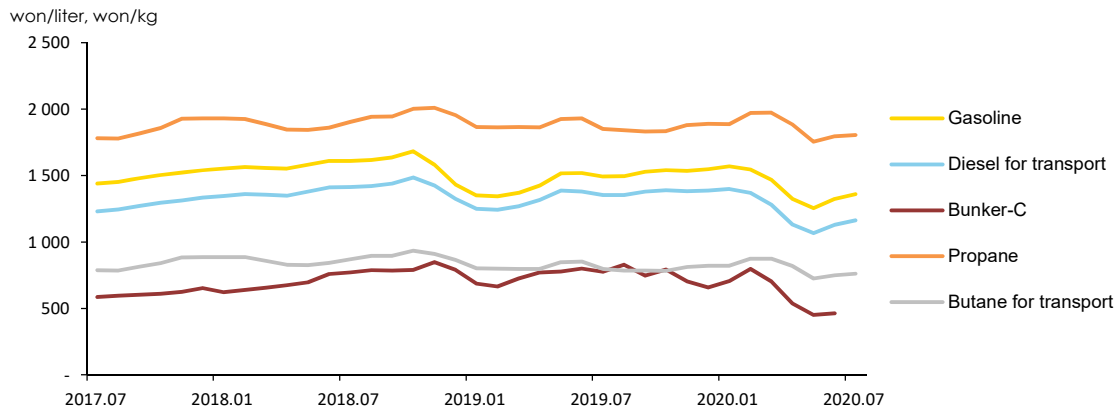
► Domestic petroleum product prices

	2018	2019				2020		
			M5	M6	M7		M5	M6
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 517.2 (-4.0)	1 517.5 (-5.7)	1 491.5 (-7.4)	1 255.1 (-17.3)	1 322.9 (-12.8)	1 360.3 (-8.8)
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 385.3 (0.4)	1 379.8 (-2.1)	1 352.8 (-4.2)	1 065.8 (-23.1)	1 127.9 (-18.3)	1 162.9 (-14.0)
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	777.0 (11.7)	799.2 (5.2)	776.5 (0.6)	451.3 (-41.9)	462.8 (-42.1)	-
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 924.1 (4.4)	1 929.0 (3.7)	1 851.4 (-2.7)	1 753.8 (-8.9)	1 794.5 (-7.0)	1 806.0 (-2.5)
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	847.6 (2.5)	851.6 (0.9)	796.8 (-8.3)	725.0 (-14.5)	749.5 (-12.0)	759.9 (-4.6)

Note: Gasoline, diesel and butane is based on charging station prices, Bunker-C is based on dealership prices, propane is based on sales shop prices. () is year-on-year growth rates (%)

Source: www.opinet.co.kr

► Domestic petroleum product prices



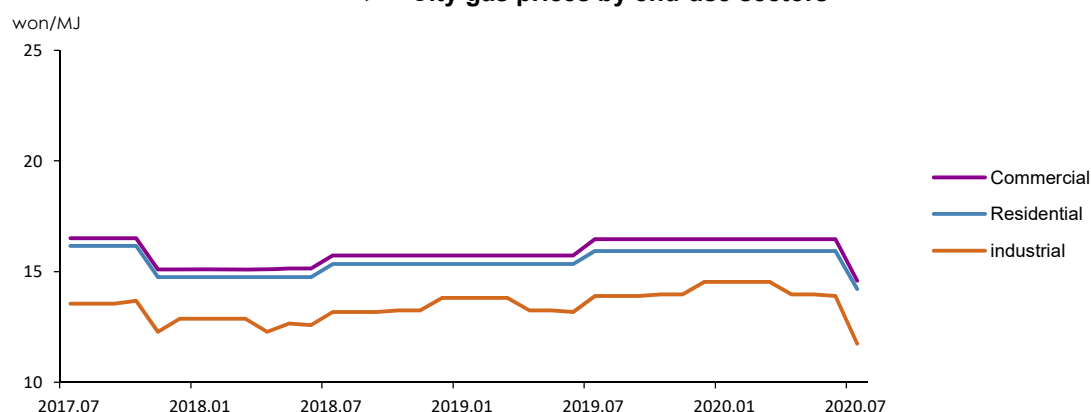
☐ **City gas price by end-use was reduced by over 10% in July compared to the previous month, which marks the first price cut since it was raised in July 2019.**

- City gas price was cut for the first time in a year, reflecting decreased raw material cost due to lower global oil prices caused by COVID-19, increased unit price to collect accounts receivable and increased wholesale supply cost as a result of decreased sales volume.

☐ **Heat energy price was also down 2.8% in July for the first time in 11 months in line with the reduction of city gas price.**

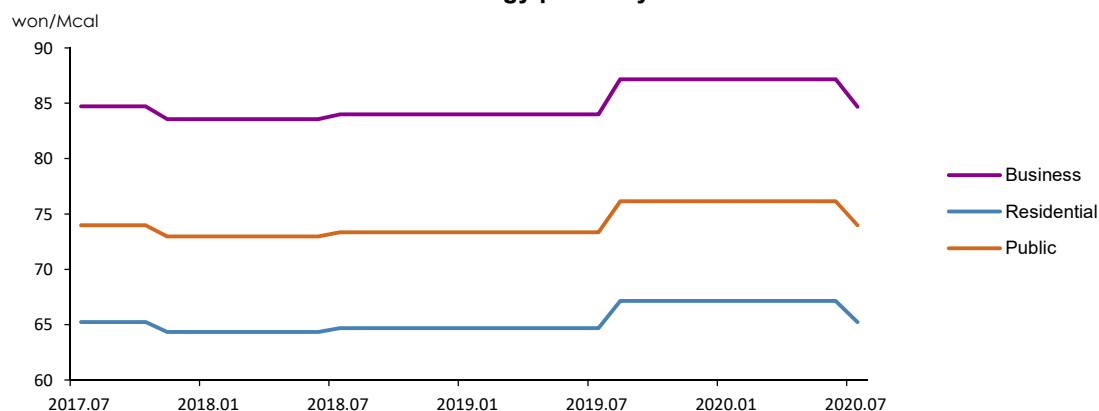
- Heat energy price was also cut, reflecting decreased city gas price, actual fuel cost and increased fixed cost, though the cut was less than that of city gas.

► 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 pricing system since July 2012. Figures before that are converted based on standard calorie (additional tax, base charge excluded)

► Heat energy prices by end-use sectors



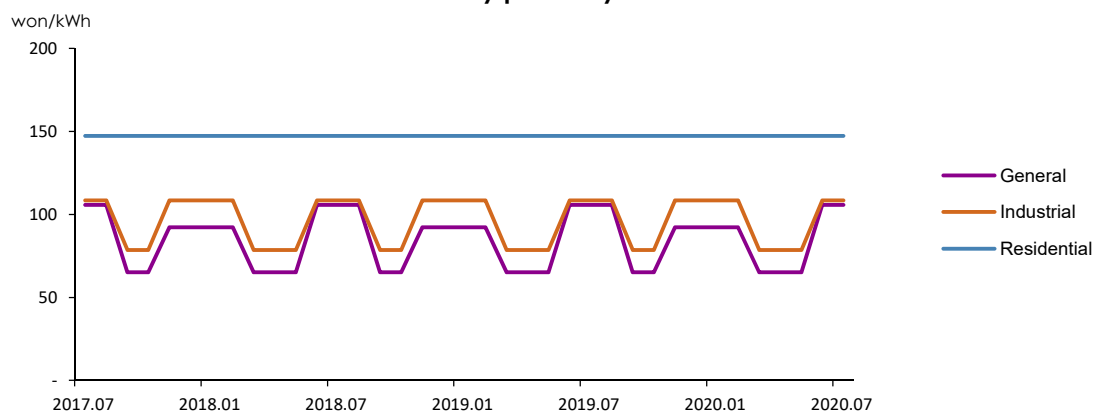
□ **Electricity prices ¹for general and industrial use remained flat in July after the price adjustment to the summer season in June, and the residential electricity price was also the same as the previous month.**

- Electricity prices for general and industrial use, which are based on time-of-use pricing, remained the same after the price adjustment from spring/autumn (Mar-May, Sept-Oct) to summer (June-Aug) season.
- Residential electricity price has been flat since the progressive pricing scheme was restructured from six to three stages in December 2016.

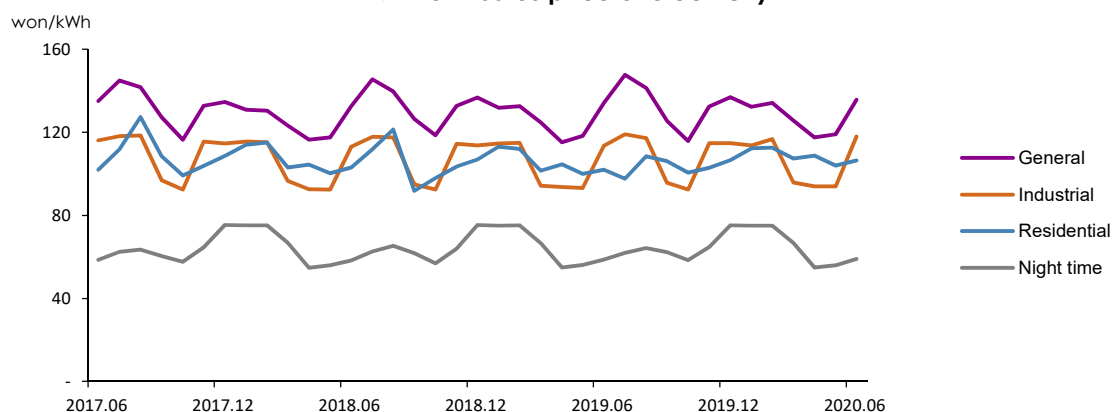
□ **The unit sales price of electricity increased in June from the previous month after the price adjustment to the summer season and due to growing use of electricity.**

- The unit sales price of electricity, which is progressively priced, went up by 2.3% than the prior month, owing to the increased power demand during summer.
- The unit sales price of electricity for industrial and general use went up by 25.4% and 13.9% respectively from the previous month following the seasonal price change (June-Aug).

► Electricity prices by end-use sectors



► 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 decreased by 6.7% year-on-year in May, led by crude oil and coal.**

- The import volume of crude oil, bituminous coal and anthracite fell by 6.3%, 14.0% and 33.3% respectively, which were estimated in their own unit of energy.
- The import volume of petroleum products went up by 6.7%, led by a strong growth in naphtha import.
- The LNG import had been on a downward slide due to falling demand from the power generation sector, though its import volume posted a slight year-on-year growth of 0.2% in May.

☐ **Renewable and ‘other’ energy generation was down 1.6% year-on-year (in May) due to reduced power generation from ‘other’ energy sources and slower growth in solar PV generation.**

- Solar PV generation grew by no more than 20.3% year-on-year in May with more rainy days.
- Renewable generation excluding ‘other’ energy (waste energy) rose by 13.4% from the same month last year.

Import and domestic production of energy

	2019p			2020p			
		M1~5	M5	M1~5	M3	M4	M5
Import volume							
Crude oil (Mbbbl)	1 071.9	458.5	84.1	424.2	84.1	82.3	78.8
	(-4.0)	(-0.2)	(-11.6)	(-7.5)	(-3.5)	(-14.0)	(-6.3)
Petroleum product (Mbbbl)	352.1	131.4	28.5	158.0	31.7	24.8	30.4
	(3.1)	(-6.1)	(1.7)	(20.2)	(32.1)	(-5.2)	(6.7)
Bituminous coal (Mton)	132.7	52.4	10.6	46.3	8.6	9.9	9.1
	(0.9)	(-5.8)	(6.4)	(-11.7)	(5.5)	(-1.6)	(-14.0)
Anthracite (Mton)	6.9	3.1	0.6	2.4	0.5	0.6	0.4
	(-15.6)	(-6.5)	(-22.3)	(-22.9)	(-25.8)	(6.0)	(-33.3)
LNG (Mton)	40.8	16.7	3.0	18.5	3.5	3.1	3.0
	(-7.4)	(-12.0)	(6.8)	(10.8)	(28.1)	(-7.3)	(0.2)
Import volume (Mtoe)	349.1	142.3	27.9	140.6	28.2	26.0	26.1
	(-1.5)	(-3.4)	(-1.8)	(-1.2)	(8.1)	(-7.0)	(-6.7)
Import value (billion US\$, CIF)	126.7	54.0	10.7	43.0	8.8	6.5	4.9
	(-13.2)	(-5.0)	(-7.1)	(-20.3)	(-10.5)	(-41.7)	(-54.2)
Energy share of total import value (%)	25.2	25.6	24.5	21.9	20.9	17.0	14.2
Foreign energy dependence (%)*	93.3	93.3	92.6	92.8	92.6	91.9	92.6
Domestic production							
Hydropower (TWh)	6.2	2.5	0.5	2.7	0.5	0.5	0.6
	(-14.1)	(-5.3)	(-31.8)	(5.5)	(18.4)	(-3.5)	(4.2)
Anthracite (Mton)	1.1	0.5	0.1	0.4	0.1	0.1	0.1
	(-9.5)	(-18.2)	(-17.9)	(-5.6)	(10.0)	(-12.5)	(-12.0)
Natural gas (Mton)	0.2	0.1	0.0	0.1	0.0	0.0	0.0
	(-21.5)	(-25.3)	(-11.4)	(-0.2)	(-12.4)	(-23.2)	(-17.6)
Renewable energy (Mtoe)	18.3	7.8	1.6	7.9	1.7	1.7	1.6
	(6.7)	(10.4)	(14.8)	(2.5)	(4.0)	(11.0)	(-1.6)

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

4. Energy Consumption

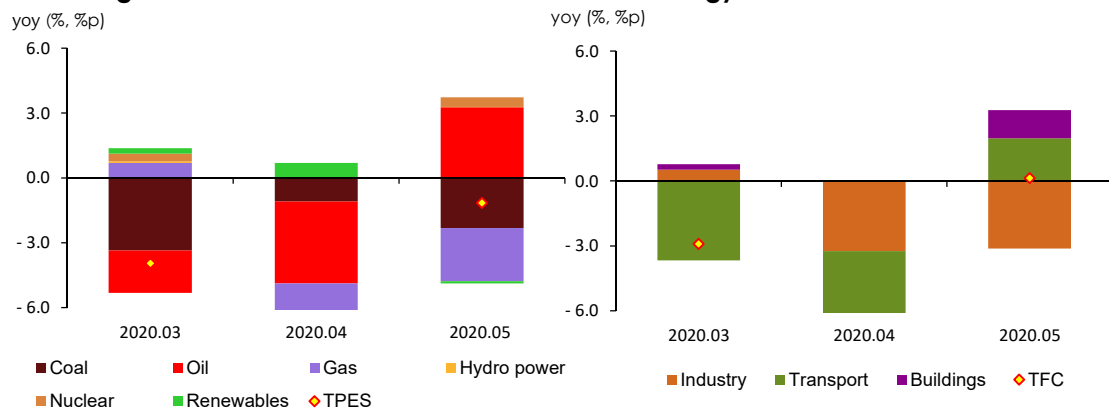
- **Total Primary Energy Supply (“TPES”) fell by 1.2% year-on-year in May despite increased petroleum use, because coal and gas use declined.**
 - Petroleum use rose by 7.9% year-on-year, led by the transport and buildings sectors, as social activities that had been halted largely resumed after the easing of COVID-19 related lockdown measures.
 - Gas-fired generation (peak load) dropped by 28.3%, as total power generation fell by 6.2% while nuclear generation (baseload) rose by 3.3%, and accordingly total gas use declined by 16.1%.
 - Coal use fell by 9.4% year-on-year, as it was down 9.4% and 15.4% in the industrial and transformation sectors.
- **Total Final Consumption (“TFC”) inched up 0.1% year-on-year (in May) with the transport and residential sectors leading the growth, as the outbreak of COVID-19 has been well contained.**
 - Transport energy use rose by 10.8% year-on-year, as travel demand increased in the road transport and domestic aviation sectors after COVID-19 prevention guidelines were relaxed to ‘distancing in daily life’.
 - Energy use increased in residential, commercial and public buildings all together, as the government provided emergency subsidies and the number of heating degree days and amount of rainfall rose by 30.5% and 86.8% amid more chilly and humid weather than usual. Consequently, buildings’ total energy use was up 8.1% year-on-year.
 - Industrial energy use fell by 4.7% year-on-year, as major export industries including petroleum products and automobiles were hit by COVID-19, and the total export value fell by 23.8% on a year-on-year basis.

► Energy consumption

	2019p	2020p					
		M1~5	M5	M1~4	M2	M4	M5
Total energy (Mtoe)	303.8	128.3	23.5	99.8	24.9	22.8	23.2
	(-1.2)	(-0.8)	(-3.3)	(-4.8)	(-1.4)	(-6.5)	(-1.2)
- Non-energy oil & coal excluded	220.0	93.8	16.5	72.6	18.3	16.5	16.4
	(-1.3)	(-0.5)	(-3.1)	(-6.0)	(-1.8)	(-6.2)	(-0.7)
Final energy (Mtoe)	231.2	99.2	17.9	77.6	19.4	17.7	18.0
	(-0.6)	(-0.6)	(-3.7)	(-4.5)	(-2.4)	(-7.7)	(0.1)

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

► The growth rates of TPES & TFC and contribution of energy sources and end-use sectors



5. Coal

□ Coal use fell by 9.4% year-on-year in May, as its final use plunged due to the impact of COVID-19.

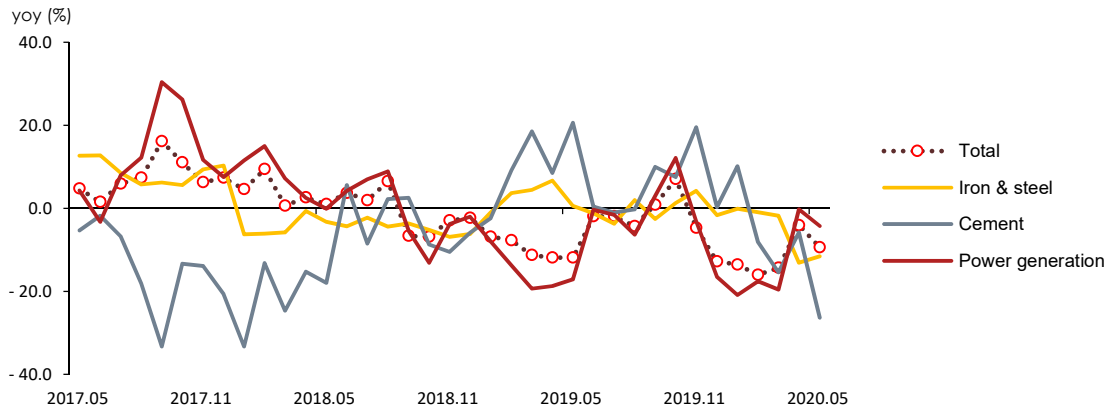
- Industrial coal use dropped by 16.2% year-on-year as a result of a sharp drop in bituminous coal use for steelmaking and cement production with growing impact of COVID-19 at home and abroad.
- Coal use for power generation and coal-fired generation fell by 4.3% and 2.1% year-on-year, because electricity use dropped by 5.8% in May from the same month last year amid the COVID-19 pandemic.

► Coal consumption

	2019p			2020p			
		M1~5	M5	M1~5	M3	M4	M5
Coal (Mton)	133.0	52.5	9.5	46.3	8.9	8.9	8.6
	(-5.7)	(-9.8)	(-11.9)	(-11.8)	(-14.3)	(-4.1)	(-9.4)
Industry	47.6	19.9	4.0	18.2	3.8	3.6	3.4
	(-1.6)	(0.5)	(-3.6)	(-8.5)	(-6.5)	(-9.1)	(-16.2)
-Coking-coal	35.0	14.4	2.9	13.6	2.9	2.5	2.6
	(1.0)	(2.8)	(0.6)	(-5.5)	(-1.8)	(-13.1)	(-11.6)
Buildings	0.6	0.2	0.0	0.2	0.0	0.0	0.0
	(-29.8)	(-30.3)	(-35.0)	(-21.3)	(-2.6)	(-3.7)	(-15.4)
Power generation	84.8	32.4	5.4	27.9	5.0	5.3	5.2
	(-7.6)	(-14.9)	(-17.1)	(-13.7)	(-19.6)	(-0.3)	(-4.3)

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 use grew by 7.9% year-on-year in May especially in the transport sector, after social distancing measures were relaxed.

- Industrial petroleum use rose by 3.7% year-on-year despite 2.1% drop in naphtha use, as the use of LPG rose by 19.8%.
- Petroleum use went up by 12.0% in the transport sector and 50.5% in the buildings sector, as travelling and social activities increased after the 'social distancing' measure that was adopted to prevent the spread of COVID-19 was eased to 'distancing in daily life'.

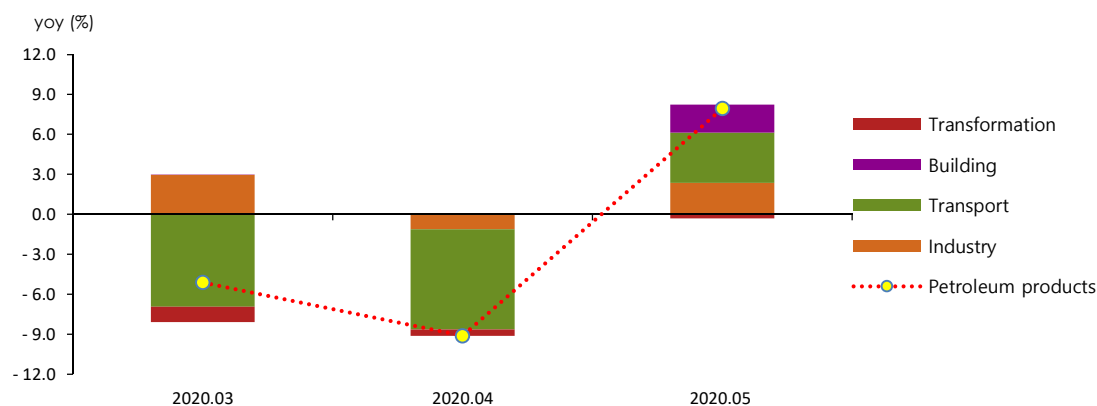
► Petroleum product consumption by end-use sectors

	2019p	2020p		2020p			
		M1~5	M5	M1~5	M3	M4	M5
Petroleum (Mbbbl)	928.4	382.8	72.6	372.4	72.6	68.8	78.4
	(-0.4)	(-2.1)	(-7.1)	(-2.7)	(-5.1)	(-9.1)	(7.9)
Industry	567.2	229.3	46.2	234.8	47.3	43.5	47.9
	(0.6)	(-2.9)	(-5.9)	(2.4)	(5.0)	(-1.9)	(3.7)
-Naphtha	438.6	181.8	36.4	177.1	34.6	31.8	35.7
	(-2.8)	(-4.4)	(-6.3)	(-2.6)	(-3.0)	(-8.2)	(-2.1)
Transport	300.3	124.7	22.9	111.1	20.3	20.7	25.7
	(-0.7)	(1.6)	(-8.7)	(-11.0)	(-20.7)	(-21.6)	(12.0)
Buildings	52.8	24.6	3.0	24.3	4.6	4.3	4.6
	(-1.7)	(-3.9)	(-13.5)	(-1.2)	(0.2)	(0.0)	(50.5)
Power generation	8.1	4.1	0.5	2.2	0.4	0.3	0.3
	(-30.8)	(-37.7)	(3.1)	(-45.7)	(-68.4)	(-52.1)	(-44.5)

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

Source: Monthly Energy Statistics

► The growth rates of petroleum product consumption & contribution(%) of end-use sectors



7. Gas

☐ **Natural gas use was down 16.1% year-on-year in May, as it declined in both of the city gas production and power generation sectors.**

- Gas use for power generation dropped by 22.7% year-on-year due to the increased share of baseload generation (4.9%) and decreased electricity use (-5.8%), and gas use for city gas production has been on a downward slide since February 2020 on a year-on-year basis.

☐ **City gas use fell by 7.0% year-on-year, with the industrial sector leading the downward trend, although it increased in the buildings sector.**

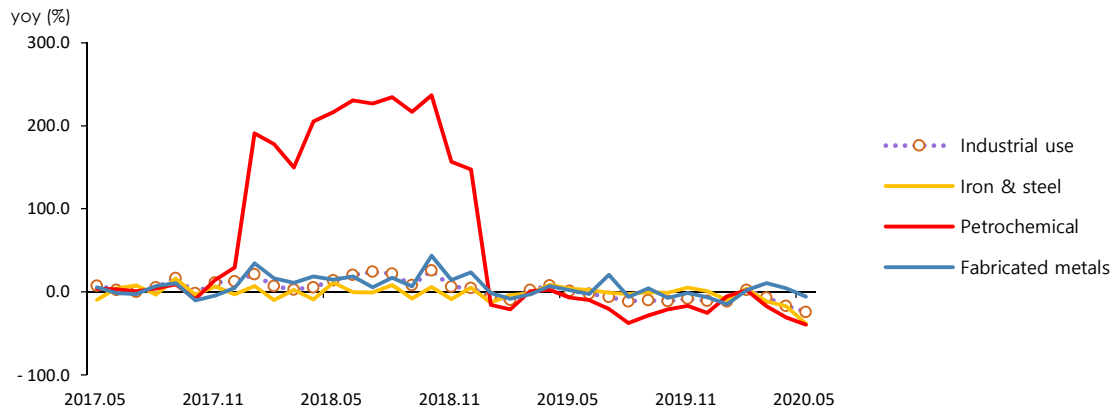
- Industrial city gas use declined by 14.5% year-on-year, as its use decreased in most industries including petrochemical (-14.2%), primary metals (-29.1%) and fabricated metals (-5.5%).
- Buildings' city gas use posted a year-on-year growth of 2.6%, as it increased by 11.2% in residential buildings with longer hours spent at home, even though it fell by 17.6% in commercial buildings and 18.9% in public buildings under ongoing 'distancing in daily life' measures.

► Natural gas and city gas consumption

	2019p	M1~5		2020p			
			M5	M1~5	M3	M4	M5
LNG (Mton)	40.9	19.0	2.7	18.5	4.0	3.0	2.3
	(-3.2)	(-4.3)	(-6.0)	(-2.5)	(3.6)	(-10.5)	(-16.1)
Power generation	18.4	7.7	1.4	7.8	1.7	1.2	1.1
	(-2.7)	(-6.5)	(-10.1)	(1.1)	(12.0)	(-19.3)	(-21.2)
City gas production	20.5	10.3	1.2	9.8	2.0	1.6	1.1
	(-2.1)	(-0.3)	(1.9)	(-4.9)	(-2.7)	(-4.6)	(-9.4)
City gas (bm³)	25.4	13.2	1.7	12.6	2.6	2.1	1.6
	(-1.1)	(0.3)	(4.2)	(-4.5)	(-0.8)	(-6.9)	(-7.0)
Industry	10.4	4.6	0.8	4.3	0.9	0.8	0.7
	(2.4)	(8.3)	(6.9)	(-5.1)	(0.3)	(-11.2)	(-14.5)
Buildings	13.8	8.1	0.7	7.8	1.6	1.2	0.8
	(-3.5)	(-3.6)	(1.8)	(-3.9)	(-0.7)	(-3.0)	(2.6)

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 decreased by 5.8% year-on-year in May, as its industrial demand plunged amid the COVID-19 outbreak.

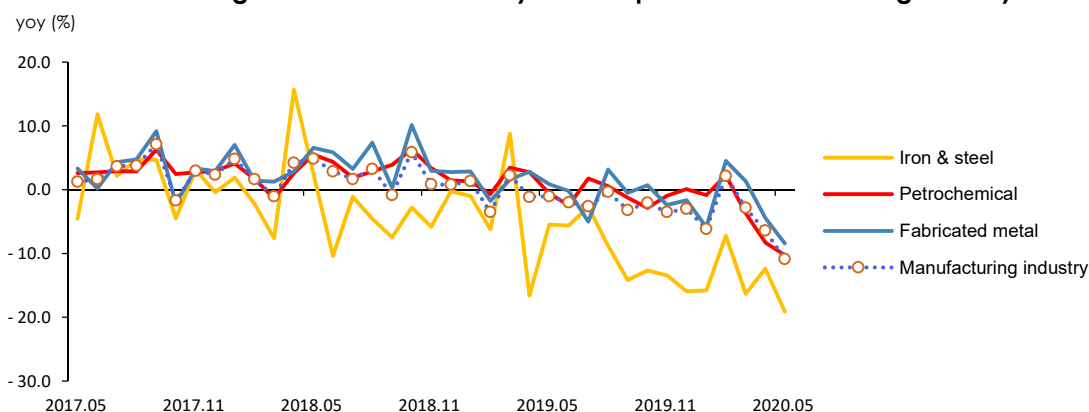
- Industrial electricity use recorded a double-digit fall (-10.1%) for the first time since January 2009 (-11.2%), which was attributed to a sharp decline in mining & manufacturing production, triggered by the COVID-19 pandemic.
- Buildings' electricity use remained flat on a year-on-year basis, even though it continued to grow fast in residential buildings amid decreased outdoor activities due to the coronavirus, as it declined in commercial buildings that account for a large share of buildings' total energy use.

► Electricity consumption by end-use sectors

	2019p	2020p		2020p			
		M1~5	M5	M1~5	M3	M4	M5
Electricity (TWh)	520.5	219.2	40.7	212.5	42.9	40.5	38.3
	(-1.1)	(-0.6)	(0.4)	(-3.1)	(-0.5)	(-4.6)	(-5.8)
Industry	279.8	117.5	23.2	111.8	23.1	21.9	20.8
	(-1.4)	(-0.2)	(-0.5)	(-4.9)	(-2.8)	(-6.2)	(-10.1)
Transport	2.9	1.2	0.2	1.1	0.2	0.2	0.2
	(-2.0)	(-0.4)	(2.1)	(-8.0)	(-4.2)	(-4.0)	(-15.9)
Buildings	237.8	100.5	17.3	99.6	19.5	18.4	17.3
	(-0.7)	(-1.2)	(1.7)	(-0.9)	(2.4)	(-2.8)	(0.1)
Residential	70.5	28.6	5.2	29.9	5.9	5.9	5.6
	(-0.3)	(1.1)	(2.1)	(4.7)	(9.8)	(5.8)	(6.7)
Commercial	135.2	58.3	9.7	56.7	11.1	10.1	9.5
	(-0.9)	(-2.0)	(2.4)	(-2.7)	(0.9)	(-5.1)	(-2.4)

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

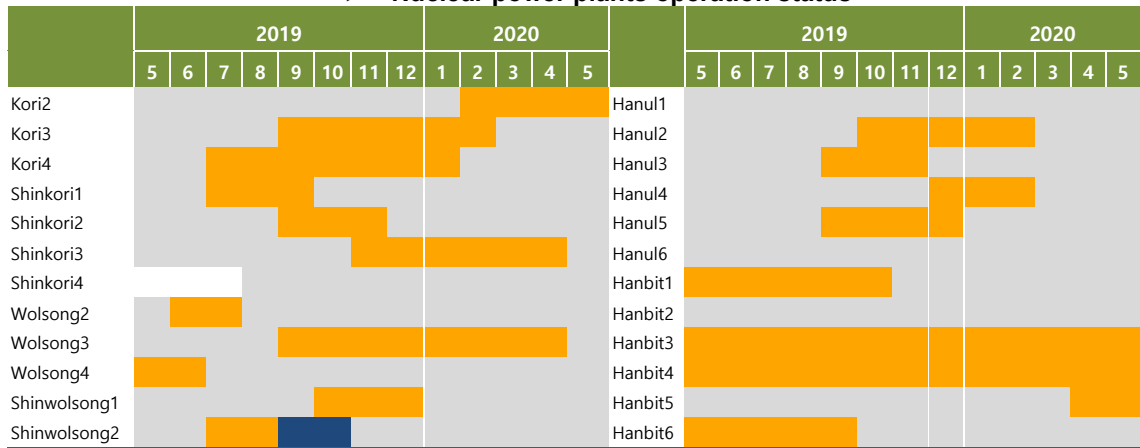
► The growth rate of electricity consumption in manufacturing industry



9. Nuclear

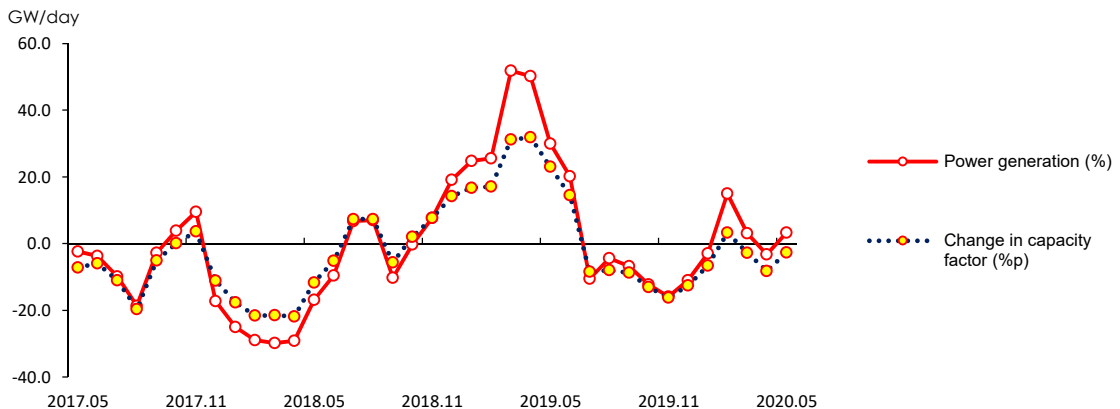
- The total nuclear generation was up 3.3% year-on-year in May despite a drop in capacity factor, as nuclear installed capacity increased.
- The average capacity factor at nuclear power plants dropped by 2.7%p to 88.2% due to high base effect of the same month last year (+23.0%p), while its installed capacity grew by 6.4% following the commissioning of Shinkori unit 4 (1.4GW, Aug. 2019).
- Nuclear energy's share of the total power generation was up 3.4%p year-on-year to 36.7% in May.

► Nuclear power plants operation status



Notes: ■ normal operation, ■ prevented maintenance, ■ unscheduled shutdown

► The growth rate of nuclear generation & average capacity factor



10. Heat and Renewable energy

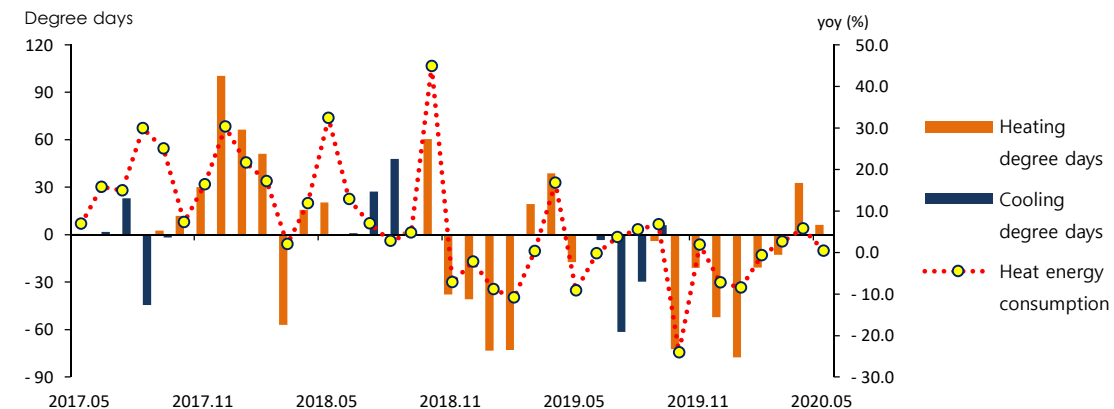
□ **Heat energy use increased by 0.4% year-on-year in May, which was influenced by the increased number of heating degree days and longer stay at home.**

- Heat energy use kept decreasing in the commercial & public sectors partly due to sluggish service businesses amid the COVID-19 pandemic, and on the contrary, it kept increasing in the residential sector (1.0%) because of the longer stay at home, and consequently, the total heat energy use slightly increased on a year-on-year basis.

□ **Renewable energy generation was down 13.0% year-on-year in May, because some energy sources were excluded from the renewable category, and solar PV generation grew more slowly.**

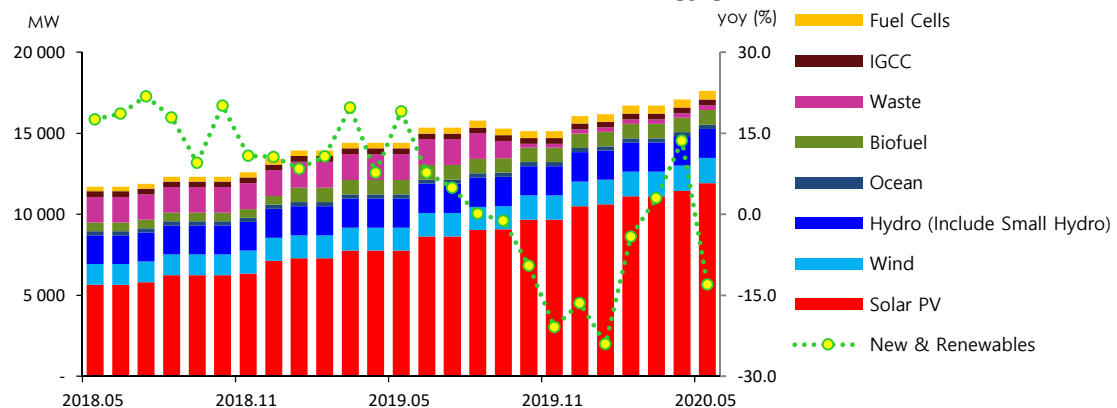
- The total renewable generation declined for the first time in three months, as the installed capacity of and power generation from waste energy plunged after it was excluded from the renewable category (Oct. 2019), and solar PV generation grew at slower pace compared to the addition of new capacity.

► Heat energy consumption by sector and the growth rate of total heat energy consumption



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.).

► New & renewable energy generation capacity by source and the growth rate of total new & renewable energy generation



11. Industry

□ Industrial energy use dropped by 4.7% year-on-year in May, as COVID-19 dealt a blow to the sector.

- Industrial energy use decreased, as the mining & manufacturing production has been down for two consecutive months, especially in the automobile and machinery & equipment sectors, owing to the sluggish exports as a result of lower global demand amid the COVID-19 pandemic and weak domestic demand.

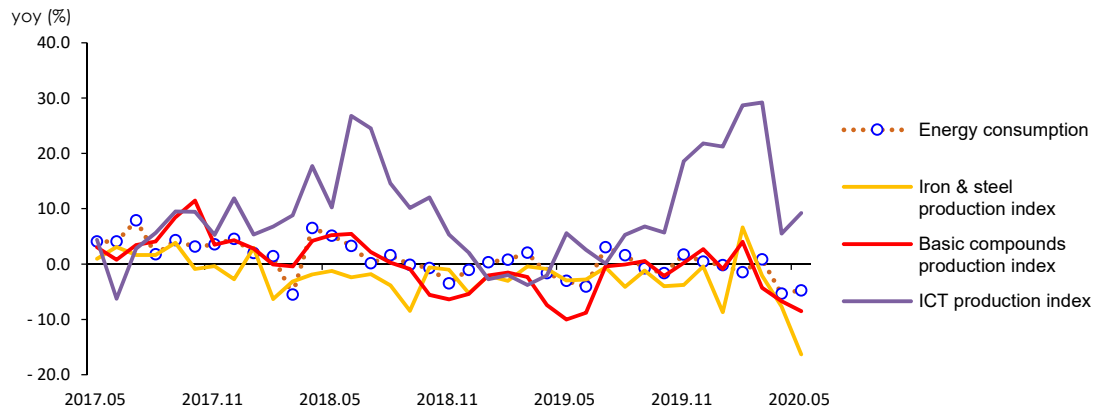
► Industrial energy consumption

	2019p	M1~5		2020p			
			M5	M1~5	M3	M4	M5
Industry (Mtoe)	142.7	59.1	11.8	57.9	11.9	11.0	11.2
	(-0.1)	(-0.3)	(-3.0)	(-2.2)	(0.9)	(-5.3)	(-4.7)
Petrochemical	72.2	29.3	5.9	29.9	6.1	5.5	5.9
	(0.1)	(-2.2)	(-5.4)	(1.9)	(6.0)	(-3.6)	(0.3)
- Naphtha	53.8	22.3	4.5	21.7	4.2	3.9	4.4
	(-2.8)	(-4.4)	(-6.3)	(-2.6)	(-3.0)	(-8.2)	(-2.1)
Iron & Steel	28.8	12.0	2.4	11.2	2.4	2.1	2.1
	(-0.0)	(1.7)	(0.0)	(-6.6)	(-3.7)	(-12.6)	(-13.3)
-Coking coal	24.4	10.1	2.0	9.5	2.0	1.8	1.8
	(1.0)	(2.8)	(0.6)	(-5.5)	(-1.8)	(-13.1)	(-11.6)
Fabricated metal	11.4	4.9	0.9	4.8	1.0	0.9	0.9
	(-0.0)	(1.1)	(1.4)	(-2.6)	(3.1)	(-3.0)	(-7.7)
Share of feedstock (%)	58.5	58.1	58.8	58.4	58.2	56.8	60.3

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

Source: Monthly Energy Statistics

► Industrial energy consumption & production index



12. Transport

□ Transport energy use marked a year-on-year growth of 10.8% in May following the easing of quarantine guidelines.

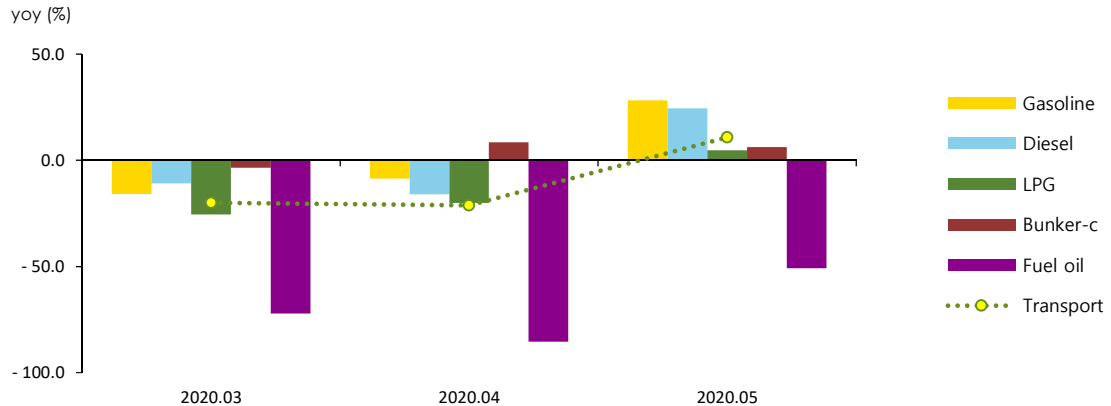
- As the COVID-19 outbreak was appeared to be well contained, the 'social distancing' measure ended on May 6th and the 'distancing in daily life' measure was implemented, which led to the increased passenger travel demand in the road transport sector and consequently, the sector's energy use was up 21.4% year-on-year.

► The growth rate of petroleum consumption in the transport sector

	2019p			2020p			
		M1~5	M5	M1~5	M3	M4	M5
Transport (Mtoe)	42.6	17.7	3.3	15.8	2.9	2.9	3.6
	(-0.9)	(1.5)	(-8.3)	(-10.8)	(-20.0)	(-21.3)	(10.8)
Road	34.7	14.3	2.6	13.2	2.5	2.6	3.1
	(0.9)	(3.3)	(-9.7)	(-7.5)	(-14.5)	(-14.6)	(21.4)
Navigation	2.6	1.2	0.2	1.2	0.2	0.2	0.3
	(-19.6)	(-13.7)	(-7.8)	(4.7)	(1.8)	(7.0)	(8.3)
Aviation	4.9	2.1	0.4	1.2	0.1	0.1	0.2
	(-1.7)	(-0.5)	(0.0)	(-42.9)	(-72.0)	(-85.4)	(-50.8)
Rail	0.3	0.1	0.0	0.1	0.0	0.0	0.0
	(-2.9)	(-1.3)	(0.5)	(-7.9)	(-5.0)	(-3.2)	(-10.5)

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

► The growth rates of energy & major petroleum product consumption in the transport sector



13. Buildings

□ **Buildings' energy use posted a year-on-year growth of 8.1% in May, led by the residential sector with the increased number of heating degree days and due to base effect.**

- Buildings' energy use increased, led by residential buildings, as the number of heating degree days increased, and people stayed at home for longer time due to the coronavirus, and especially petroleum use increased, as the use of kerosene surged due to base effect of the same period last year.
- Energy use in residential buildings went up by 16.4% even after the eased 'distancing in daily life' measure was implemented, as the use of all major energy sources increased except coal due to more hours spent at home with increased remote working.
- Energy use in commercial & public buildings started an upward move, as petroleum use surged (41.9%) due to base effect, even though city gas, electricity and heat energy use declined (-17.6%, -2.8%, -3.1%) owing to a prolonged slowdown in production activity, particularly in the face-to-face service sector, in the midst of the COVID-19 pandemic.

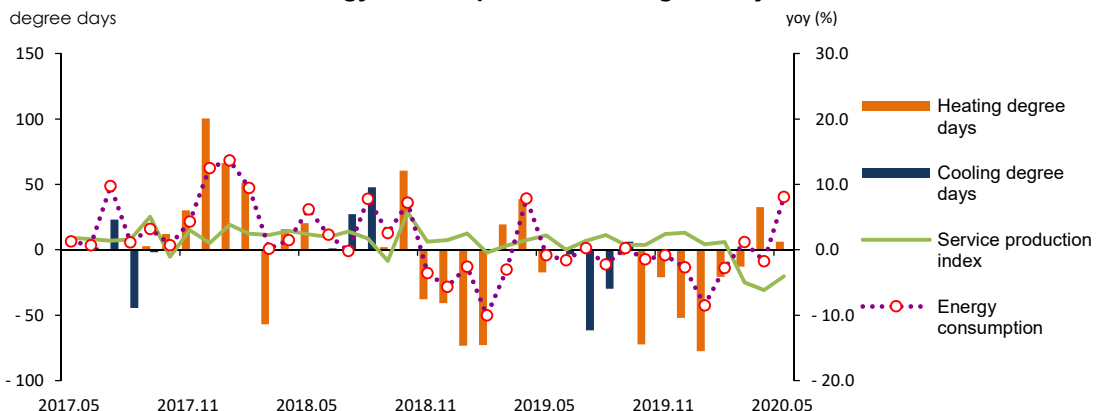
► Energy consumption in buildings

	2019p			2020p			
		M1~5	M5	M1~5	M3	M4	M5
Buildings (Mtoe)	46.0	22.4	2.9	22.0	4.4	3.7	3.1
	(-2.0)	(-2.8)	(-0.8)	(-2.0)	(1.2)	(-1.7)	(8.1)
Residential	22.6	12.1	1.3	12.1	2.5	2.0	1.5
	(-3.6)	(-3.3)	(-1.9)	(-0.2)	(4.1)	(4.5)	(16.4)
Commercial	17.8	7.9	1.2	7.5	1.5	1.3	1.2
	(-0.3)	(-1.5)	(-0.1)	(-5.1)	(-2.6)	(-8.9)	(-0.1)
Public-others	5.5	2.4	0.4	2.3	0.5	0.4	0.4
	(-1.2)	(-4.2)	(0.5)	(-0.9)	(-1.4)	(-5.9)	(7.1)
Heating degree days	2 342.9	1 511.5	20.3	1 439.3	312.2	213.5	26.5
	(-9.8)	(-6.5)	(-46.0)	(-4.8)	(-3.9)	(18.1)	(30.5)
Cooling degree days	120.4	-	-	-	-	-	-
	(-42.4)	-	-	-	-	-	-

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

Source: Monthly Energy Statistics

► Energy consumption in buildings & major indicators



14. Transformation

□ The total power generation and fuel input fell by 6.2% and 4.6% respectively in May compared to the same month last year as a result of a sharp drop in electricity use.

- Electricity use was down nearly 6%, and baseload generation made a small increase, and accordingly, gas-fired generation plunged.
- Coal and nuclear energy's share of the total power generation were up 1.5%p to 35.3% and 3.4%p to 36.7% respectively, while the share of gas was down 5.6%p to 18.2%.

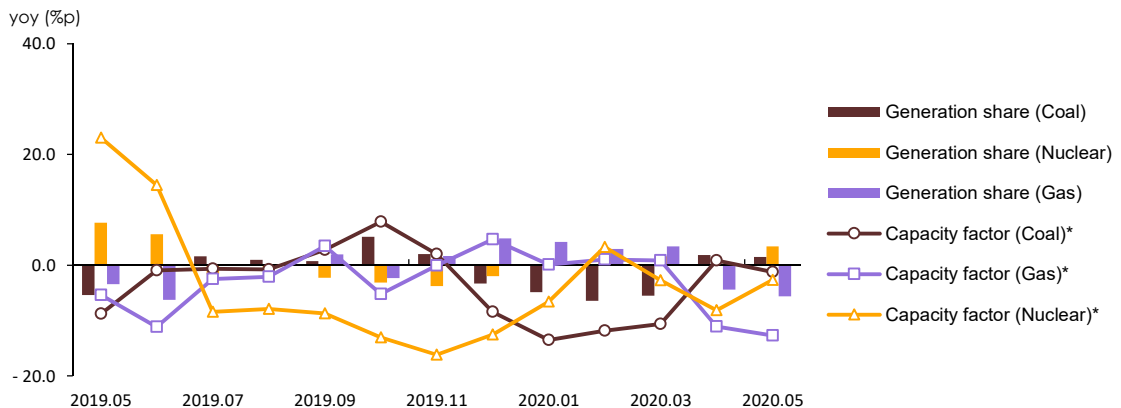
► Energy consumption in the power generation sector

	2019p			2020p			
		M1~5	M5	M1~5	M3	M4	M5
Input (Mtoe)	116.6	48.2	9.1	46.0	9.3	8.7	8.7
	(-1.7)	(-0.4)	(-0.4)	(-4.4)	(-4.4)	(-3.8)	(-4.6)
Coal	50.1	19.1	3.2	16.5	3.0	3.1	3.1
	(-7.6)	(-15.1)	(-17.2)	(-13.7)	(-19.5)	(-0.2)	(-4.3)
Oil	0.8	0.4	0.0	0.1	0.0	0.0	0.0
	(-39.3)	(-39.4)	(-14.7)	(-70.9)	(-88.6)	(-74.9)	(-69.3)
Gas	24.4	10.2	1.8	10.3	2.3	1.6	1.4
	(-2.9)	(-6.6)	(-10.1)	(1.0)	(11.7)	(-19.2)	(-20.6)
Nuclear	31.1	14.1	3.1	14.5	3.1	2.9	3.2
	(9.3)	(36.2)	(29.9)	(2.6)	(3.1)	(-3.3)	(3.3)
Hydro/other renewables	10.2	4.3	0.9	4.6	1.0	1.0	0.9
	(7.2)	(12.2)	(14.9)	(7.6)	(12.1)	(23.3)	(1.8)

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

Source: Monthly Energy Statistics

► Power generation by major energy sources



<Appendix> Major indicators & statistics of energy supply and demand

Major Statistics & Indicators of the Economy

	2018	2019					2020			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
GDP (trillion won)	1 812.0 (2.9)	1 849.0 (2.0)	437.2 (1.8)	437.2 (1.8)	- (-)	- (-)	443.2 (1.4)	443.2 (1.4)	- (-)	- (-)
Private consumption	875.6 (3.2)	890.2 (1.7)	222.6 (1.4)	222.6 (1.4)	- (-)	- (-)	212.0 (-4.8)	212.0 (-4.8)	- (-)	- (-)
Facilities investment	166.3 (-2.3)	153.9 (-7.5)	36.5 (-17.4)	36.5 (-17.4)	- (-)	- (-)	39.2 (7.3)	39.2 (7.3)	- (-)	- (-)
Construction investment	269.8 (-4.6)	262.9 (-2.5)	52.3 (-8.1)	52.3 (-8.1)	- (-)	- (-)	54.5 (4.2)	54.5 (4.2)	- (-)	- (-)
Consumer price index (2015=100)	104.5	104.9	104.7	104.5	104.9	105.1	105.4	105.5	105.0	104.7
USD to KRW exchange rate (won)	1 100.2	1 165.4	1 139.9	1 130.7	1 141.0	1 183.3	1 206.4	1 220.1	1 225.2	1 228.7
Benchmark rate (%)	1.5	1.6	1.8	1.8	1.8	1.8	0.9	0.8	0.8	0.5
Coincident composite index (2015=100)	110.1	111.7	110.9	110.8	111.0	111.4	112.1	112.2	110.9	110.1
Mining & manufacturing production index (2015=100)	106.4	106.3	103.1	105.7	106.8	108.2	103.0	113.8	101.5	97.6
Manufacturing operation ratio index (2015=100)	98.8	98.5	95.9	98.3	100.1	101.8	92.7	103.4	91.0	87.5
Average temperature	13.0	13.5	8.2	7.5	12.0	18.6	8.6	7.9	10.9	17.7
- year-on-year difference	- 0.1	0.5	0.8	- 0.6	- 1.3	0.8	0.4	0.4	- 1.1	- 0.9
Heating degree days	2 597.8 (3.2)	2 342.9 (-9.8)	1 511.5 (-6.5)	325.0 (6.3)	180.8 (27.2)	20.3 (-46.0)	1 439.3 (-4.8)	312.2 (-3.9)	213.5 (18.1)	26.5 (30.5)
Cooling degree days	209.0 (57.5)	120.4 (-42.4)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Energy intensity	0.17 (-1.0)	0.17 (-3.2)	0.18 (-2.5)	0.18 (-2.5)	- (-)	- (-)	0.17 (-5.5)	0.17 (-5.5)	- (-)	- (-)
Per capita consumption										
oil (bbl)	18.1 (-1.0)	18.0 (-0.6)	7.4 (-2.3)	1.5 (-1.7)	1.5 (-1.3)	1.4 (-7.3)	7.2 (-2.8)	1.4 (-5.2)	1.3 (-9.2)	1.5 (7.8)
Electricity (MWh)	10.2 (3.1)	10.1 (-1.3)	4.2 (-0.8)	0.8 (0.2)	0.8 (0.8)	0.8 (0.2)	4.1 (-3.2)	0.8 (-0.6)	0.8 (-4.8)	0.7 (-6.0)
City gas (1 000 m ³)	0.5 (6.9)	0.5 (-4.3)	0.2 (-3.0)	0.0 (-2.8)	0.0 (10.3)	0.0 (1.3)	0.2 (-6.5)	0.0 (-3.1)	0.0 (-8.8)	0.0 (-10.6)
Total energy (toe)	6.0 (1.3)	5.9 (-1.4)	2.5 (-1.0)	0.5 (0.3)	0.5 (1.3)	0.5 (-3.5)	2.4 (-4.2)	0.5 (-4.1)	0.4 (-6.6)	0.4 (-1.3)

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 Ratio & Output by Sectors

(2015=100)

	[2015=100]									
	2018	2019					2020			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industrial production index										
All industry	107.5 (1.6)	108.1 (0.5)	105.2 (-0.1)	108.4 (-1.0)	107.8 (0.7)	109.1 (1.4)	103.9 (-1.3)	109.4 (0.9)	102.2 (-5.2)	102.9 (-5.7)
Mining & manufacturing	106.4 (1.5)	106.3 (-0.0)	103.1 (-1.2)	105.7 (-2.5)	106.8 (0.4)	108.2 (0.7)	103.0 (-0.1)	113.8 (7.7)	101.5 (-5.0)	97.6 (-9.8)
Semiconductor	168.4 (21.2)	188.1 (11.7)	158.2 (4.9)	159.4 (0.4)	164.4 (1.2)	177.7 (12.1)	212.9 (34.6)	231.6 (45.3)	192.8 (17.3)	225.8 (27.1)
Iron & steel	100.5 (-2.7)	98.3 (-2.2)	99.3 (-1.9)	101.4 (-0.4)	100.2 (-0.9)	101.8 (-3.0)	93.4 (-5.9)	99.3 (-2.1)	92.5 (-7.7)	85.2 (-16.3)
Cement	100.0 (-8.8)	93.8 (-6.2)	92.2 (-5.2)	99.1 (-8.2)	106.2 (-4.4)	106.7 (-6.6)	83.0 (-10.0)	92.8 (-6.4)	97.3 (-8.4)	86.7 (-18.7)
Basic compound	110.4 (0.1)	107.5 (-2.6)	106.4 (-4.7)	109.3 (-2.3)	102.8 (-7.4)	103.3 (-10.0)	102.9 (-3.3)	104.6 (-4.3)	95.9 (-6.7)	94.5 (-8.5)
Transport equipment	93.9 (-1.2)	93.1 (-0.9)	94.9 (3.0)	97.7 (-0.7)	101.7 (3.7)	101.1 (3.3)	78.1 (-17.7)	101.7 (4.1)	81.7 (-19.7)	65.0 (-35.7)
Electric & electronic	106.5 (-0.2)	107.7 (1.2)	103.6 (0.7)	107.1 (-1.1)	108.5 (3.8)	109.5 (3.5)	99.5 (-4.0)	110.7 (3.4)	101.0 (-6.9)	93.2 (-14.9)
Service	106.9 (2.2)	108.4 (1.4)	106.2 (1.3)	108.7 (0.6)	107.7 (1.5)	109.5 (2.2)	103.4 (-2.7)	103.3 (-5.0)	101.1 (-6.1)	105.1 (-4.0)
Wholesale and retail	105.0 (1.8)	104.6 (-0.4)	103.8 (-0.4)	107.9 (-1.6)	105.5 (-0.8)	108.1 (1.2)	99.4 (-4.3)	100.9 (-6.5)	97.6 (-7.5)	103.2 (-4.5)
Food & Accommodation	98.5 (-1.9)	97.5 (-1.0)	95.1 (-1.0)	95.1 (-2.9)	96.0 (-0.9)	100.7 (-0.5)	78.4 (-17.6)	64.2 (-32.5)	72.4 (-24.6)	86.7 (-13.9)
Operating ratio index										
Iron & steel - Pig iron	47 124.3 (0.1)	47 520.7 (0.8)	19 662.2 (3.3)	4 063.6 (5.0)	3 853.9 (3.5)	4 069.6 (12.6)	17 987.3 (-8.5)	3 678.5 (-9.5)	3 290.0 (-14.6)	3 483.6 (-14.4)
Iron & steel - Crude steel	72 464.0 (2.0)	71 411.9 (-1.5)	30 072.8 (0.4)	6 274.6 (2.9)	6 001.3 (1.8)	6 274.5 (0.7)	27 403.6 (-8.9)	5 783.6 (-7.8)	5 078.9 (-15.4)	5 383.9 (-14.2)
Petrochemical - Basic oil	31 139.2 (1.9)	31 804.1 (2.1)	12 804.5 (-0.8)	2 597.5 (4.2)	2 395.8 (-7.9)	2 452.4 (-10.2)	13 211.5 (3.2)	2 618.9 (0.8)	2 483.2 (3.6)	2 566.3 (4.6)
Petrochemical - Intermediate raw material	16 981.8 (2.9)	16 014.0 (-5.7)	6 638.1 (-4.6)	1 314.6 (-5.8)	1 255.1 (-7.7)	1 226.6 (-11.4)	6 719.6 (1.2)	1 337.7 (1.8)	1 286.6 (2.5)	1 267.9 (3.4)
Petrochemical - 3 major products	21 793.6 (-1.1)	21 584.7 (-1.0)	9 032.2 (-1.4)	1 864.2 (-1.3)	1 648.7 (-10.7)	1 819.5 (2.0)	9 103.8 (0.8)	1 861.6 (-0.1)	1 753.9 (6.4)	1 768.9 (-2.8)
The number of cars	4 028.7 (-2.1)	3 950.6 (-1.9)	1 695.5 (1.6)	345.8 (-4.9)	371.9 (5.0)	366.2 (4.1)	1 330.5 (-21.5)	369.1 (6.7)	289.5 (-22.2)	231.1 (-36.9)

Note: p means provisional
Source: Monthly energy statistics

International Energy Prices

	2018	2019					2020			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	57.4 (-13.2)	60.9 (-13.0)	54.7 (-18.7)	57.6 (-18.5)	37.5 (-34.6)	28.5 (-53.1)	38.3 (-30.0)	40.8 (-29.2)
Dubai	69.4 (30.5)	63.5 (-8.5)	65.1 (-5.2)	69.4 (-6.8)	61.8 (-16.1)	63.3 (-13.5)	41.0 (-37.0)	30.5 (-56.1)	40.8 (-34.0)	43.3 (-31.6)
Brent	71.5 (30.5)	64.2 (-10.3)	65.8 (-8.0)	70.3 (-8.7)	63.0 (-17.0)	64.2 (-14.3)	42.3 (-35.8)	32.4 (-53.9)	40.8 (-35.3)	43.2 (-32.7)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	66.3 (-4.0)	71.1 (-0.2)	68.3 (-8.1)	65.9 (-12.2)	45.1 (-32.1)	26.2 (-63.2)	29.8 (-56.3)	39.2 (-40.5)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	10.8 (7.4)	10.1 (-1.0)	10.0 (-3.8)	10.1 (-3.0)	9.7 (-10.1)	10.1 (-0.7)	9.0 (-10.7)	9.0 (-11.4)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	526.7 (5.9)	481.5 (-5.6)	470.3 (-7.7)	488.3 (-6.0)	449.7 (-14.6)	467.9 (-2.8)	442.2 (-6.0)	381.3 (-21.9)
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	85.8 (-19.0)	82.3 (-21.8)	72.5 (-36.6)	72.1 (-39.7)	59.8 (-30.3)	52.5 (-36.2)	52.2 (-28.0)	51.6 (-28.5)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	107.9 (-5.2)	111.8 (-2.6)	109.4 (-4.3)	96.6 (-14.1)	82.6 (-23.5)	83.6 (-25.3)	75.4 (-31.1)	68.8 (-28.8)
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	71.4 (-12.0)	76.3 (-12.9)	67.6 (-19.2)	73.7 (-11.3)	45.4 (-36.4)	33.5 (-56.2)	45.3 (-32.9)	46.6 (-36.7)
Kerosene	84.8 (29.8)	77.3 (-8.9)	78.1 (-7.2)	81.5 (-9.3)	74.6 (-14.2)	78.4 (-10.2)	44.7 (-42.7)	28.9 (-64.6)	41.2 (-44.8)	43.9 (-44.0)
Diesel	84.9 (27.9)	78.2 (-7.9)	78.9 (-5.9)	82.7 (-8.6)	75.1 (-14.0)	78.8 (-9.3)	50.3 (-36.2)	36.1 (-56.4)	46.6 (-38.0)	50.2 (-36.4)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	63.5 (0.7)	64.4 (-5.3)	59.5 (-14.0)	66.1 (-6.1)	36.6 (-42.4)	26.7 (-58.6)	36.9 (-38.0)	39.4 (-40.5)
Propane	542.1 (16.0)	434.6 (-19.8)	457.9 (-13.0)	525.0 (5.0)	430.0 (-23.2)	375.0 (-32.4)	397.1 (-13.3)	340.0 (-35.2)	350.0 (-18.6)	360.0 (-4.0)
Butane	539.2 (7.5)	441.7 (-18.1)	463.6 (-11.0)	530.0 (5.0)	415.0 (-25.9)	355.0 (-37.7)	409.3 (-11.7)	340.0 (-35.8)	330.0 (-20.5)	340.0 (-4.2)
Naphtha	67.0 (24.5)	56.9 (-15.1)	56.9 (-16.0)	60.0 (-19.5)	51.7 (-26.9)	55.6 (-22.9)	38.5 (-32.4)	26.3 (-56.1)	39.0 (-24.6)	43.5 (-21.8)

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.petroneet.co.kr, IMF (primary commodity price), Monthly energy statistics

Total Primary Energy Supply (TPES)

	2018	2019p					2020p			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Coal (Mton)	141.0 (0.9)	133.0 (-5.7)	52.5 (-9.8)	10.4 (-11.3)	9.3 (-11.9)	9.5 (-11.9)	46.3 (-11.8)	8.9 (-14.3)	8.9 (-4.1)	8.6 (-9.4)
- Coking coal excluded	106.4 (2.8)	98.0 (-7.8)	38.1 (-13.7)	7.4 (-16.2)	6.4 (-18.4)	6.6 (-16.4)	32.7 (-14.2)	6.0 (-19.3)	6.4 (0.1)	6.0 (-8.4)
Oil (Mbbbl)	931.8 (-0.6)	928.4 (-0.4)	382.8 (-2.1)	76.5 (-1.5)	75.6 (-1.1)	72.6 (-7.1)	372.4 (-2.7)	72.6 (-5.1)	68.8 (-9.1)	78.4 (7.9)
- Non-energy oil excluded	445.5 (0.4)	451.8 (1.4)	186.6 (-0.5)	38.0 (-0.5)	37.8 (5.7)	33.1 (-8.6)	176.8 (-5.3)	33.3 (-12.2)	32.8 (-13.1)	38.5 (16.1)
LNG (Mton)	42.3 (16.2)	40.9 (-3.2)	19.0 (-4.3)	3.8 (-3.9)	3.3 (2.2)	2.7 (-6.0)	18.5 (-2.5)	4.0 (3.6)	3.0 (-10.5)	2.3 (-16.1)
Hydro (TWh)	7.3 (3.9)	6.2 (-14.1)	2.5 (-5.3)	0.5 (-2.7)	0.5 (6.3)	0.5 (-31.8)	2.7 (5.5)	0.5 (18.4)	0.5 (-3.5)	0.6 (4.2)
Nuclear (TWh)	133.5 (-10.1)	145.9 (9.3)	66.2 (36.2)	14.0 (51.8)	14.1 (50.2)	14.8 (29.9)	68.0 (2.6)	14.5 (3.1)	13.7 (-3.3)	15.3 (3.3)
Others (Mtoe)	17.1 (8.0)	18.3 (6.7)	7.8 (10.4)	1.6 (14.7)	1.5 (5.1)	1.6 (14.8)	7.9 (2.5)	1.7 (4.0)	1.7 (11.0)	1.6 (-1.6)
TPES (Mtoe)	307.5 (1.8)	303.8 (-1.2)	128.3 (-0.8)	25.8 (0.5)	24.4 (1.5)	23.5 (-3.3)	123.0 (-4.1)	24.8 (-3.9)	22.8 (-6.5)	23.2 (-1.2)
- Non-energy oil excluded	247.1 (2.6)	244.4 (-1.1)	103.9 (-0.2)	21.0 (1.1)	19.7 (3.8)	18.6 (-2.7)	98.5 (-5.1)	19.8 (-5.8)	18.3 (-6.9)	18.2 (-1.9)
- Non-energy oil&coal excluded	222.9 (3.5)	220.0 (-1.3)	93.8 (-0.5)	19.0 (0.8)	17.6 (3.4)	16.5 (-3.1)	89.0 (-5.1)	17.8 (-6.2)	16.5 (-6.2)	16.4 (-0.7)

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

Share of TPES by Sources

(unit: %)

	2018	2019p					2020p			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Coal	28.2	27.0	25.3	24.8	23.7	25.1	23.4	22.3	24.2	23.1
- Coking coal excluded	20.3	19.0	17.5	16.9	15.3	16.5	15.7	14.2	16.4	15.4
Oil	38.5	38.7	37.9	37.7	39.4	39.1	38.3	37.2	38.1	42.8
- non-energy oil excluded	18.9	19.2	18.9	19.2	20.1	18.2	18.4	17.1	18.4	21.3
LNG	18.0	17.6	19.3	19.3	17.8	15.1	19.7	20.8	17.0	12.8
Hydro	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Nuclear	9.2	10.2	11.0	11.6	12.4	13.4	11.8	12.4	12.8	14.0
Others	5.6	6.0	6.0	6.2	6.3	6.8	6.5	6.8	7.5	6.7
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)

	2018	2019p					2020p			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industry	142.9 (0.7)	142.7 (-0.1)	59.1 (-0.3)	11.8 (2.0)	11.6 (-1.7)	11.8 (-3.0)	57.9 (-2.2)	11.9 (0.9)	11.0 (-5.3)	11.2 (-4.7)
Transport	43.0 (0.4)	42.6 (-0.9)	17.7 (1.5)	3.6 (0.8)	3.7 (5.7)	3.3 (-8.3)	15.8 (-10.8)	2.9 (-20.0)	2.9 (-21.3)	3.6 (10.8)
Residential	23.5 (4.4)	22.6 (-3.6)	12.1 (-3.3)	2.4 (-3.8)	1.9 (11.1)	1.3 (-1.9)	12.1 (-0.2)	2.5 (4.1)	2.0 (4.5)	1.5 (16.4)
Commercial	17.9 (2.9)	17.8 (-0.3)	7.9 (-1.5)	1.5 (-0.9)	1.4 (6.7)	1.2 (-0.1)	7.5 (-5.1)	1.5 (-2.6)	1.3 (-8.9)	1.2 (-0.1)
Public	5.6 (2.0)	5.5 (-1.2)	2.4 (-4.2)	0.5 (-5.8)	0.4 (-1.5)	0.4 (0.5)	2.3 (-0.9)	0.5 (-1.4)	0.4 (-5.9)	0.4 (7.1)
TFC	232.7 (1.2)	231.2 (-0.6)	99.2 (-0.6)	19.8 (0.7)	19.1 (1.5)	17.9 (-3.7)	95.6 (-3.7)	19.2 (-2.9)	17.7 (-7.7)	18.0 (0.1)
Coal (Mton)	49.2 (-2.3)	48.2 (-2.1)	20.2 (0.0)	4.1 (4.4)	4.0 (-0.8)	4.1 (-3.8)	18.4 (-8.7)	3.9 (-6.4)	3.6 (-9.1)	3.4 (-16.2)
Oil (Mbbl)	920.0 (-0.7)	920.3 (0.0)	378.7 (-1.5)	75.2 (-1.1)	74.9 (-1.5)	72.1 (-7.2)	370.2 (-2.2)	72.2 (-4.0)	68.4 (-8.7)	78.1 (8.3)
Electricity (TWh)	526.1 (3.6)	520.5 (-1.1)	219.2 (-0.6)	43.1 (0.4)	42.4 (1.0)	40.7 (0.4)	212.5 (-3.1)	42.9 (-0.5)	40.5 (-4.6)	38.3 (-5.8)
City gas (Bm³)	24.3 (7.4)	23.3 (-4.1)	12.4 (-2.8)	2.5 (-2.6)	2.1 (10.6)	1.5 (1.5)	11.6 (-6.4)	2.4 (-3.0)	1.9 (-8.6)	1.4 (-10.5)
Heat-others (1 000 toe)	11.8 (6.4)	11.9 (0.9)	5.5 (3.0)	1.1 (7.6)	1.0 (8.5)	0.9 (2.6)	5.4 (-2.4)	1.1 (-1.7)	1.0 (-1.9)	0.8 (-4.1)

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

Share of the Total Final Consumption by Sources

(unit: %)

	2018	2019p					2020p			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industry	61.4	61.7	59.6	59.8	60.7	65.8	60.5	62.1	62.3	62.5
Transport	18.5	18.4	17.8	18.3	19.6	18.3	16.5	15.1	16.7	20.3
Residential	10.1	9.8	12.2	11.9	10.0	7.0	12.7	12.8	11.4	8.1
Commercial	7.7	7.7	8.0	7.6	7.4	6.8	7.9	7.7	7.3	6.8
Public	2.4	2.4	2.4	2.3	2.3	2.2	2.4	2.4	2.3	2.3
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	13.9	13.8	13.4	13.8	13.9	15.0	12.9	13.4	13.6	12.7
Oil	50.2	50.4	48.4	48.2	49.7	50.8	48.9	47.8	48.9	55.2
Electricity	19.4	19.4	19.0	18.7	19.1	19.5	19.1	19.2	19.7	18.4
City gas	11.4	11.3	13.7	13.7	12.1	9.7	13.5	14.0	12.2	9.0
Heat-others	5.1	5.1	5.5	5.6	5.2	4.9	5.6	5.7	5.6	4.7

Note: p means provisional
Source: Monthly Energy Statistics

Statistics on Energy Production Facilities

	2017	2018	2019	2020p			M3	M4	M5
				M3	M4	M5			
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	125.3 (5.2)	119.8 (2.6)	119.8 (2.6)	119.8 (1.7)	125.9 (5.1)	126.3 (5.4)	126.8 (5.8)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	23.3 (6.4)	21.9 (-3.0)	21.9 (-3.0)	21.9 (-3.0)	23.3 (6.4)	23.3 (6.4)	23.3 (6.4)
Bituminous coal	36.1 (16.8)	36.4 (0.7)	36.4 (0.1)	36.4 (0.8)	36.4 (0.8)	36.4 (0.3)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)
Gas	37.9 n.a	37.9 (-0.0)	39.6 (4.5)	37.9 (1.5)	37.9 (1.5)	37.9 (0.2)	41.2 (8.5)	41.2 (8.5)	41.2 (8.5)
Refinery capacity (mil BPSD)	3.1 (1.3)	3.2 (3.2)	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -

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

Source: The monthly report on major electric power statistics

Statistics on Energy Consumption

	2017	2018	2019	2020p			M3	M4	M5
				M3	M4	M5			
The number of household demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.7 (2.8)	19.3 (3.0)	19.3 (2.8)	19.3 (2.8)	19.8 (2.4)	19.7 (2.4)	19.7 (2.4)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.7 (2.0)	23.3 (2.8)	23.3 (2.6)	23.4 (2.5)	23.8 (2.0)	23.9 (2.2)	23.9 (2.3)
- gasoline	10.4 (2.7)	10.6 (2.5)	11.0 (3.1)	10.7 (2.4)	10.7 (2.4)	10.8 (2.5)	11.0 (3.3)	11.1 (3.5)	11.2 (3.7)
- diesel	9.6 (4.4)	9.9 (3.7)	10.0 (0.3)	10.0 (3.2)	10.0 (2.7)	10.0 (2.4)	10.0 (-0.1)	9.9 (-0.1)	9.9 (-0.1)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-3.2)	2.0 (-3.1)	2.0 (-2.9)	2.0 (-0.7)	2.0 (-0.6)	2.0 (-0.6)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.5 (26.1)	0.4 (29.5)	0.4 (29.9)	0.4 (29.5)	0.5 (24.2)	0.5 (24.3)	0.5 (24.9)

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

Source: Monthly energy statistics

KEEI

MONTHLY **KOREA ENERGY TRENDS** (2020, NO.101)



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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