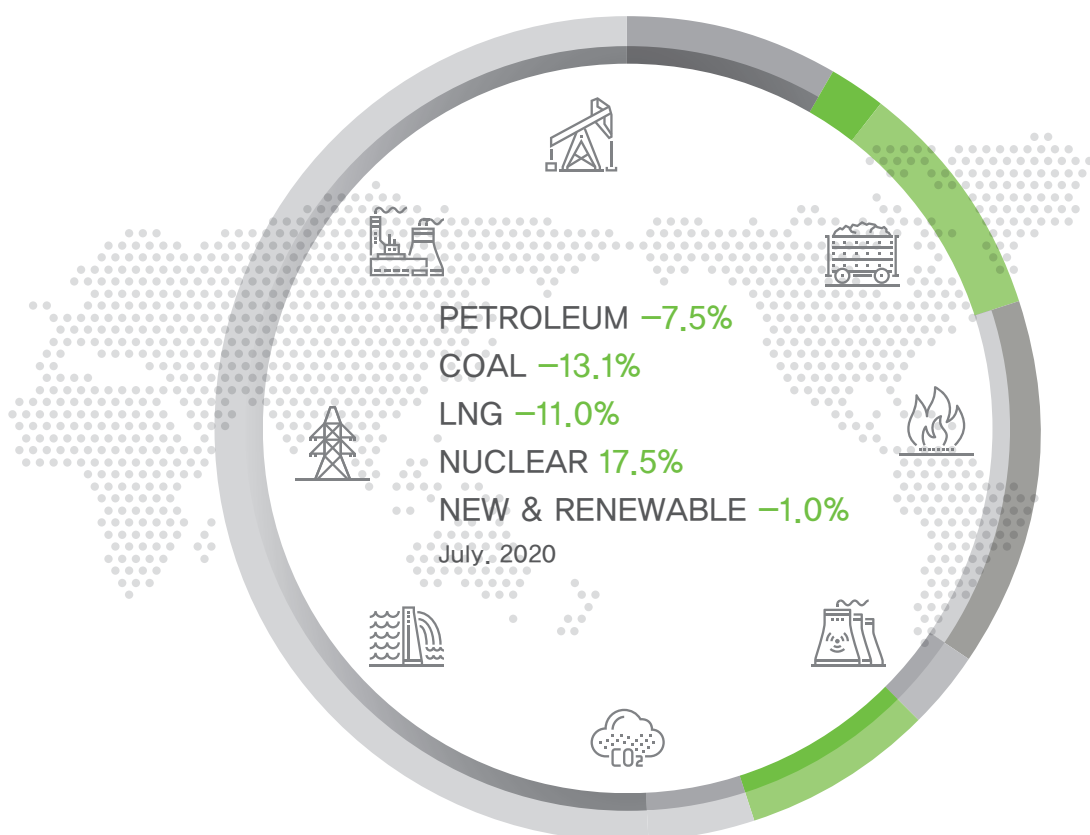


KEEI

MONTHLY KOREA ENERGY TRENDS

2020 / 10
KOREA ENERGY ECONOMICS INSTITUTE



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

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1. The Economy and the Industry

- **The mining & manufacturing production index dropped by 2.4% year-on-year in July, led by a drop in the basic chemical materials and iron & steel sectors, although the index increased in the semiconductor sector.**
 - The semiconductor production index continued to grow rapidly in July, posting a year-on-year growth of 17.0%, and its export value rose by 5.6%, as demand for mobile devices such as smartphones, which was sluggish in 1H, rebounded.
 - The production index of basic chemical materials was down 10.0% year-on-year, owing to the unscheduled maintenance at some facilities including the shutdown of Lotte Chemical's Daesan factory following an accident, although Hanwha Total expanded its naphtha cracking capacity (Sept. 2019).
 - The iron & steel production index declined by 14.9% year-on-year, as domestic demand was still weak, although the export volume dropped at a much slower rate thanks to the growing exports to China.
 - The automobile production index fell by 7.7% year-on-year, which was a slower rate of decline than the previous month, because the number of automobiles exported decreased at a much slower rate (-9.2%), and domestic sales kept growing. The number of automobiles produced was down 3.8%.
- **The service production index was down 1.2% year-on-year (in July), led by a drop in the wholesale & retail and restaurant & accommodations sectors where face-to-face service is provided.**
 - The service production index took a downward slide again, as the index fell more rapidly in the wholesale & retail sectors (-2.1%) and also dropped rapidly in the restaurant & accommodations (-9.2%) and art & sports & leisure (-30.0%) sectors, although the rate of decline was lower than the previous month amid a slowdown in the spread of COVID-19.

► **Major economic and industrial indicators**

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
GDP (trillion won)	1 849.0 (2.0)	898.4 (1.9)	- -	891.9 (-0.7)	- -	448.7 (-2.7)	- -
Total export (\$billion, customs clearance basis)	539.9 (-10.7)	314.9 (-9.6)	43.8 (-15.5)	283.4 (-10.0)	34.8 (-23.8)	39.2 (-10.9)	42.8 (-2.2)
Industrial production index (2015=100)	106.3 (-0.0)	104.5 (-0.9)	110.1 (1.6)	103.9 (-0.5)	97.7 (-9.7)	105.0 (-0.6)	107.5 (-2.4)
Semi-conductors	188.1 (11.7)	168.8 (5.1)	195.2 (4.1)	219.3 (29.9)	225.8 (27.1)	241.8 (23.9)	228.4 (17.0)
Basic chemical products	107.5 (-2.6)	106.5 (-4.7)	113.4 (-0.4)	101.4 (-4.8)	94.5 (-8.5)	93.3 (-7.2)	102.1 (-10.0)
Iron&Steel	98.3 (-2.2)	99.7 (-1.8)	102.4 (-0.6)	90.7 (-9.0)	85.1 (-16.4)	80.9 (-18.0)	87.1 (-14.9)
Cars	93.1 (-0.9)	95.5 (3.9)	100.9 (14.3)	80.5 (-15.8)	64.9 (-35.8)	79.6 (-14.6)	93.1 (-7.7)
Service production index (2015=100)	108.4 (1.4)	106.8 (1.1)	108.0 (1.4)	104.5 (-2.1)	105.1 (-4.0)	108.2 -	106.7 (-1.2)
Restaurant & Accommodation	97.5 (-1.0)	95.9 (-1.2)	99.4 (-2.5)	81.0 (-15.6)	86.6 (-14.0)	84.6 (-12.2)	90.3 (-9.2)
Wholesale & Retail	104.6 (-0.4)	103.7 (-0.5)	102.7 (-0.6)	100.2 (-3.4)	103.3 (-4.4)	103.7 (-0.1)	100.5 (-2.1)
Restaurant & Accommodation	97.5 (-1.0)	95.9 (-1.2)	99.4 (-2.5)	81.0 (-15.6)	86.6 (-14.0)	84.6 (-12.2)	90.3 (-9.2)

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

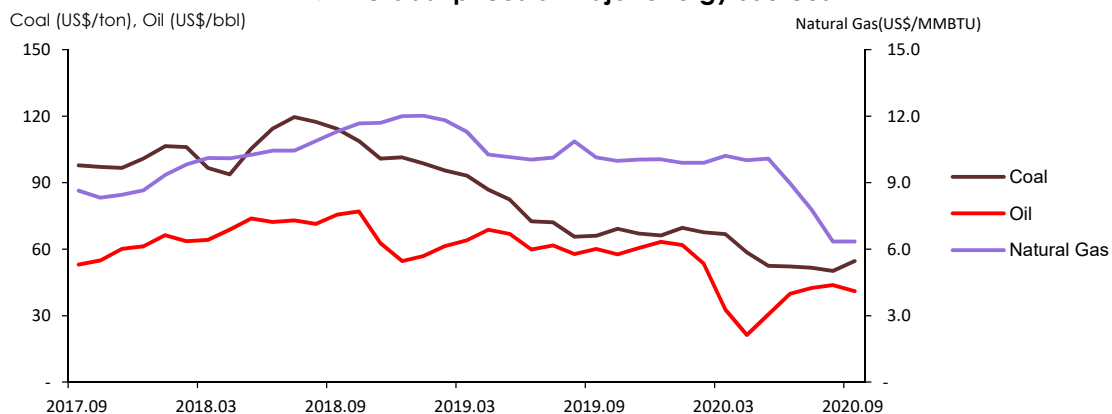
- **Global oil price went down by 6.4% in September than the previous month due to another wave of COVID-19 and concerns over weak petroleum demand, and it was down 31.8% on a year-on-year basis.**
 - Global oil price declined in September than a month ago owing to the repeated COVID-19 outbreak in major countries, Saudi Arabia's reduction in official selling price of crude oil in October, concerns over weak petroleum demand in the U.S., although such price decline was partially offset by disruptions in the US crude oil production, which was caused by a hurricane.

► Global energy prices

	2018	2019				2020		
			M7	M8	M9	M7	M8	M9
Crude oil (US\$/bbl)	68.6 (29.5)	61.6 (-10.2)	61.7 (-15.4)	57.8 (-19.0)	60.1 (-20.3)	42.4 (-31.2)	43.8 (-24.2)	41.0 (-31.8)
Natural gas (US\$/MMBTU)	10.7 (24.0)	10.6 (-1.1)	10.1 (-3.0)	10.9 (-0.1)	10.1 (-10.3)	7.8 (-23.1)	6.3 (-41.6)	6.3 (-37.5)
Coal (US\$/ton)	107.0 (20.9)	77.9 (-27.3)	72.1 (-39.7)	65.6 (-44.1)	66.0 (-42.2)	51.6 (-28.5)	50.1 (-23.5)	54.6 (-17.2)

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 slightly decreased in September from the previous month in line with the global price trend. On a year-on-year basis, however, they have been on a rapid downward spiral.**
 - The prices of gasoline and diesel at gas stations dropped by 0.6% and 0.8% respectively than the prior month, which partly reflects the global oil price decrease that started in early September.
 - Bunker-C oil price was up 5.5% in August than a month ago, affected by global oil price increase, however it was down 33.1% on a year-on-year basis due to the ongoing impact of weak demand that was resulted from the International Maritime Organization's environmental regulation.
- **Propane and butane prices were up 0.8% and 1.5% in September compared to the previous month. On a year-on-year basis, the prices went down by 0.6% and 1.7% respectively.**
 - Saudi Aramco's global propane and butane prices were raised in August (1.4%, 1.5% respectively), and accordingly, major domestic LPG suppliers raised their prices by KRW20/kg, which led to a slight month on month growth in domestic prices.

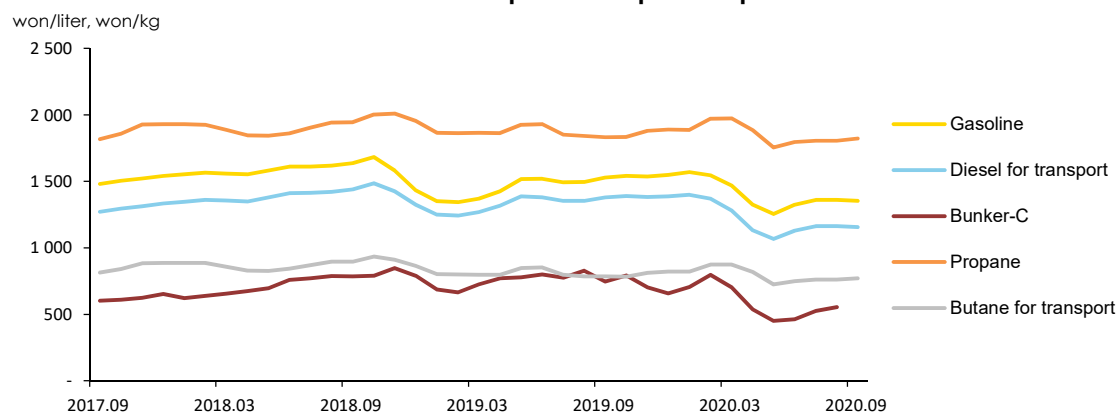
► Domestic petroleum product prices

	2018	2019				2020			
			M7	M8	M9		M7	M8	M9
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 491.5 (-7.4)	1 493.7 (-7.7)	1 529.3 (-6.6)	1 360.3 (-8.8)	1 361.1 (-8.9)	1 352.5 (-11.6)	
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 352.8 (-4.2)	1 351.9 (-4.7)	1 379.8 (-4.1)	1 162.9 (-14.0)	1 163.6 (-13.9)	1 154.5 (-16.3)	
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	776.5 (0.6)	827.4 (4.9)	747.4 (-4.7)	524.7 (-32.4)	553.7 (-33.1)	-	
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 851.4 (-2.7)	1 841.1 (-5.2)	1 831.9 (-5.8)	1 806.0 (-2.5)	1 806.0 (-1.9)	1 821.0 (-0.6)	
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	796.8 (-8.3)	785.4 (-12.2)	784.7 (-12.4)	759.9 (-4.6)	760.4 (-3.2)	771.5 (-1.7)	

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 (%)

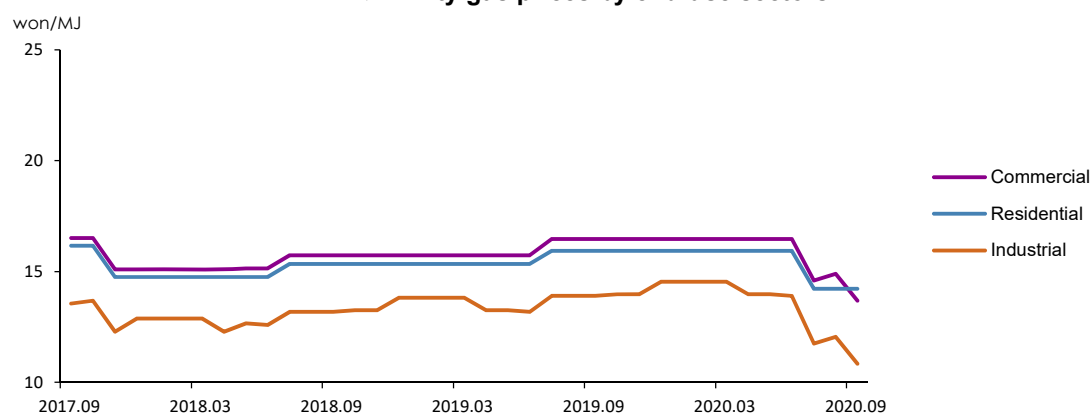
Source: www.opinet.co.kr

► Domestic petroleum product prices



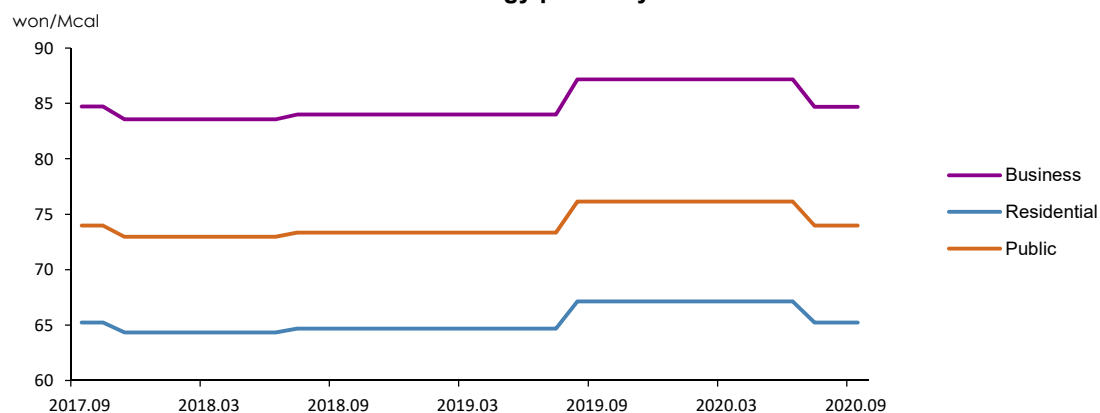
- **City gas prices for commercial and industrial use went down by 8.2% and 10.1% respectively, and that for residential use remained flat compared to the prior month.**
 - City gas prices for commercial and industrial use, which are adjusted every month, fell by 8.2% and 10.1% respectively as a result of a drop in global oil price and LNG importing price in addition to the impact of COVID-19, while city gas price for residential use was the same as the previous month.
- **Heat energy price has been flat until September since the price reduction in July, but it was down 2.8% on a year-on-year basis.**
 - Heat energy price was cut in July in line with the city gas price cut, though the cut was less than that of city gas, as it reflected actual fuel cost and increased fixed cost.

► 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



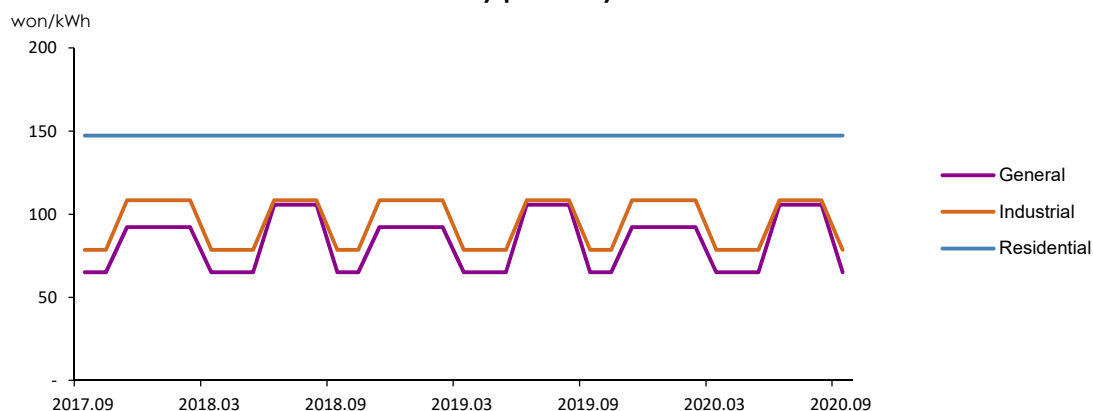
□ **Electricity prices for general and industrial use declined after the price adjustment to the spring/autumn season, and the residential electricity price was also the same as the previous month.**

- Electricity prices for general and industrial use, which are based on time-of-use pricing, went down by 38.3% and 27.6% respectively, after the price adjustment from summer (June-Aug) to spring/autumn (Mar-May, Sept-Oct) season.
- Residential electricity price has been flat since the progressive pricing scheme was restructured from six to three stages in December 2016.

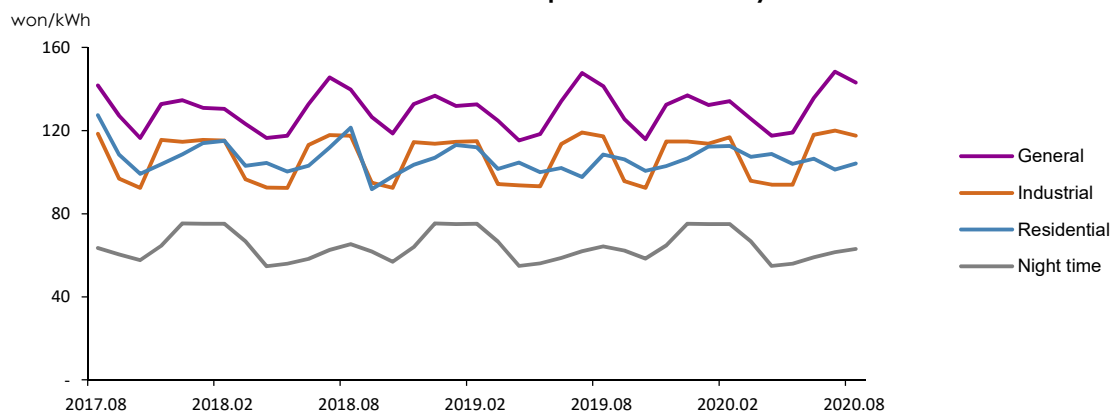
□ **The unit sales prices of electricity for general and industrial use declined in August than a month ago, while that for residential use increased due to growing electricity consumption.**

- The unit sales price of electricity for residential use was up 2.6% in August from the previous month, as the electricity use ceilings in the progressive pricing scheme were temporarily raised between July and August, and consequently, electricity consumption increased in August, boosting sales revenue.
- The unit sales prices of electricity for general and industrial use declined by 3.5% and 2.1% respectively than a month ago, following the price adjustment to the spring/autumn season.

► **Electricity prices by end-use sectors**



► **Unit sales price of electricity**



3. Energy Supply

- **The total energy import volume dropped by 9.3% year-on-year in July, led by a drop in bituminous coal and LNG consumption.**
 - The import volume of bituminous coal and LNG fell by 10.8% and 21.5% in own unit of energy, as coal and gas-fired generation decreased amid falling power demand.
 - The import volume of crude oil was up 0.1%, while that of petroleum products was down 0.9% year-on-year.
- **Renewable & ‘other’ energy generation declined by 1.0% year-on-year (in July), as solar PV generation grew more slowly, and wind power generation decreased.**
 - Despite increased installed capacity, solar PV generation grew at a slower rate of 18.4% year-on-year owing to the decreased amount of sunshine during the rainy season, and wind power generation fell by 16.4% as a result of the curtailment due to strong winds.
 - Renewable energy generation except ‘other’ energy (waste) posted a year-on-year growth of 16.9% in July, however, it dropped by 3.3%p compared to the previous month.

► Import and domestic production of energy

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Import volume							
Crude oil (Mbbbl)	1 071.9	630.6	86.3	585.3	78.8	74.7	86.4
	(-4.0)	(-3.6)	(-10.7)	(-7.2)	(-6.3)	(-12.9)	(0.1)
Petroleum product (Mbbbl)	352.1	191.8	32.1	219.5	30.4	29.7	31.8
	(3.1)	(-2.7)	(12.3)	(14.4)	(6.7)	(5.0)	(-0.9)
Bituminous coal (Mton)	132.7	73.9	12.0	66.2	9.1	9.2	10.7
	(0.9)	(-3.6)	(11.5)	(-10.4)	(-14.0)	(-2.7)	(-10.8)
Anthracite (Mton)	6.9	4.3	0.6	3.5	0.4	0.5	0.5
	(-15.6)	(-7.3)	(3.7)	(-20.1)	(-33.3)	(-12.7)	(-12.7)
LNG (Mton)	40.8	22.9	3.0	23.4	3.0	2.6	2.4
	(-7.4)	(-9.9)	(10.2)	(2.3)	(0.2)	(-19.5)	(-21.5)
Import volume (Mtoe)	349.2	199.4	29.9	193.2	26.1	25.5	27.1
	(-1.5)	(-2.7)	(4.0)	(-3.1)	(-6.4)	(-6.3)	(-9.3)
Import value (billion US\$, CIF)	126.7	74.6	10.3	54.1	4.9	4.9	6.4
	(-13.2)	(-8.9)	(-16.2)	(-27.5)	(-54.2)	(-52.3)	(-37.8)
Energy share of total import value (%)	25.2	25.3	23.5	19.9	14.2	13.8	16.5
Foreign energy dependence (%)*	93.3	93.2	93.3	92.7	92.5	92.4	92.8
Domestic production							
Hydropower (TWh)	6.2	3.6	0.6	3.8	0.6	0.5	0.6
	(-14.1)	(-15.0)	(-29.9)	(6.0)	(4.2)	(6.7)	(8.0)
Anthracite (Mton)	1.1	0.6	0.1	0.6	0.1	0.1	0.1
	(-9.7)	(-17.7)	(-3.4)	(-2.8)	(-12.0)	(8.2)	-
Natural gas (Mton)	0.2	0.1	0.0	0.1	0.0	0.0	0.0
	(-21.5)	(-19.9)	(-1.0)	(-9.2)	(-17.6)	(-21.4)	(-35.0)
Renewable energy (Mtoe)	18.3	10.8	1.5	11.1	1.6	1.6	1.5
	(6.7)	(9.4)	(6.1)	(2.9)	(-0.8)	(4.7)	(-1.0)

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

4. Energy Consumption

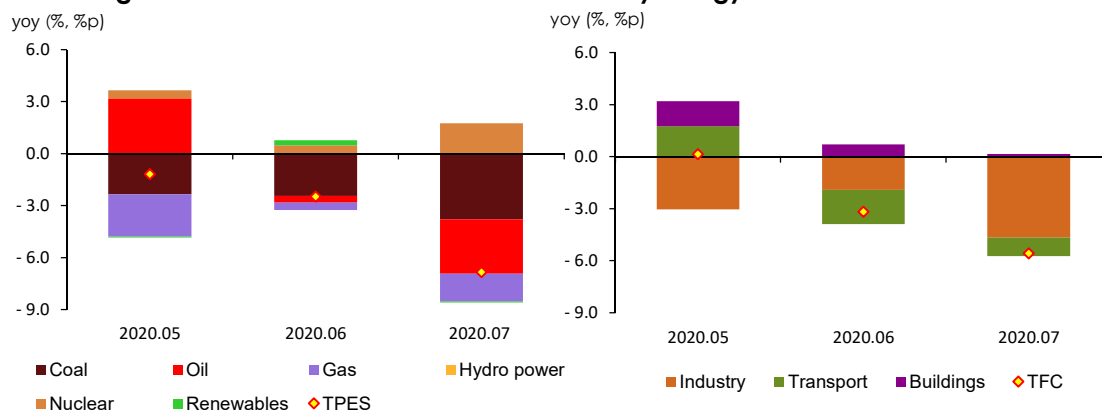
- **Total Primary Energy Supply (“TPES”) fell by 6.8% year-on-year in July, as coal, gas and petroleum use all declined.**
 - Coal use fell by 13.1% year-on-year, led by the power generation sector where coal-fired generation (baseload) dropped by 14.6%, and bituminous coal use fell by 19.1% amid falling power demand (-2.1% year-on-year).
 - Gas use declined by 11.0% year-on-year, as gas-fired generation fell by 15.1%, and LNG use also dropped by 13.6% in the power generation sector due to falling power demand.
 - Petroleum consumption was down 7.5% year-on-year, as the consumption of naphtha for feedstock in the industrial sector decreased significantly to 9.6%.
- **Total Final Consumption (“TFC”) went down by 5.6% year-on-year (in July), with the industrial and transport sectors leading the downward trend.**
 - Industrial energy use fell by 7.0% year-on-year, as petrochemical production slowed down because of the faster decline in domestic demand and exports, and consequently, feedstock energy use decreased.
 - Transport energy use was down 5.6% year-on-year amid ongoing impact of COVID-19, although petroleum use fell more slowly with a recovery in demand for road transport and domestic flights.
 - Buildings’ energy use increased by 1.1% year-on-year, although it declined in commercial buildings, as people stayed at home for longer during the ongoing COVID-19 pandemic and rainy season, which increased energy use in residential buildings (5.0%).

► Energy consumption

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
TPES (Mtoe)	303.6	176.9	25.4	169.3	23.2	22.7	23.6
	(-1.3)	(-1.1)	(-1.8)	(-4.3)	(-1.2)	(-2.5)	(-6.8)
- Non-energy oil&coal excluded	220.1	128.6	18.0	122.1	16.4	16.2	16.9
	(-1.3)	(-0.7)	(-2.5)	(-5.1)	(-0.8)	(-3.2)	(-6.4)
TFC (Mtoe)	231.0	135.2	18.5	130.0	17.9	16.9	17.5
	(-0.8)	(-0.9)	(-0.2)	(-3.9)	(0.1)	(-3.2)	(-5.6)

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

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



5. Coal

□ **Coal use dropped by 13.1% year-on-year in July, as its demand decreased in the power generation sector along with falling electricity demand.**

- Amid gradually decreasing impact of COVID-19 and the signs of an export-driven economic recovery, the iron & steel business, one of the major coal consuming industry, posted a slower year-on-year drop in production index, and accordingly, its coal use returned to the level of the same month last year.
- Coal use fell by 17.6% year-on-year in July in the power generation sector, and coal-fired generation dropped by 14.6%, as electricity consumption decreased by 2.1% from the same period last year.

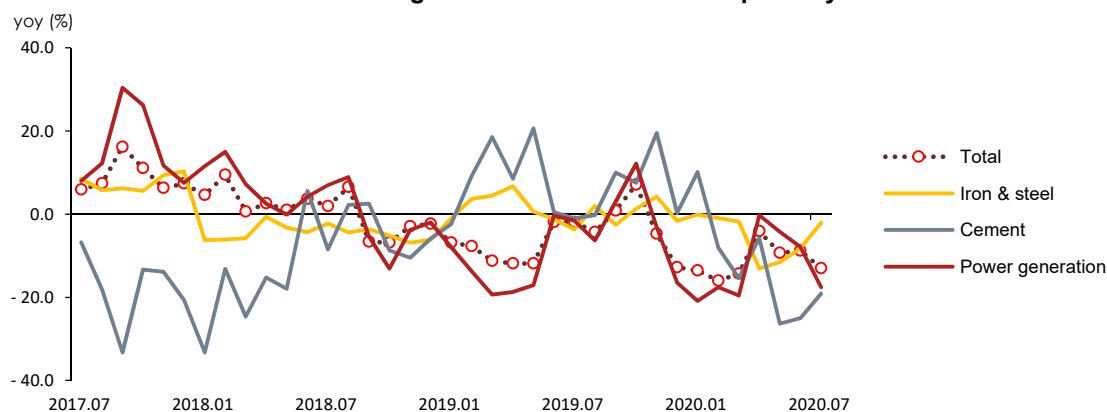
► Coal consumption

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Coal (Mton)	133.0	75.4	12.4	66.6	8.6	9.6	10.7
	(-5.7)	(-7.5)	(-1.9)	(-11.6)	(-9.3)	(-8.8)	(-13.1)
Industry	47.6	27.9	4.0	25.6	3.4	3.6	3.8
	(-1.6)	(-0.6)	(-2.5)	(-8.1)	(-16.1)	(-10.3)	(-3.5)
-Coking-coal	35.0	20.3	3.0	19.2	2.6	2.6	2.9
	(1.0)	(1.2)	(-3.7)	(-5.4)	(-11.6)	(-8.3)	(-2.1)
Buildings	0.6	0.2	0.0	0.2	0.0	0.0	0.0
	(-29.2)	(-30.1)	(-36.4)	(-22.2)	(-15.4)	(-12.5)	(-28.6)
Power generation	84.8	47.2	8.4	40.8	5.2	6.0	6.9
	(-7.6)	(-11.0)	(-1.6)	(-13.6)	(-4.3)	(-7.8)	(-17.6)

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

Source: Monthly Energy Statistics

► The growth rate of coal consumption by use



6. Petroleum

□ **Petroleum consumption was down 7.5% year-on-year in July, as the consumption fell in the industrial and transport sectors all together.**

- Industrial petroleum use declined by 8.3% year-on-year, as the use of naphtha that takes up a large share of the total petroleum use fell by 9.6%.
- Petroleum use in the road transport and aviation sectors slightly recovered, as the spread of the COVID-19 slowed down, and the summer vacation season has begun.
- Petroleum use increased in commercial buildings and decreased in residential buildings, and the buildings' total petroleum use went up by 1.0% on a year-on-year basis.

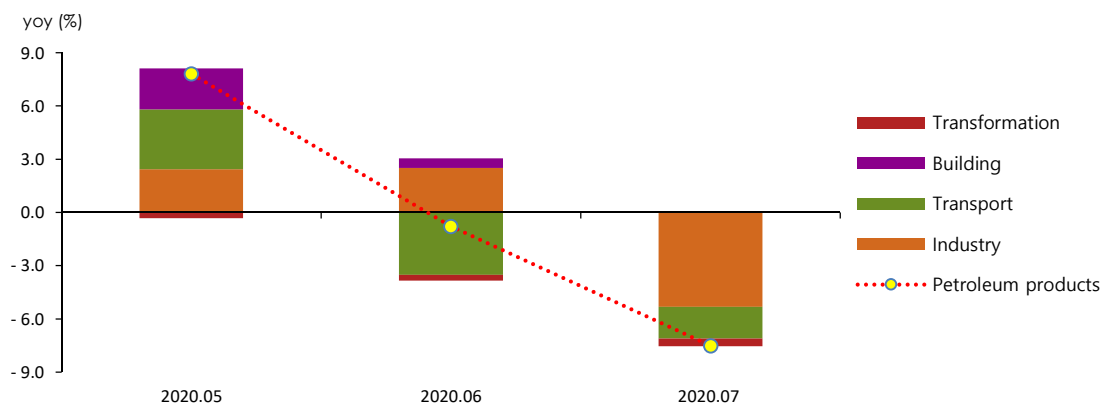
► Petroleum product consumption by end-use sectors

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Petroleum (Mbbl)	927.1	533.3	78.4	515.7	78.2	71.1	72.5
	(-0.5)	(-2.0)	(1.2)	(-3.3)	(7.8)	(-0.8)	(-7.5)
Industry	566.2	322.6	50.4	325.5	47.8	44.7	46.2
	(0.4)	(-2.3)	(5.1)	(0.9)	(3.8)	(4.2)	(-8.3)
-Naphtha	438.6	254.2	38.9	245.9	35.7	33.6	35.2
	(-2.8)	(-3.9)	(1.9)	(-3.3)	(-2.1)	(0.4)	(-9.6)
Transport	303.3	176.1	24.7	157.2	25.5	23.2	23.3
	(0.3)	(1.0)	(-4.6)	(-10.7)	(10.6)	(-9.8)	(-5.7)
Buildings	49.1	29.0	2.7	30.2	4.6	3.0	2.7
	(-8.6)	(-7.7)	(3.1)	(4.0)	(56.7)	(14.5)	(1.0)
Power generation	8.6	5.6	0.6	2.8	0.3	0.3	0.3
	(-26.9)	(-31.1)	(-37.4)	(-49.7)	(-45.3)	(-41.3)	(-55.2)

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

Source: Monthly Energy Statistics

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



7. Gas

□ Natural gas use fell by 11.0% year-on-year in July, with the power generation sector leading the downward trend.

- Gas-fired generation declined by 15.1% year-on-year, and gas use for power generation fell by 13.6% as a result of falling electricity demand (-2.1% YoY) and surging nuclear generation.

□ City gas use fell by 7.6% year-on-year in July, which was a slower pace of decline than a month ago, as industrial city gas use decreased more slowly.

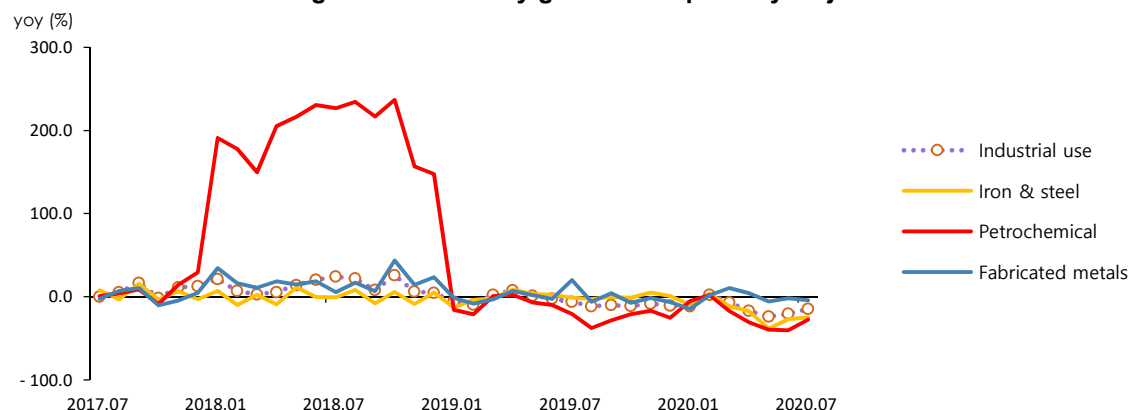
- Industrial city gas use fell by 10.2% year-on-year, as production slightly recovered in the iron & steel and chemical sectors on the back of growing export demand, although production grew more slowly in the ICT sector that has been a major driving force in the manufacturing industries.
- Gas use in buildings fell by 3.2%, which was attributed to weak service businesses due to the impact of COVID-19.

► Natural gas and city gas consumption

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
LNG (Mton)	40.9	24.3	2.8	23.4	2.3	2.4	2.5
	(-3.2)	(-4.9)	(-2.5)	(-3.5)	(-16.1)	(-3.1)	(-11.0)
Power generation	18.4	10.5	1.6	10.5	1.1	1.3	1.4
	(-2.7)	(-8.1)	(-3.3)	(-0.5)	(-21.2)	(6.8)	(-13.6)
City gas production	20.5	12.6	1.1	11.8	1.1	1.0	1.0
	(-2.1)	(0.1)	(1.1)	(-5.7)	(-9.4)	(-12.6)	(-5.9)
City gas (bm³)	25.4	16.0	1.4	15.2	1.6	1.3	1.3
	(-1.1)	(0.5)	(0.7)	(-5.3)	(-7.0)	(-10.5)	(-7.6)
Industry	10.4	6.2	0.8	5.8	0.7	0.7	0.7
	(2.3)	(6.9)	(1.6)	(-7.4)	(-14.5)	(-17.5)	(-10.2)
Buildings	13.8	9.1	0.5	8.8	0.8	0.5	0.5
	(-3.6)	(-3.3)	(-0.1)	(-3.6)	(2.6)	(-0.3)	(-3.2)

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 dropped by 2.1% year-on-year in July, led by a drop in the industrial sector, although it increased in the buildings sector.

- Industrial electricity consumption has been down for five consecutive months since March, as the mining & manufacturing production index fell for four months in a row due to the economic slowdown at home and abroad amid the spreading COVID-19 pandemic.
- Buildings' electricity consumption grew by 1.5% despite a slight decline in commercial buildings, as it continuously increased in residential buildings.

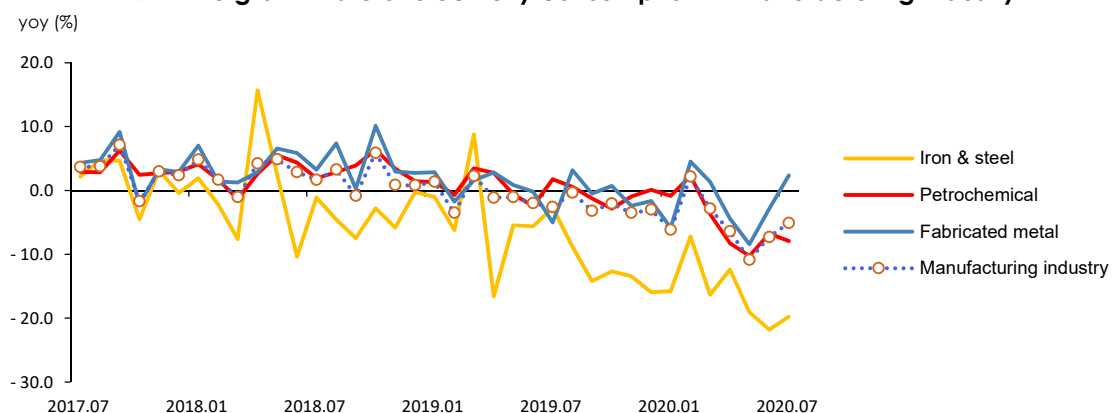
► Electricity consumption by end-use sectors

	2019p			2020p			
		M1~7	M7		M1~7	M5	M6
Electricity (TWh)	520.5	302.8	43.0	294.3	38.3	39.8	42.1
	(-1.1)	(-0.9)	(-2.4)	(-2.8)	(-5.8)	(-2.1)	(-2.1)
Industry	279.8	163.7	23.5	155.3	20.8	21.2	22.4
	(-1.4)	(-0.7)	(-2.3)	(-5.1)	(-10.1)	(-6.7)	(-4.9)
Transport	2.9	1.7	0.3	1.6	0.2	0.2	0.2
	(-2.0)	(-0.4)	(-1.8)	(-8.3)	(-15.9)	(-7.2)	(-10.3)
Buildings	237.8	137.4	19.2	137.4	17.3	18.4	19.5
	(-0.7)	(-1.3)	(-2.6)	(0.0)	(0.1)	(3.8)	(1.5)
Residential	70.5	39.5	5.6	41.6	5.6	5.8	6.0
	(-0.3)	(0.2)	(-4.5)	(5.5)	(6.7)	(8.8)	(6.7)
Commercial	135.2	79.2	10.9	77.8	9.5	10.2	10.9
	(-0.9)	(-1.8)	(-2.1)	(-1.8)	(-2.4)	(2.2)	(-0.2)

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

Source: Monthly Energy Statistics

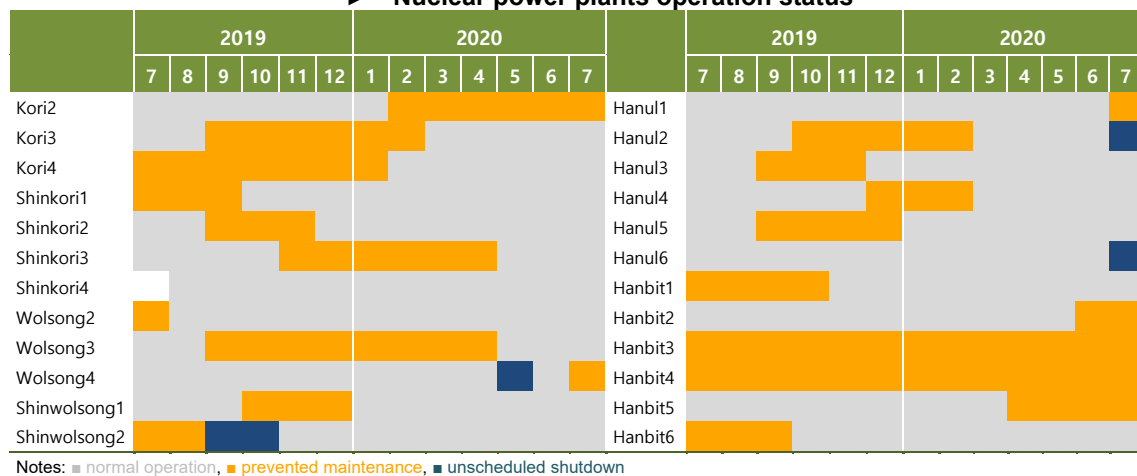
► The growth rate of electricity consumption in manufacturing industry



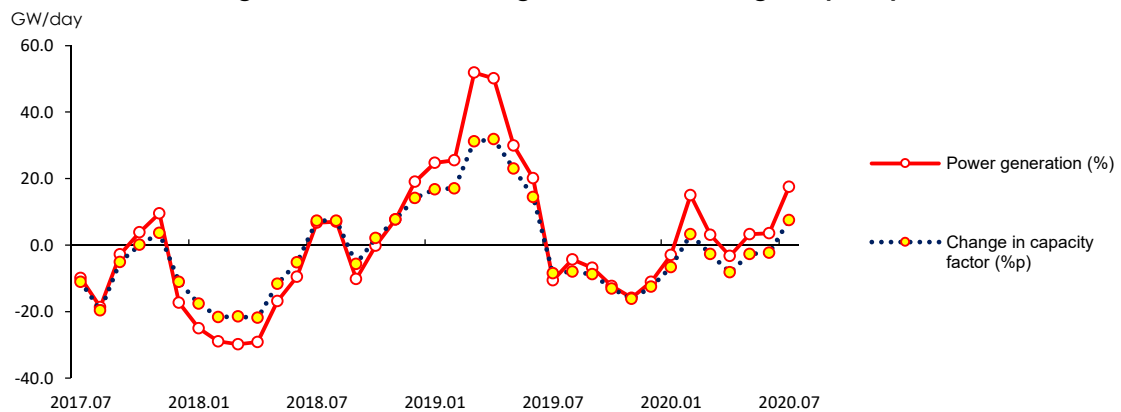
9. Nuclear

- **The total nuclear generation grew by 17.5% year-on-year in July, as the nuclear capacity factor and its installed capacity increased.**
 - The nuclear capacity factor was up 7.3%p year-on-year to 79.3% in July, and its installed capacity increased by 6.4% with the commissioning of Shinkori unit 4 (1.4GW, Aug. 2019).
 - As the nuclear generation increased, its share of the total power generation went up by 5.9%p year-on-year to 29.4%.

► Nuclear power plants operation status



► The growth rate of nuclear generation & average capacity factor



10. Heat and Renewable energy

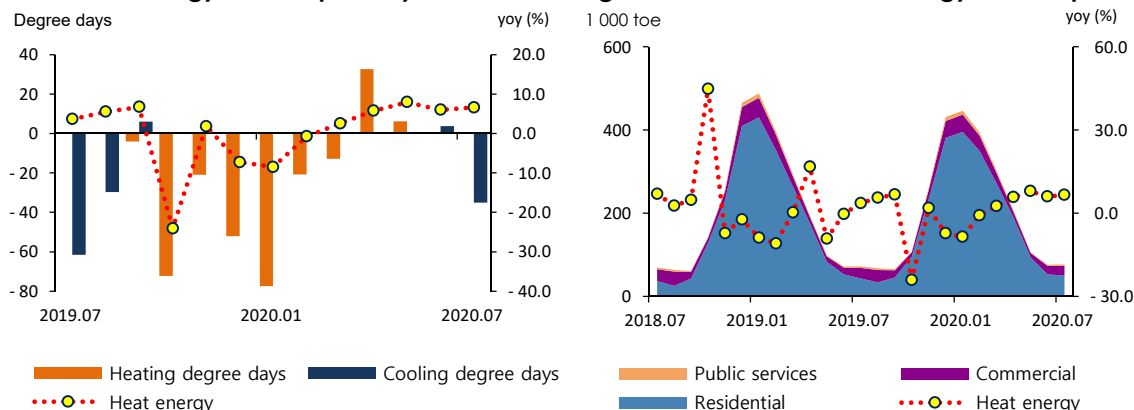
□ **Heat energy use grew by 6.6% year-on-year in July, as the temperature was lower than the seasonal average, and the rainy season started.**

- Heat energy use decreased in the commercial & public sectors where energy demand for cooling is high during summer, while it surged in the residential sector (15.2%), which was affected by lower temperature (-2.2°C), long rainy season and more hours spent at home amid the COVID-19 pandemic.

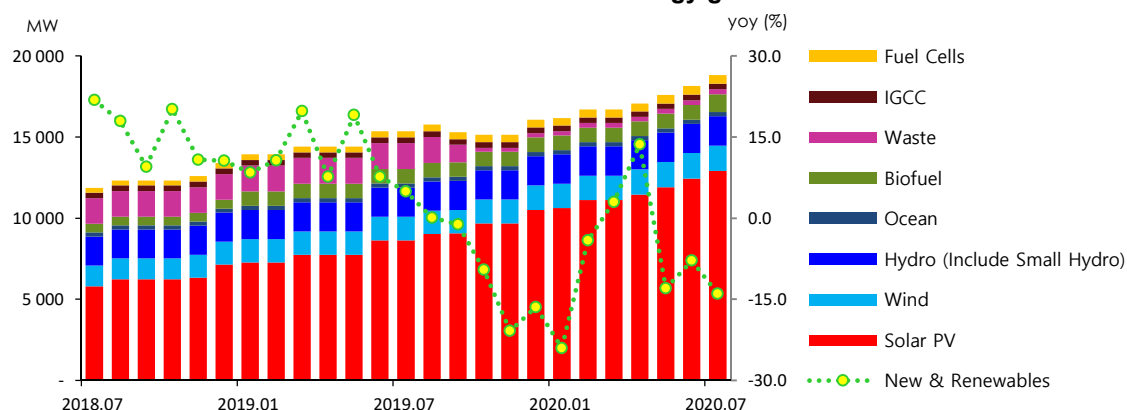
□ **The total renewable energy generation declined by 14.0% year-on-year (in July), due to the re-categorization of renewable energy sources and a reduction in bioenergy generation.**

- Renewable energy generation decreased for three consecutive months, because bioenergy and wind power generation declined, and the installed capacity of and power generation from waste energy plunged, after non-renewable waste energy was excluded from the renewable category (Oct. 2019).

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



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



11. Industry

- Industrial energy use fell by 7.0% year-on-year in July as a result of an output reduction in the chemical industry.
 - Energy use fell sharply in the chemical sector amid further decline in domestic demand and exports, even though the overall domestic economy seems to be gradually recovering thanks to the successful and aggressive COVID-19 responses.

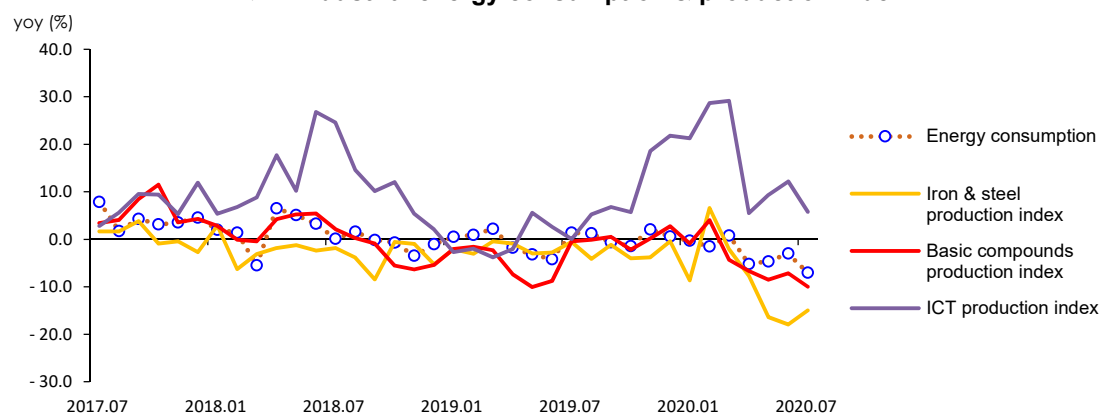
► Industrial energy consumption

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Industry (Mtoe)	142.6	82.6	12.3	80.2	11.2	10.9	11.4
	(-0.2)	(-0.6)	(1.4)	(-3.0)	(-4.6)	(-3.0)	(-7.0)
Petrochemical	72.0	41.3	6.4	41.2	5.9	5.5	5.8
	(-0.2)	(-1.7)	(3.6)	(-0.2)	(0.5)	(-1.1)	(-8.4)
- Naphtha	53.8	31.2	4.8	30.1	4.4	4.1	4.3
	(-2.8)	(-3.9)	(1.9)	(-3.3)	(-2.1)	(0.4)	(-9.6)
Iron & Steel	28.8	16.8	2.5	15.7	2.1	2.1	2.3
	(-0.0)	(0.5)	(-3.4)	(-6.9)	(-13.3)	(-10.1)	(-4.8)
-Coking coal	24.4	14.1	2.1	13.4	1.8	1.8	2.0
	(1.0)	(1.2)	(-3.7)	(-5.4)	(-11.6)	(-8.3)	(-2.1)
Fabricated metal	11.4	6.7	0.9	6.6	0.9	0.9	0.9
	(-0.1)	(0.4)	(-1.4)	(-1.8)	(-7.4)	(-2.4)	(1.9)
Share of feedstock (%)	58.5	58.3	59.7	58.6	60.3	59.3	59.0

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

Source: Monthly Energy Statistics

► Industrial energy consumption & production index



12. Transport

□ Transport energy use dropped by 5.6% year-on-year in July because of the ongoing impact of COVID-19.

- Energy use for road transport was down 2.3% year-on-year. The decline rate, however, was 2.6%p lower, because demand for passenger road transport slightly rebounded, as one of the major COVID-19 outbreaks linked to a club in Itaewon was finally contained after it started in early May, and the summer vacation season has begun
- Energy use for aviation dropped by 39.8% year-on-year, hit by the COVID-19 outbreak, although energy use fell more slowly in domestic flight operations due to the increased number of flights.
- Energy use for navigation grew by 12.7%, as the impact of COVID-19 was limited in the sector. The use of bunker-C oil rose by 11.5%.

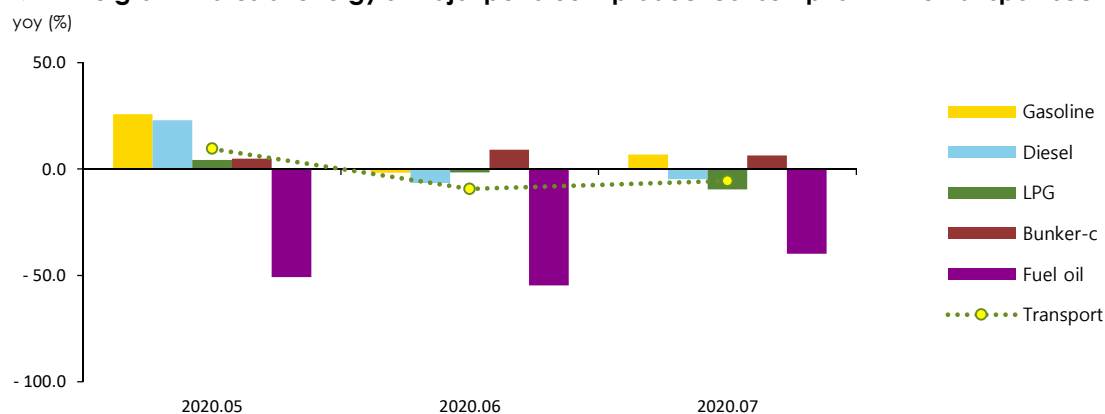
► The growth rate of petroleum consumption in the transport sector

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Transport (Mtoe)	43.0	25.0	3.5	22.4	3.6	3.3	3.3
	(0.0)	(0.9)	(-4.6)	(-10.5)	(9.5)	(-9.4)	(-5.6)
Road	35.1	20.3	2.9	18.8	3.1	2.8	2.8
	(1.9)	(2.3)	(-3.6)	(-7.1)	(19.9)	(-4.9)	(-2.3)
Navigation	2.6	1.7	0.2	1.8	0.3	0.3	0.3
	(-17.1)	(-11.2)	(-11.4)	(5.7)	(5.7)	(17.0)	(12.7)
Aviation	4.9	2.9	0.4	1.6	0.2	0.2	0.2
	(-1.7)	(-0.7)	(-7.3)	(-44.2)	(-50.8)	(-54.7)	(-39.8)
Rail	0.3	0.2	0.0	0.2	0.0	0.0	0.0
	(-2.8)	(-1.5)	(-3.1)	(-8.6)	(-10.5)	(-7.6)	(-13.0)

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 rose by 1.1% year-on-year in July, as people stayed at home for longer periods during the COVID-19 pandemic and the rainy season.

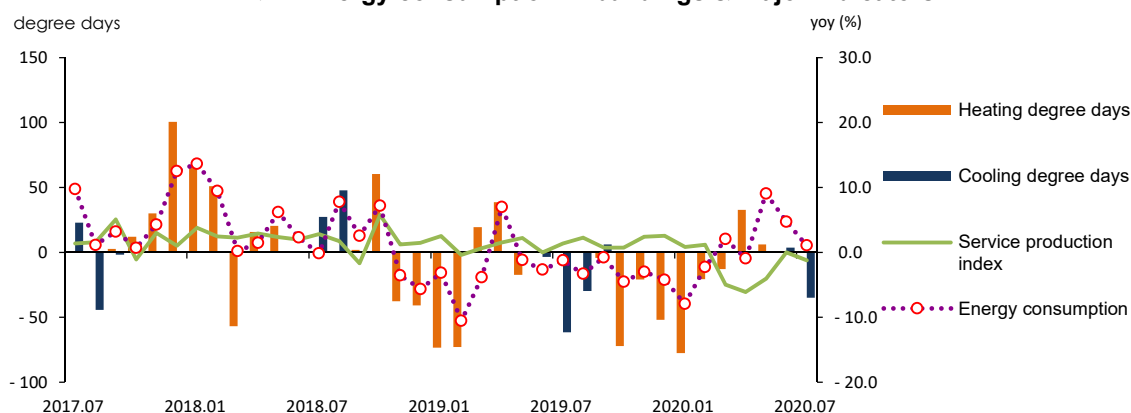
- Energy use increased in buildings, especially in residential buildings, because power demand increased due to longer hours spent at home during the COVID-19 pandemic and rainy season in addition to the humid weather conditions, although energy use declined in commercial & public buildings.
- Energy use grew by 5.0% year-on-year in residential buildings; electricity, city gas and heat energy use grew by 6.7%, 5.2% and 15.2% respectively as a result of longer hours spent at home and growing power demand to lower the humidity.
- Energy use in commercial & public buildings fell by 1.0% despite increased kerosene use (20.7%), because the service sector production was hit by the pandemic and rainy season, and consequently, electricity, city gas, LPG and heat energy use all decreased (-0.7%, -11.2%, -6.1%, -6.2%).

► Energy consumption in buildings

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Buildings (Mtoe)	45.4	27.6	2.7	27.5	3.1	2.7	2.7
	(-3.2)	(-3.1)	(-1.2)	(-0.5)	(9.1)	(4.8)	(1.1)
Residential	22.5	14.1	0.9	14.1	1.5	1.0	1.0
	(-4.1)	(-3.1)	(-2.2)	(0.6)	(17.7)	(6.2)	(5.0)
Commercial	17.5	10.3	1.3	10.1	1.2	1.3	1.3
	(-2.3)	(-3.2)	(-2.2)	(-2.1)	(1.0)	(4.1)	(-1.2)
Public/others	5.4	3.2	0.4	3.2	0.4	0.4	0.4
	(-2.4)	(-2.8)	(4.0)	(-0.4)	(6.4)	(3.0)	(-0.4)
Heating degree days	2 342.9	1 511.5	-	1 439.3	26.5	-	-
	(-9.8)	(-6.5)	-	(-4.8)	(30.5)	-	-
Cooling degree days	120.4	39.5	39.5	8.2	-	3.7	4.5
	(-42.4)	(-62.2)	(-60.9)	(-79.2)	-	-	(-88.6)

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

► Energy consumption in buildings & major indicators



14. Transformation

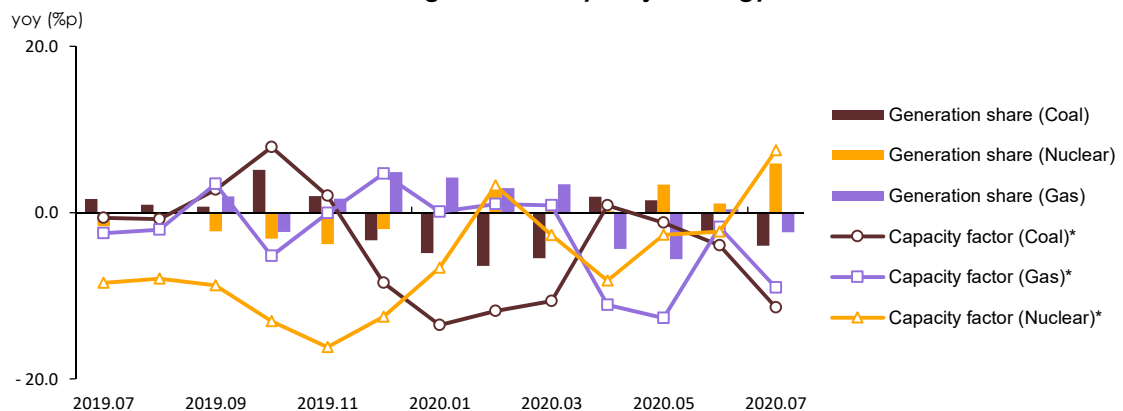
- The use of power generation fuels fell by 7.1% year-on-year in July, which was attributed to falling power demand amid the COVID-19 pandemic and decreased power generation.
 - The total power generation fell by 6.2% year-on-year, as electricity consumption dropped by 2.1%, mostly in the industrial and commercial sectors owing to a drop in production activities amid the COVID-19 pandemic.
 - Nuclear energy's share of the total power generation was up 5.9%p, while the shares of coal and gas fell by 4.0%p and 2.3%p respectively.

► Energy consumption in the power generation sector

	2019p			2020p			
		M1~7	M7	M1~7	M5	M6	M7
Input (Mtoe)	116.7	67.9	10.5	65.0	8.7	9.2	9.7
	(-1.7)	(-0.9)	(-4.5)	(-4.3)	(-4.6)	(-0.4)	(-7.1)
Coal	50.1	27.9	4.9	24.1	3.1	3.5	4.1
	(-7.6)	(-11.1)	(-1.6)	(-13.6)	(-4.3)	(-7.9)	(-17.6)
Oil	0.8	0.6	0.1	0.2	0.0	0.0	0.0
	(-35.7)	(-36.6)	(-52.2)	(-71.0)	(-69.4)	(-59.6)	(-70.1)
Gas	24.4	13.9	2.1	13.9	1.4	1.7	1.8
	(-2.9)	(-8.2)	(-3.5)	(-0.4)	(-20.6)	(7.0)	(-12.9)
Nuclear	31.1	19.5	2.5	20.4	3.2	3.0	2.9
	(9.3)	(25.3)	(-10.5)	(4.7)	(3.3)	(3.6)	(17.5)
Hydro/other renewables	10.2	6.0	0.9	6.4	0.9	0.9	0.9
	(7.2)	(9.8)	(2.9)	(7.0)	(1.8)	(10.2)	(1.0)

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			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
GDP (trillion won)	1 812.0 (2.9)	1 849.0 (2.0)	898.4 (1.9)	- (-)	461.3 (2.1)	- (-)	891.9 (-0.7)	- (-)	448.7 (-2.7)	- (-)
Private consumption	875.6 (3.2)	890.2 (1.7)	439.4 (1.6)	- (-)	216.7 (1.8)	- (-)	420.1 (-4.4)	- (-)	208.1 (-4.0)	- (-)
Facilities investment	166.3 (-2.3)	153.9 (-7.5)	76.6 (-12.3)	- (-)	40.1 (-7.0)	- (-)	80.9 (5.6)	- (-)	41.7 (4.1)	- (-)
Construction investment	269.8 (-4.6)	262.9 (-2.5)	124.4 (-5.2)	- (-)	72.1 (-3.0)	- (-)	126.6 (1.7)	- (-)	72.1 (-0.1)	- (-)
Consumer price index (2015=100)	104.5	104.9	104.7	105.1	104.9	104.6	105.2	104.7	104.9	104.9
USD to KRW exchange rate (won)	1 100.2	1 165.4	1 150.0	1 183.3	1 175.6	1 175.3	1 205.9	1 228.7	1 210.0	1 198.9
Benchmark rate (%)	1.5	1.6	1.7	1.8	1.8	1.5	0.8	0.5	0.5	0.5
Coincident composite index (2015=100)	110.1	111.7	111.1	111.4	111.6	111.7	111.7	110.1	110.5	111.0
Mining & manufacturing production index (2015=100)	106.4	106.3	104.5	108.2	105.6	110.1	103.9	97.7	105.0	107.5
Manufacturing operation ratio index (2015=100)	98.8	98.5	97.4	101.8	98.9	103.6	93.7	87.4	94.7	97.5
Average temperature	13.0	13.5	12.4	18.6	21.3	24.9	12.6	17.7	22.8	22.7
- year-on-year difference	- 0.1	0.5	0.1	0.8	- 0.9	- 2.0	0.2	- 0.9	1.5	- 2.2
Heating degree days	2 597.8 (3.2)	2 342.9 (-9.8)	1 511.5 (-6.5)	20.3 (-46.0)	- (-)	- (-)	1 439.3 (-4.8)	26.5 (30.5)	- (-)	- (-)
Cooling degree days	209.0 (57.5)	120.4 (-42.4)	39.5 (-62.2)	- (-)	- (-100.0)	39.5 (-60.9)	8.2 (-79.2)	- (-)	3.7 (-)	4.5 (-88.6)
Energy intensity	0.17 (-1.0)	0.17 (-3.2)	0.17 (-2.8)	- (-)	0.15 (-3.4)	- (-)	0.16 (-3.4)	- (-)	0.15 (-0.7)	- (-)
Per capita consumption										
oil (bbl)	18.1 (-1.0)	17.9 (-0.7)	10.3 (-2.2)	1.4 (-7.4)	1.4 (-5.3)	1.5 (1.0)	10.0 (-3.4)	1.5 (7.7)	1.4 (-0.9)	1.4 (-7.6)
Electricity (MWh)	10.2 (3.1)	10.1 (-1.3)	5.9 (-1.1)	0.8 (0.2)	0.8 (-1.2)	0.8 (-2.6)	5.7 (-2.9)	0.7 (-6.0)	0.8 (-2.3)	0.8 (-2.2)
City gas (1 000 m ³)	0.5 (6.9)	0.5 (-4.3)	0.3 (-3.0)	0.0 (1.3)	0.0 (-1.7)	0.0 (-3.6)	0.3 (-7.1)	0.0 (-10.6)	0.0 (-11.2)	0.0 (-9.6)
Total energy (toe)	6.0 (1.3)	5.9 (-1.5)	3.4 (-1.3)	0.5 (-3.6)	0.4 (-2.3)	0.5 (-2.0)	3.3 (-4.4)	0.4 (-1.3)	0.4 (-2.6)	0.5 (-7.0)

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)

	2018	2019					2020			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industrial production index										
All industry	107.5 (1.6)	108.1 (0.5)	106.3 (-0.1)	109.1 (1.4)	109.4 (-0.9)	108.3 (0.9)	105.2 (-1.0)	103.0 (-5.6)	110.2 (0.7)	106.7 (-1.5)
Mining & manufacturing	106.4 (1.5)	106.3 (-0.0)	104.5 (-0.9)	108.2 (0.7)	105.6 (-2.0)	110.1 (1.6)	103.9 (-0.5)	97.7 (-9.7)	105.0 (-0.6)	107.5 (-2.4)
Semiconductor	168.4 (21.2)	188.1 (11.7)	168.8 (5.1)	177.7 (12.1)	195.1 (7.3)	195.2 (4.1)	219.3 (29.9)	225.8 (27.1)	241.8 (23.9)	228.4 (17.0)
Iron & steel	100.5 (-2.7)	98.3 (-2.2)	99.7 (-1.8)	101.8 (-3.0)	98.6 (-2.8)	102.4 (-0.6)	90.7 (-9.0)	85.1 (-16.4)	80.9 (-18.0)	87.1 (-14.9)
Cement	100.0 (-8.8)	93.8 (-6.2)	94.1 (-6.5)	106.7 (-6.6)	102.5 (-11.3)	95.5 (-7.0)	83.9 (-10.9)	86.9 (-18.6)	91.8 (-10.4)	80.4 (-15.8)
Basic compound	110.4 (0.1)	107.5 (-2.6)	106.5 (-4.7)	103.3 (-10.0)	100.5 (-8.8)	113.4 (-0.4)	101.4 (-4.8)	94.5 (-8.5)	93.3 (-7.2)	102.1 (-10.0)
Transport equipment	93.9 (-1.2)	93.1 (-0.9)	95.5 (3.9)	101.1 (3.3)	93.2 (-1.5)	100.9 (14.3)	80.5 (-15.8)	64.9 (-35.8)	79.6 (-14.6)	93.1 (-7.7)
Electric & electronic	106.5 (-0.2)	107.7 (1.2)	104.9 (1.2)	109.5 (3.5)	106.2 (-0.4)	110.1 (5.0)	101.6 (-3.1)	93.2 (-14.9)	106.6 (0.4)	107.5 (-2.4)
Service	106.9 (2.2)	108.4 (1.4)	106.8 (1.1)	109.5 (2.2)	108.2 -	108.0 (1.4)	104.5 (-2.1)	105.1 (-4.0)	108.2 -	106.7 (-1.2)
Wholesale and retail	105.0 (1.8)	104.6 (-0.4)	103.7 (-0.5)	108.1 (1.2)	103.8 (-1.2)	102.7 (-0.6)	100.2 (-3.4)	103.3 (-4.4)	103.7 (-0.1)	100.5 (-2.1)
Food & Accommodation	98.5 (-1.9)	97.5 (-1.0)	95.9 (-1.2)	100.7 (-0.5)	96.4 (-1.1)	99.4 (-2.5)	81.0 (-15.6)	86.6 (-14.0)	84.6 (-12.2)	90.3 (-9.2)
Operating ratio index										
Iron & steel - Pig iron	47 124.3 (0.1)	47 520.7 (0.8)	27 577.1 (1.7)	4 069.6 (12.6)	3 909.8 (-2.2)	4 005.1 (-2.3)	25 375.1 (-8.0)	3 483.6 (-14.4)	3 482.2 (-10.9)	3 905.6 (-2.5)
Iron & steel - Crude steel	72 464.0 (2.0)	71 411.9 (-1.5)	42 048.5 (-0.4)	6 274.5 (0.7)	5 949.3 (-2.7)	6 026.4 (-2.4)	38 018.7 (-9.6)	5 383.9 (-14.2)	5 089.2 (-14.5)	5 525.9 (-8.3)
Petrochemical - Basic oil	31 139.2 (1.9)	31 804.1 (2.1)	18 110.2 (-0.6)	2 452.4 (-10.2)	2 427.5 (-7.4)	2 878.2 (7.0)	18 265.1 (0.9)	2 570.1 (4.8)	2 490.8 (2.6)	2 559.4 (-11.1)
Petrochemical - Intermediate raw material	16 981.8 (2.9)	16 014.0 (-5.7)	9 168.7 (-5.9)	1 226.6 (-11.4)	1 169.4 (-10.5)	1 361.3 (-8.1)	9 243.1 (0.8)	1 267.9 (3.4)	1 236.0 (5.7)	1 287.5 (-5.4)
Petrochemical - 3 major products	21 793.6 (-1.1)	21 584.7 (-1.0)	12 663.9 (-1.0)	1 819.5 (2.0)	1 702.9 (-4.2)	1 928.8 (3.9)	12 507.3 (-1.2)	1 758.9 (-3.3)	1 665.6 (-2.2)	1 744.6 (-9.5)
The number of cars	4 028.7 (-2.1)	3 950.6 (-1.9)	2 387.9 (3.3)	366.2 (4.1)	332.8 (-1.0)	359.6 (17.4)	1 973.4 (-17.4)	231.1 (-36.9)	297.1 (-10.7)	345.7 (-3.8)

Note: p means provisional
Source: Monthly Energy Statistics

International Energy Prices

	2018	2019					2020			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	57.1 (-14.5)	57.6 (-18.5)	54.8 (-19.2)	57.0 (-18.7)	38.3 (-32.8)	40.8 (-29.2)	42.4 (-22.7)	39.6 (-30.4)
Dubai	69.4 (30.5)	63.5 (-8.5)	64.0 (-8.6)	63.3 (-13.5)	59.1 (-18.4)	61.1 (-20.8)	41.4 (-35.3)	43.3 (-31.6)	44.0 (-25.6)	41.5 (-32.1)
Brent	71.5 (30.5)	64.2 (-10.3)	64.7 (-10.9)	64.2 (-14.3)	59.5 (-19.4)	62.3 (-21.3)	42.5 (-34.3)	43.2 (-32.7)	45.0 (-24.3)	41.9 (-32.8)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	65.8 (-6.8)	65.9 (-12.2)	64.5 (-14.2)	63.1 (-17.4)	40.0 (-39.2)	39.2 (-40.5)	44.7 (-30.8)	- (-100.0)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	10.7 (4.3)	10.1 (-3.0)	10.9 (-0.1)	10.1 (-10.3)	8.8 (-17.8)	7.8 (-23.1)	6.3 (-41.6)	6.3 (-37.5)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	519.5 (2.2)	488.3 (-6.0)	479.2 (-10.0)	509.9 (-9.3)	414.8 (-20.2)	383.1 (-21.5)	317.3 (-33.8)	262.8 (-48.5)
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	81.4 (-24.8)	72.1 (-39.7)	65.6 (-44.1)	66.0 (-42.2)	58.2 (-28.5)	51.6 (-28.5)	50.1 (-23.5)	54.6 (-17.2)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	104.9 (-7.8)	96.6 (-14.1)	103.6 (-5.9)	85.0 (-26.9)	79.7 (-24.1)	68.8 (-28.8)	70.7 (-31.8)	68.4 (-19.5)
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	71.7 (-13.2)	73.7 (-11.3)	70.1 (-17.4)	74.7 (-16.6)	46.0 (-35.9)	46.6 (-36.7)	48.2 (-31.2)	47.2 (-36.8)
Kerosene	84.8 (29.8)	77.3 (-8.9)	77.7 (-9.0)	78.4 (-10.2)	74.6 (-14.5)	77.7 (-15.2)	44.0 (-43.4)	43.9 (-44.0)	43.3 (-42.0)	39.3 (-49.4)
Diesel	84.9 (27.9)	78.2 (-7.9)	78.4 (-8.3)	78.8 (-9.3)	75.4 (-14.8)	78.1 (-16.8)	49.5 (-36.8)	50.2 (-36.4)	49.5 (-34.4)	44.2 (-43.4)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	62.3 (-3.6)	66.1 (-6.1)	54.5 (-21.1)	61.3 (-13.2)	37.6 (-39.7)	39.4 (-40.5)	42.2 (-22.5)	39.6 (-35.4)
Propane	542.1 (16.0)	434.6 (-19.8)	436.1 (-19.3)	375.0 (-32.4)	370.0 (-36.2)	350.0 (-41.7)	390.0 (-10.6)	360.0 (-4.0)	365.0 (-1.4)	365.0 (4.3)
Butane	539.2 (7.5)	441.7 (-18.1)	440.6 (-18.7)	355.0 (-37.7)	360.0 (-39.5)	360.0 (-43.3)	396.1 (-10.1)	340.0 (-4.2)	345.0 (-4.2)	355.0 (-1.4)
Naphtha	67.0 (24.5)	56.9 (-15.1)	55.9 (-19.0)	55.6 (-22.9)	50.6 (-29.3)	54.0 (-28.1)	39.5 (-29.3)	43.5 (-21.8)	42.9 (-15.1)	43.0 (-20.4)

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.petrinet.co.kr, IMF (primary commodity price), Monthly Energy Statistics

Total Primary Energy Supply (TPES)

	2018	2019p	2020p				2020p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal (Mton)	141.0 (0.9)	133.0 (-5.7)	75.4 (-7.5)	9.5 (-11.9)	10.5 (-1.9)	12.4 (-1.9)	66.6 (-11.6)	8.6 (-9.3)	9.6 (-8.8)	10.7 (-13.1)
- Coking coal excluded	106.4 (2.8)	98.0 (-7.8)	55.1 (-10.4)	6.6 (-16.4)	7.6 (-2.2)	9.4 (-1.3)	47.5 (-13.9)	6.0 (-8.4)	6.9 (-9.0)	7.8 (-16.5)
Oil (Mbbbl)	931.8 (-0.6)	927.1 (-0.5)	533.3 (-2.0)	72.5 (-7.2)	71.7 (-5.1)	78.4 (1.2)	515.7 (-3.3)	78.2 (7.8)	71.1 (-0.8)	72.5 (-7.5)
- Non-energy oil excluded	445.5 (0.4)	451.8 (1.4)	258.4 (-0.4)	33.0 (-9.0)	35.3 (-2.8)	36.2 (1.1)	244.6 (-5.3)	38.3 (15.9)	33.8 (-4.1)	34.4 (-5.0)
LNG (Mton)	42.3 (16.2)	40.9 (-3.2)	24.3 (-4.9)	2.7 (-6.0)	2.4 (-11.8)	2.8 (-2.5)	23.4 (-3.5)	2.3 (-16.1)	2.4 (-3.1)	2.5 (-11.0)
Hydro (TWh)	7.3 (3.9)	6.2 (-14.1)	3.6 (-15.0)	0.5 (-31.8)	0.5 (-34.4)	0.6 (-29.9)	3.8 (6.0)	0.6 (4.2)	0.5 (6.7)	0.6 (8.0)
Nuclear (TWh)	133.5 (-10.1)	145.9 (9.3)	91.5 (25.3)	14.8 (29.9)	13.6 (20.2)	11.7 (-10.5)	95.8 (4.7)	15.3 (3.3)	14.1 (3.6)	13.7 (17.5)
Others (Mtoe)	17.1 (8.0)	18.3 (6.7)	10.8 (9.4)	1.6 (14.8)	1.5 (7.9)	1.5 (6.1)	11.1 (2.9)	1.6 (-0.8)	1.6 (4.7)	1.5 (-1.0)
TPES (Mtoe)	307.5 (1.8)	303.6 (-1.3)	176.9 (-1.1)	23.5 (-3.4)	23.2 (-2.1)	25.4 (-1.8)	169.3 (-4.3)	23.2 (-1.2)	22.7 (-2.5)	23.6 (-6.8)
- Non-energy oil excluded	247.1 (2.6)	244.5 (-1.0)	142.7 (-0.6)	18.6 (-2.7)	18.7 (-0.7)	20.1 (-2.6)	135.5 (-5.1)	18.2 (-1.9)	18.0 (-3.7)	18.9 (-6.0)
- Non-energy oil&coal excluded	222.9 (3.5)	220.1 (-1.3)	128.6 (-0.7)	16.5 (-3.1)	16.7 (-0.7)	18.0 (-2.5)	122.1 (-5.1)	16.4 (-0.8)	16.2 (-3.2)	16.9 (-6.4)

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

Share of TPES by Sources

(unit: %)

	2018	2019p	2020p				2020p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal	28.2	27.1	26.3	25.2	27.9	30.0	24.4	23.1	26.1	28.1
- Coking coal excluded	20.3	19.0	18.3	16.5	19.3	21.9	16.5	15.4	18.0	19.6
Oil	38.5	38.6	38.2	39.0	39.2	39.0	38.5	42.7	39.8	38.5
- non-energy oil excluded	18.9	19.2	18.9	18.1	19.6	18.3	18.5	21.2	19.2	18.5
LNG	18.0	17.6	17.9	15.1	13.7	14.6	18.0	12.9	13.6	13.9
Hydro	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.6
Nuclear	9.2	10.2	11.0	13.4	12.4	9.8	12.1	14.0	13.2	12.4
Others	5.6	6.0	6.1	6.8	6.4	6.1	6.6	6.8	6.9	6.5
TPES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: p means provisional
Source: Monthly Energy Statistics

Total Final Consumption (TFC)

(Unit: Mtoe)

	2018	2019p					2020p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	142.9 (0.7)	142.6 (-0.2)	82.6 (-0.6)	11.8 (-3.2)	11.2 (-4.2)	12.3 (1.4)	80.2 (-3.0)	11.2 (-4.6)	10.9 (-3.0)	11.4 (-7.0)
Transport	43.0 (0.4)	43.0 (0.0)	25.0 (0.9)	3.3 (-7.7)	3.7 (-0.2)	3.5 (-4.6)	22.4 (-10.5)	3.6 (9.5)	3.3 (-9.4)	3.3 (-5.6)
Residential	23.5 (4.4)	22.5 (-4.1)	14.1 (-3.1)	1.3 (-2.0)	1.0 (-2.7)	0.9 (-2.2)	14.1 (0.6)	1.5 (17.7)	1.0 (6.2)	1.0 (5.0)
Commercial	17.9 (2.9)	17.5 (-2.3)	10.3 (-3.2)	1.2 (-0.9)	1.2 (-2.8)	1.3 (-2.2)	10.1 (-2.1)	1.2 (1.0)	1.3 (4.1)	1.3 (-1.2)
Public	5.6 (2.0)	5.4 (-2.4)	3.2 (-2.8)	0.4 (0.6)	0.4 (-2.2)	0.4 (4.0)	3.2 (-0.4)	0.4 (6.4)	0.4 (3.0)	0.4 (-0.4)
TFC	232.7 (1.2)	231.0 (-0.8)	135.2 (-0.9)	17.9 (-3.8)	17.5 (-3.1)	18.5 (-0.2)	130.0 (-3.9)	17.9 (0.1)	16.9 (-3.2)	17.5 (-5.6)
Coal (Mton)	49.2 (-2.3)	48.2 (-2.1)	28.1 (-1.0)	4.1 (-3.8)	4.0 (-4.5)	4.0 (-2.6)	25.8 (-8.2)	3.4 (-16.1)	3.6 (-10.3)	3.8 (-3.5)
Oil (Mbbl)	920.0 (-0.7)	918.6 (-0.2)	527.6 (-1.5)	72.0 (-7.3)	71.2 (-5.0)	77.8 (1.7)	512.9 (-2.8)	77.9 (8.2)	70.8 (-0.5)	72.2 (-7.1)
Electricity (TWh)	526.1 (3.6)	520.5 (-1.1)	302.8 (-0.9)	40.7 (0.4)	40.6 (-1.0)	43.0 (-2.4)	294.3 (-2.8)	38.3 (-5.8)	39.8 (-2.1)	42.1 (-2.1)
City gas (Bm³)	24.3 (7.4)	23.3 (-4.1)	14.8 (-2.8)	1.5 (1.5)	1.3 (-1.5)	1.2 (-3.4)	13.8 (-7.0)	1.4 (-10.5)	1.1 (-11.1)	1.1 (-9.4)
Heat-others (1 000 toe)	11.8 (6.4)	11.9 (0.9)	7.2 (2.6)	0.9 (2.6)	0.8 (1.2)	0.9 (1.8)	7.1 (-1.0)	0.9 (-2.0)	0.8 (-0.4)	0.9 (-1.1)

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			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	61.4	61.7	61.1	65.7	64.2	66.3	61.7	62.5	64.3	65.3
Transport	18.5	18.6	18.5	18.4	20.9	19.1	17.2	20.2	19.6	19.1
Residential	10.1	9.7	10.4	7.0	5.6	5.0	10.9	8.2	6.2	5.6
Commercial	7.7	7.6	7.6	6.7	6.9	7.3	7.8	6.8	7.5	7.6
Public	2.4	2.4	2.4	2.2	2.3	2.3	2.4	2.3	2.5	2.5
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	13.9	13.8	15.1	15.1	14.4	13.3	12.8	14.1	14.7
Oil	50.2	50.3	49.4	50.8	51.6	53.1	49.8	55.1	53.0	52.0
Electricity	19.4	19.4	19.3	19.5	20.0	20.0	19.5	18.4	20.2	20.7
City gas	11.4	11.3	12.2	9.7	8.5	7.8	12.0	9.0	7.9	7.7
Heat-others	5.1	5.2	5.3	4.9	4.8	4.7	5.5	4.8	4.9	5.0

Note: p means provisional
Source: Monthly Energy Statistics

Statistics on Energy Production Facilities

	2017	2018	2019	2020p			M5	M6	M7
				M5	M6	M7			
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	125.3 (5.2)	119.8 (1.7)	121.1 (3.4)	121.1 (3.1)	126.8 (5.8)	127.3 (5.1)	127.8 (5.5)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	23.3 (6.4)	21.9 (-3.0)	21.9 -	21.9 -	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 (0.3)	36.4 (0.3)	36.4 (0.1)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)
Gas	37.9 -	37.9 (-0.0)	39.6 (4.5)	37.9 (0.2)	38.3 (1.2)	38.3 (1.2)	41.2 (8.5)	41.2 (7.5)	41.2 (7.5)
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			M5	M6	M7
				M5	M6	M7			
The number of household demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.7 (2.8)	19.3 (2.8)	19.3 (2.8)	19.3 (2.8)	19.7 (2.4)	19.8 (2.5)	19.8 (2.6)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.7 (2.0)	23.4 (2.5)	23.4 (2.5)	23.5 (2.4)	23.9 (2.3)	24.0 (2.5)	24.1 (2.5)
- gasoline	10.4 (2.7)	10.6 (2.5)	11.0 (3.1)	10.8 (2.5)	10.8 (2.5)	10.8 (2.6)	11.2 (3.7)	11.2 (4.1)	11.3 (4.3)
- diesel	9.6 (4.4)	9.9 (3.7)	10.0 (0.3)	10.0 (2.4)	10.0 (2.1)	10.0 (1.9)	9.9 (-0.1)	10.0 (-0.2)	10.0 (-0.3)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-2.9)	2.0 (-2.8)	2.0 (-2.6)	2.0 (-0.6)	2.0 (-0.5)	2.0 (-0.6)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.5 (26.1)	0.4 (29.5)	0.4 (29.4)	0.4 (29.4)	0.5 (24.9)	0.6 (25.9)	0.6 (26.6)

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

KEEI

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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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