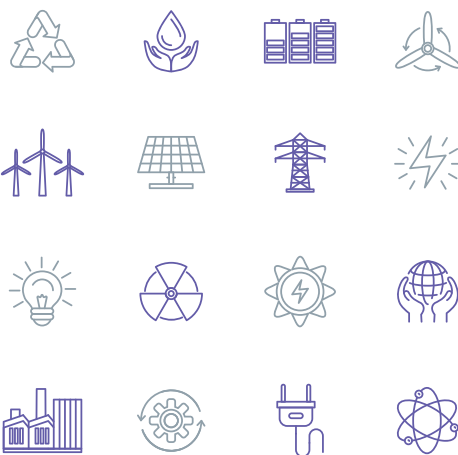


KEEI

MONTHLY KOREA ENERGY TRENDS



COAL -8.1%
PETROLEUM -11.1%
LNG 7.6%
NUCLEAR 36.2%
NEW & RENEWABLE 2.6%
DECEMBER, 2020

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



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1. The Economy and the Industry

- ☐ **Although facility investment rose, 2020 Q4 GDP showed year-on-year decline of 1.4% as consumer spending and construction investment shrank**
- ☐ **December mining and manufacturing production index showed year-on-year growth of 2.5% thanks to the growth in semiconductors, despite the decline in the automobile sector**
 - Semiconductor production index showed year-on-year growth of 17.5% as demand for semiconductors rose with more consumers requiring PCs and servers for contact-free experiences including home offices and online education amidst the COVID-19
 - Basic chemical production index showed year-on-year decline of 8.5% due to the shutdown of Lotte Chemical and LG Chemical facilities as well as SK Chemical closing down a massive NCC facility that was capable of producing 200,000 tons a year on Dec. 11, 2020
- ☐ **Service production index was down 2.2% year-on-year as a result of recession in food and accommodation sectors as well as logistics due to COVID-19 pandemic**

Major economic and industrial indicators

	2018	2019	2020p				
			M12		M10	M11	M12
GDP (trillion won)	1 812.0 (2.9)	1 849.0 (2.0)	487.4 (2.3)	1 831.3 (-1.0)	- -	- -	481.5 (-1.2)
Total export (\$billion, customs clearance basis)	604.9 (5.4)	539.9 (-10.7)	45.7 (-5.3)	512.5 (-5.1)	44.8 (-3.9)	45.8 (3.9)	51.3 (12.4)
Industrial production index (2015=100)	106.4 (1.5)	106.7 (0.3)	115.1 (6.4)	106.3 (-0.4)	109.0 (-2.8)	111.5 (0.1)	118.0 (2.5)
Semi-conductors	168.4 (21.2)	188.0 (11.7)	232.0 (35.3)	230.5 (22.6)	239.7 (12.3)	247.2 (7.9)	272.5 (17.5)
Basic chemical products	110.4 (0.1)	108.9 (-1.4)	114.9 (4.1)	102.3 (-6.0)	102.2 (-4.2)	88.4 (-15.0)	105.1 (-8.5)
Iron&Steel	100.5 (-2.7)	98.3 (-2.2)	98.1 (-0.4)	92.1 (-6.3)	94.9 (-3.5)	95.9 (-1.3)	98.4 (0.3)
Cars	93.9 (-1.2)	93.4 (-0.6)	94.7 (-4.5)	84.1 (-9.9)	95.4 (-4.0)	95.4 (0.2)	89.7 (-5.3)
Service production index (2015=100)	106.9 (2.2)	108.4 (1.4)	118.8 (2.6)	106.2 (-2.0)	106.4 (-2.5)	108.8 (-1.4)	116.2 (-2.2)
Wholesale & Retail	105.0 (1.8)	104.6 (-0.4)	109.7 (0.1)	101.9 (-2.6)	104.0 (-1.7)	106.0 (-2.5)	108.1 (-1.5)
Restaurant & Accommodation	98.5 (-1.9)	97.5 (-1.0)	109.9 (0.9)	79.5 (-18.5)	83.4 (-15.2)	80.7 (-17.1)	66.4 (-39.6)

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 Prices¹

Global Energy Prices

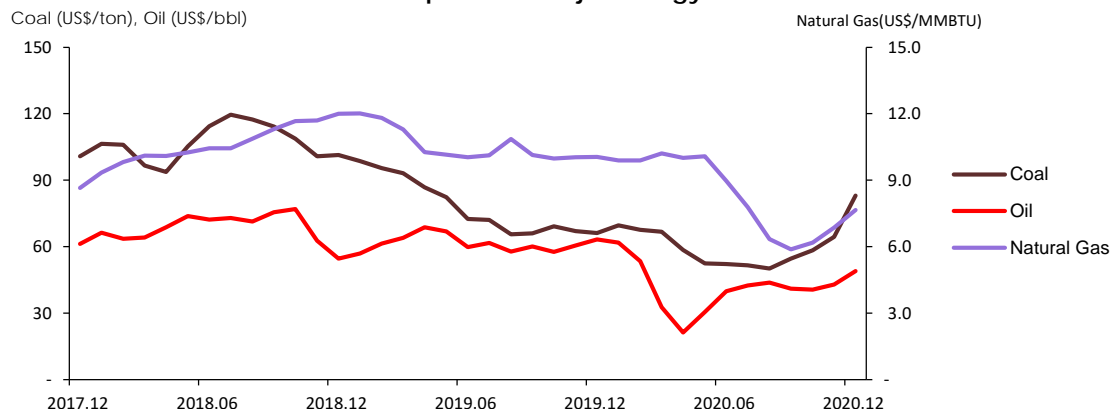
- **Global crude oil price in December surged by 14.3% year-on-year as members of OPEC+ agreed to cut production and some COVID-19 vaccines got approved for emergency use**
 - International oil prices increased as members of OPEC+ agreed to increase the production cutline even higher than the previous levels, starting from 2021, while expectations for economic rebound rose with several major countries approving the urgent use of COVID-19 vaccines
 - International coal prices rose by 28.9% compared to the previous month, and a year-on-year growth of 25.5% due to the recent rise in global oil prices and sharp surges in power demand from major countries during winter
 - International natural gas prices increased by 11.7% compared to the previous month due to increase in international oil prices and demand for winter heating during cold weather events, but showed an overall year-on-year decline of 23.8%

Global energy prices

	2018	2019				2020		
			M10	M11	M12	M10	M11	M12
Crude oil (US\$/bbl)	68.6 (29.5)	61.6 (-10.2)	57.7 (-25.0)	60.6 (-3.4)	63.3 (15.8)	40.6 (-29.6)	42.9 (-29.2)	49.0 (-22.5)
Natural gas (US\$/MMBTU)	10.7 (24.0)	10.6 (-1.1)	10.0 (-14.4)	10.0 (-14.2)	10.1 (-16.2)	6.2 (-38.1)	6.9 (-31.7)	7.7 (-23.8)
Coal (US\$/ton)	107.0 (20.9)	77.9 (-27.3)	69.2 (-36.4)	67.0 (-33.5)	66.2 (-34.7)	58.4 (-15.6)	64.4 (-3.9)	83.0 (25.5)

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



¹ This report presents the energy price trend of the month for which energy consumed data is available. For more on the latest price trend, see *Energy Supply and Demand Brief*.

Domestic energy prices

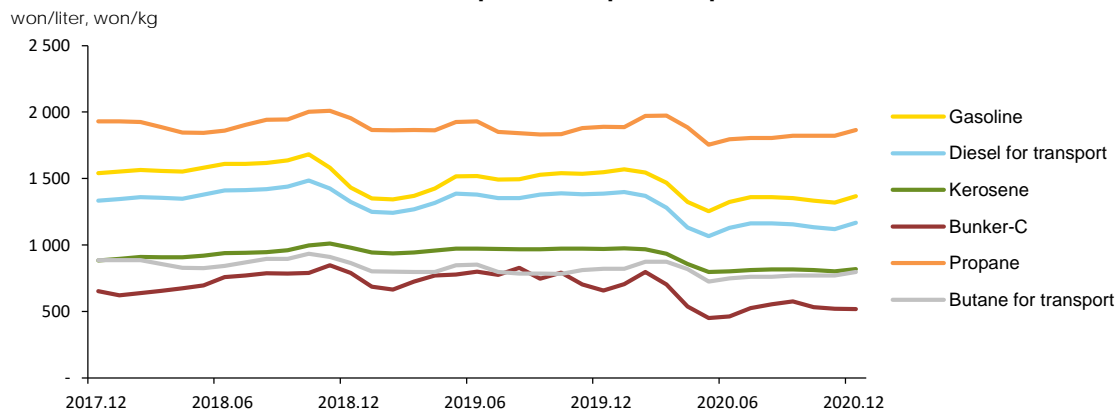
- **Due to the increase in international oil prices, December gasoline and diesel prices also increased by 3.7% and 4.4%, respectively, compared to the previous month**
 - The average price of gasoline and diesel at gas stations steadily declined from September to November. But after the international oil prices rebounded starting from November, and spiked in December, average gasoline prices rose again for the first time in four months
 - Unlike other energy sources, Bunker-C oil prices decreased by 2.4% from the previous month as a result of IMO 2020 emission-related regulations and a resulting decline in demand, and registered a huge year-on-year decline of 21.1%
- **Propane and Butane prices increased by 2.4% and 3.4% from a month ago, respectively, in December due to an overall increase in international prices in November**
 - Saudi Aramco's November international prices increased by about 15% compared to the previous month, and the domestic LPG supply prices also increased to about 44KRW/kg, reflecting the rise in international pricing. As a result, propane and butane prices climbed up

Domestic petroleum product prices

	2018	2019	2020			2020	2020	2020
			M10	M11	M12	M10	M11	M12
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 540.5 (-8.4)	1 535.7 (-2.9)	1 548.5 (8.0)	1 333.3 (-13.5)	1 319.6 (-14.1)	1 367.8 (-11.7)
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 387.7 (-6.6)	1 380.5 (-3.1)	1 385.4 (4.6)	1 134.0 (-18.3)	1 119.6 (-18.9)	1 168.3 (-15.7)
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	791.4 (0.1)	703.5 (-16.9)	658.0 (-16.6)	533.0 (-32.7)	520.0 (-26.1)	518.9 (-21.1)
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 833.6 (-8.4)	1 879.3 (-6.4)	1 889.7 (-3.3)	1 822.1 (-0.6)	1 822.2 (-3.0)	1 865.2 (-1.3)
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	783.7 (-16.1)	810.5 (-11.0)	820.6 (-4.9)	771.4 (-1.6)	770.6 (-4.9)	796.9 (-2.9)

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



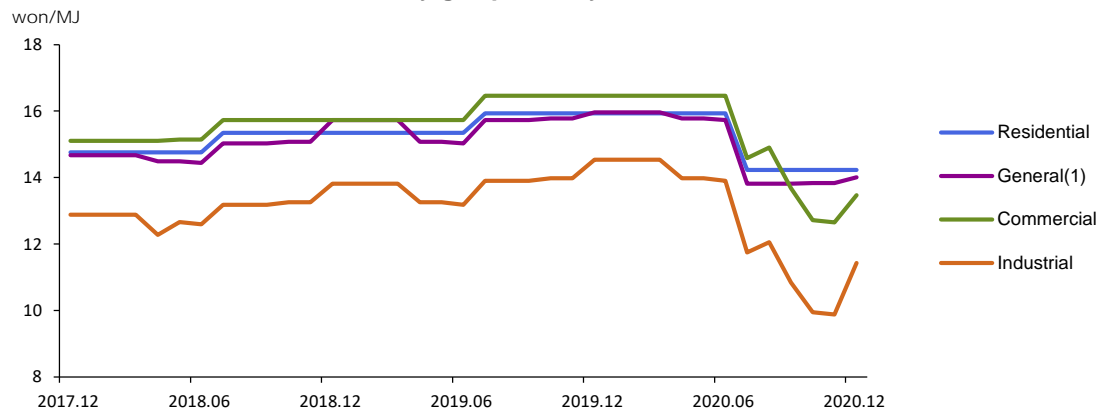
□ **In December, city gas prices for business heating and industrial uses increased by 6.4% and 15.7% respectively on a month-on-month basis**

- As city gas prices for business and industrial uses are adjusted on a monthly basis, it significantly increased compared to the previous month due to the increase in international oil and LNG prices. City gas prices for general purposes increase by 1.3% compared to the previous month as city gas switched to the winter rate

□ **Electricity prices for general and industrial use increased in December after they were adjusted for the winter season, while residential electricity price was the same as the previous month.**

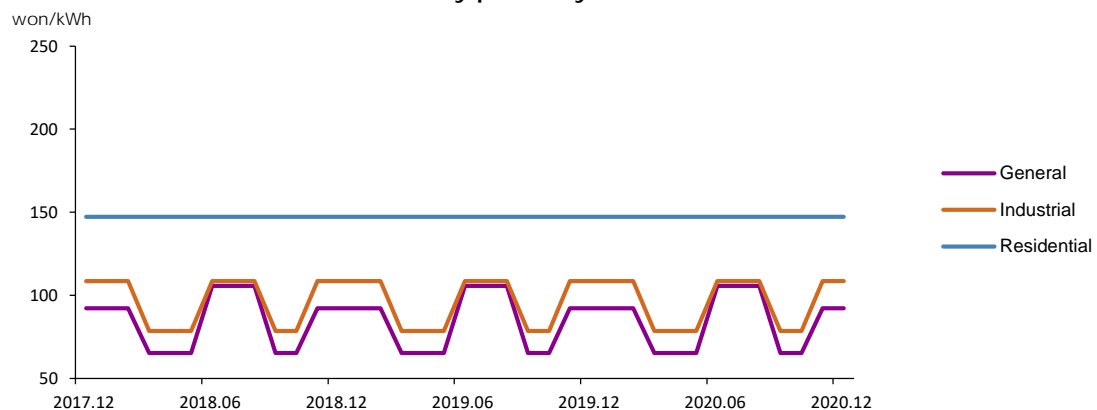
- Electricity prices for general and industrial use that are subject to time-of-use pricing rose by 41.6% and 38.2% respectively in November, after the price adjustment from spring/autumn (March-May, Sept-Oct) to winter (Nov-Feb).
- With a new scheme of Fuel Adjustment Mechanism (FAM) being applied on January 2021, prices may be adjusted every three months. The actual electricity rate in January 2021 decreased by 2.7KRW/kWh compared to the previous month

City gas prices by end-use sectors



Source: Seoulgas

Electricity prices by end-use sectors



Source: KEPCO

3. Energy Supply

□ **Energy imports in December showed year-on-year decline of 11.0% as all energy imports decreased except for anthracite**

- Volume of crude oil imports dropped by 5.6% year-on-year due to less crude oil being used as feedstocks in refineries. On the other hand, Middle East share of crude oil imports showed year-on-year growth of 2.4%p to 71.6% as imports of Saudi Arabian crude oil increased
- For petroleum products, import volume showed year-on-year decline of 21.5% as less naphtha and LPG, the main raw materials for petrochemical sector, had been fed. Also, oil consumption in the logistics sector decreased due to the significantly lessened demand for air transportation
- In addition to a continuous decline in bituminous coal use for power generation, which accounts for a large share in the consumption mix, the fine dust seasonal management system was further strengthened to show a year-on-year decline of 11.9% for import volume of bituminous coal

► **Import and domestic production of energy**

	2018	2019		2020p			
			M12		M10	M11	M12
Import volume							
Crude oil (Mbbl)	1 116.3 (-0.2)	1 071.9 (-4.0)	89.5 (-3.8)	980.3 (-8.6)	82.1 (-0.2)	69.5 (-25.3)	84.4 (-5.6)
Petroleum product (Mbbl)	341.6 (8.6)	352.1 (3.1)	36.0 (12.2)	347.3 (-1.4)	20.3 (-27.6)	23.7 (-16.9)	28.3 (-21.5)
Bituminous coal (Mton)	131.5 (0.0)	132.7 (0.9)	11.6 (11.9)	115.5 (-13.0)	9.5 (-23.7)	9.4 (-15.2)	10.2 (-11.9)
Anthracite (Mton)	8.2 (17.1)	6.9 (-16.4)	0.6 (-25.1)	6.3 (-8.7)	0.4 (-28.8)	0.4 (0.4)	0.8 (32.2)
LNG (Mton)	44.0 (17.3)	40.7 (-7.4)	4.8 (1.5)	40.0 (-1.8)	3.8 (20.5)	3.6 (-5.5)	4.3 (-10.6)
Import volume (Mtoe)	354.5 (4.4)	349.2 (-1.5)	32.5 (2.2)	325.4 (-6.8)	26.0 (-8.5)	26.1 (-10.6)	29.0 (-11.0)
Import value (billion US\$, CIF)	146.0 (33.3)	126.7 (-13.2)	11.3 (-8.8)	86.4 (-31.8)	6.3 (-35.7)	5.8 (-43.8)	7.7 (-32.0)
Energy share of total import value (%)	27.3	25.2	25.9	18.4	16.1	14.6	17.2
Foreign energy dependence (%)*	93.6	93.5	94.1	93.1	93.1	93.7	93.9
Domestic production							
Hydropower (TWh)	7.3 (3.9)	6.2 (-14.1)	0.5 (-16.7)	7.1 (14.4)	0.5 (-13.2)	0.4 (-5.8)	0.5 (-0.7)
Anthracite (Mton)	1.2 (-19.2)	1.1 (-9.7)	0.1 (15.4)	1.0 (-6.0)	0.1 (-10.3)	0.1 (-10.4)	0.1 (-8.9)
Natural gas (Mton)	0.2 (-10.4)	0.2 (-15.2)	0.0 (-15.6)	0.1 (-28.6)	- (-100.0)	0.0 (-16.1)	0.0 (-38.1)
Renewable energy (Mtoe)	17.1 (8.0)	17.7 (3.3)	1.5 (0.7)	17.7 (0.0)	1.4 (-2.1)	1.3 (-2.9)	1.5 (2.6)

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

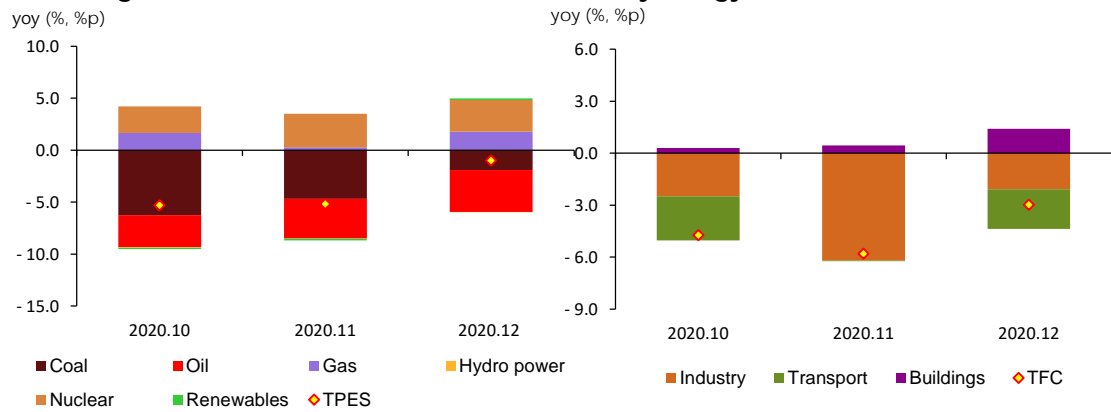
4. Energy Consumption

- **Total Primary energy Supply("TPES") for December showed year-on-year decline of 1.0% as the decreasing trend of energy consumption was dulled with rise in gas consumption**
 - Despite the increase in petroleum use for buildings due to cold weather, overall use showed year-on-year decline of 11.1% as industrial usage dropped with decrease in naphtha consumption, and transportation usage shrank as a result of heightened Social Distancing restrictions
 - Coal usage dropped by 8.1% year-on-year due to about 16% plunge in power generation purposes, although the amount of coal used for industrial purposes increased
 - Nuclear power generation showed incredible year-on-year growth of 36.2% as an increasing number of power plants resumed operation after scheduled preventive maintenance
 - Gas usage showed year-on-year growth of 7.6% as city gas usage grew due to the cold weather, along with a decrease in gas rates. Similarly, gas consumption for power generation rose on the back of increasing electricity usage and coal generation reduction from the fine dust-related restrictions during winter
- **In spite of a surge in energy consumption in the building sector, Total Final Consumption ("TFC") dropped by 3.0% year-on-year as the energy use in the logistics sector continued to decrease**
 - Industrial energy use dropped by 3.5% year-on-year, led by a continuous drop of naphtha use in the petrochemical sector, although energy consumption in the primary and fabricated metal industries showed signs of rebounding
 - Transport energy use went down by 13.2% from the same month last year as energy consumption witnessed a steep decrease in several sectors including road, marine and air transport, offsetting the positive effect of a year-on-year oil price drop
 - Energy use in the building sector increased by 5.9% year-on-year bolstered by several factors such as cold weather events, increased work time from home, a decrease in energy rates

Energy consumption							
	2018	2019		2020p			
			M12		M10	M11	M12
TPES (Mtoe)	307.6	303.1	28.0	290.1	22.8	24.0	27.7
	(1.8)	(-1.5)	(-3.2)	(-4.3)	(-5.3)	(-5.2)	(-1.0)
- Non-energy oil&coal excluded	223.0	219.6	20.7	210.6	16.4	18.0	20.8
	(3.5)	(-1.5)	(-4.3)	(-4.1)	(-6.0)	(-1.3)	(0.6)
TFC (Mtoe)	233.4	231.4	21.6	222.0	17.3	18.4	21.0
	(1.2)	(-0.9)	(-0.9)	(-4.0)	(-4.7)	(-5.8)	(-3.0)

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 fell by 8.1% year-on-year in December due to a sharp drop in the power generation sector, dwarfing the increase in the industrial sector

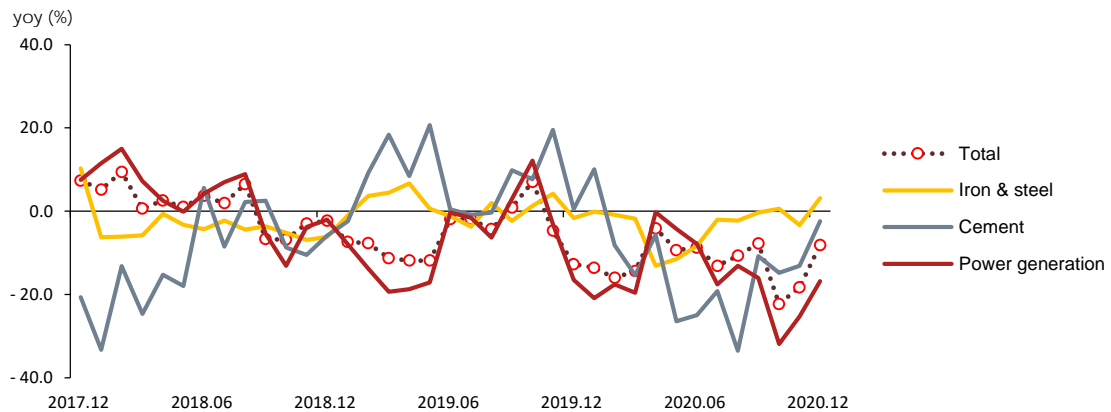
- Industrial coal use rose by 6.4% from the same month last year, bolstered by increasing production in the steel industry, resulting from base effect and increased working days
- Coal use decreased by 16.8% year-on-year in the power generation sector as some coal-fired generation facilities stopped operation and limitations were enforced upon power generation output

Coal consumption

	2018	2019	2020p				
			M12		M10	M11	M12
Coal (Mton)	141.1	133.0	10.9	116.5	9.0	8.9	10.0
	(0.9)	(-5.7)	(-12.8)	(-12.4)	(-22.3)	(-18.3)	(-8.1)
Industry	48.4	47.6	4.0	45.3	3.9	3.7	4.3
	(-1.8)	(-1.7)	(-5.1)	(-4.8)	(-5.1)	(-5.5)	(6.4)
-Coking-coal	34.6	35.0	2.9	33.8	3.0	2.8	3.0
	(-4.6)	(1.0)	(-1.7)	(-3.3)	(0.6)	(-3.3)	(3.2)
Buildings	0.9	0.6	0.1	0.5	0.1	0.1	0.1
	(-15.7)	(-29.3)	(-26.4)	(-20.8)	(-11.2)	(-37.3)	(4.1)
Power generation	91.8	84.8	6.8	70.7	5.0	5.1	5.7
	(2.6)	(-7.6)	(-16.5)	(-16.6)	(-31.9)	(-25.2)	(-16.8)

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

The growth rate of coal consumption by use



6. Petroleum

□ Petroleum use dropped by 11.1% in December on a year-on-year basis due to the decreasing trend in industrial naphtha use and a drop in transport use

- Petroleum use was down 12.0% from the same month last year in the industrial sector although naphtha consumption started to show slight signs of recovering after the NCC fire accident
- Petroleum use fell by 13.8% year-on-year in the transportation sector, as travel demands decreased with the enhanced Social Distancing restrictions
- Petroleum use in buildings showed year-on-year growth of 8.5% as demand for heating increased with 14% more heating degree days throughout the cold winter weathers in December

Petroleum product consumption by end-use sectors

	2018	2019	2020p				
			M12		M10	M11	M12
Petroleum (Mbbbl)	931.8	927.1	85.1	873.3	69.7	71.0	75.6
	(-0.6)	(-0.5)	(2.0)	(-5.8)	(-8.0)	(-10.5)	(-11.1)
Industry	564.1	566.2	51.9	543.0	43.5	39.8	45.7
	(-0.5)	(0.4)	(5.5)	(-4.1)	(-5.0)	(-18.1)	(-12.0)
-Naphtha	451.2	438.6	38.4	405.3	31.0	27.4	33.6
	(-1.6)	(-2.8)	(-0.9)	(-7.6)	(-9.6)	(-24.7)	(-12.5)
Transport	302.3	303.2	26.5	273.9	22.3	25.6	22.8
	(-0.3)	(0.3)	(-1.1)	(-9.6)	(-13.6)	(0.0)	(-13.8)
Buildings	53.7	49.1	5.7	50.1	3.5	4.7	6.1
	(-4.9)	(-8.6)	(-13.9)	(2.1)	(-7.1)	(2.1)	(8.5)
Power generation	11.7	8.6	1.0	6.2	0.4	0.9	0.9
	(12.1)	(-26.9)	(27.1)	(-27.7)	(3.1)	(64.6)	(-8.1)

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

Source: Monthly Energy Statistics

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



7. Gas

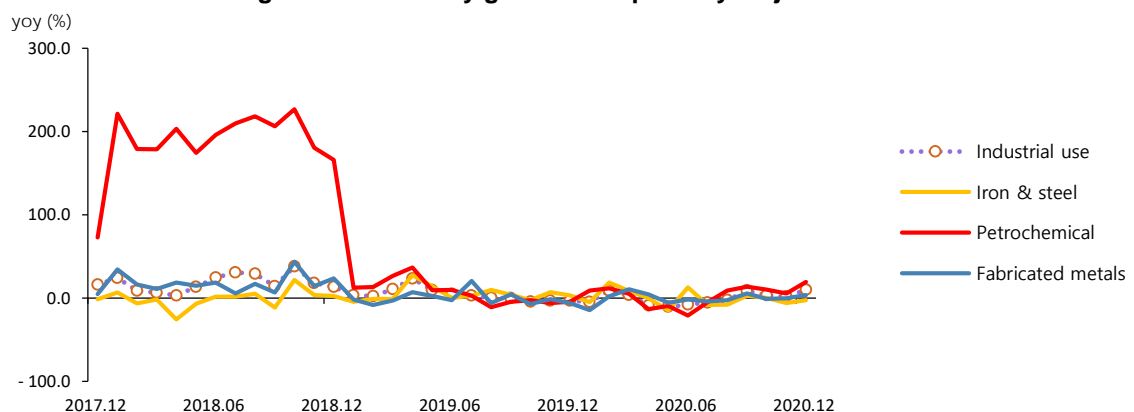
- **Natural gas use showed year-on-year growth of 7.6% in December, driven by increased consumption for both power generation and city gas**
 - Gas use for power generation increased by 4.1%, reflecting a drop in coal-fired generation (-16.7%) and an increase in power consumption (0.7%)
- **Final consumption of city gas climbed by 8.4% amid increased use in the petrochemical and residential sectors**
 - Industrial gas use showed year-on-year growth of 9.9% amid a rise (19.3%) in direct imports resulting from decreased global LNG prices and a soar in the petrochemical sector, offsetting a -2.6% drop in the primary metal industry's consumption
 - In spite of a decline in use in the public and commercial building sectors, total city gas use in buildings was up 8.5% from the same month last year as the power use in residential buildings climbed up

Natural gas and city gas consumption

	2018	2019		2020p			
			M12		M10	M11	M12
LNG (Mton)	42.3	41.0	5.0	41.4	3.1	3.8	5.4
	(16.2)	(-3.1)	(2.4)	(1.1)	(11.1)	(1.4)	(7.6)
Power generation	18.5	17.9	2.0	18.6	1.5	1.6	2.1
	(22.1)	(-3.0)	(19.4)	(3.6)	(16.5)	(1.4)	(4.1)
City gas production	21.4	21.0	2.7	21.0	1.5	2.0	3.0
	(10.0)	(-1.5)	(-6.4)	(-0.2)	(8.9)	(1.4)	(10.4)
City gas (bm³)	26.3	26.1	3.1	26.0	1.7	2.3	3.4
	(9.7)	(-0.6)	(-3.3)	(-0.5)	(6.5)	(2.9)	(8.4)
Industry	10.8	11.1	1.1	11.1	0.9	1.0	1.2
	(18.0)	(3.5)	(-3.1)	(-0.2)	(3.4)	(1.7)	(9.9)
Buildings	14.3	13.8	2.0	13.8	0.7	1.2	2.1
	(5.1)	(-3.6)	(-3.5)	(0.0)	(14.3)	(4.9)	(8.5)

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

The growth rate of city gas consumption by major industries



8. Electricity

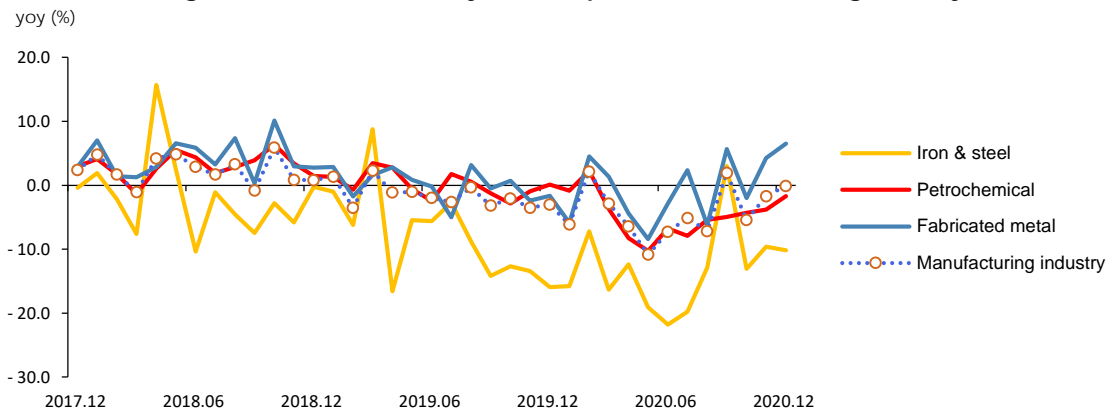
- **Electricity use showed year-on-year growth of 0.7% in December as power consumption in building and industrial sectors slightly increased**
 - Industrial power use registered a year-on-year increase of 0.3% with increased electricity use in the fabricated metal industry, driven by the recovery of manufacturing activity
 - Despite a slight decrease in power consumption from industrial buildings, electricity use in buildings was up 0.9% as power use in residential buildings grew

Electricity consumption by end-use sectors

	2018	2019		2020p			
			M12		M10	M11	M12
Electricity (TWh)	526.1	520.5	44.7	509.3	39.1	41.1	45.0
	(3.6)	(-1.1)	(-1.3)	(-2.2)	(-3.8)	(0.1)	(0.7)
Industry	283.7	279.8	23.6	268.7	21.5	22.4	23.7
	(2.5)	(-1.4)	(-3.1)	(-4.0)	(-5.1)	(-1.5)	(0.3)
Transport	3.0	2.9	0.2	2.7	0.2	0.2	0.3
	(3.6)	(-2.0)	(-7.8)	(-5.9)	(-4.8)	(-1.4)	(12.8)
Buildings	239.5	237.8	20.9	237.8	17.3	18.5	21.1
	(4.9)	(-0.7)	(1.0)	(0.0)	(-2.2)	(2.1)	(0.9)
Residential	70.7	70.5	5.8	74.1	5.6	5.8	6.2
	(6.3)	(-0.3)	(1.5)	(5.1)	(3.4)	(5.5)	(6.3)
Commercial	136.4	135.2	12.1	132.5	9.4	10.2	11.9
	(4.6)	(-0.9)	(0.9)	(-2.0)	(-5.0)	(0.7)	(-1.5)

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

The growth rate of electricity consumption in manufacturing industry

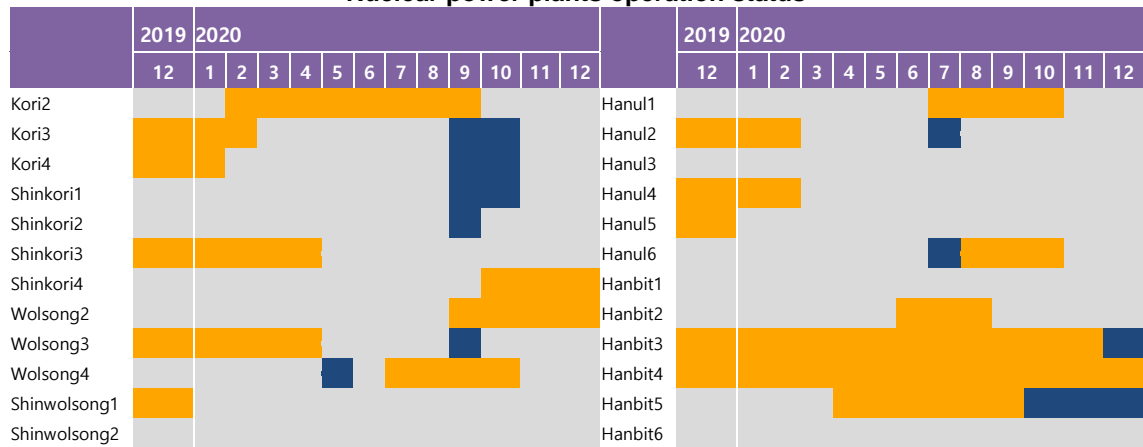


9. Nuclear

□ Nuclear power generation showed year-on-year growth of 36.2% in December, as capacity utilization rate jumped up

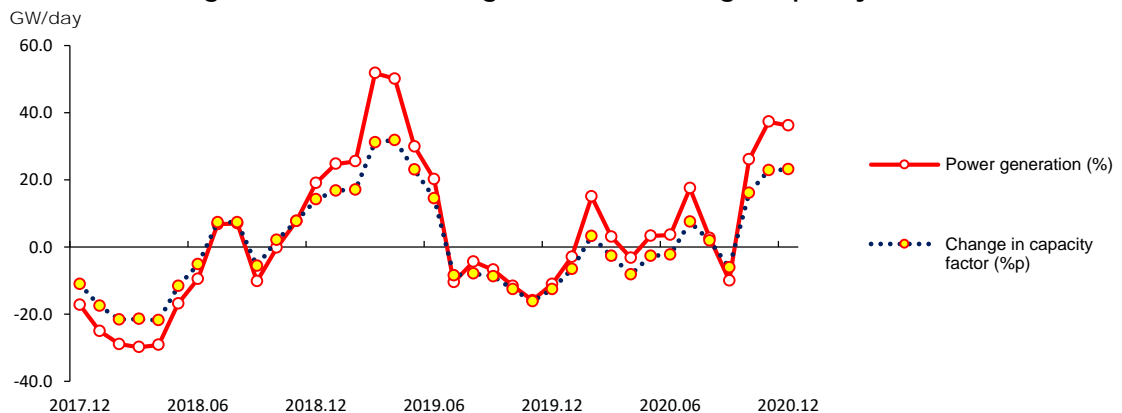
- Nuclear generation capacity factor climbed up to 87.1% as many reactors resumed power generation after scheduled preventive maintenance
- With an increasing number of nuclear power plants coming back online as they finish their scheduled preventive maintenance, nuclear power capacity factor posted a steady increase from 55% in September 2020 to 87% in December, recording a year-on-year growth of 23.1%p
- As the nuclear generation increased, its share of the total power generation went up by 7.2%p year-on-year to 29.2%.

Nuclear power plants operation status



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

The growth rate of nuclear generation & average capacity factor



10. Heat and Renewable energy

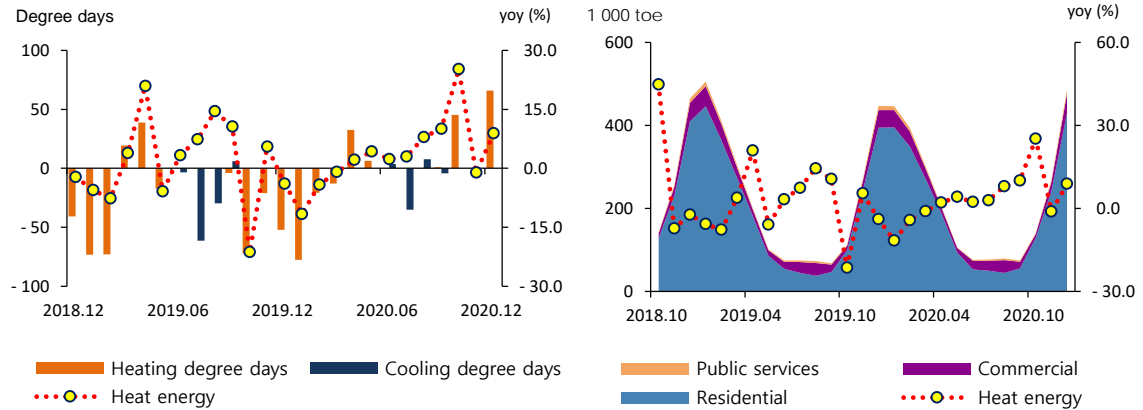
☐ Heat energy use grew by 8.9% year-on-year in December as demand for heating climbed in all sectors

- Heat energy use showed year-on-year growth of 8.9%, thanks to the surge of 8.9% in the residential sector, which accounts for the biggest share in total heat energy consumption mix

☐ Renewable energy generation² soared by 28.6% from the same year last year centering around solar PV generation and fuel cells

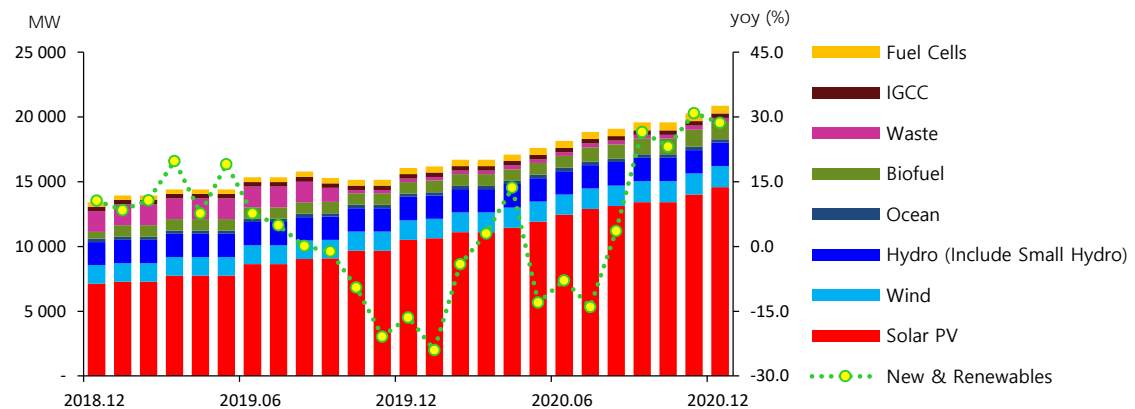
- Boosted by increased capacity factor, power generation from solar PV and fuel cells showed year-on-year growth, and became the driving force for an increase in renewable energy generation. Similarly, IGCC generation has been on the rise recently

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



² The capacity factor and power generation data are from the renewable section in the Monthly Report on Major Electric Power Statistics by KEPCO. For renewable and other energy generation within energy balance mix, water is excluded, while the segment factors in non-renewable waste energy

11. Industry

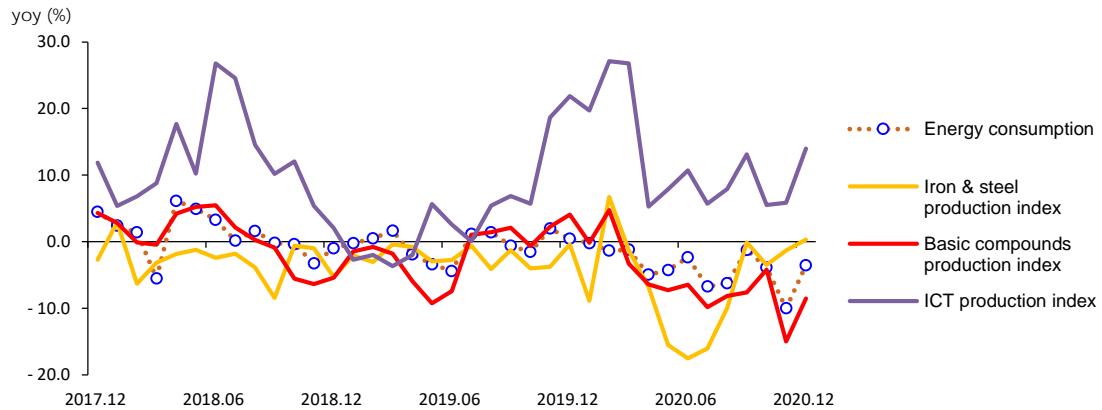
- Despite signs of recovery in the fabricated metal sector, industrial energy use dwindled by 3.5% year-on-year in December driven by a drop in the petrochemical industry
 - While energy consumption in the fabricated metal and primary metal sectors picked up, total industrial energy use has been on the decrease due to the continuous drop in the petrochemical sector

Industrial energy consumption

	2018	2019		2020p			
			M12		M10	M11	M12
Industry (Mtoe)	143.5	142.9	12.7	137.4	11.2	10.9	12.2
	(0.7)	(-0.4)	(0.4)	(-3.9)	(-3.9)	(-10.0)	(-3.5)
Petrochemical	72.1	72.0	6.5	69.1	5.5	5.0	5.9
	(3.0)	(-0.1)	(2.5)	(-4.1)	(-4.5)	(-17.4)	(-9.3)
- Naphtha	55.3	53.8	4.7	49.7	3.8	3.4	4.1
	(-1.6)	(-2.8)	(-0.9)	(-7.6)	(-9.6)	(-24.7)	(-12.5)
Iron & Steel	29.4	29.5	2.5	28.3	2.4	2.4	2.5
	(-12.8)	(0.4)	(-2.8)	(-4.1)	(-0.8)	(-4.2)	(1.4)
-Coking coal	24.1	24.4	2.0	23.6	2.1	2.0	2.1
	(-4.6)	(1.0)	(-1.7)	(-3.3)	(0.6)	(-3.3)	(3.2)
Fabricated metal	11.4	11.4	1.0	11.4	0.9	1.0	1.1
	(5.9)	(-0.1)	(-2.4)	(-0.1)	(-1.1)	(4.1)	(6.5)
Share of feedstock (%)	58.8	58.3	57.5	57.7	57.3	54.7	56.2

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

Industrial energy consumption & production index



12. Transport

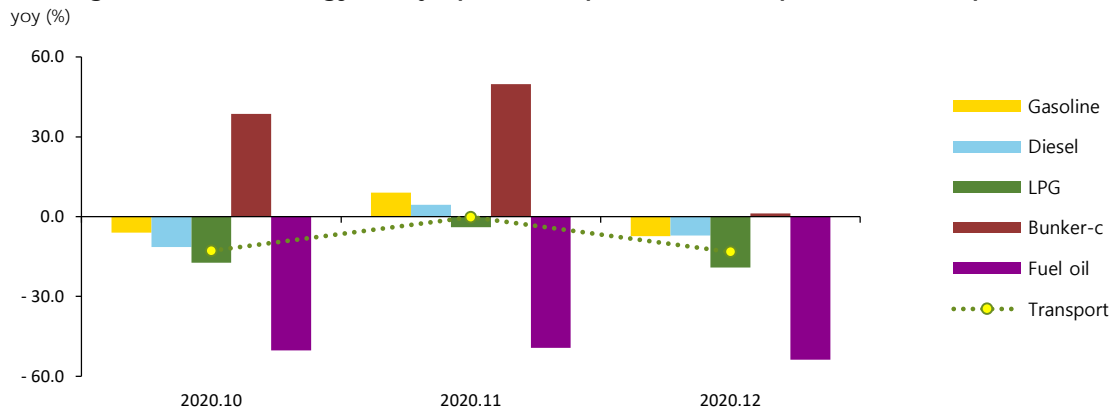
- **Transport energy use went down by 13.2% in December on a year-on-year basis amid the third wave of COVID 19 pandemic**
 - Energy use fell by 8.0% in the road transportation sector as Social Distancing restrictions were raised to Level 2.5 from December 6 to the end of the year
 - Energy use in the aviation sector registered a huge year-on-year decline of 53.7% as the number of domestic flights significantly dropped due to heightened Social Distancing restrictions
 - Energy use dropped by 3.7% in the marine transport sector as diesel consumption for shipping declined by 21.9% from the same month last year

The growth rate of petroleum consumption in the transport sector

	2018	2019		2020p			
			M12		M10	M11	M12
Transport (Mtoe)	43.0	43.0	3.7	38.9	3.2	3.6	3.2
	(0.4)	(0.0)	(-1.2)	(-9.4)	(-12.8)	(-0.2)	(-13.2)
Road	34.4	35.1	3.0	33.1	2.7	3.1	2.8
	(0.9)	(1.9)	(-1.6)	(-5.6)	(-10.3)	(5.0)	(-8.0)
Navigation	3.2	2.6	0.2	3.0	0.2	0.3	0.2
	(-9.9)	(-17.1)	(-11.1)	(12.3)	(34.1)	(27.8)	(-3.7)
Aviation	5.0	4.9	0.5	2.6	0.2	0.2	0.2
	(4.4)	(-1.7)	(8.5)	(-48.2)	(-50.3)	(-49.3)	(-53.7)
Rail	0.4	0.3	0.0	0.3	0.0	0.0	0.0
	(3.6)	(-2.8)	(-8.4)	(-7.6)	(-8.5)	(-5.5)	(9.4)

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

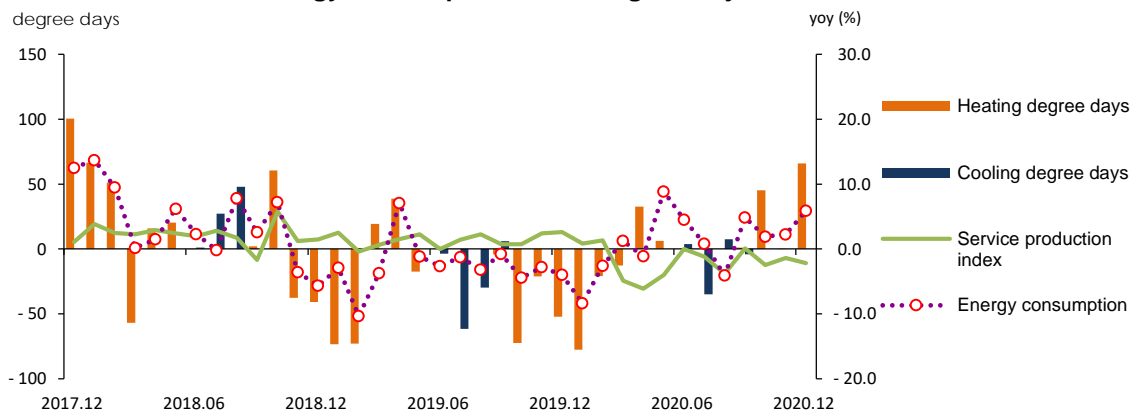
- **Energy use grew by 5.9% year-on-year in buildings for December as energy consumption in residential buildings soared up driven by cold temperature effects and increased working time from home**
 - Despite the dire situation of the face-to-face service sector, resulting from the heightened COVID-19 Social Distancing preventive restrictions, the overall energy use in buildings continued to increase as energy consumption in residential buildings surged due to increased heating demands and more work time from home
 - Energy use in residential buildings showed year-on-year growth due to rising use of heat, electricity, and city gas (+8.9%, 6.3%, and 11.6% respectively), as demand for heating rose over the cold winter weather and increased work time from home with Social Distancing restrictions implemented
 - For commercial and public buildings, city gas and electricity use dropped by 3.1% and 1.2% respectively amid a dwindling output from the service sector (-2.2%) due to COVID-19, while total energy use in buildings grew by 0.5% as petroleum and heat consumption rose on the back of base effect regarding the year-on-year decline and higher demand for heating

Energy consumption in buildings

	2018	2019		2020p			
			M12		M10	M11	M12
Buildings (Mtoe)	46.9	45.5	5.2	45.7	3.0	3.9	5.5
	(3.5)	(-3.1)	(-4.0)	(0.5)	(1.9)	(2.2)	(5.9)
Residential	23.5	22.6	3.0	23.2	1.4	2.1	3.2
	(4.4)	(-3.6)	(-5.2)	(2.7)	(10.0)	(3.9)	(9.9)
Commercial	17.9	17.5	1.7	17.1	1.2	1.4	1.7
	(2.9)	(-2.3)	(-1.9)	(-2.2)	(-5.0)	(0.9)	(0.9)
Public-others	5.6	5.4	0.5	5.4	0.4	0.4	0.5
	(2.0)	(-3.2)	(-3.7)	(-0.4)	(-3.1)	(-1.2)	(-0.8)
Heating degree days	2 597.8	2 342.9	470.2	2 382.7	128.4	277.0	536.1
	(3.2)	(-9.8)	(-10.0)	(1.7)	(54.5)	(-0.1)	(14.0)
Cooling degree days	209.0	120.4	-	92.5	-	-	-
	(57.5)	(-42.4)	-	(-23.2)	-	-	-

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

Energy consumption in buildings & major indicators



14. Transformation

- As electricity consumption grew in December, total generation and energy input for generation increased by 2.6% and 3.2% year-on-year respectively
 - Total power generation showed year-on-year growth of 2.6%, with the volume of energy input for generation rose at a faster rate. This is due to high-efficient gas generation only registering a 1.7% increase, while low-efficient baseload generation, as well as renewable and water power generation, showed rapid growth

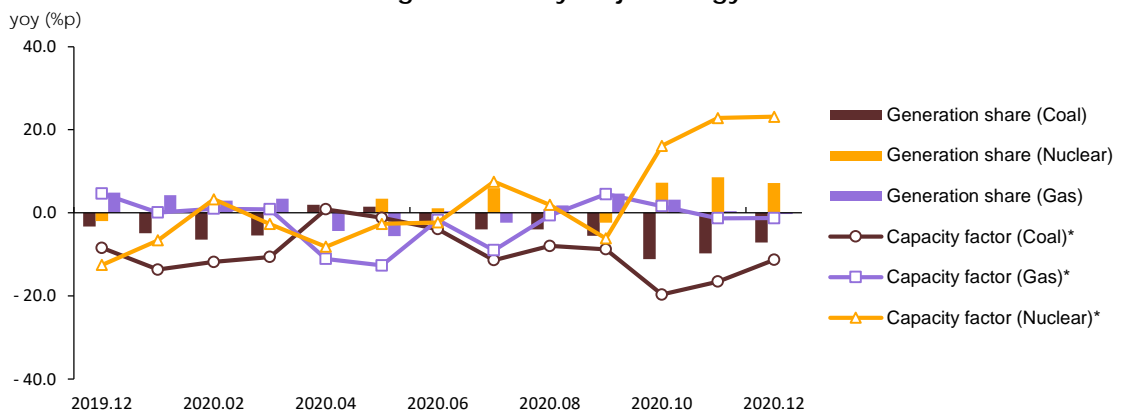
Power generation by major energy sources

	2018	2019	M12	2020p			
					M10	M11	M12
Total Generation (TWh)	570.6	563.0	50.3	552.1	43.1	45.0	51.6
	(3.1)	(-1.3)	(-3.0)	(-1.9)	(-3.4)	(-0.4)	(2.6)
Coal	238.4	227.4	19.0	196.3	14.3	14.4	15.8
	(-0.2)	(-4.6)	(-10.8)	(-13.7)	(-27.7)	(-23.6)	(-16.7)
Oil	5.7	3.3	0.5	2.3	0.1	0.4	0.3
	(9.1)	(-42.6)	(22.6)	(-31.5)	(-34.2)	(137.6)	(-31.3)
Gas	153.5	144.4	16.4	146.1	11.5	12.8	16.6
	(21.8)	(-6.0)	(14.1)	(1.2)	(9.9)	(1.1)	(1.7)
Nuclear	133.5	145.9	11.1	160.2	13.5	14.0	15.1
	(-10.1)	(9.3)	(-11.0)	(9.8)	(27.1)	(37.4)	(36.2)
Hydro/other renewables	38.9	39.2	2.8	41.9	3.5	3.2	3.5
	(15.8)	(0.6)	(-17.1)	(6.9)	(20.3)	(29.3)	(26.4)
Baseload	371.9	373.3	30.0	356.5	27.8	28.5	30.9
	(-4.0)	(0.4)	(-10.9)	(-4.5)	(-8.6)	(-2.2)	(2.7)

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	2020				2020		
				M10	M11	M12		M10	M11	M12
GDP (trillion won)	1 760.8 (3.2)	1 812.0 (2.9)	1 849.0 (2.0)	- (-)	- (-)	487.4 (2.3)	1 830.6 (-1.0)	- (-)	- (-)	480.8 (-1.4)
Private consumption	848.6 (2.8)	875.6 (3.2)	890.2 (1.7)	- (-)	- (-)	228.5 (1.9)	846.3 (-4.9)	- (-)	- (-)	213.6 (-6.5)
Facilities investment	170.3 (16.5)	166.3 (-2.3)	153.9 (-7.5)	- (-)	- (-)	40.8 (-2.0)	164.3 (6.8)	- (-)	- (-)	43.2 (5.7)
Construction investment	282.9 (7.3)	269.8 (-4.6)	262.9 (-2.5)	- (-)	- (-)	72.6 (2.6)	262.6 (-0.1)	- (-)	- (-)	70.8 (-2.5)
Consumer price index (2015=100)	102.9	104.5	104.9	105.5	104.9	105.1	105.4	105.6	105.5	105.7
USD to KRW exchange rate (won)	1 131.0	1 100.2	1 165.4	1 184.1	1 167.5	1 175.8	1 180.3	1 144.7	1 116.8	1 095.1
Benchmark rate (%)	1.3	1.5	1.6	1.3	1.3	1.3	0.7	0.5	0.5	0.5
Coincident composite index (2015=100)	107.6	110.1	111.7	112.6	112.7	113.3	112.3	113.0	113.8	114.1
Mining & manufacturing production index (2015=100)	104.8	106.4	106.7	112.1	111.4	115.1	106.3	109.0	111.5	118.0
Manufacturing operation ratio index (2015=100)	98.4	98.8	98.4	103.5	100.8	102.5	95.6	98.8	100.5	103.5
Average temperature	13.1	13.0	13.5	15.8	8.8	2.8	13.2	14.0	8.8	0.7
- year-on-year difference	- 0.5	- 0.1	0.5	2.8	0.7	1.7	- 0.3	- 1.8	0.0	- 2.1
Heating degree days	2 517.1 (5.5)	2 597.8 (3.2)	2 342.9 (-9.8)	83.1 (-46.5)	277.2 (-7.0)	470.2 (-10.0)	2 382.7 (1.7)	128.4 (54.5)	277.0 (-0.1)	536.1 (14.0)
Cooling degree days	132.7 (-13.9)	209.0 (57.5)	120.4 (-42.4)	- (-)	- (-)	- (-)	92.5 (-23.2)	- (-)	- (-)	- (-)
Energy intensity	0.17 (-0.4)	0.17 (-1.0)	0.16 (-3.4)	- (-)	- (-)	0.16 (-3.8)	0.16 (-3.5)	- (-)	- (-)	0.16 (-2.5)
Per capita consumption										
oil (bbl)	18.2 (1.5)	18.1 (-1.0)	17.9 (-0.7)	1.5 (2.8)	1.5 (4.1)	1.6 (1.8)	16.9 (-5.9)	1.3 (-8.1)	1.4 (-10.7)	1.5 (-11.3)
Electricity (MWh)	9.9 (1.9)	10.2 (3.1)	10.1 (-1.3)	0.8 (1.4)	0.8 (-2.1)	0.9 (-1.5)	9.8 (-2.3)	0.8 (-4.0)	0.8 (-0.1)	0.9 (0.5)
City gas (1 000 m ³)	0.4 (6.0)	0.5 (6.9)	0.5 (-4.3)	0.0 (-12.3)	0.0 (-6.6)	0.1 (-5.7)	0.4 (-3.6)	0.0 (2.9)	0.0 (0.7)	0.1 (7.5)
Total energy (toe)	5.9 (2.5)	6.0 (1.3)	5.9 (-1.6)	0.5 (-0.4)	0.5 (-1.3)	0.5 (-3.4)	5.6 (-4.4)	0.4 (-5.5)	0.5 (-5.3)	0.5 (-1.1)

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

The Index of Production Ratio & Output by Sectors

(2015=100)

	2017	2018	2019				2020			
				M10	M11	M12		M10	M11	M12
Industrial production index										
All industry	105.9 (2.7)	107.5 (1.6)	108.6 (0.9)	110.4 (0.5)	110.9 (1.9)	121.8 (4.4)	107.3 (-1.2)	107.0 (-3.1)	110.1 (-0.7)	120.9 (-0.7)
Mining & manufacturing	104.8 (2.5)	106.4 (1.5)	106.7 (0.3)	112.1 (-0.4)	111.4 (1.5)	115.1 (6.4)	106.3 (-0.4)	109.0 (-2.8)	111.5 (0.1)	118.0 (2.5)
Iron & steel	103.4 (1.9)	100.5 (-2.7)	98.3 (-2.2)	98.3 (-4.0)	97.2 (-3.8)	98.1 (-0.4)	92.1 (-6.3)	94.9 (-3.5)	95.9 (-1.3)	98.4 (0.3)
Cement	109.7 (1.7)	100.0 (-8.8)	94.3 (-5.7)	100.9 (-9.3)	103.7 (-6.2)	95.6 (4.6)	86.6 (-8.2)	94.5 (-6.3)	98.1 (-5.4)	93.2 (-2.5)
Basic compound	110.4 (5.6)	110.4 (0.1)	108.9 (-1.4)	106.7 (-0.7)	104.0 (2.3)	114.9 (4.1)	102.3 (-6.0)	102.2 (-4.2)	88.4 (-15.0)	105.1 (-8.5)
Transport equipment	95.1 (-2.6)	93.9 (-1.2)	93.4 (-0.6)	99.4 (-5.3)	95.2 (-11.0)	94.7 (-4.5)	84.1 (-9.9)	95.4 (-4.0)	95.4 (0.2)	89.7 (-5.3)
Electric & electronic	106.6 (3.0)	106.5 (-0.2)	109.6 (2.9)	118.7 (4.1)	115.3 (-1.5)	120.8 (8.3)	108.8 (-0.7)	112.4 (-5.3)	118.7 (2.9)	127.3 (5.4)
Service	104.5 (1.9)	106.9 (2.2)	108.4 (1.4)	109.1 (0.7)	110.3 (2.4)	118.8 (2.6)	106.2 (-2.0)	106.4 (-2.5)	108.8 (-1.4)	116.2 (-2.2)
Wholesale and retail	103.2 (0.7)	105.0 (1.8)	104.6 (-0.4)	105.8 (-1.9)	108.7 (-0.3)	109.7 (0.1)	101.9 (-2.6)	104.0 (-1.7)	106.0 (-2.5)	108.1 (-1.5)
Food & Accommodation	100.4 (-1.9)	98.5 (-1.9)	97.5 (-1.0)	98.4 -	97.3 (0.2)	109.9 (0.9)	79.5 (-18.5)	83.4 (-15.2)	80.7 (-17.1)	66.4 (-39.6)
Output of major industries										
Iron & steel - Pig iron	16 503.2 (1.6)	47 124.3 (0.1)	47 520.7 (0.8)	4 036.5 (-1.6)	3 951.5 (4.6)	3 948.5 (-3.2)	45 359.6 (-4.5)	3 943.9 (-2.3)	3 867.8 (-2.1)	4 115.2 (4.2)
Iron & steel - Crude steel	71 030.0 (3.6)	72 464.0 (2.0)	71 411.9 (-1.5)	5 963.8 (-3.8)	5 904.4 (-0.3)	5 879.7 (-4.6)	67 078.8 (-6.1)	5 859.9 (-1.7)	5 765.4 (-2.4)	5 909.6 (0.5)
Petrochemical - Basic oil	30 546.8 (9.9)	31 139.2 (1.9)	31 804.1 (2.1)	2 587.6 (4.7)	2 670.3 (8.8)	2 884.2 (6.9)	30 323.6 (-4.7)	2 426.7 (-6.2)	2 153.7 (-19.3)	2 395.2 (-17.0)
Petrochemical - Intermediate raw material	16 503.2 (6.0)	16 981.8 (2.9)	16 014.0 (-5.7)	1 235.6 (-14.1)	1 363.0 (-3.0)	1 401.3 (-5.7)	15 355.4 (-4.1)	1 211.5 (-1.9)	1 087.8 (-20.2)	1 293.2 (-7.7)
Petrochemical - 3 major products	22 034.7 (4.9)	21 793.6 (-1.1)	21 584.7 (-1.0)	1 704.7 (1.4)	1 671.2 (-3.5)	1 808.1 (-3.6)	21 251.7 (-1.5)	1 769.2 (3.8)	1 649.7 (-1.3)	1 788.3 (-1.1)
The number of cars	4 114.9 (-2.7)	4 028.7 (-2.1)	3 950.6 (-1.9)	351.4 (-7.9)	346.4 (-11.3)	337.5 (-5.4)	3 506.8 (-11.2)	336.3 (-4.3)	324.5 (-6.3)	296.9 (-12.0)

Note: p means provisional
 onthly Energy Statistics, Korea Petrochemical Industry Association, Automobile Manufacturers Association

International Energy Prices

	2017	2018	2019				2020			
				M10	M11	M12		M10	M11	M12
Crude oil (USD/bbl)										
WTI	51.0 (17.6)	64.8 (27.1)	57.0 (-11.9)	54.0 (-23.7)	57.1 (0.7)	59.8 (22.1)	39.4 (-30.9)	39.6 (-26.8)	41.4 (-27.5)	47.1 (-21.3)
Dubai	53.2 (28.9)	69.4 (30.5)	63.5 (-8.5)	59.4 (-25.2)	62.0 (-5.4)	64.9 (13.2)	42.2 (-33.6)	40.7 (-31.5)	43.4 (-30.0)	49.8 (-23.2)
Brent	54.8 (21.7)	71.5 (30.5)	64.2 (-10.3)	59.6 (-26.0)	62.7 (-4.9)	65.2 (13.0)	43.2 (-32.7)	41.5 (-30.4)	44.0 (-29.9)	50.2 (-22.9)
Unit value of import (C&F)	53.3 (29.9)	71.4 (34.0)	65.5 (-8.2)	64.2 (-18.9)	64.3 (-15.5)	66.2 (-0.7)	44.8 (-31.7)	43.4 (-32.4)	42.7 (-33.7)	46.7 (-29.4)
LNG										
From Indonesia (USD/MMBTU)	8.6 (16.7)	10.7 (24.0)	10.6 (-1.0)	10.0 (-14.4)	10.0 (-14.2)	10.1 (-16.2)	8.3 (-21.3)	6.2 (-38.1)	6.9 (-31.7)	7.7 (-23.8)
Unit value of import (USD/ton, CIF)	416.3 (16.7)	526.3 (26.4)	505.4 (-4.0)	479.0 (-17.4)	454.5 (-22.2)	455.4 (-20.7)	390.2 (-22.8)	275.7 (-42.4)	312.1 (-31.3)	358.5 (-21.3)
Bituminous coal (USD/ton)										
From Australia	88.5 (33.9)	107.0 (20.9)	77.9 (-27.2)	69.2 (-36.4)	67.0 (-33.5)	66.2 (-34.7)	60.8 (-22.0)	58.4 (-15.6)	64.4 (-3.9)	83.0 (25.5)
Unit value of import (CIF)	104.3 (51.5)	113.6 (8.9)	100.7 (-11.3)	92.1 (-19.4)	87.5 (-21.3)	85.1 (-25.3)	77.7 (-22.9)	70.4 (-23.5)	70.9 (-19.0)	72.2 (-15.2)
Petroleum product (USD/bbl)										
Gasoline	68.1 (21.2)	79.9 (17.4)	72.5 (-9.3)	74.0 (-15.6)	76.3 (11.1)	74.8 (24.7)	46.7 (-35.7)	46.0 (-37.9)	46.8 (-38.7)	53.5 (-28.5)
Kerosene	65.3 (23.6)	84.8 (29.8)	77.3 (-8.9)	75.4 (-20.8)	74.9 (-9.7)	77.8 (9.3)	44.7 (-42.1)	41.6 (-44.8)	45.7 (-39.0)	53.9 (-30.7)
Diesel	66.4 (25.2)	84.9 (27.9)	78.2 (-7.9)	77.1 (-20.7)	76.0 (-7.6)	79.2 (13.2)	49.4 (-36.8)	43.9 (-43.0)	47.6 (-37.4)	55.4 (-30.0)
Bunker-C	49.7 (40.2)	65.2 (31.3)	57.5 (-11.8)	47.4 (-38.3)	39.4 (-42.3)	43.3 (-23.3)	39.2 (-31.9)	41.2 (-13.0)	43.7 (10.9)	47.4 (9.5)
Propane	467.5 (44.6)	542.1 (16.0)	434.6 (-19.8)	420.0 (-35.9)	430.0 (-20.4)	440.0 (-1.1)	397.1 (-8.6)	375.0 (-10.7)	430.0 -	450.0 (2.3)
Butane	501.7 (41.0)	539.2 (7.5)	441.7 (-18.1)	435.0 (-33.6)	445.0 (-15.2)	455.0 (9.6)	403.8 (-8.6)	380.0 (-12.6)	440.0 (-1.1)	460.0 (1.1)
Naphtha	53.8 (26.6)	67.0 (24.5)	56.9 (-15.1)	56.8 (-23.9)	59.5 (4.8)	63.5 (22.7)	40.5 (-28.9)	41.7 (-26.6)	40.6 (-31.8)	47.6 (-25.0)

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, World Bank, Monthly Energy Statistics

Domestic Energy Prices

	2017	2018	2019			2020				
				M10	M11	M12		M10	M11	M12
Petroleum product										
Gasoline (won/liter)	1 491.5 (6.3)	1 581.4 (6.0)	1 471.9 (-6.9)	1 540.5 (-8.4)	1 535.7 (-2.9)	1 548.5 (8.0)	1 381.6 (-6.1)	1 333.3 (-13.5)	1 319.6 (-14.1)	1 367.8 (-11.7)
Diesel (won/liter)	1 282.7 (8.5)	1 391.9 (8.5)	1 340.1 (-3.7)	1 387.7 (-6.6)	1 380.5 (-3.1)	1 385.4 (4.6)	1 189.8 (-11.2)	1 134.0 (-18.3)	1 119.6 (-18.9)	1 168.3 (-15.7)
Bunker-C (won/liter)	619.5 (19.0)	734.8 (18.6)	743.9 (1.2)	791.4 (0.1)	703.5 (-16.9)	658.0 (-16.6)	573.6 (-22.9)	533.0 (-32.7)	520.0 (-26.1)	518.9 -
Propane (won/kg)	1 833.7 (8.5)	1 920.5 (4.7)	1 869.7 (-2.6)	1 833.6 (-8.4)	1 879.3 (-6.4)	1 889.7 (-3.3)	1 850.7 (-1.0)	1 822.1 (-0.6)	1 822.2 (-3.0)	1 865.2 (-1.3)
Butane (won/liter)	826.4 (12.6)	874.6 (5.8)	806.2 (-7.8)	783.7 (-16.1)	810.5 (-11.0)	820.6 (-4.9)	791.1 (-1.9)	771.4 (-1.6)	770.6 (-4.9)	796.9 (-2.9)
City gas(won/MJ)										
Residential	15.7 (3.8)	15.1 (-4.3)	15.6 (3.9)	15.9 (3.8)	15.9 (3.8)	15.9 (3.8)	15.1 (-3.6)	14.2 (-10.7)	14.2 (-10.7)	14.2 (-10.7)
General(1)	15.4 (4.4)	14.9 (-3.8)	15.6 (4.9)	15.8 (4.7)	15.8 (4.7)	16.0 (1.5)	14.9 (-4.7)	13.8 (-12.3)	13.8 (-12.3)	14.0 (-12.3)
Commercial	16.1 (3.0)	15.4 (-4.4)	16.1 (4.4)	16.5 (4.7)	16.5 (4.7)	16.5 (4.7)	15.1 (-6.4)	12.7 (-22.7)	12.7 (-23.2)	13.5 (-18.2)
Industry	13.3 (5.9)	13.0 (-2.3)	13.8 (6.0)	14.0 (5.4)	14.0 (5.4)	14.5 (5.2)	12.6 (-8.4)	9.9 (-28.8)	9.9 (-29.3)	11.4 (-21.4)
Heat(won/Mcal)										
Residential	66.3 (-2.7)	64.5 (-2.7)	65.7 (1.8)	67.1 (3.8)	67.1 (3.8)	67.1 (3.8)	66.2 (0.7)	65.2 (-2.8)	65.2 (-2.8)	65.2 (-2.8)
Commercial	86.1 (-2.7)	83.8 (-2.7)	85.3 (1.8)	87.2 (3.8)	87.2 (3.8)	87.2 (3.8)	85.9 (0.7)	84.7 (-2.8)	84.7 (-2.8)	84.7 (-2.8)
Public	75.2 (-2.7)	73.2 (-2.7)	74.5 (1.9)	76.1 (3.8)	76.1 (3.8)	76.1 (3.8)	75.1 (0.7)	74.0 (-2.9)	74.0 (-2.9)	74.0 (-2.9)
Electricity(won/kWh)										
Residential	147.3 (-29.8)	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -
General	84.4 -	84.4 -	84.4 -	65.2 -	92.3 -	92.3 -	84.4 -	65.2 -	92.3 -	92.3 -
Industry	96.0 -	96.0 -	96.0 -	78.5 -	108.5 -	108.5 -	96.0 -	78.5 -	108.5 -	108.5 -

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

2.Electricity prices are based on Residential(High-voltage, 201~400kWh), General((A) 1, Low-voltage), Industry((B), High-voltageB, option II mid-load)

Source: www.petronet.co.kr, www.seoulgas.co.kr, cyber.kepco.co.kr

Total Primary Energy Supply (TPES)

	2017	2018	2019				2020p			
				M10	M11	M12		M10	M11	M12
Coal (Mton)	139.8	141.1	133.0	11.6	10.9	10.9	116.5	9.0	8.9	10.0
	96.7	12.1	- 67.8	7.0	- 4.7	- 12.8	- 146.5	- 22.3	- 18.3	- 8.1
- Coking coal excluded	103.5	106.4	98.0	8.6	8.0	8.0	82.7	6.0	6.1	7.0
	95.3	35.7	- 93.5	9.2	- 7.6	- 16.2	- 181.8	- 30.1	- 23.8	- 12.3
Oil (Mbbbl)	937.1	931.8	927.1	75.7	79.4	85.1	873.3	69.7	71.0	75.6
	21.9	- 5.6	- 6.4	3.0	4.3	2.0	- 67.1	- 8.0	- 10.5	- 11.1
- Non-energy oil excluded	443.7	445.5	451.8	38.6	39.5	42.9	424.7	34.8	39.4	37.5
	- 27.4	4.9	16.5	14.1	4.4	3.4	- 64.5	- 9.7	- 0.0	- 12.5
LNG (Mton)	36.4	42.3	41.0	2.8	3.7	5.0	41.4	3.1	3.8	5.4
	42.5	225.1	- 35.8	- 10.4	1.8	2.4	10.2	11.1	1.4	7.6
Hydro (TWh)	7.0	7.3	6.2	0.5	0.5	0.5	7.1	0.5	0.4	0.5
	96.4	67.2	- 132.1	7.3	- 15.0	- 16.7	159.5	- 13.2	- 5.8	- 0.7
Nuclear (TWh)	148.4	133.5	145.9	10.6	10.2	11.1	160.2	13.5	14.0	15.1
	- 92.1	- 109.2	141.5	- 12.3	- 15.9	- 11.0	129.6	27.1	37.4	36.2
Others (Mtoe)	15.8	17.1	17.7	1.4	1.4	1.5	17.7	1.4	1.3	1.5
	201.3	96.8	40.1	2.2	- 0.8	0.7	2.2	- 2.1	- 2.9	2.6
TPES (Mtoe)	302.1	307.6	303.1	24.1	25.3	28.0	290.1	22.8	24.0	27.7
	34.1	22.3	- 17.3	- 0.2	- 1.2	- 3.2	- 50.6	- 5.3	- 5.2	- 1.0
- Non-energy oil excluded	240.7	247.1	244.0	19.5	20.3	22.7	234.2	18.5	20.0	22.9
	25.1	32.1	- 14.7	1.4	- 2.4	- 4.1	- 47.1	- 5.3	- 1.5	0.8
- Non-energy oil&coal excluded	215.4	223.0	219.6	17.4	18.3	20.7	210.6	16.4	18.0	20.8
	17.3	42.3	- 17.6	1.5	- 3.1	- 4.3	- 47.6	- 6.0	- 1.3	0.6

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

Share of TPES by Sources

(unit: %)

	2017	2018	2019				2020p			
				M10	M11	M12		M10	M11	M12
Coal	28.5	28.2	27.1	29.6	26.7	24.1	24.9	24.7	23.2	22.4
- Coking coal excluded	20.2	20.3	19.1	21.1	18.5	16.8	16.8	15.6	14.9	14.8
Oil	39.5	38.5	38.7	39.6	39.7	38.5	38.0	38.6	37.8	34.8
- non-energy oil excluded	19.2	18.9	19.2	20.4	20.0	19.7	18.7	19.4	21.2	17.5
LNG	15.7	18.0	17.7	15.0	19.2	23.3	18.7	17.5	20.5	25.4
Hydro	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4
Nuclear	10.5	9.2	10.3	9.4	8.6	8.4	11.8	12.6	12.5	11.6
Others	5.2	5.6	5.8	6.0	5.5	5.2	6.1	6.2	5.6	5.4
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)

	2017	2018	2019				2020p			
				M10	M11	M12		M10	M11	M12
Industry	142.5 (5.0)	143.5 (9.6)	142.9 (-5.0)	11.7 (-1.5)	12.1 (2.0)	12.7 (0.4)	137.4 (-46.1)	11.2 (-3.9)	10.9 (-10.0)	12.2 (-3.5)
Transport	42.8 (1.4)	43.0 (5.0)	43.0 (2.3)	3.6 (12.6)	3.6 (-3.2)	3.7 (-1.2)	38.9 (-104.0)	3.2 (-12.8)	3.6 (-0.2)	3.2 (-13.2)
Residential	22.5 (3.7)	23.5 (53.9)	22.6 (-33.5)	1.3 (-12.8)	2.0 (-4.3)	3.0 (-5.2)	23.2 (54.1)	1.4 (10.0)	2.1 (3.9)	3.2 (9.9)
Commercial	17.4 (2.0)	17.9 (33.3)	17.5 (-22.4)	1.2 (3.6)	1.4 (-0.4)	1.7 (-1.9)	17.1 (-24.0)	1.2 (-5.0)	1.4 (0.9)	1.7 (0.9)
Public	5.5 (4.8)	5.6 (23.6)	5.4 (-35.0)	0.4 (2.9)	0.4 (-3.3)	0.5 (-3.7)	5.4 (-2.2)	0.4 (-3.1)	0.4 (-1.2)	0.5 (-0.8)
TFC	230.6 (3.9)	233.4 (15.0)	231.4 (-10.8)	18.2 (0.5)	19.5 (0.0)	21.6 (-0.9)	222.0 (-47.5)	17.3 (-4.7)	18.4 (-5.8)	21.0 (-3.0)
Coal (Mton)	50.4 (3.0)	49.3 (-23.6)	48.2 (-25.1)	4.2 (-0.9)	4.1 (-7.3)	4.1 (-5.7)	45.8 (-58.2)	4.0 (-5.3)	3.8 (-6.6)	4.4 (6.4)
Oil (Mbbbl)	926.6 (3.1)	920.0 (-7.3)	918.5 (-2.2)	75.3 (3.6)	78.8 (4.3)	84.1 (1.8)	867.1 (-64.7)	69.3 (-8.0)	70.1 (-11.1)	74.7 (-11.2)
Electricity (TWh)	507.7 (2.1)	526.1 (43.3)	520.5 (-12.0)	40.6 (1.6)	41.1 (-1.9)	44.7 (-1.3)	509.3 (-25.6)	39.1 (-3.8)	41.1 (0.1)	45.0 (0.7)
City gas (Bm ³)	22.6 (5.8)	24.3 (101.1)	23.3 (-42.7)	1.4 (-12.1)	2.0 (-6.4)	2.8 (-5.5)	22.5 (-45.7)	1.4 (3.0)	2.0 (0.8)	3.1 (7.7)
Heat-others (1 000 toe)	11.1 (18.8)	11.8 (80.2)	11.6 (-23.2)	0.8 (-5.7)	1.0 (-1.0)	1.2 (-3.2)	11.4 (-10.2)	0.8 (2.5)	1.0 (-2.2)	1.2 (2.5)

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	2019				2020p			
				M10	M11	M12		M10	M11	M12
Industry	61.8	61.5	61.8	64.1	61.9	58.7	61.9	64.7	59.1	58.3
Transport	18.6	18.4	18.6	19.9	18.5	17.3	17.5	18.2	19.6	15.5
Residential	9.7	10.1	9.8	7.0	10.4	13.7	10.5	8.1	11.5	15.5
Commercial	7.5	7.7	7.6	6.7	7.0	7.9	7.7	6.7	7.5	8.2
Public	2.4	2.4	2.3	2.2	2.2	2.4	2.4	2.2	2.3	2.4
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	14.5	13.9	13.9	15.2	13.9	12.6	13.8	15.3	13.9	13.7
Oil	51.1	50.1	50.2	52.1	51.1	49.2	49.3	50.5	48.7	45.4
Electricity	18.9	19.4	19.3	19.2	18.1	17.8	19.7	19.4	19.3	18.5
City gas	10.7	11.6	11.6	9.0	11.9	14.9	12.0	10.1	12.9	16.6
Heat-others	4.8	5.1	5.0	4.4	5.0	5.5	5.2	4.7	5.2	5.8

Note: p means provisional
Source: Monthly energy statistics

Statistics on Energy Production Facilities

	2018	2019				2020p			
			M10	M11	M12		M10	M11	M12
Total capacity (GW)	119.1 (1.9)	125.3 (5.2)	124.0 (5.1)	124.4 (5.2)	125.3 (5.2)	127.3 (4.6)	127.8 (3.0)	128.6 (3.4)	129.2 (3.1)
Nuclear	21.9 (-3.0)	23.3 (6.4)	23.3 (6.4)	23.3 (6.4)	23.3 (6.4)	23.3 (3.6)	23.3 -	23.3 -	23.3 -
Bituminous coal	36.4 (0.7)	36.4 (0.1)	36.4 (0.1)	36.4 (0.1)	36.4 (0.1)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)
Gas	37.9 (-0.0)	39.6 (4.5)	39.2 (3.5)	39.5 (4.4)	39.6 (4.5)	41.2 (7.2)	41.2 (5.1)	41.2 (4.1)	41.2 (4.1)
Refinery capacity (mil BPSD)	3.2 (3.2)	3.2 -	3.2 -	3.2 -	3.2 -	38.4 -	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

	2018	2019					2020p		
			M10	M11	M12		M10	M11	M12
The number of household demanding city gas (mil)	19.1 (3.1)	19.7 (2.8)	19.4 (2.7)	19.5 (2.6)	19.7 (2.8)		19.9 (2.5)	20.0 (2.5)	20.1 (2.3)
Registered cars (mil)	23.2 (3.0)	23.7 (2.0)	23.6 (2.2)	23.6 (2.1)	23.7 (2.0)		24.3 (2.8)	24.3 (2.9)	24.4 (2.9)
- gasoline	10.6 (2.5)	11.0 (3.1)	10.9 (2.9)	10.9 (3.0)	11.0 (3.1)		11.3 (4.1)	11.4 (4.1)	11.4 (4.1)
- diesel	9.9 (3.7)	10.0 (0.3)	10.0 (1.0)	10.0 (0.6)	10.0 (0.3)		10.0 (0.2)	10.0 (0.4)	10.0 (0.3)
- LPG	2.0 (-3.3)	2.0 (-1.5)	2.0 (-2.1)	2.0 (-1.8)	2.0 (-1.5)		2.0 (-0.9)	2.0 (-1.1)	2.0 (-1.3)
- hybrid	0.4 (30.9)	0.5 (26.1)	0.5 (27.6)	0.5 (26.2)	0.5 (26.1)		0.6 (29.9)	0.6 (32.0)	0.6 (33.1)

Note: () is year-on-year growth rates (%)
Source: Monthly energy statistics