

KEEI

MONTHLY KOREA ENERGY TRENDS

2020 / 05
KOREA ENERGY ECONOMICS INSTITUTE

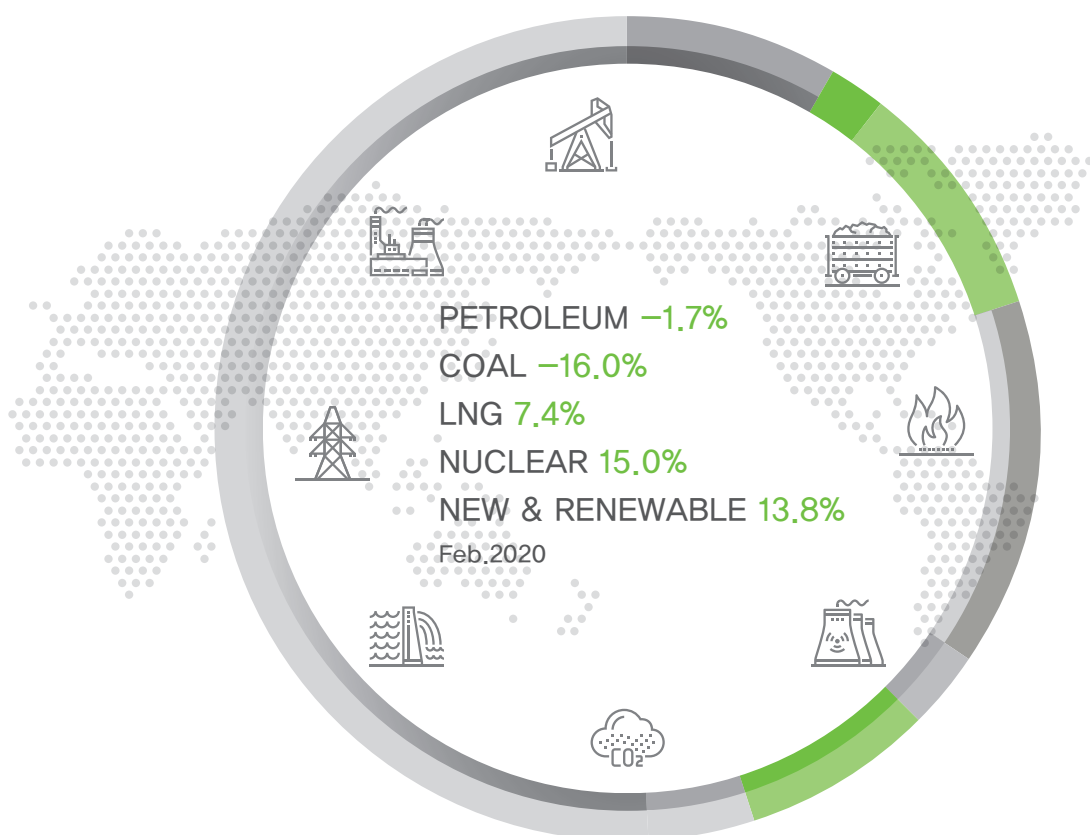


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1. The Economy and the Industry

- ☐ **The mining & manufacturing production index went up by 11.3% year-on-year in February, led by the semiconductor, basic chemical materials and iron & steel businesses.**
 - The semiconductor production index grew by 46.8% year-on-year driven by increased export volume, and its index of operating ratio increased by 24.0%.
 - The production index of basic chemical materials posted a year-on-year growth of 4.0%, led by basic petrochemicals and three major petrochemical products (synthetic resin, synthetic material, synthetic rubber) on the back of growing export volume (2.6%) and construction of a new facility, even though their unit export prices declined in line with global oil price trend.
 - The iron & steel production index bounced back in 25 months, posting a year-on-year growth of 6.7%, as the production of electric furnace steel and steel plates increased due to a sharp decline in imports from China and resultant growth in domestic demand.
 - The automobile production index dropped by 15.8% year-on-year, as a number of domestic production facilities were closed following the shutdown of wiring harness manufacturing facilities in China due to the spread of the new coronavirus ("Covid-19"). The number of automobiles produced also fell by 26.4%.
- ☐ **The service production index grew by mere 1.2% year-on-year (in February), as the index decreased in the restaurant & accommodation sector amid the spreading Covid-19.**
 - The service production index increased from the same month last year, led by the information & communications and health & social welfare sectors (5.9%, 4.2%), the pace of growth, however, continued to be slower as was in the previous month due to a sharp drop in the restaurant & accommodation sector (-14.6%) that was hit by the Covid-19.

► Major economic and industrial indicators

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
GDP (trillion won)	1 807.7 (2.7)	- -	- -	1 844.5 (2.0)	486.3 (2.3)	- -	- -
Total export (\$billion, customs clearance basis)	604.9 (5.4)	46.2 (-6.2)	39.5 (-11.3)	539.9 (-10.7)	45.7 (-5.3)	43.1 (-6.6)	40.9 (3.6)
Industrial production index (2015=100)	106.4 (1.5)	105.2 (-0.9)	89.6 (-4.1)	106.3 (-0.0)	114.8 (6.1)	102.3 (-2.8)	99.7 (11.3)
Semi-conductors	168.4 (21.2)	148.4 (7.0)	141.3 (3.9)	188.1 (11.7)	232.1 (35.3)	207.1 (39.6)	207.4 (46.8)
Basic compound	110.4 (0.1)	114.2 (-2.1)	102.3 (-1.5)	107.5 (-2.6)	113.4 (2.7)	113.2 (-0.9)	106.4 (4.0)
Steel	100.5 (-2.7)	103.9 (-2.1)	89.3 (-3.0)	98.3 (-2.2)	98.1 (-0.4)	94.9 (-8.7)	95.3 (6.7)
Cars	93.9 (-1.2)	96.6 (8.4)	77.3 (0.3)	93.1 (-0.9)	94.3 (-4.9)	77.2 (-20.1)	65.1 (-15.8)
Service production index (2015=100)	106.9 (2.2)	105.8 (2.5)	99.4 (-0.4)	108.4 (1.4)	118.8 (2.6)	106.7 (0.9)	100.6 (1.2)
Wholesale & Retail	105.0 (1.8)	105.2 (3.2)	92.5 (-3.9)	104.6 (-0.4)	109.7 (0.1)	103.0 (-2.1)	92.1 (-0.4)
Restaurant & Accommodation	98.5 (-1.9)	96.9 (1.4)	86.7 (-2.1)	97.5 (-1.0)	109.9 (0.9)	94.8 (-2.2)	74.0 (-14.6)

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

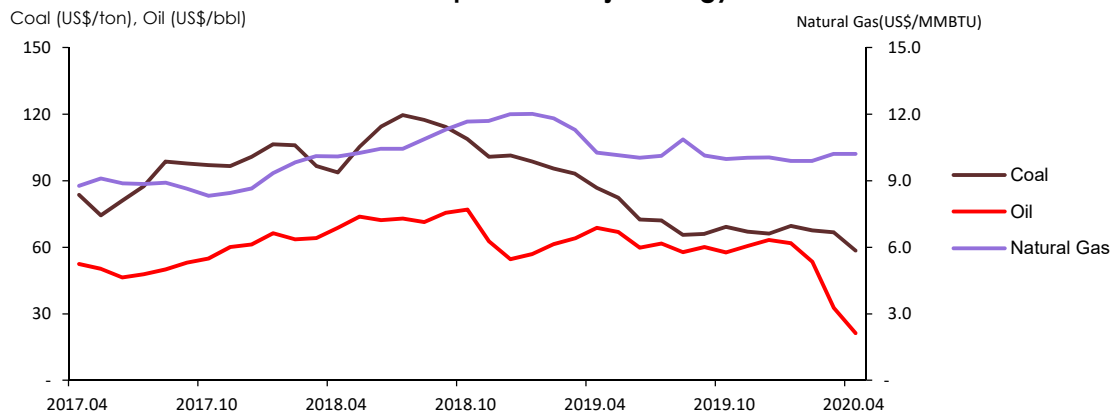
- **Global oil price fell by 69.1% in April on a year-on-year basis and by 34.9% from the previous month amid the concerns over a drop in petroleum demand due to the spreading Covid-19.**
 - OPEC+ nations agreed to cut their oil production in a meeting held on April 9 (local time), one month after they failed to reach an agreement. However, it didn't drive up the oil price, as the output-cuts target was much lower compared to the decline in petroleum demand.
 - IEA and OPEC slashed their forecast for global petroleum demand and expressed worries that the petroleum demand could decline faster amid the economic recession, as proven by China's negative growth in 1Q and IMF's downward revision of global economic forecasts.
 - The price of West Texas Intermediate (WTI) crude oil for delivery in May turned negative for the first time, as the May contract deadline approached (April 21), which is affected by weak petroleum demand.

► Global energy prices

	2018	2019				2020		
			M2	M3	M4	M2	M3	M4
Crude oil (US\$/bbl)	68.6 (29.5)	61.6 (-10.2)	61.3 (-3.5)	64.0 (-0.0)	68.8 (0.0)	53.4 (-12.9)	32.6 (-49.1)	21.2 (-69.1)
Natural gas (US\$/MMBTU)	10.7 (24.0)	10.6 (-1.1)	11.8 (20.2)	11.3 (11.7)	10.3 (1.7)	9.9 (-16.2)	10.2 (-9.6)	10.2 (-0.5)
Coal (US\$/ton)	107.0 (20.9)	77.9 (-27.3)	95.4 (-9.9)	93.1 (-3.7)	86.8 (-7.4)	67.6 (-29.1)	66.7 (-28.3)	58.6 (-32.5)

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 fell in April from a month ago, as global oil price declined due to the spreading Covid-19.

- Gasoline and diesel prices at gas stations dropped by 9.9% and 11.6% respectively in April, as global oil price continued its downward trend along with falling petroleum demand amid the Covid-19 pandemic.
- The price of bunker-C oil also declined by 23.7% from the previous month, which is attributed to the oil price decline, although demand for low sulfur fuel oil increased.

☐ Propane & butane prices decreased in April compared to the previous month owing to the drop in global prices.

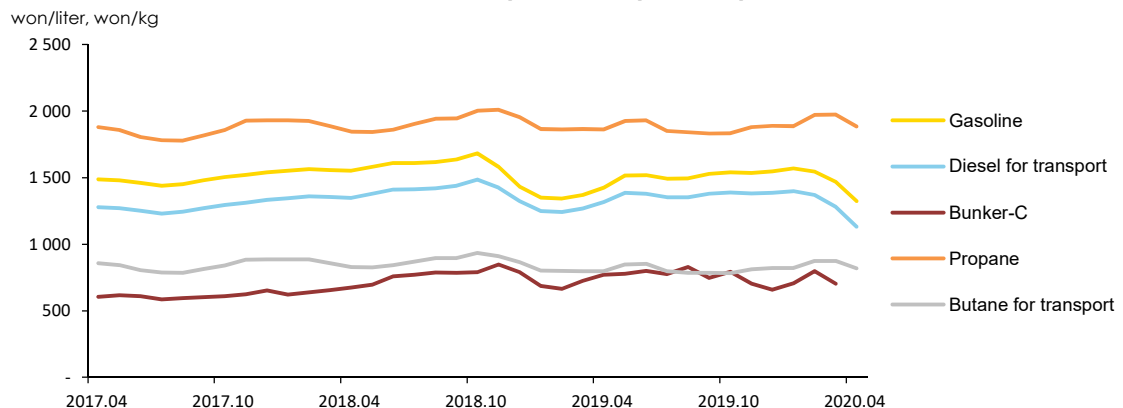
- Saudi Aramco's global propane and butane prices fell by 14.9% and 11.9% respectively in March and by almost 50% in April, and accordingly, domestic LPG importers lowered the prices by 4.4% and 6.4% from the previous month.

► Domestic petroleum product prices

	2018	2019				2020		
			M2	M3	M4	M2	M3	M4
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 343.8 (-14.1)	1 369.5 (-12.1)	1 424.4 (-8.2)	1 545.3 (15.0)	1 469.1 (7.3)	1 323.7 (-7.1)
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 242.9 (-8.6)	1 269.2 (-6.3)	1 316.4 (-2.4)	1 369.9 (10.2)	1 280.8 (0.9)	1 132.4 (-14.0)
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	665.8 (4.3)	724.0 (10.3)	771.1 (14.3)	797.7 (19.8)	703.1 (-2.9)	536.7 (-30.4)
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 863.3 (-3.3)	1 864.7 (-1.2)	1 863.6 (1.0)	1 971.5 (5.8)	1 973.2 (5.8)	1 885.5 (1.2)
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	798.7 (-9.9)	797.5 (-7.0)	796.5 (-3.9)	874.5 (9.5)	874.3 (9.6)	818.4 (2.8)

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

► Domestic petroleum product prices



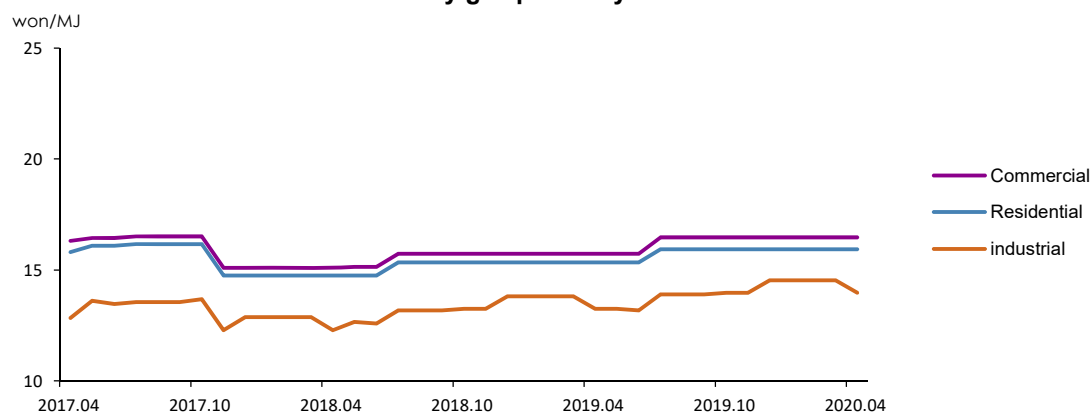
☐ **City gas price has been flat for the past ten months until April, since it was raised in July 2019.**

- City gas price had been fixed since July 2018 despite the upward trend in global LPG price in order to alleviate economic burdens on people. The price, however, was raised in July 2019 for the first time in a year to collect accounts receivable that were accumulated during the price-fixing period.

☐ **Heat energy price has been flat for nine consecutive months until April, since it was raised in August 2019.**

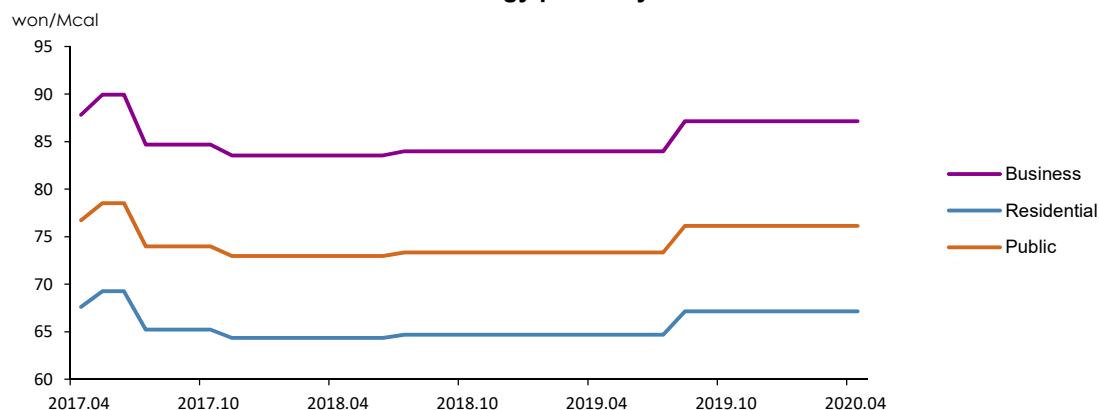
- Heat energy price was raised in August 2019 for the first time in 13 months (since July 2018), reflecting the city gas price increase in July and the energy tax reform.

► 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



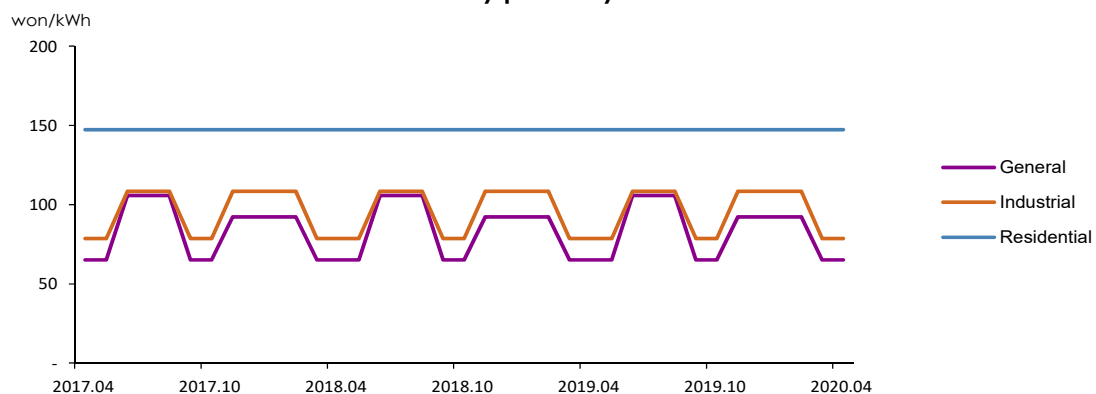
□ **Electricity prices¹ for general and industrial use remained flat after the price adjustment to the spring/autumn season in March, and the residential electricity price was also the same as the previous month.**

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

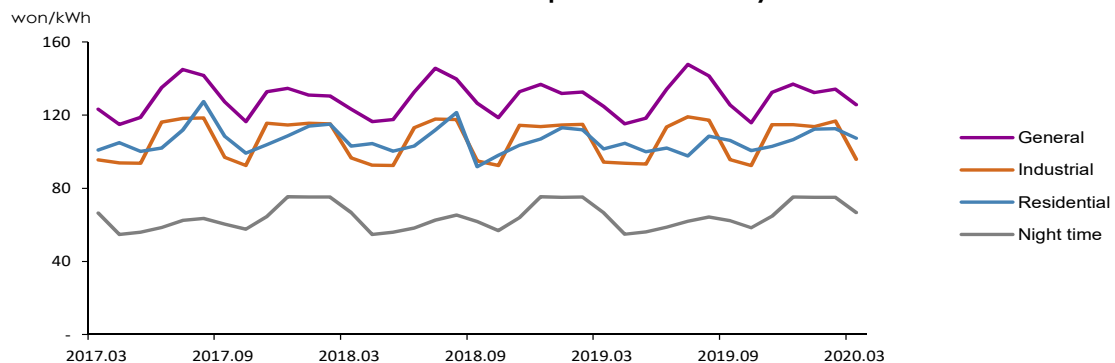
□ **The unit sales price of electricity for residential, industrial and general use all decreased in March from the previous month.**

- The unit sales price of residential electricity fell by 4.6% from a month earlier, as it is getting warmer with the change of season, and consequently, electricity demand for heating decreased.
- The unit sales price of electricity for industrial and general use dropped by 17.9% and 6.4% respectively, as the prices were adjusted for the spring/autumn season based on the time-of-use pricing.

► 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 grew by 1.9% year-on-year in February, as the imports of petroleum products and LNG dramatically increased.**

- The import volume of petroleum products jumped by 40.2% year-on-year, led by naphtha, LPG and bunker-C oil.
- The import of LNG maintained an upward trend, while that of coal declined steadily, as coal-fired generation continued to be curbed during the winter months.

□ **Renewable & other energy generation rose by 13.8% (year-on-year in February), with solar PV and the IGCC plant taking the lead.**

- Renewable & other energy generation increased, owing to the rapidly increased power generation at the IGCC plant and strong growth in installed capacity of solar PV and fuel cells.
- The installed capacity of waste energy and power generation from the source fell sharply, after it was classified as 'other energy' through a legal revision.

Import and domestic production of energy

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Import volume							
Crude oil (Mbbbl)	1 116.3	93.1	98.5	1 071.9	89.5	92.7	86.3
	(-0.2)	(-6.7)	(4.2)	(-4.0)	(-3.8)	(-0.4)	(-12.3)
Petroleum product (Mbbbl)	341.6	30.2	22.6	352.1	36.0	39.3	31.7
	(8.6)	(9.2)	(-23.0)	(3.1)	(12.2)	(30.4)	(40.2)
Bituminous coal (Mton)	131.5	12.9	10.7	132.7	11.6	10.3	8.4
	(0.0)	(11.3)	(3.2)	(0.9)	(11.9)	(-20.2)	(-21.7)
Anthracite (Mton)	8.1	0.5	0.8	6.9	0.6	0.7	0.3
	(16.0)	(-15.6)	(34.0)	(-15.6)	(-25.1)	(21.4)	(-62.8)
LNG (Mton)	44.0	3.8	3.8	40.8	4.8	4.1	4.7
	(17.3)	(-7.5)	(-16.9)	(-7.4)	(2.1)	(8.7)	(24.9)
Import volume (Mtoe)	354.5	32.0	28.3	349.1	32.5	31.5	28.8
	(4.4)	(3.2)	(-4.6)	(-1.5)	(2.3)	(-1.8)	(1.9)
Import value (billion US\$, CIF)	146.0	11.2	11.2	126.7	11.3	12.2	10.7
	(33.3)	(-4.3)	(-7.4)	(-13.2)	(-8.8)	(8.7)	(-4.0)
Energy share of total import value (%)	27.3	24.8	30.5	25.2	25.9	28.5	28.8
Foreign energy dependence (%)*	93.6	94.1	93.9	93.4	94.1	93.8	93.1
Domestic production							
Hydropower (TWh)	7.3	0.5	0.5	6.2	0.5	0.5	0.5
	(3.9)	(12.5)	(7.0)	(-14.3)	(-16.7)	(-1.2)	(12.2)
Anthracite (Mton)	1.2	0.1	0.1	1.1	0.1	0.1	0.1
	(-19.2)	(-20.0)	(-17.3)	(-9.5)	(15.4)	(-20.0)	(11.1)
Natural gas (Mton)	0.2	0.0	0.0	0.2	0.0	0.0	0.0
	(-10.4)	(-75.7)	(-16.5)	(-21.5)	(-15.6)	(216.9)	(-9.7)
Renewable energy (Mtoe)	17.1	1.6	1.4	17.9	1.5	1.5	1.6
	(8.0)	(8.3)	(2.5)	(4.7)	(1.3)	(-3.1)	(13.8)

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

Source: Monthly Energy statistics

4. Energy Consumption

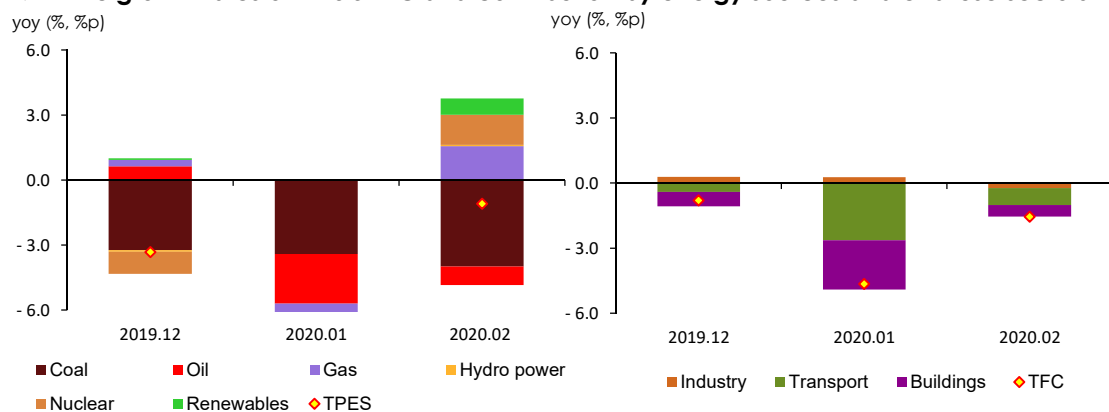
- **Total Primary Energy Supply (“TPES”) was down 1.1% year-on-year in February, as the use of coal and petroleum decreased.**
 - Coal use dropped by 16.0% year-on-year, as bituminous coal use for steelmaking and industrial anthracite use decreased, and coal-fired generation plunged owing to the fine dust mitigation policy during the winter season.
 - Petroleum use fell by 1.7% year-on-year, led by the road transport and aviation sectors, as traffic volume dropped sharply since the stricter social distancing policy was implemented in order to contain the spread of Covid-19.
 - Gas use increased in the power generation sector due to growing gas-fired generation, and its use for city gas production rebounded for the first time in seven months.
- **Total Final Consumption (“TFC”) fell by 1.6% year-on-year (in February), as the consumption rapidly decreased in all end-use sectors, especially in the transport sector.**
 - Energy use for transport was down 4.8% year-on-year, led by the road transport and aviation sectors due to a sharp drop in traffic volume amid the spreading Covid-19, in addition to the high base effect of the same period last year when the temporary fuel tax cut boosted demand, which expired later that year.
 - Buildings’ energy use dropped by 2.0% year-on-year, led by the commercial buildings, as warm weather reduced energy demand for heating, though electricity demand increased in residential buildings, because people stayed home for longer than usual amid the Covid-19 pandemic.
 - Industrial energy use went down by 0.4% from the same month last year, because coking coal use declined due to a drop in pig iron production, and as anthracite use plunged as well, although industrial production increased elsewhere including the petrochemical and ICT sectors.

► Energy consumption

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Total energy (Mtoe)	307.5	29.2	25.2	303.4	28.0	27.3	24.9
	(1.8)	(-0.8)	(-2.3)	(-1.3)	(-3.3)	(-6.7)	(-1.1)
- Non-energy oil&coal excluded	222.9	22.0	18.6	219.7	20.7	20.0	18.3
	(3.5)	(-0.7)	(-3.1)	(-1.5)	(-4.5)	(-8.9)	(-1.4)
Final energy (Mtoe)	232.7	22.4	19.9	231.2	21.6	21.4	19.6
	(1.2)	(0.5)	(-2.1)	(-0.6)	(-0.8)	(-4.6)	(-1.6)

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



Note: The growth rate of TPES (%) = Aggregated total contribution of energy sources (%p)/ The growth rate of TFC (%) = Aggregated total contribution of end-use sectors (%p)

5. Coal

□ **Coal consumption declined by 16.0% year-on-year in February, as the consumption plunged in all sectors.**

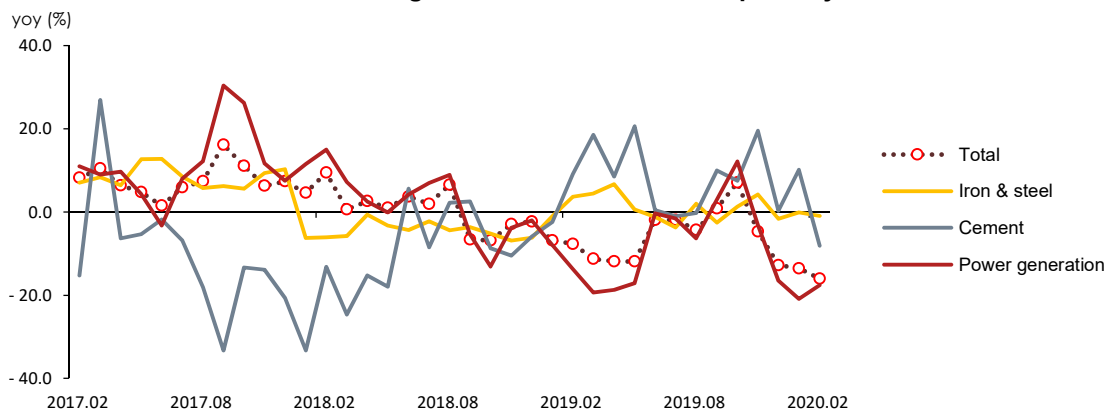
- Industrial coal use fell by 13.3% on a year-on-year basis, owing to the decline in the use of anthracite and bituminous coal for pig iron manufacturing.
- Coal use in buildings went down by 15.8%, as the number of heating degree days fell by 4.8% year-on-year in February, marking the 2nd consecutive month of decline, with continuing warm weather.
- Coal use dropped by 17.5% in the power generation sector, despite a year-on-year growth of 0.3% in electricity use in February, as the total coal-fired generation fell by 12.7% due to the cap on the operation of coal-fired power plants as part of the fine dust reduction measures.

► Coal consumption

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Coal (Mton)	141.0	12.4	11.0	133.0	10.9	10.7	9.3
	(0.9)	(-6.9)	(-7.7)	(-5.7)	(-12.8)	(-13.6)	(-16.0)
Industry	48.3	3.9	3.9	47.6	4.0	4.0	3.4
	(-2.0)	(-4.0)	(6.7)	(-1.6)	(-5.1)	(2.8)	(-13.3)
-Coking-coal	34.6	2.9	2.7	35.0	2.9	2.9	2.7
	(-4.6)	(-1.1)	(3.7)	(1.0)	(-1.7)	(-0.1)	(-0.9)
Buildings	0.9	0.1	0.1	0.6	0.1	0.1	0.0
	(-15.7)	(-21.0)	(-41.8)	(-29.8)	(-26.6)	(-38.3)	(-15.8)
Power generation	91.8	8.4	7.1	84.8	6.8	6.6	5.8
	(2.6)	(-7.9)	(-13.8)	(-7.6)	(-16.5)	(-20.8)	(-17.5)

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 went down by 1.7% year-on-year in February, with the transport and buildings sectors leading the downward trend, which is attributed to the Covid-19 outbreak.**

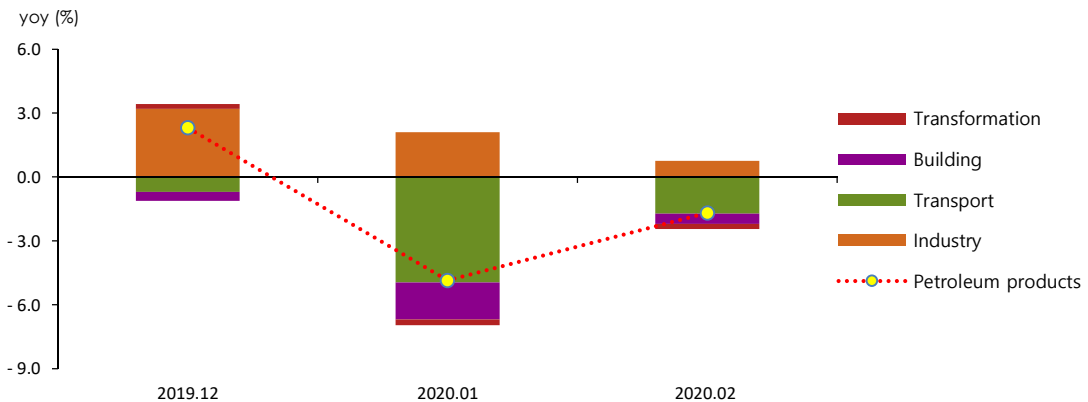
- Industrial petroleum consumption grew by 1.3% year-on-year despite the spread of Covid-19, as overall production activity remained healthy with increased number of work days, and the output of basic chemical materials increased in the petrochemical sector.
- Petroleum consumption fell by 5.4% year-on-year in the transport sector, as traffic volume dropped by 6.2% due to the Covid-19 outbreak, in addition to the high base effect of the same month last year when the temporary fuel tax cut boosted demand, which expired later that year.

► Petroleum product consumption by end-use sectors

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Petroleum (Mbbbl)	931.8	84.9	73.1	928.4	85.3	80.7	71.9
	(-0.6)	(1.2)	(-2.3)	(-0.4)	(2.3)	(-4.9)	(-1.7)
Industry	564.1	49.6	44.2	567.2	51.9	51.4	44.8
	(-0.5)	(0.4)	(-0.9)	(0.6)	(5.4)	(3.6)	(1.3)
-Naphtha	451.2	39.6	35.6	438.6	38.4	39.5	35.5
	(-1.6)	(-1.8)	(-2.7)	(-2.8)	(-0.9)	(-0.2)	(-0.1)
Transport	302.3	26.8	23.0	300.3	26.2	22.6	21.8
	(-0.3)	(7.3)	(3.2)	(-0.7)	(-2.2)	(-15.7)	(-5.4)
Buildings	53.7	7.4	5.3	52.8	6.2	5.9	4.9
	(-4.9)	(0.9)	(-12.3)	(-1.7)	(-5.2)	(-19.9)	(-6.8)
Power generation	11.7	1.0	0.6	8.1	1.0	0.8	0.4
	(12.1)	(-53.0)	(-68.1)	(-30.8)	(23.2)	(-22.6)	(-28.3)

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 consumption posted a year-on-year growth of 7.4% in February, as the consumption increased in both of the power generation and city gas production sectors.**
 - Gas use for power generation grew by 16.9% year-on-year due to the drop in coal-fired generation (-12.7%) and growth in electricity use (0.3%), and gas use for city gas production bounced back for the first time in seven months since July 2019.
- **City gas use rose by 2.4% year-on-year (in February), led by a strong growth in the industrial sector, though its use declined in the buildings sector.**
 - Industrial city gas use went up by 15.0% year-on-year, as its demand increased in the petrochemical, primary metals and fabricated metals sectors
 - City gas use in buildings fell by 2.8% year-on-year, as the number of heating degree days declined (-20.8 degree days).

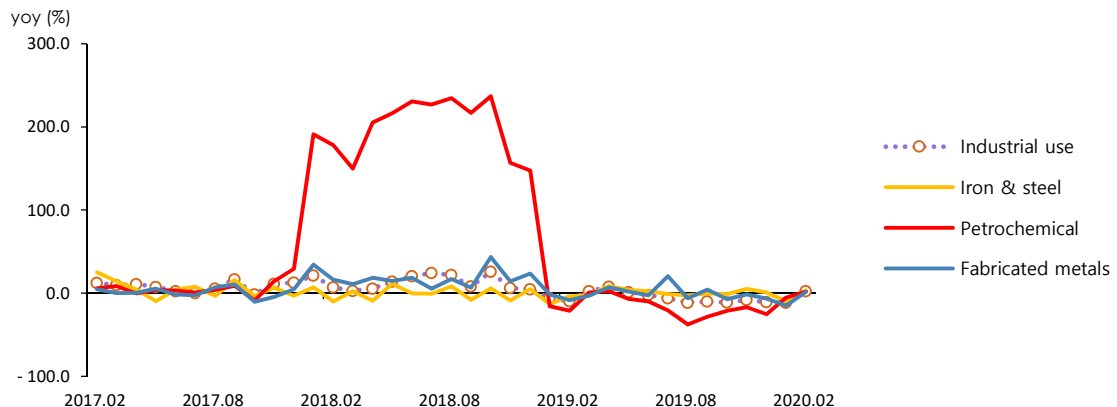
► Natural gas and city gas consumption

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
LNG (Mton)	42.3	5.0	4.1	40.9	5.0	4.9	4.4
	(16.2)	(-6.2)	(-6.1)	(-3.2)	(1.4)	(-2.4)	(7.4)
Power generation	18.9	1.8	1.5	18.4	2.0	1.9	1.7
	(21.5)	(-4.9)	(2.0)	(-2.7)	(16.3)	(6.2)	(16.9)
City gas production	19.8	2.8	2.3	18.8	2.5	2.5	2.2
	(7.7)	(-7.7)	(-11.0)	(-5.0)	(-8.6)	(-10.4)	(-1.0)
City gas (bm³)	25.7	3.5	3.0	25.4	3.1	3.4	3.1
	(9.9)	(-2.1)	(-7.8)	(-1.1)	(-3.6)	(-5.4)	(2.4)
Industry	10.2	1.0	0.9	10.4	1.0	1.0	1.0
	(19.2)	(3.3)	(2.2)	(2.4)	(-4.0)	(1.1)	(15.0)
Buildings	14.3	2.4	2.1	13.8	2.0	2.2	2.0
	(5.1)	(-4.2)	(-11.5)	(-3.5)	(-3.5)	(-8.2)	(-2.8)

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 was up 0.3% year-on-year in February, with the industrial sector leading the growth, though the consumption declined in the buildings sector.

- Industrial electricity consumption rose by 1.4% despite the impact of Covid-19, as the consumption rebounded in the petrochemical and fabricated metals sectors partly due to the increased number of work days, and it fell much slowly in the primary metals sector.
- Electricity use in buildings slightly decreased, as the outbreak of Covid-19 had contrasting impacts on the residential and commercial use of electricity.

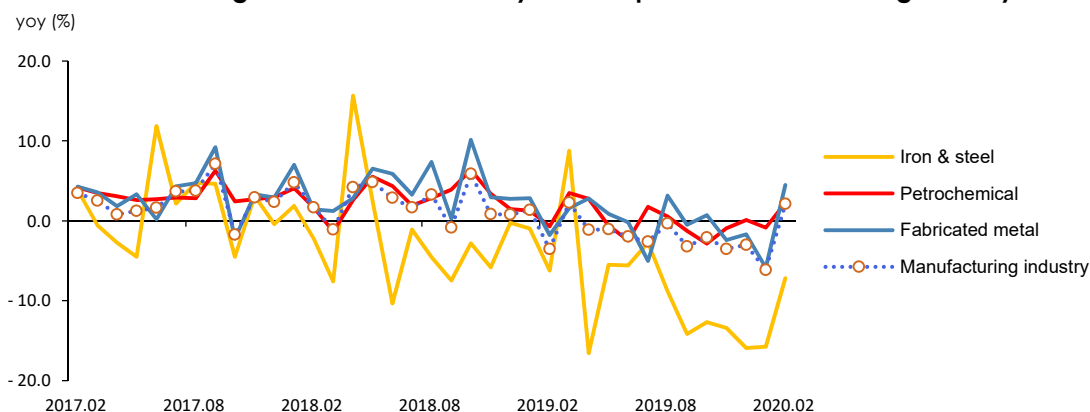
► Electricity consumption by end-use sectors

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Electricity (TWh)	526.1	48.6	44.4	520.5	44.7	46.3	44.5
	(3.6)	(0.6)	(-5.1)	(-1.1)	(-1.3)	(-4.8)	(0.3)
Industry	283.7	25.1	22.1	279.8	23.6	23.5	22.4
	(2.5)	(1.5)	(-3.5)	(-1.4)	(-3.1)	(-6.3)	(1.4)
Transport	3.0	0.3	0.2	2.9	0.2	0.2	0.2
	(3.6)	(-1.0)	(-3.6)	(-2.0)	(-7.8)	(-9.0)	(-7.0)
Buildings	239.5	23.3	22.0	237.8	20.9	22.5	21.8
	(4.9)	(-0.4)	(-6.7)	(-0.7)	(1.0)	(-3.1)	(-0.7)
Residential	70.7	6.2	6.1	70.5	5.8	6.3	6.3
	(6.3)	(1.8)	(-1.3)	(-0.3)	(1.5)	(0.2)	(2.1)
Commercial	136.4	13.9	13.0	135.2	12.1	13.2	12.7
	(4.6)	(-1.2)	(-8.4)	(-0.9)	(0.9)	(-4.6)	(-2.1)

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

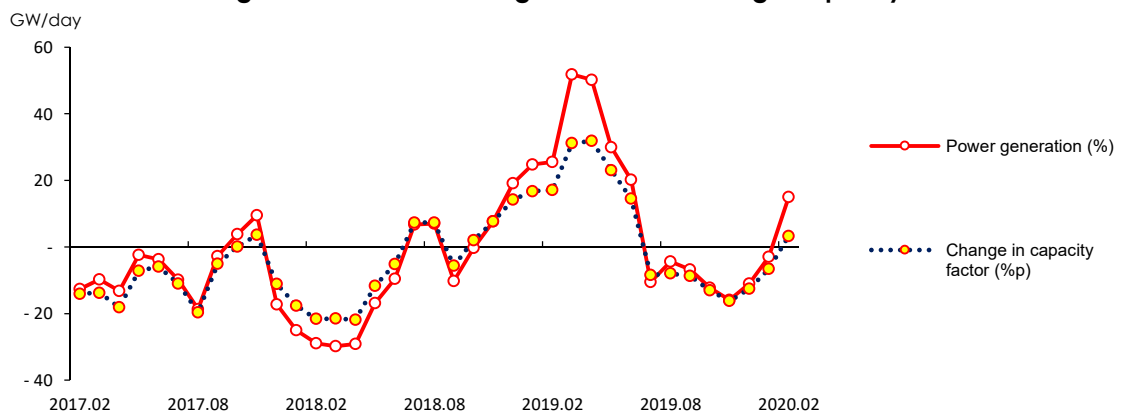
- The total nuclear generation posted a year-on-year growth of 15.0% in February, as its installed capacity and capacity factor increased.
 - The installed capacity of nuclear power plants went up by 6.4% year-on-year with the commissioning of Shinkori unit 4 (1.4GW, Aug. 2019), and the average capacity factor that had been down recently rose by 3.3%p owing to the drop in preventive maintenance.
 - Nuclear energy's share of the total power generation was up 3.2%p year-on-year to 27.3%.

► Nuclear power plants operation status

	2019												2020			2019												2020	
	2	3	4	5	6	7	8	9	10	11	12	1	2	2		3	4	5	6	7	8	9	10	11	12	1	2		
Kori2															Hanul1														
Kori3															Hanul2														
Kori4															Hanul3														
Shinkori1															Hanul4														
Shinkori2															Hanul5														
Shinkori3															Hanul6														
Shinkori4															Hanbit1														
Wolsong2															Hanbit2														
Wolsong3															Hanbit3														
Wolsong4															Hanbit4														
Shinwolsong1															Hanbit5														
Shinwolsong2															Hanbit6														

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

► The growth rate of nuclear generation & average capacity factor



10. Heat and Renewable energy

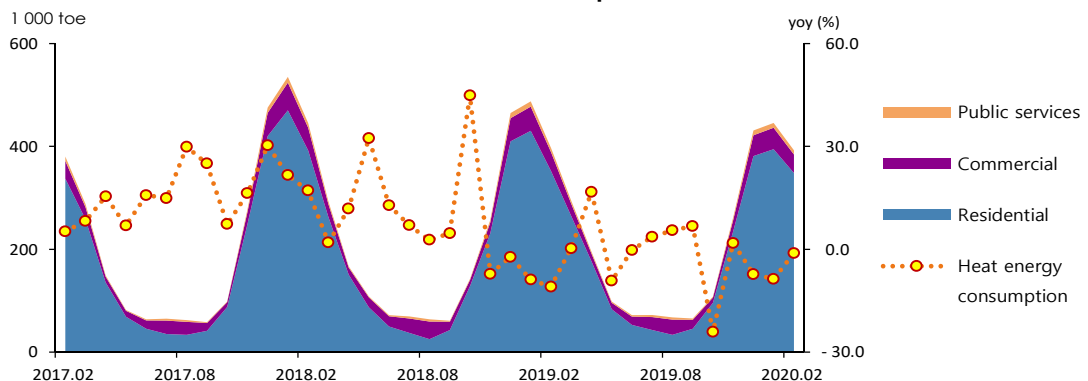
☐ **Heat energy consumption was down 1.1% in February on a year-on-year basis because of the warmer weather than the same period last year.**

- The average temperature rose by 1.2°C in February from the same month last year, and the number of heating degree days fell by 20.8 degree days. Consequently, heat energy consumption declined especially in the residential sector and commercial sector (-1.6%) as well, with the latter influenced by the Covid-19 pandemic.

☐ **Renewable energy generation decreased as a result of some changes in the classification. The decline, however, slowed down on the back of the increased power generation from solar PV and the IGCC plant.**

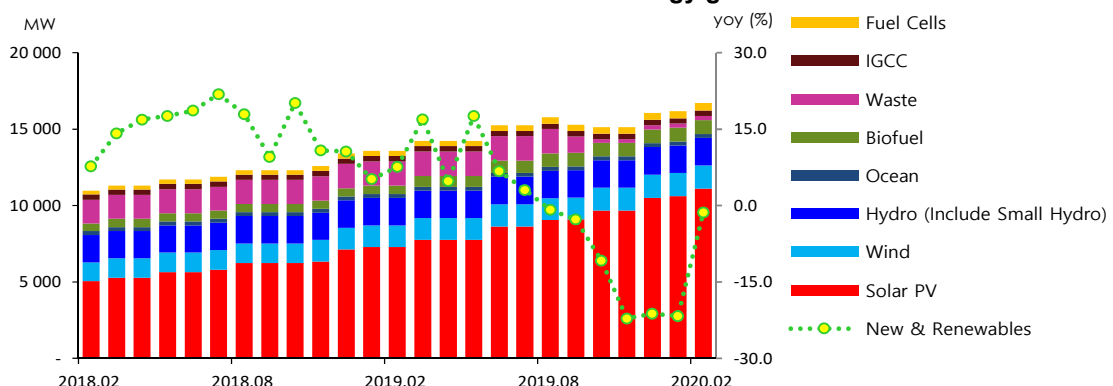
- Renewable generation fell by mere 1.3% due to the growth in solar PV installations and rapidly increased power generation from the restarted IGCC plant, though the installed capacity and power generation from non-renewable waste energy plunged, after it was excluded from the renewable category (Oct. 2019)

► 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 slid by 0.4% year-on-year in February despite increased production activities.

- Industrial energy use decreased due to weak coal demand, although production activities increased even amid the Covid-19 outbreak, for example, the mining & manufacturing production index rose by 11.3% year-on-year, and the manufacturing operating ratio index was up 9.5%.

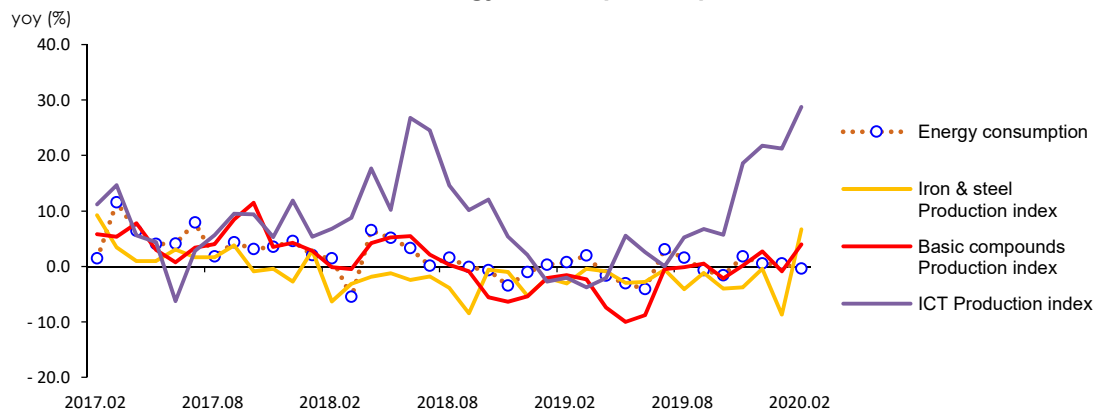
► Industrial energy consumption

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Industry (Mtoe)	142.9	12.5	11.4	142.7	12.6	12.6	11.3
	(0.7)	(0.3)	(0.7)	(-0.1)	(0.5)	(0.5)	(-0.4)
Petrochemical	72.1	6.3	5.7	72.2	6.4	6.6	5.8
	(3.0)	(0.4)	(-1.5)	(0.1)	(2.4)	(3.7)	(3.1)
- Naphtha	55.3	4.9	4.4	53.8	4.7	4.8	4.4
	(-1.6)	(-1.8)	(-2.7)	(-2.8)	(-0.9)	(-0.2)	(-0.1)
Iron & Steel	28.9	2.4	2.3	28.8	2.4	2.5	2.3
	(-13.0)	(-1.7)	(1.9)	(-0.0)	(-2.8)	(0.5)	(2.4)
-Coking coal	24.1	2.0	1.9	24.4	2.0	2.0	1.9
	(-4.6)	(-1.1)	(3.7)	(1.0)	(-1.7)	(-0.1)	(-0.9)
Fabricated metal	11.4	1.1	0.9	11.4	1.0	1.0	1.0
	(5.9)	(2.6)	(-3.0)	(-0.0)	(-2.8)	(-8.6)	(3.8)
Share of feedstock (%)	59.1	57.8	58.3	58.5	57.6	57.7	58.3

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

Source: Monthly Energy Statistics

► Industrial energy consumption & production index



12. Transport

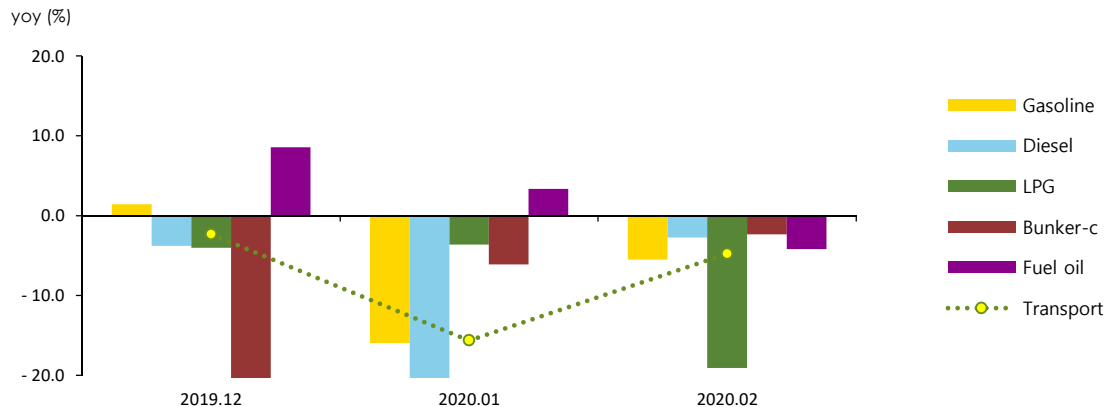
- **Transport energy use went down by 4.8% year-on-year in February, as the Covid-19 outbreak led to a sharp fall in traffic demand.**
 - Energy use for road transport declined by 5.5% year-on-year, as traffic demand plunged after the stricter social-distancing policy was implemented to contain the spread of Covid-19, in addition to the high base effect of the same period last year when the temporary fuel tax cut boosted demand, which expired later that year.
 - Energy use for aviation dropped by 4.1% year-on-year as a result of a sharp decline in the number of domestic and international flights amid the Covid-19 pandemic.

► The growth rate of petroleum consumption in the transport sector

	2018	2019p			M12	2020p	
		M1	M2			M1	M2
Transport (Mtoe)	43.0 (0.4)	3.8 (6.8)	3.2 (2.7)	42.6 (-0.9)	3.7 (-2.3)	3.2 (-15.6)	3.1 (-4.8)
Road	34.4 (0.9)	3.1 (11.4)	2.6 (4.8)	34.7 (0.9)	3.0 (-2.7)	2.5 (-19.9)	2.5 (-5.5)
Navigation	3.2 (-9.9)	0.3 (-16.5)	0.2 (-9.6)	2.6 (-19.6)	0.2 (-14.6)	0.3 (4.5)	0.2 (2.1)
Aviation	5.0 (4.4)	0.4 (-5.2)	0.4 (-1.9)	4.9 (-1.7)	0.5 (8.6)	0.4 (3.4)	0.4 (-4.1)
Rail	0.4 (3.6)	0.0 (0.2)	0.0 (-4.2)	0.3 (-2.9)	0.0 (-8.4)	0.0 (-12.6)	0.0 (-7.1)

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

□ **Energy use in buildings dropped by 2.0% year-on-year in February, led by the residential and commercial sectors, which is attributed to the mild weather.**

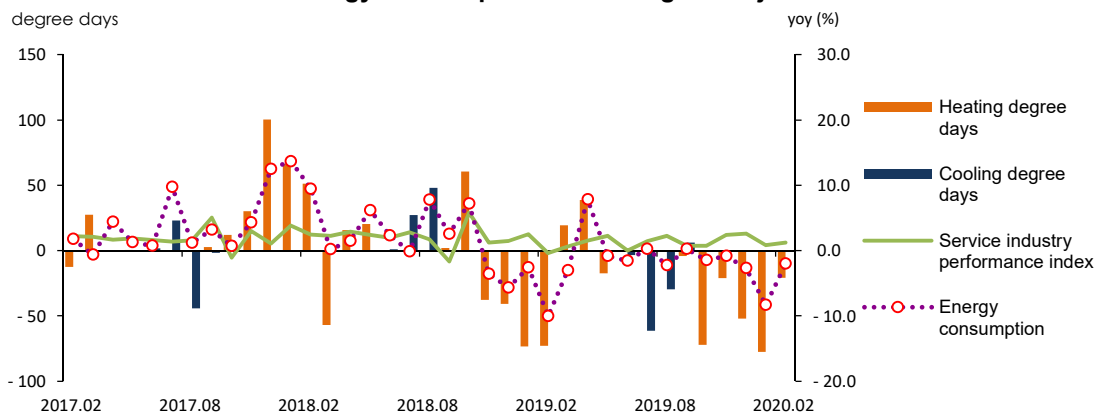
- Buildings' energy use decreased, as the number of heating degree days declined amid the mild weather, and as the use of heating energy sources declined partly due to the Covid-19 outbreak, which include coal, petroleum, city gas and heat (-15.8%, -6.8%, -2.8%, -1.1%).
- Energy use in residential buildings fell by 1.8%, because the use of heating energy sources decreased, including coal (briquettes), petroleum, city gas and heat (-15.8%, -9.4%, -2.2%, -1.1%), although electricity use grew by 2.1%, as people spent more time at home in the midst of the Covid-19 pandemic.
- Energy use in commercial buildings has been down for three consecutive months, as the use of major energy sources including electricity declined (petroleum -8.9%, city gas -5.1%, electricity -2.1%, heat -1.6%), owing to the suspension or shorter hours of business operation during the Covid-19 pandemic.

► Energy consumption in buildings

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Buildings (Mtoe)	46.9	6.2	5.3	46.0	5.2	5.6	5.2
	(3.5)	(-2.6)	(-10.0)	(-2.0)	(-2.7)	(-8.3)	(-2.0)
Residential	23.5	3.6	3.0	22.6	3.0	3.2	3.0
	(4.4)	(-3.3)	(-10.9)	(-3.6)	(-4.9)	(-9.0)	(-1.8)
Commercial	17.9	2.0	1.8	17.8	1.7	1.9	1.7
	(2.9)	(-1.7)	(-8.0)	(-0.3)	(-0.1)	(-7.9)	(-3.5)
Public · others	5.6	0.6	0.5	5.5	0.5	0.5	0.5
	(2.0)	(-0.6)	(-11.9)	(-1.2)	(1.7)	(-5.9)	(2.4)
Heating degree days	2 597.8	548.4	437.0	2 342.9	470.2	470.9	416.2
	(3.2)	(-11.8)	(-14.3)	(-9.8)	(-10.0)	(-14.1)	(-4.8)
Cooling degree days	209.0	-	-	120.4	-	-	-
	(57.5)	-	-	(-42.4)	-	-	-

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

► Energy consumption in buildings & major indicators



14. Transformation

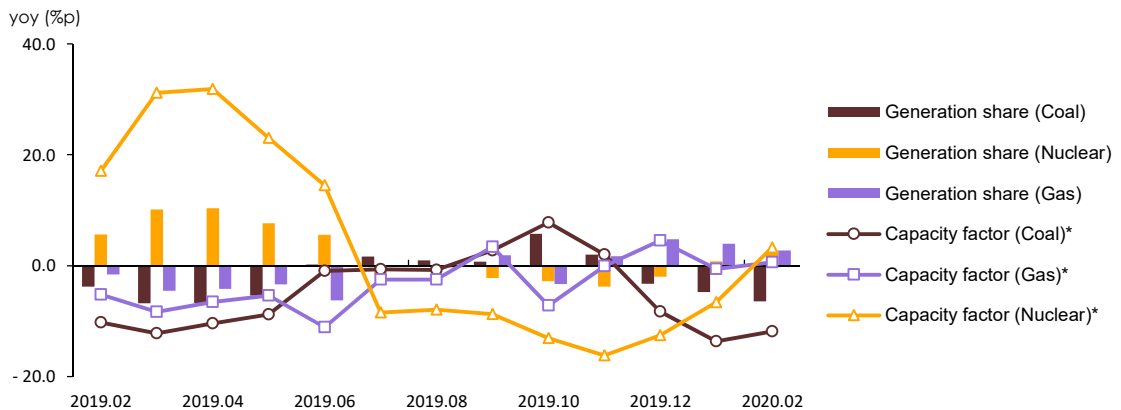
- The energy input to power stations was up 0.4% year-on-year in February, led by nuclear energy and gas, while coal use declined.
 - The total power generation grew by 1.5% on a year-on-year basis, as electricity demand increased (0.3%) partly due to the increased number of work days.
 - The energy input to power stations grew more slowly (0.4%) compared to the rate of growth in the total power generation (1.5%), which is because less efficient baseload generation took a smaller share, while highly efficient gas generation took a large share.

► Energy consumption in the power generation sector

	2018	2019p				2020p	
		M1	M2		M12	M1	M2
Input (Mtoe)	118.7	10.9	9.2	116.3	10.0	9.9	9.3
	(3.1)	(-1.3)	(-2.6)	(-2.0)	(-6.6)	(-9.6)	(0.4)
Coal	54.2	4.9	4.2	50.1	4.0	3.9	3.4
	(2.7)	(-8.1)	(-13.9)	(-7.6)	(-16.6)	(-20.9)	(-17.6)
Oil	1.3	0.1	0.0	0.8	0.1	0.1	0.0
	(7.5)	(-64.2)	(-70.9)	(-39.3)	(38.1)	(-41.3)	(-63.6)
Gas	25.1	2.4	2.0	24.4	2.7	2.6	2.3
	(21.4)	(-5.1)	(1.6)	(-2.9)	(15.9)	(5.7)	(16.4)
Nuclear	28.4	2.6	2.4	31.1	2.4	2.5	2.7
	(-10.1)	(24.7)	(25.5)	(9.3)	(-11.0)	(-2.9)	(15.0)
Hydro/other renewables	9.6	0.8	0.7	9.9	0.8	0.8	0.9
	(9.9)	(9.7)	(5.0)	(3.6)	(-1.6)	(-5.3)	(18.1)

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

	2017	2018				2019			
			2Q	3Q	4Q		2Q	3Q	4Q
GDP (trillion won)	1 760.8 (3.2)	1 807.7 (2.7)	450.8 (2.9)	453.0 (2.1)	475.2 (2.9)	1 844.5 (2.0)	460.1 (2.0)	462.3 (2.0)	486.3 (2.3)
Private consumption	848.6 (2.8)	872.3 (2.8)	212.2 (2.9)	217.8 (2.3)	223.5 (2.4)	889.0 (1.9)	216.5 (2.0)	221.7 (1.8)	227.9 (1.9)
Facilities investment	170.3 (16.5)	166.2 (-2.4)	43.2 (-4.3)	37.3 (-9.4)	41.7 (-5.3)	153.5 (-7.7)	40.2 (-7.0)	36.3 (-2.6)	40.6 (-2.5)
Construction investment	282.9 (7.3)	270.9 (-4.3)	74.4 (-2.5)	68.0 (-8.7)	71.3 (-5.7)	262.4 (-3.1)	71.8 (-3.5)	65.5 (-3.7)	72.1 (1.1)
Consumer price index (2015=100)	102.9	104.5	104.3	104.8	104.8	104.9	104.9	104.9	105.2
USD to KRW exchange rate (won)	1 131.0	1 100.2	1 079.0	1 121.5	1 127.4	1 165.4	1 166.6	1 193.9	1 175.8
Benchmark rate (%)	1.3	1.5	1.5	1.5	1.7	1.6	1.8	1.5	1.3
Coincident composite index (2015=100)	107.6	110.1	110.1	110.4	110.6	111.7	111.3	112.0	112.9
Mining & manufacturing production index (2015=100)	104.8	106.4	107.2	105.4	110.1	106.3	106.9	105.7	112.5
Manufacturing operating ratio index (2015=100)	98.4	98.8	101.1	97.3	101.8	98.5	100.3	98.9	102.4
Average temperature	13.1	13.0	17.8	24.8	7.4	13.5	17.3	24.3	9.1
- year-on-year difference	- 0.5	- 0.1	- 0.3	0.7	0.1	0.5	- 0.5	- 0.6	1.7
Heating degree days	2 517.1 (5.5)	2 597.8 (3.2)	179.7 (25.1)	5.0 (72.4)	975.9 (-1.8)	2 342.9 (-9.8)	201.1 (11.9)	0.9 (-82.0)	830.5 (-14.9)
Cooling degree days	132.7 (-13.9)	209.0 (57.5)	3.5 (45.8)	205.5 (57.7)	- (-)	120.4 (-42.4)	- (-)	120.4 (-41.4)	- (-)
Energy intensity	0.17 (-0.4)	0.17 (-0.8)	0.16 (0.8)	0.17 (0.3)	0.17 (-3.7)	0.17 (-3.3)	0.15 (-3.4)	0.16 (-3.3)	0.16 (-3.8)
Per capita consumption									
oil (bbl)	18.2 (1.5)	18.1 (-1.0)	4.5 (2.8)	4.5 (-1.3)	4.5 (-5.4)	18.0 (-0.6)	4.3 (-4.6)	4.5 (0.3)	4.7 (3.1)
Electricity (MWh)	9.9 (1.9)	10.2 (3.1)	2.4 (3.2)	2.7 (4.4)	2.5 (0.9)	10.1 (-1.3)	2.4 (-0.1)	2.6 (-2.5)	2.4 (-0.8)
City gas (1 000 m ³)	0.4 (6.0)	0.5 (6.9)	0.1 (7.5)	0.1 (8.0)	0.1 (2.6)	0.5 (-4.3)	0.1 (4.1)	0.1 (-3.9)	0.1 (-7.6)
Total energy (toe)	5.9 (2.5)	6.0 (1.3)	1.4 (3.3)	1.5 (1.9)	1.5 (-1.4)	5.9 (-1.5)	1.4 (-1.6)	1.4 (-1.5)	1.5 (-1.8)

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

The Index of Production & Operating Ratio by Sectors

(2015=100)

	2015=100								
	2017	2018	2019					2020	
			M12	M1	M2		M12	M1	M2
Industrial production index									
All industry	105.9 (2.7)	107.5 (1.6)	116.7 (0.4)	105.0 (0.6)	95.9 (-2.2)	108.1 (0.5)	121.3 (3.9)	104.4 (-0.6)	100.6 (4.9)
Mining & manufacturing	104.8 (2.5)	106.4 (1.5)	108.2 (0.7)	105.2 (-0.9)	89.6 (-4.1)	106.3 (-0.0)	114.8 (6.1)	102.3 (-2.8)	99.7 (11.3)
Iron & steel	103.4 (1.9)	100.5 (-2.7)	98.5 (-5.3)	103.9 (-2.1)	89.3 (-3.0)	98.3 (-2.2)	98.1 (-0.4)	94.9 (-8.7)	95.3 (6.7)
Cement	109.7 (1.7)	100.0 (-8.8)	91.4 (-13.6)	82.7 (4.8)	66.3 (-10.8)	93.8 (-6.2)	95.4 (4.4)	66.6 (-19.5)	71.6 (8.0)
Basic compound	110.4 (5.6)	110.4 (0.1)	110.4 (-5.4)	114.2 (-2.1)	102.3 (-1.5)	107.5 (-2.6)	113.4 (2.7)	113.2 (-0.9)	106.4 (4.0)
Transport equipment	95.1 (-2.6)	93.9 (-1.2)	99.2 (20.7)	96.6 (8.4)	77.3 (0.3)	93.1 (-0.9)	94.3 (-4.9)	77.2 (-20.1)	65.1 (-15.8)
Electric & electronic	106.6 (3.0)	106.5 (-0.2)	111.5 (0.2)	104.2 (1.7)	88.8 (-4.9)	107.7 (1.2)	120.6 (8.2)	97.0 (-6.9)	95.9 (8.0)
Service	104.5 (1.9)	106.9 (2.2)	115.8 (1.5)	105.8 (2.5)	99.4 (-0.4)	108.4 (1.4)	118.8 (2.6)	106.7 (0.9)	100.6 (1.2)
Operating ratio index									
Manufacturing	98.4 (-0.6)	98.8 (0.4)	99.0 (2.0)	96.8 (-0.8)	82.4 (-4.4)	98.5 (-0.3)	102.7 (3.7)	91.6 (-5.4)	90.2 (9.5)
Iron & steel	102.8 (1.7)	100.1 (-2.6)	98.3 (-4.9)	103.7 (-2.2)	89.0 (-2.8)	98.1 (-2.0)	97.8 (-0.5)	94.5 (-8.9)	95.1 (6.9)
Cement	107.2 (0.5)	108.4 (1.1)	102.5 (-2.1)	90.4 (15.0)	72.1 (-2.7)	101.7 (-6.2)	103.4 (0.9)	72.2 (-20.1)	77.6 (7.6)
Basic compound	105.9 (3.0)	103.5 (-2.3)	102.7 (-7.1)	106.1 (-3.3)	95.1 (-2.7)	99.4 (-4.0)	103.8 (1.1)	104.0 (-2.0)	97.8 (2.8)
Transport equipment	87.7 (-6.5)	89.6 (2.3)	95.0 (25.8)	95.5 (14.8)	75.7 (5.6)	92.9 (3.6)	94.3 (-0.7)	77.7 (-18.6)	67.3 (-11.1)
Electric & electronic	104.0 (1.2)	102.2 (-1.7)	105.8 (0.1)	99.7 (-0.1)	85.7 (-5.2)	103.5 (1.3)	115.3 (9.0)	92.0 (-7.7)	92.7 (8.2)

Note: p means provisional
Source: Monthly Energy Statistics

International Energy Prices

	2018	2019					2020			
			M1~4	M2	M3	M4	M1~4	M2	M3	M4
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	57.1 (-10.3)	55.0 (-11.6)	58.2 (-7.3)	63.9 (-3.7)	38.8 (-32.1)	50.5 (-8.1)	30.5 (-47.7)	16.7 (-73.9)
Dubai	69.4 (30.5)	63.5 (-8.5)	65.4 (0.6)	64.6 (3.0)	66.9 (6.7)	70.9 (3.9)	43.2 (-34.0)	54.2 (-16.0)	33.7 (-49.6)	20.4 (-71.3)
Brent	71.5 (30.5)	64.2 (-10.3)	65.8 (-3.6)	64.4 (-2.0)	67.0 (0.5)	71.6 (-0.2)	44.9 (-31.8)	55.5 (-13.9)	33.7 (-49.7)	26.6 (-62.8)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	64.8 (-1.5)	63.0 (-5.8)	65.3 (0.7)	68.9 (4.0)	55.0 (-15.0)	64.2 (1.9)	52.8 (-19.1)	33.9 (-50.8)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	11.3 (15.3)	11.8 (20.2)	11.3 (11.7)	10.3 (1.7)	10.1 (-11.4)	9.9 (-16.2)	10.2 (-9.6)	10.2 (-0.5)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	561.6 (15.6)	614.3 (18.8)	563.3 (15.3)	481.9 (-0.6)	463.7 (-17.4)	446.9 (-27.3)	461.4 (-18.1)	476.2 (-1.2)
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	93.5 (-7.2)	95.4 (-9.9)	93.1 (-3.7)	86.8 (-7.4)	65.6 (-29.8)	67.6 (-29.1)	66.7 (-28.3)	58.6 (-32.5)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	109.4 (-3.9)	110.4 (-0.5)	112.9 (-5.5)	107.7 (-5.3)	87.5 (-20.0)	85.0 (-23.0)	89.3 (-20.9)	89.6 (-16.8)
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	70.6 (-10.1)	66.3 (-13.9)	74.4 (-3.5)	80.8 (-0.8)	48.2 (-31.8)	64.5 (-2.7)	36.4 (-51.0)	20.5 (-74.6)
Kerosene	84.8 (29.8)	77.3 (-8.9)	78.0 (-4.0)	77.9 (-2.7)	79.8 (1.1)	82.6 (-3.0)	49.8 (-36.2)	63.1 (-19.0)	39.3 (-50.8)	21.3 (-74.3)
Diesel	84.9 (27.9)	78.2 (-7.9)	79.0 (-2.1)	78.9 (1.0)	81.0 (3.4)	83.3 (-1.2)	54.8 (-30.5)	66.0 (-16.4)	45.5 (-43.9)	31.4 (-62.3)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	63.7 (8.9)	63.9 (12.1)	66.2 (16.2)	66.8 (9.5)	38.3 (-39.8)	46.7 (-27.0)	31.5 (-52.5)	23.3 (-65.1)
Propane	542.1 (16.0)	434.6 (-19.8)	468.8 (-9.4)	440.0 (-16.2)	490.0 (2.1)	515.0 (8.4)	432.5 (-7.7)	505.0 (14.8)	430.0 (-12.2)	230.0 (-55.3)
Butane	539.2 (7.5)	441.7 (-18.1)	486.3 (-3.2)	470.0 (-6.9)	520.0 (11.8)	535.0 (13.8)	463.8 (-4.6)	545.0 (16.0)	480.0 (-7.7)	240.0 (-55.1)
Naphtha	67.0 (24.5)	56.9 (-15.1)	57.8 (-10.0)	56.4 (-7.9)	60.1 (-4.5)	63.2 (-5.4)	40.2 (-30.5)	52.3 (-7.2)	30.3 (-49.6)	17.3 (-72.6)

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)

	2017	2018	2019p				2020p		
				M1~2	M1	M2	M1~2	M1	M2
Coal (Mton)	139.8	141.0	133.0	23.4	12.4	11.0	20.0	10.7	9.3
	(8.1)	(0.9)	(-5.7)	(-7.3)	(-6.9)	(-7.7)	(-14.7)	(-13.6)	(-16.0)
- Coking coal excluded	103.5	106.4	98.0	17.7	9.4	8.3	14.3	7.8	6.6
	(7.9)	(2.8)	(-7.8)	(-9.7)	(-8.5)	(-10.9)	(-19.3)	(-17.7)	(-21.0)
Oil (Mbbbl)	937.1	931.8	928.4	158.0	84.9	73.1	152.6	80.7	71.9
	(1.7)	(-0.6)	(-0.4)	(-0.5)	(1.2)	(-2.3)	(-3.4)	(-4.8)	(-1.7)
- Non-energy oil excluded	443.7	445.5	451.8	77.7	42.6	35.0	72.1	38.4	33.7
	(-2.5)	(0.4)	(1.4)	(0.5)	(3.6)	(-3.0)	(-7.2)	(-10.0)	(-3.7)
LNG (Mton)	36.4	42.3	40.9	9.1	5.0	4.1	9.3	4.9	4.4
	(4.3)	(16.2)	(-3.2)	(-6.1)	(-6.2)	(-6.1)	(2.0)	(-2.4)	(7.4)
Hydro (TWh)	7.0	7.3	6.2	1.0	0.5	0.5	1.1	0.5	0.5
	(5.5)	(3.9)	(-14.3)	(9.9)	(12.5)	(7.0)	(5.0)	(-1.2)	(12.2)
Nuclear (TWh)	148.4	133.5	145.9	23.3	12.3	11.0	24.6	11.9	12.7
	(-8.4)	(-10.1)	(9.3)	(25.1)	(24.7)	(25.5)	(5.6)	(-2.9)	(15.0)
Others (Mtoe)	15.8	17.1	17.9	2.9	1.6	1.4	3.1	1.5	1.6
	(16.7)	(8.0)	(4.7)	(5.5)	(8.3)	(2.5)	(4.8)	(-3.1)	(13.8)
TPES (Mtoe)	302.1	307.5	303.4	54.5	29.2	25.2	52.2	27.3	24.9
	(2.8)	(1.8)	(-1.3)	(-1.5)	(-0.8)	(-2.3)	(-4.1)	(-6.7)	(-1.1)
- Non-energy oil excluded	240.7	247.1	244.0	44.5	24.0	20.5	42.3	22.0	20.2
	(2.1)	(2.6)	(-1.2)	(-1.6)	(-0.8)	(-2.5)	(-5.0)	(-8.2)	(-1.3)
- Non-energy oil & coal excluded	215.4	222.9	219.7	40.6	22.0	18.6	38.3	20.0	18.3
	(1.4)	(3.5)	(-1.5)	(-1.8)	(-0.7)	(-3.1)	(-5.5)	(-8.9)	(-1.4)

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

Share of TPES by Sources

(unit: %)

	2017	2018	2019p				2020p		
				M1~2	M1	M2	M1~2	M1	M2
Coal	28.5	28.2	27.0	26.4	26.0	26.9	23.7	24.2	23.2
- Coking coal excluded	20.2	20.3	19.0	19.1	19.0	19.3	16.2	16.7	15.5
Oil	39.5	38.5	38.7	36.8	36.9	36.8	36.7	37.1	36.3
- non-energy oil excluded	19.2	18.9	19.2	18.5	19.0	18.1	17.6	17.8	17.4
LNG	15.7	18.0	17.6	21.9	22.5	21.2	23.3	23.5	23.0
Hydro	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Nuclear	10.5	9.2	10.2	9.1	8.9	9.3	10.0	9.3	10.8
Others	5.2	5.6	5.9	5.4	5.3	5.4	5.9	5.5	6.2
TPES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: p means provisional
Source: Monthly Energy Statistics

Total Final Consumption (TFC)

(unit: Mtoe)

	2017	2018	2019p				2020p		
				M1~2	M1	M2	M1~2	M1	M2
Industry	141.9 (5.0)	142.9 (0.7)	142.7 (-0.1)	23.9 (0.5)	12.5 (0.3)	11.4 (0.7)	23.9 (0.1)	12.6 (0.5)	11.3 (-0.4)
Transport	42.8 (1.2)	43.0 (0.4)	42.6 (-0.9)	7.0 (4.9)	3.8 (6.8)	3.2 (2.7)	6.3 (-10.6)	3.2 (-15.6)	3.1 (-4.8)
Residential · commercial	39.9 (2.9)	41.3 (3.7)	40.5 (-2.2)	10.4 (-6.2)	5.6 (-2.8)	4.8 (-9.8)	9.8 (-5.7)	5.1 (-8.6)	4.7 (-2.4)
Public	5.5 (4.1)	5.6 (2.0)	5.5 (-1.2)	1.1 (-6.1)	0.6 (-0.6)	0.5 (-11.9)	1.0 (-2.1)	0.5 (-5.9)	0.5 (2.4)
TFC	230.0 (3.9)	232.7 (1.2)	231.2 (-0.6)	42.3 (-0.7)	22.4 (0.5)	19.9 (-2.1)	41.0 (-3.2)	21.4 (-4.6)	19.6 (-1.5)
Coal (Mton)	50.4 (2.7)	49.2 (-2.3)	48.2 (-2.1)	8.0 (0.2)	4.0 (-4.5)	4.0 (5.4)	7.5 (-5.8)	4.0 (1.8)	3.5 (-13.3)
Oil (Mbbl)	926.6 (3.0)	920.0 (-0.7)	920.3 (0.0)	156.4 (1.1)	83.9 (2.6)	72.5 (-0.6)	151.4 (-3.2)	80.0 (-4.6)	71.5 (-1.5)
Electricity (TWh)	507.7 (2.2)	526.1 (3.6)	520.5 (-1.1)	93.0 (-2.2)	48.6 (0.6)	44.4 (-5.1)	90.8 (-2.3)	46.3 (-4.8)	44.5 (0.3)
City gas (Bm³)	22.6 (6.3)	24.3 (7.4)	23.3 (-4.1)	6.3 (-7.6)	3.4 (-4.6)	2.9 (-10.8)	5.9 (-5.5)	3.1 (-8.9)	2.8 (-1.4)
Heat · others (1 000 toe)	11.1 (18.4)	11.8 (6.4)	11.9 (0.9)	2.5 (-1.2)	1.3 (0.9)	1.1 (-3.6)	2.5 (0.7)	1.3 (-3.5)	1.2 (5.7)

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

Source: Monthly Energy Statistics

Share of the Total Final Consumption by Sources

(unit: %)

	2017	2018	2019p				2020p		
				M1~2	M1	M2	M1~2	M1	M2
Industry	61.7	61.4	61.7	56.3	55.7	57.0	58.2	58.7	57.7
Transport	18.6	18.5	18.4	16.6	16.9	16.3	15.3	14.9	15.8
Residential · commercial	17.3	17.8	17.5	24.5	24.8	24.2	23.9	23.8	24.0
Public	2.4	2.4	2.4	2.5	2.6	2.5	2.5	2.5	2.5
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	14.5	13.9	13.8	12.4	11.8	13.1	12.2	12.5	11.9
Oil	51.2	50.2	50.4	46.8	47.4	46.2	46.4	46.7	46.0
Electricity	19.0	19.4	19.4	18.9	18.6	19.2	19.1	18.6	19.5
City gas	10.5	11.4	11.3	16.0	16.3	15.8	16.3	16.1	16.4
Heat · others	4.8	5.1	5.1	5.8	5.9	5.7	6.1	6.0	6.2

Note: p means provisional

Source: Monthly Energy Statistics

Statistics on Energy Production Facilities

	2017	2018	2019				2020		
			M12	M1	M2		M12	M1	M2
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	119.1 (1.9)	118.9 (11.9)	119.4 (11.4)	125.3 (7.2)	125.3 (7.2)	125.4 (7.7)	125.9 (8.1)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	21.9 (-3.0)	21.9 (-5.5)	21.9 (-5.5)	23.3 (3.2)	23.3 (3.2)	23.3 (3.2)	23.3 (3.2)
Bituminous coal	36.1 (16.8)	36.4 (0.7)	36.4 (0.7)	36.5 (17.6)	36.5 (17.6)	36.4 (0.8)	36.4 (0.8)	36.5 (1.0)	36.5 (1.0)
Gas	37.9 (16.0)	37.9 (-0.0)	37.9 (-0.0)	37.9 (16.3)	37.9 (13.3)	39.6 (4.5)	39.6 (4.5)	41.2 (10.2)	41.2 (10.2)
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 (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				2020		
			M12	M1	M2		M12	M1	M2
The number of households demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.1 (3.1)	19.3 (3.3)	19.3 (3.0)	19.7 (2.8)	19.7 (2.8)	19.7 (2.3)	19.8 (2.4)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.2 (3.0)	23.3 (3.0)	23.3 (2.9)	23.7 (2.0)	23.7 (2.0)	23.7 (2.0)	23.7 (1.9)
- gasoline	10.4 (2.7)	10.6 (2.5)	10.6 (2.5)	10.7 (2.5)	10.7 (2.4)	11.0 (3.1)	11.0 (3.1)	11.0 (3.1)	11.0 (3.1)
- diesel	9.6 (4.4)	9.9 (3.7)	9.9 (3.7)	10.0 (3.7)	10.0 (3.6)	10.0 (0.3)	10.0 (0.3)	10.0 (0.0)	10.0 (-0.1)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-1.5)	2.0 (-1.1)	2.0 (-1.0)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.4 (30.9)	0.4 (30.7)	0.4 (30.3)	0.5 (26.1)	0.5 (26.1)	0.5 (25.1)	0.5 (24.3)

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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