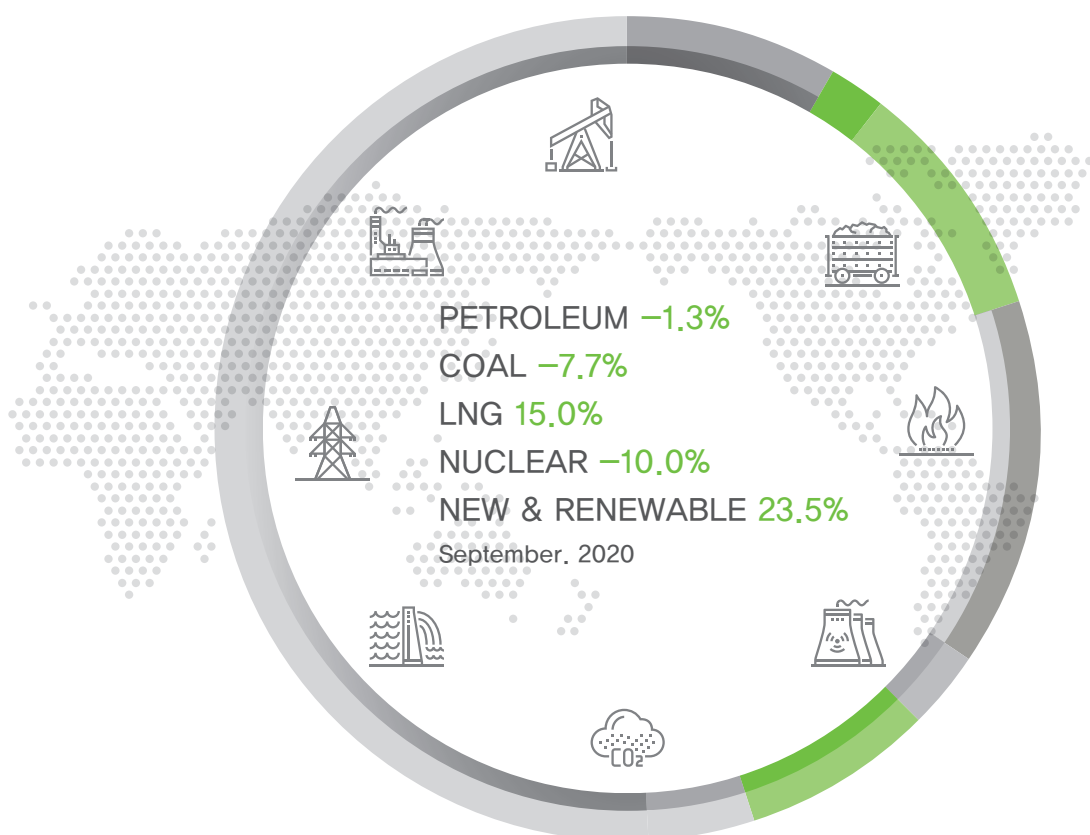


# KEEI

## MONTHLY KOREA ENERGY TRENDS

2020 / 12  
KOREA ENERGY ECONOMICS INSTITUTE



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

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## 1. The Economy and the Industry

- ☐ **Gross domestic product contracted 1.1% year-on-year in 3Q, as private consumption and construction investment declined.**
  - Private consumption dropped by 4.4% year-on-year, as consumers spent less on services such as food and accommodation and semi-durable goods including clothes, although they spent more on durable (e.g. automobile) and non-durable (e.g. groceries) goods due to the impact of COVID-19.
  - The investment in construction fell by 1.0% year-on-year, as it dropped in buildings construction, while facility investment grew by 10.6%, led by transport equipment (7.4%) and machinery (11.8%).
- ☐ **The mining & manufacturing production index posted a year-on-year growth of 8.0% in September, with the semiconductor and automobile sectors leading the growth.**
  - The production index of semiconductors jumped by 26.0% year-on-year, as its export value increased (11.8%) due to growing demand for laptop and personal computers and a recovery in smartphone sales.
  - The production index of iron & steel products declined by 1.1% year-on-year, which was much slower than the previous month, as its export value started an upward move (1.8%) with the recovery in the downstream industries such as automobile and export to China.
  - The production index of automobiles went up by 15.4% year-on-year, as the export started to increase (23.0%) for the first time since March with growing demand from the US and Europe, mainly for SUVs and green automobiles.
- ☐ **The service production index was up 0.1% year-on-year (in September), despite the impact of COVID-19, as it rebounded in the wholesale & retail sectors.**
  - The service production index increased for the first time in seven months owing to a recovery in the wholesale·retail sectors (3.1%) and faster growth in the financial·insurance sectors (20.0%), although it continued to decline in the restaurant·accommodation (-21.2%) and art·sports·leisure (-34.6%) sectors.

► **Major economic and industrial indicators**

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
GDP (trillion won)	1 849.0 (2.0)	1 361.5 (1.9)	463.1 (2.0)	1 349.8 (-0.9)	- -	- -	457.9 (-1.1)
Total export (\$billion, customs clearance basis)	539.9 (-10.7)	403.6 (-10.4)	44.6 (-11.9)	370.7 (-8.1)	36.3 (-17.1)	46.2 (5.0)	40.9 (-8.3)
Industrial production index (2015=100)	106.3 (-0.0)	104.3 (-0.8)	104.1 (1.8)	104.5 (0.2)	107.5 (-2.4)	100.3 (-2.6)	112.4 (8.0)
Semi-conductors	188.1 (11.7)	175.8 (6.7)	203.1 (9.8)	225.6 (28.3)	228.4 (17.0)	239.2 (21.2)	255.9 (26.0)
Basic chemical products	107.5 (-2.6)	107.8 (-3.6)	111.2 (0.5)	102.0 (-5.3)	102.1 (-10.0)	104.6 (-7.3)	103.8 (-6.7)
Iron&Steel	98.3 (-2.2)	98.5 (-2.0)	93.2 (-1.2)	90.5 (-8.1)	86.9 (-15.1)	87.5 (-8.6)	92.2 (-1.1)
Cars	93.1 (-0.9)	92.1 (1.5)	83.0 (-2.4)	80.8 (-12.2)	93.0 (-7.8)	68.2 (-11.4)	95.8 (15.4)
Service production index (2015=100)	108.4 (1.4)	106.9 (1.2)	106.8 (0.8)	104.7 (-2.0)	106.7 (-1.2)	104.1 (-3.8)	106.9 (0.1)
Restaurant & Accommodation	97.5 (-1.0)	96.1 (-1.5)	91.5 (-4.6)	80.4 (-16.3)	90.4 (-9.1)	84.6 (-16.9)	72.1 (-21.2)
Wholesale & Retail	104.6 (-0.4)	103.5 (-0.3)	102.8 (-0.3)	100.4 (-2.9)	100.6 (-2.0)	96.8 (-5.8)	106.0 (3.1)
Restaurant & Accommodation	97.5 (-1.0)	96.1 (-1.5)	91.5 (-4.6)	80.4 (-16.3)	90.4 (-9.1)	84.6 (-16.9)	72.1 (-21.2)

Note: Figures are based on the real price of 2010, P means provisional, ( ) is year-on-year growth rates (%)

Source: Korea International Trade Association, Korea Statistical Information Service

## 2. Energy Prices

### Global energy prices

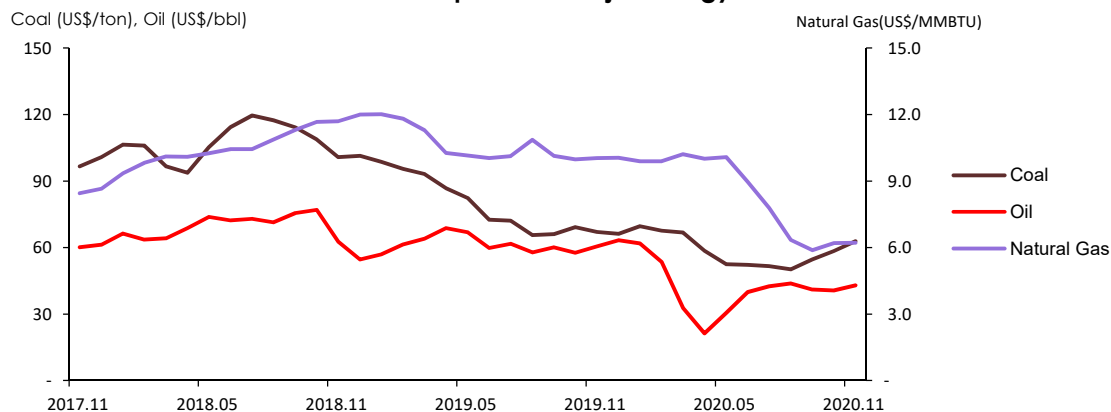
- Global oil price was up 5.8% in November from the previous month following the news on the development of vaccines for COVID-19, although it was still down 29.2% on a year-on-year basis.
  - Global oil price increased amid the vaccine related news, chances of extended oil output reduction in OPEC+ countries and lower uncertainty after Joe Biden's victory in the US presidential election. However, such increase was partly offset by weak crude oil demand in the midst of the COVID-19 pandemic.

#### ► Global energy prices

	2018	2019				2020			
			M9	M10	M11	M9	M10	M11	
Crude oil (US\$/bbl)	68.6	61.6	60.1	57.7	60.6	41.0	40.6	42.9	
	(29.5)	(-10.2)	(-20.3)	(-25.0)	(-3.4)	(-31.8)	(-29.6)	(-29.2)	
Natural gas (US\$/MMBTU)	10.7	10.6	10.1	10.0	10.0	5.9	6.2	6.2	
	(24.0)	(-1.1)	(-10.3)	(-14.4)	(-14.2)	(-42.0)	(-38.0)	(-38.2)	
Coal (US\$/ton)	107.0	77.9	66.0	69.2	67.0	54.6	58.4	62.8	
	(20.9)	(-27.3)	(-42.2)	(-36.4)	(-33.5)	(-17.2)	(-15.6)	(-6.2)	

Note: Global oil price is the average of the three benchmarks; Brent, Dubai, WTI, Natural gas and coal prices are based on Japan's LNG importing price from Indonesia (CIF) and the price of Australian coal. ( ) is year-on-year growth rates (%)  
 Source: www.petronet.co.kr, World Bank(Commodity Markets)

#### ► Global prices of major energy sources



## Domestic energy prices

### □ Gasoline and diesel prices decreased slightly in November than a month ago. On a year-on-year basis, however, it continued to fall by over 10%.

- The prices of gasoline and diesel at gas stations fell by 1.0% and 1.2% respectively in November from the previous month, which was affected by global oil price decrease in October due to the impact of COVID-19.
- Bunker-C oil price dropped by 7.3% in October compared to the prior month partly due to global oil price decrease, and it fell by 32.7% year-on-year, as its demand has been weak following the International Maritime Organization's environmental regulation.

### □ Propane and butane prices remained at the previous month's level in November, and went down by 3.0% and 4.9% respectively on a year-on-year basis.

- Domestic prices of propane and butane were flat in November, even though Saudi Aramco's propane price increased in the previous month, as domestic LPG suppliers didn't adjust prices for two months to make them competitive with other fuels.

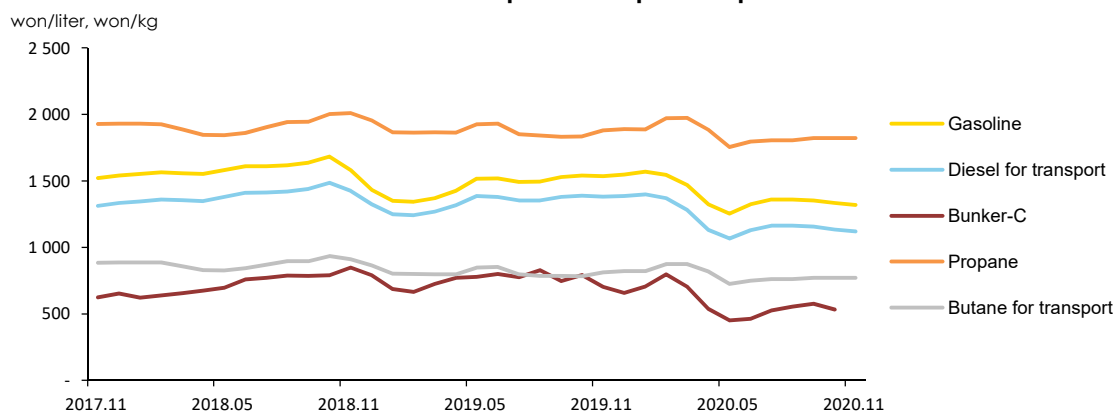
#### ► Domestic petroleum product prices

	2018	2019			2020			
			M9	M10	M11	M9	M10	M11
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 529.3 (-6.6)	1 540.5 (-8.4)	1 535.7 (-2.9)	1 352.5 (-11.6)	1 333.3 (-13.5)	1 319.6 (-14.1)
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 379.8 (-4.1)	1 387.7 (-6.6)	1 380.5 (-3.1)	1 154.5 (-16.3)	1 134.0 (-18.3)	1 119.6 (-18.9)
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	747.4 (-4.7)	791.4 (0.1)	703.5 (-16.9)	575.2 (-23.0)	533.0 (-32.7)	- (-100.0)
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 831.9 (-5.8)	1 833.6 (-8.4)	1 879.3 (-6.4)	1 821.0 (-0.6)	1 822.1 (-0.6)	1 822.2 (-3.0)
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	784.7 (-12.4)	783.7 (-16.1)	810.5 (-11.0)	771.5 (-1.7)	771.4 (-1.6)	770.6 (-4.9)

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

Source: [www.opinet.co.kr](http://www.opinet.co.kr)

#### ► Domestic petroleum product prices



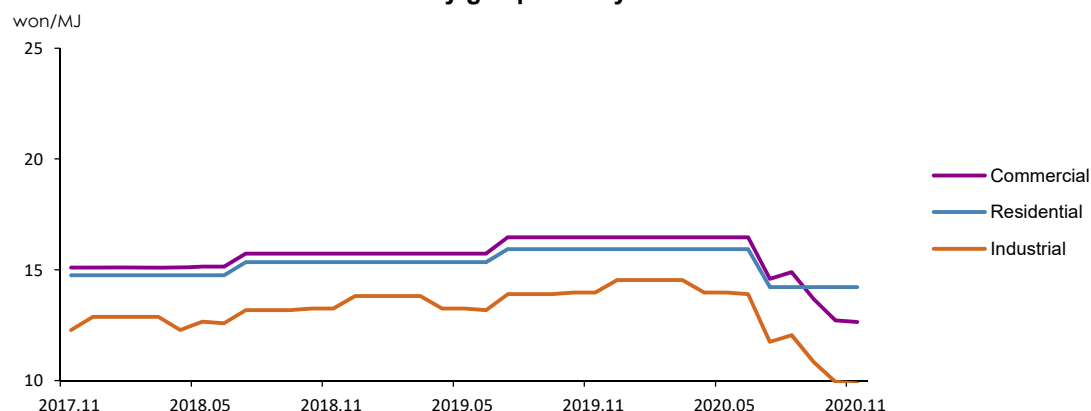
□ **City gas price for commercial and industrial use went down by 0.5% and 0.7% respectively, and that for residential use remained flat compared to the prior month.**

- The prices of city gas for commercial and industrial use, that are subject to a monthly adjustment, fell by 8.2% and 10.1% respectively from the prior month owing to the global oil price decrease and supply from the spot market (Oct), while the price for residential use was the same as the previous month.

□ **Heat energy price has been flat for four consecutive months until November since the price reduction in July, but it was down 2.8% on a year-on-year basis.**

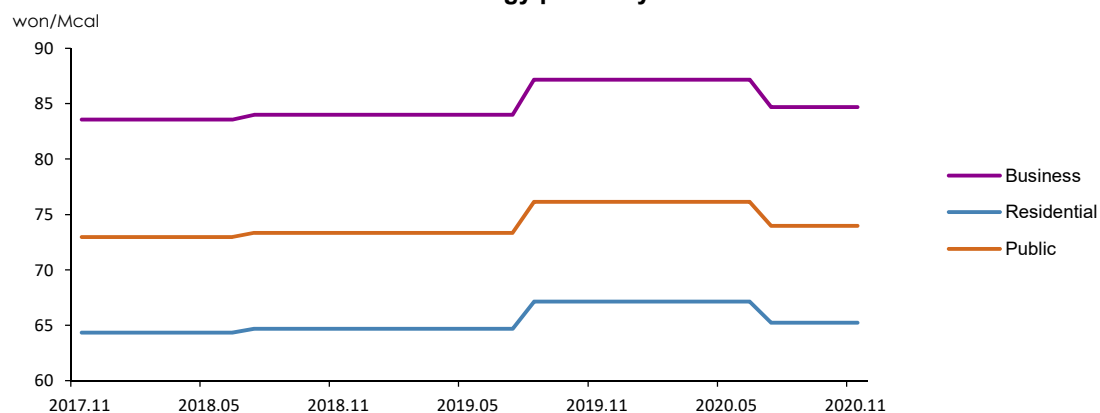
- Heat energy price was cut in July in line with the city gas price cut, though the cut was less than that of city gas, as it reflected actual fuel cost and increased fixed cost.

#### ► City gas prices by end-use sectors



Note: Instead of volume(M<sup>3</sup>), calorie (MJ) has been used as the unit of measurement in the city gas pricing system since July 2012. Figures before that are converted based on standard calorie (additional tax, base charge excluded)

#### ► Heat energy prices by end-use sectors





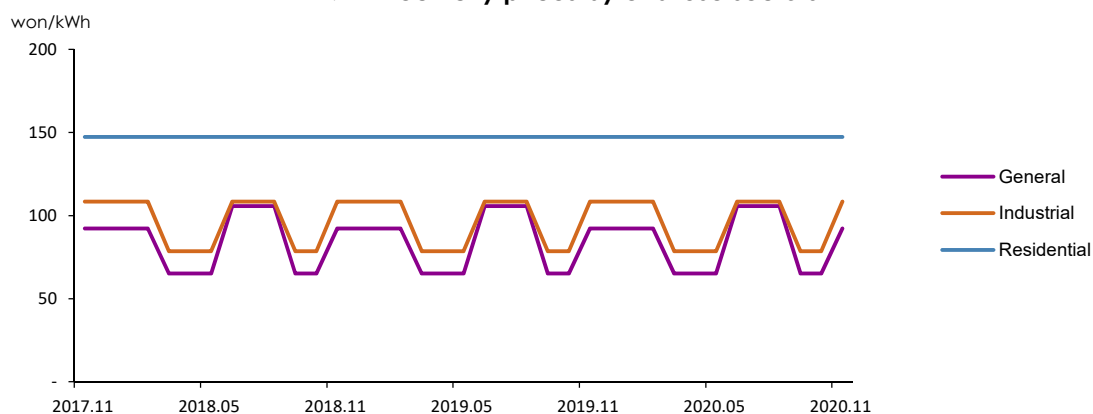
□ **Electricity prices for general and industrial use increased in November than a month ago after they were adjusted for the winter season, while the residential electricity price remained flat.**

- Electricity prices for general and industrial use that are subject to a time-of-use pricing, went up by 41.6% and 38.2% respectively in November as a result of the seasonal price adjustment from spring/autumn (Mar-May, Sept-Oct) to winter (Nov-Feb).
- Electricity prices are to be adjusted every three months with the introduction of the fuel cost pass-through system from January 2021.

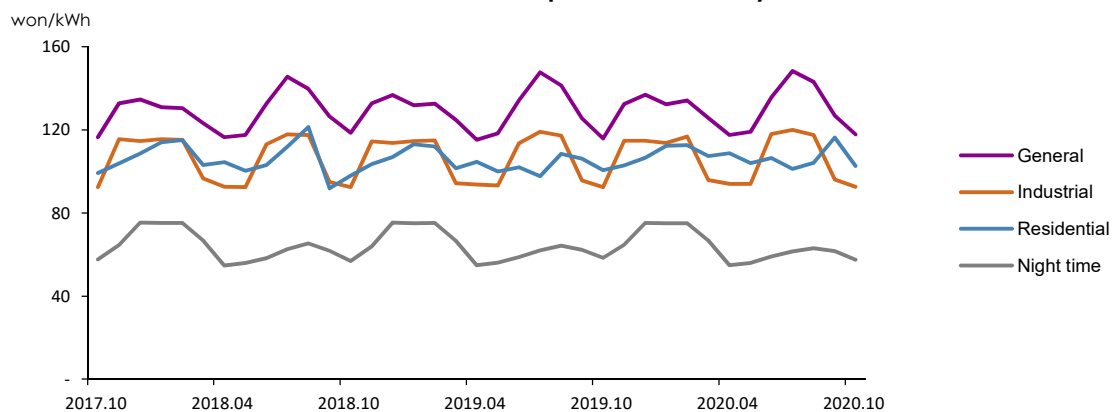
□ **The unit sales price of electricity declined in October from the prior month due to decreased electricity use in all end-use sectors.**

- The use of residential electricity, which is progressively priced, decreased in October from the previous month, and accordingly, the unit sales price dropped by 11.9% than a month ago.
- The unit sales prices of electricity for general and industrial use fell by 7.1% and 3.7% respectively from the previous month, owing to the seasonal price adjustment in September from summer to spring/autumn and a drop in power use during peak-load time.

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



► **Unit sales price of electricity**



### 3. Energy Supply

□ **The total energy import volume dropped by 4.4% year-on-year in September despite an increase in LNG imports, as the import of petroleum products declined.**

- The import volume of crude oil grew slightly by 0.6% from the same month last year, while that of petroleum products fell by 8.8%.
- The import volume of LNG jumped by 18.3%, as gas use increased along with a surge in gas-fired generation following the unscheduled shutdown of five nuclear reactors due to the impact of Typhoon Maysak and Haishen accompanied by strong winds.

□ **Renewable & 'other energy' generation posted a year-on-year growth of 23.5%, as solar PV generation increased thanks to the higher solar radiation levels.**

- Renewable & 'other energy' generation rose dramatically: solar PV generation surged by 52.5% year-on-year in September due to the increased amount of sunshine; bioenergy generation also jumped by 55.5%, as electricity generation from wood pellets increased in former coal-fired power plants; fuel cell and wind power generation also increased.

► **Import and domestic production of energy**

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>Import volume</b>							
Crude oil (Mbbbl)	1 071.9	807.0	79.3	744.1	86.4	78.9	79.8
	(-4.0)	(-2.8)	(-2.2)	(-7.8)	(0.1)	(-18.7)	(0.6)
Petroleum product (Mbbbl)	352.1	259.4	32.4	274.8	31.8	25.8	29.5
	(3.1)	(2.5)	(11.4)	(5.9)	(-0.9)	(-26.9)	(-8.8)
Bituminous coal (Mton)	132.7	97.6	11.0	86.4	10.7	9.2	11.0
	(0.9)	(-1.7)	(-5.2)	(-11.5)	(-10.8)	(-27.1)	(-0.5)
Anthracite (Mton)	6.9	5.3	0.2	4.6	0.5	0.6	0.6
	(-15.6)	(-9.0)	(-36.7)	(-11.7)	(-12.7)	(-16.8)	(182.6)
LNG (Mton)	40.8	29.0	2.5	28.3	2.4	2.0	2.9
	(-7.4)	(-8.4)	(-25.2)	(-2.3)	(-21.7)	(-45.5)	(18.3)
Import volume (Mtoe)	349.2	259.1	27.8	244.4	27.1	24.9	26.6
	(-1.5)	(-1.4)	(-5.0)	(-5.7)	(-9.3)	(-21.7)	(-4.4)
Import value (billion US\$, CIF)	126.7	95.2	9.0	66.6	6.4	6.0	6.5
	(-13.2)	(-10.4)	(-23.8)	(-30.1)	(-37.8)	(-48.3)	(-27.8)
Energy share of total import value (%)	25.2	25.3	23.3	19.2	16.5	16.7	16.6
Foreign energy dependence (%)*	93.3	93.2	93.0	92.5	92.8	92.1	91.4
<b>Domestic production</b>							
Hydropower (TWh)	6.2	4.7	0.6	5.8	0.6	1.1	0.9
	(-14.1)	(-15.6)	(-20.7)	(21.1)	(8.0)	(78.8)	(55.6)
Anthracite (Mton)	1.1	0.8	0.1	0.8	0.1	0.1	0.1
	(-9.7)	(-13.7)	(15.6)	(-4.7)	-	(-20.0)	(-3.4)
Natural gas (Mton)	0.2	0.2	0.0	0.1	0.0	0.0	0.0
	(-21.5)	(-21.4)	(-43.9)	(-19.0)	(-35.0)	(-41.5)	(-93.3)
Renewable energy (Mtoe)	18.3	13.9	1.4	14.6	1.5	1.7	1.8
	(6.7)	(7.8)	(-1.6)	(5.1)	(-0.8)	(2.2)	(23.5)

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

## 4. Energy Consumption

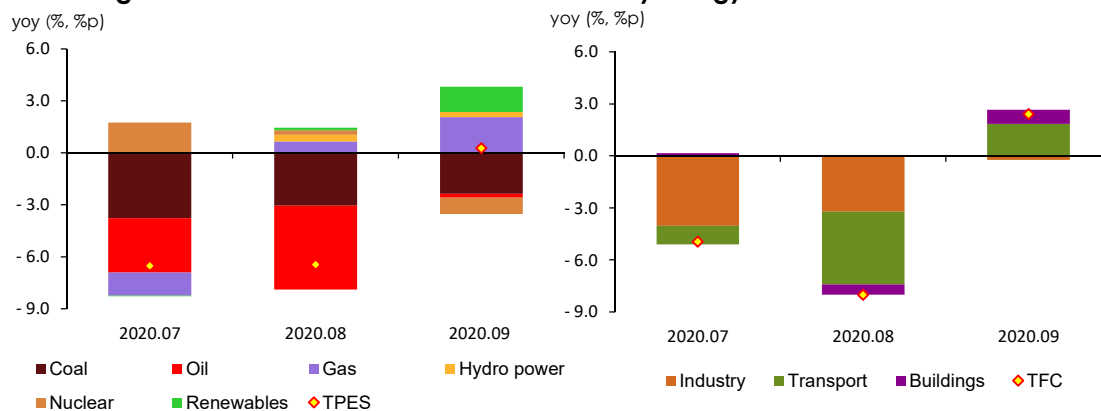
- **Total Primary Energy Supply (“TPES”) went up by 0.3% year-on-year in September, as a drop in coal use was offset by increased use of gas and renewable energy.**
  - Gas use rose by 15.0% year-on-year, as gas-fired generation was up 20.9% and LNG use for power generation grew by 23.6%, which were affected by the failure and shutdown of Kori and Wolsung nuclear power plants that were damaged by Typhoon Maysak and Haishen.
  - The use of renewable & ‘other energy’ rose by 23.5% owing to a surge in solar PV generation amid favorable weather conditions with the start of autumn and growing bioenergy generation through increased wood pellet generation capacity.
  - Coal use declined by 7.7% year-on-year, as coal-fired generation was down 11.6%. Petroleum use fell by 1.3% year-on-year, because the use of naphtha as feedstock plunged by 10.5%, though it increased in the transport sector.
- **Total Final Consumption (“TFC”) was up 2.4% year-on-year (in September), led by the transport and buildings sectors.**
  - Transport energy use went up by 11% year-on-year despite another wave of COVID-19, due to the year-on-year base effect of a sharp drop in fuel use for road transport following the termination of fuel tax cuts in August, though energy demand fell sharply in the aviation sector, because domestic air travel demand fell again after a slight increase.
  - Buildings energy use grew by 4.9% year-on-year, led by residential sector energy demand for heating, as chilly weather continued after the rainy season and typhoons, and the average temperature was 1.4°C lower than the same month last year.

### ► Energy consumption

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>TPES (Mtoe)</b>	<b>303.6</b>	<b>226.2</b>	<b>23.1</b>	<b>216.8</b>	<b>23.7</b>	<b>24.4</b>	<b>23.2</b>
	(-1.3)	(-1.2)	(-2.8)	(-4.2)	(-6.5)	(-6.4)	(0.3)
- Non-energy oil&coal excluded	220.1	163.7	16.1	156.5	17.0	17.7	16.6
	(-1.3)	(-1.0)	(-3.0)	(-4.4)	(-6.0)	(-6.6)	(3.0)
<b>TFC (Mtoe)</b>	<b>231.0</b>	<b>171.9</b>	<b>17.4</b>	<b>165.9</b>	<b>17.6</b>	<b>17.7</b>	<b>17.8</b>
	(-0.8)	(-1.0)	(-4.3)	(-3.5)	(-4.9)	(-8.0)	(2.4)

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 declined by 7.7% year-on-year in September, with the buildings and power generation sectors leading the downward trend, though its industrial use increased.

- Industrial coal use posted a year-on-year growth of 11.4%, as the production declined at a slower pace than the same period last year in the iron & steel sector, a large coal-consuming industry, and the industrial use of anthracite increased partly due to base effect.
- Coal use fell by 16.0% year-on-year in September in the power generation sector, and coal-fired generation dropped by 11.6%.

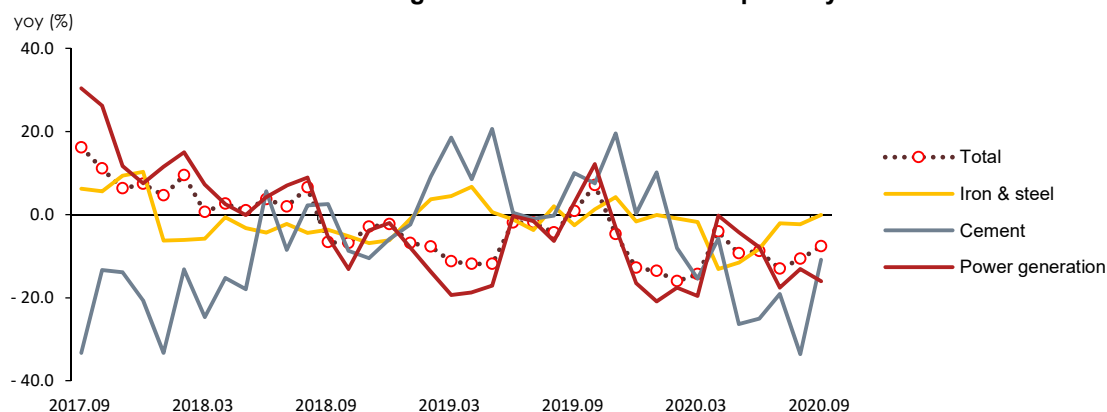
### ► Coal consumption

	2019p			2020p				
		M1~9	M9		M1~9	M7	M8	M9
<b>Coal (Mton)</b>	<b>133.0</b>	<b>99.6</b>	<b>11.5</b>	<b>88.6</b>	<b>10.7</b>	<b>11.3</b>	<b>10.6</b>	
	(-5.7)	(-6.2)	(0.8)	(-11.0)	(-13.1)	(-10.7)	(-7.7)	
Industry	47.6	35.5	3.5	33.5	3.8	3.9	3.9	
	(-1.6)	(-0.8)	(-3.3)	(-5.8)	(-3.5)	(-5.5)	(11.4)	
-Coking-coal	35.0	26.1	2.9	24.9	2.9	2.9	2.9	
	(1.0)	(0.9)	(-2.6)	(-4.5)	(-2.1)	(-2.3)	(-0.1)	
Buildings	0.6	0.3	0.1	0.2	0.0	0.0	0.0	
	(-29.2)	(-28.9)	(-23.1)	(-24.2)	(-28.6)	(-50.0)	(-28.0)	
Power generation	84.8	63.7	7.9	54.9	6.9	7.4	6.7	
	(-7.6)	(-8.9)	(3.0)	(-13.8)	(-17.6)	(-13.1)	(-16.0)	

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 decreased by 1.3% year-on-year in September, led by the industrial sector, although it grew in the transport and buildings sectors.**

- Industrial petroleum use declined by 7.9% year-on-year, as the use of naphtha that takes up a large share of the total petroleum use fell by 10.5%.
- Transport energy use rose by 11.0% due to the base effect of a sharp drop in fuel use after the government terminated fuel tax cuts at the end of August 2019.
- Buildings' energy use grew by 10.8% year-on-year as a result of growing energy demand for heating, because the weather was colder than the previous year.

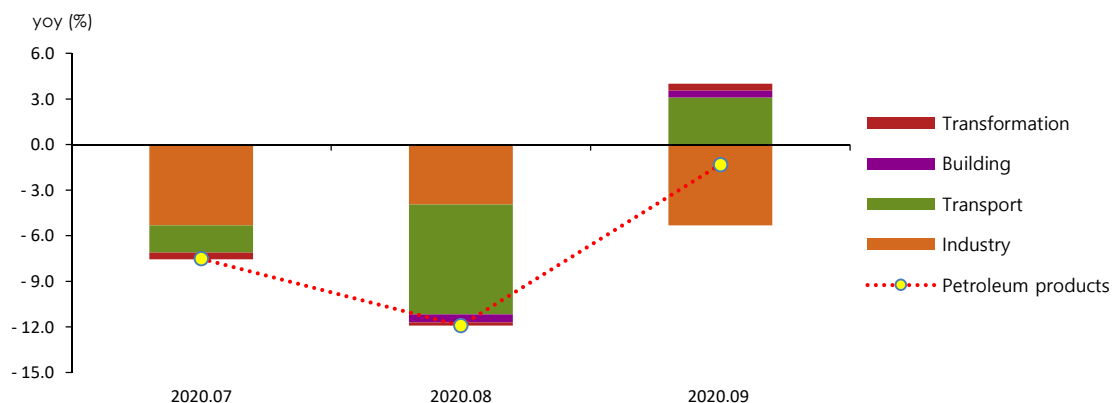
► **Petroleum product consumption by end-use sectors**

	2019p			2020p			
		M1~9	M9		M1~9	M7	M8
<b>Petroleum (Mbbl)</b>	<b>927.1</b>	<b>686.9</b>	<b>72.3</b>	<b>657.0</b>	<b>72.5</b>	<b>71.7</b>	<b>71.4</b>
	(-0.5)	(-1.7)	(-6.0)	(-4.4)	(-7.5)	(-11.9)	(-1.3)
Industry	566.2	419.9	48.6	414.0	46.2	45.6	44.7
	(0.4)	(-1.1)	(2.2)	(-1.4)	(-8.3)	(-6.6)	(-7.9)
-Naphtha	438.6	329.6	37.3	313.3	35.2	34.1	33.4
	(-2.8)	(-3.3)	(-2.6)	(-4.9)	(-9.6)	(-10.5)	(-10.5)
Transport	303.3	225.4	20.4	203.1	23.3	23.0	22.7
	(0.3)	(-0.5)	(-19.3)	(-9.9)	(-5.7)	(-20.3)	(11.0)
Buildings	49.1	35.0	3.0	35.9	2.7	2.6	3.3
	(-8.6)	(-7.9)	(-19.8)	(2.5)	(0.9)	(-14.2)	(10.8)
Power generation	8.6	6.6	0.4	4.0	0.3	0.5	0.7
	(-26.9)	(-31.1)	(-5.0)	(-40.2)	(-55.2)	(-26.8)	(91.1)

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 grew by 15.0% year-on-year in September, led by a surge in the power generation sector.**
  - Industrial power use increased after a downward trend, leading the growth in total power use (3.3%), and accordingly, gas-fired generation rose dramatically by 20.9%, while coal-fired generation declined.
- **City gas consumption went up by 8.0% year-on-year (in September), as more natural gas was directly imported.**
  - Industrial gas use grew by 16.3% year-on-year amid business recovery especially in the semiconductor sector and surging direct imports of natural gas in the iron & steel and chemical sectors.

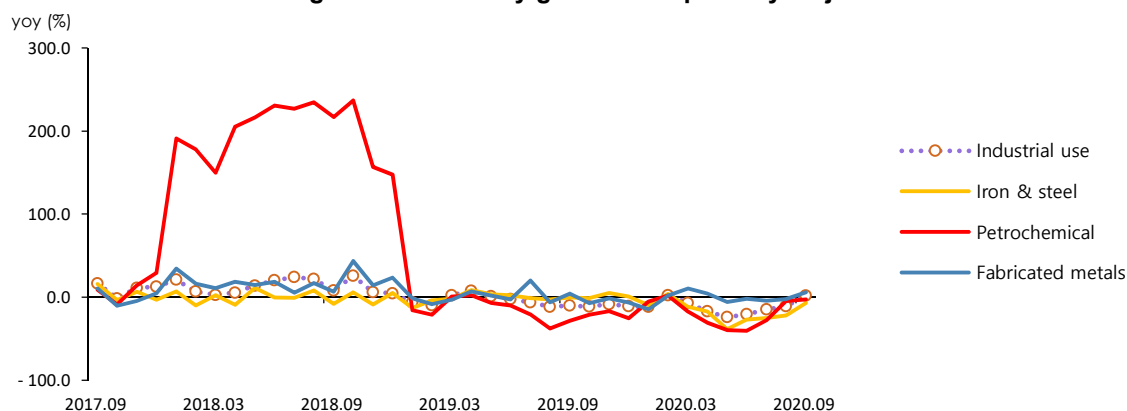
### ► Natural gas and city gas consumption

	2019p			2020p			
		M1~9	M9		M1~9	M7	M8
<b>LNG (Mton)</b>	<b>40.9</b>	<b>29.5</b>	<b>2.4</b>	<b>29.2</b>	<b>2.6</b>	<b>3.0</b>	<b>2.8</b>
	(-3.2)	(-3.8)	(6.4)	(-1.0)	(-9.1)	(4.6)	(15.0)
Power generation	18.4	13.5	1.3	13.4	1.4	1.7	1.6
	(-2.7)	(-5.7)	(12.3)	(-0.5)	(-15.3)	(5.0)	(23.6)
City gas production	20.5	14.6	1.0	14.6	1.1	1.1	1.1
	(-2.1)	(-0.1)	(-1.5)	(-0.5)	(1.5)	(6.1)	(9.8)
<b>City gas (bm<sup>3</sup>)</b>	<b>25.4</b>	<b>18.6</b>	<b>1.3</b>	<b>18.6</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>
	(-1.1)	(0.5)	(0.7)	(-0.3)	(-0.2)	(6.9)	(8.0)
Industry	10.4	7.7	0.8	8.0	0.8	0.8	0.9
	(2.3)	(5.0)	(-1.6)	(4.2)	(2.7)	(8.2)	(16.3)
Buildings	13.8	10.0	0.4	9.7	0.5	0.5	0.4
	(-3.6)	(-2.5)	(5.1)	(-3.1)	(-3.2)	(6.0)	(-1.8)

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 use showed an upward trend in September for the first time in seven months, as it rebounded in the industrial sector and surged in the residential sector.

- Industrial electricity use recorded the first growth since March, as industrial production recovered, posting an 8% growth in the mining & manufacturing production index.
- Electricity use rose sharply in residential buildings but remained flat in commercial buildings compared to the same month last year.

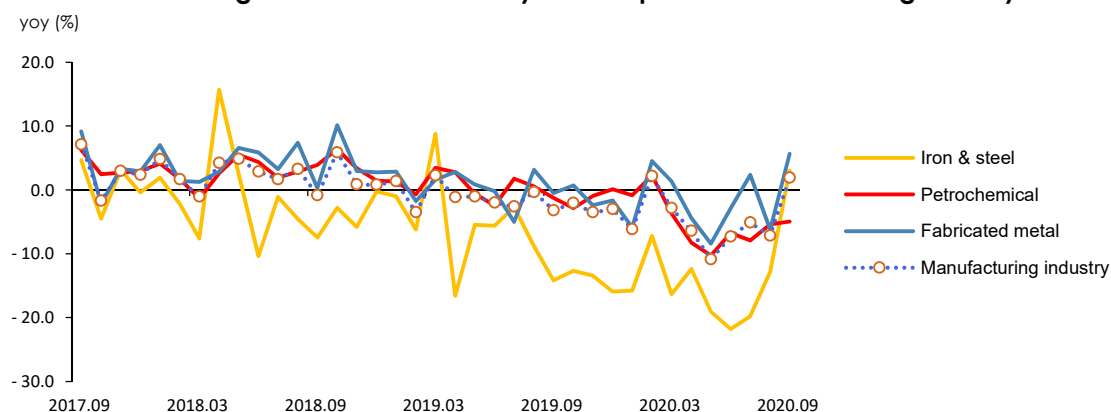
### ► Electricity consumption by end-use sectors

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>Electricity (TWh)</b>	<b>520.5</b>	<b>394.0</b>	<b>43.6</b>	<b>384.0</b>	<b>42.1</b>	<b>44.6</b>	<b>45.1</b>
	(-1.1)	(-1.2)	(-0.2)	(-2.5)	(-2.1)	(-6.2)	(3.3)
Industry	279.8	210.7	22.7	201.0	22.4	22.5	23.2
	(-1.4)	(-0.9)	(-2.6)	(-4.6)	(-4.9)	(-7.1)	(2.1)
Transport	2.9	2.2	0.3	2.0	0.2	0.3	0.2
	(-2.0)	(-0.7)	(0.8)	(-8.4)	(-10.3)	(-9.9)	(-7.4)
Buildings	237.8	181.1	20.7	180.9	19.5	21.8	21.7
	(-0.7)	(-1.6)	(2.6)	(-0.1)	(1.5)	(-5.3)	(4.9)
Residential	70.5	53.7	6.6	56.5	6.0	7.2	7.6
	(-0.3)	(-1.3)	(4.0)	(5.1)	(6.7)	(-5.5)	(15.0)
Commercial	135.2	103.2	11.3	101.0	10.9	11.9	11.3
	(-0.9)	(-1.8)	(1.9)	(-2.1)	(-0.2)	(-5.9)	(-0.0)

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

Source: Monthly Energy Statistics

### ► The growth rate of electricity consumption in manufacturing industry



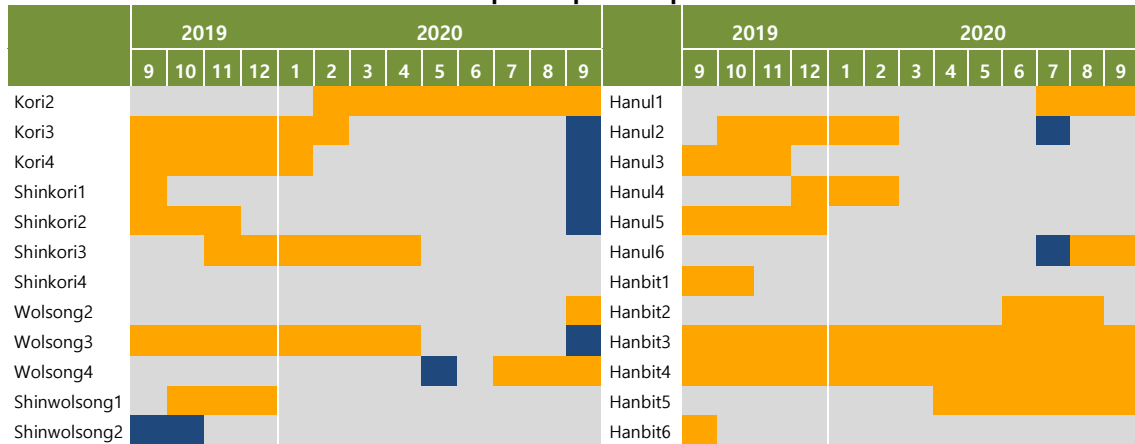


## 9. Nuclear

□ The total nuclear generation fell by 10.0% year-on-year in September due to the shutdown of some nuclear power plants after a series of typhoons.

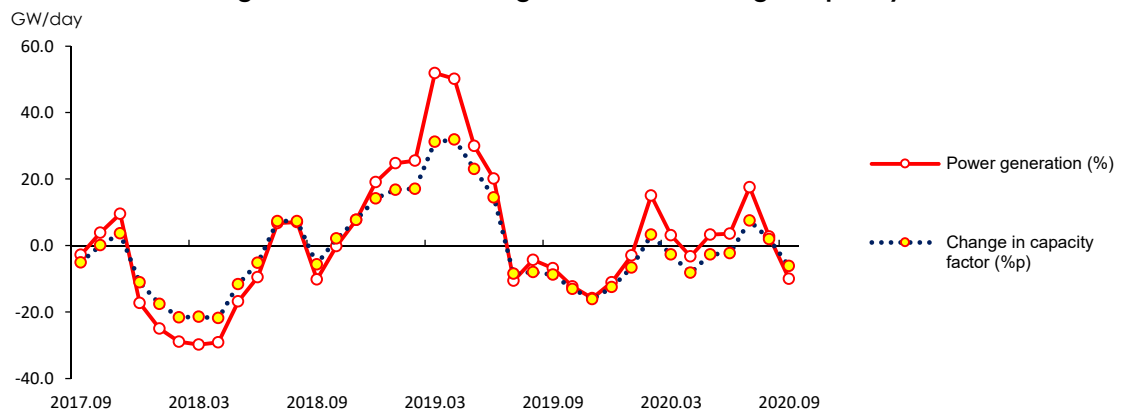
- The nuclear capacity factor decreased by 6.1%p year-on-year to 55.5%.
- As the nuclear generation decreased, its share of the total power generation went down by 2.4%p year-on-year to 20.8%.

### ► Nuclear power plants operation status



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

### ► The growth rate of nuclear generation & average capacity factor



## 10. Heat and Renewable energy

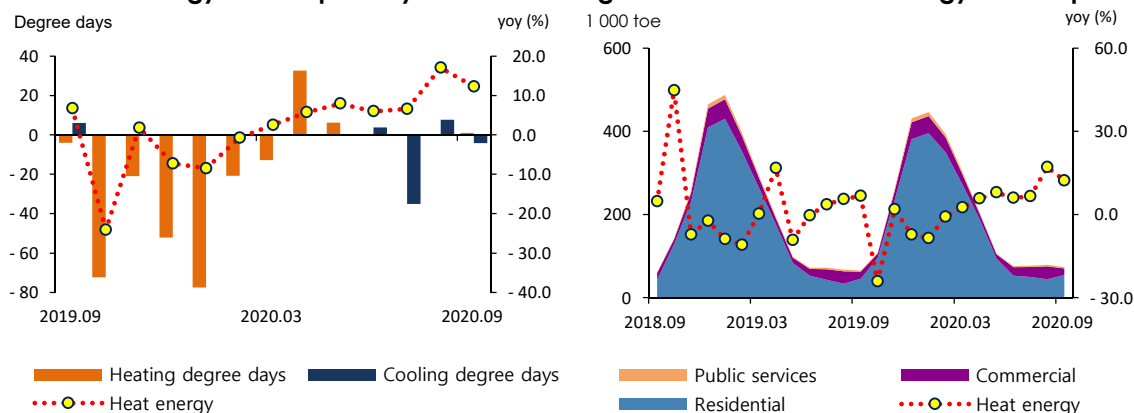
□ **Heat energy use increased by 12.3% year-on-year in September due to the impact of social distancing measures and typhoons, and the residential sector led the growth.**

- Residential heat energy use grew by 19.5%, as people spent more time at home due to the enhanced social distancing measures (2-2.5/8.30-9.27) amid repeated COVID-19 outbreaks and the impact of Typhoon Maysak and Haishen. Meanwhile, heat energy use fell by 7.1% in the commercial sector.

□ **The total renewable energy generation grew by 26.5% year-on-year, as solar PV, hydro and bioenergy generation all increased.**

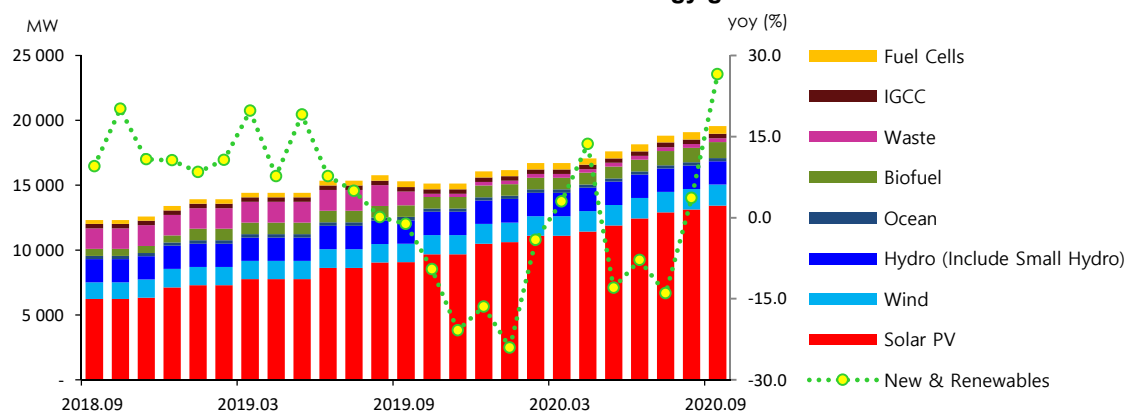
- The total renewable generation increased, led by a surge in solar PV, hydropower and bioenergy generation, although the installed capacity of and power generation from waste energy plunged (-80.0%) after it was excluded in the renewable category (Oct. 2019).

### ► 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 remained (almost) flat in September on a year-on-year basis, as the growth in energy use in the fabricated metals sector was offset by a drop in naphtha use.
  - Industrial energy use fell by 0.4% year-on-year, affected by weak production in the petrochemical sector, although energy use surged in the fabricated metals sector, as its business recovered led by the semiconductor industry.

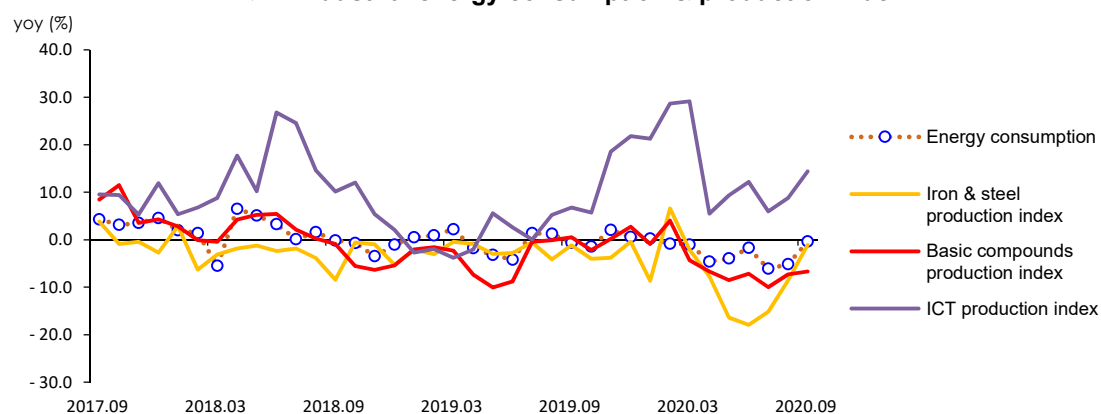
### ► Industrial energy consumption

	2019p			2020p			
		M1~9	M9		M1~9	M7	M8
<b>Industry (Mtoe)</b>	<b>142.6</b>	<b>106.3</b>	<b>11.6</b>	<b>103.6</b>	<b>11.5</b>	<b>11.5</b>	<b>11.5</b>
	(-0.2)	(-0.4)	(-0.7)	(-2.6)	(-6.1)	(-5.1)	(-0.4)
Petrochemical	72.0	53.7	6.1	52.7	5.9	5.9	5.7
	(-0.2)	(-1.0)	(0.9)	(-1.9)	(-7.8)	(-5.1)	(-6.6)
- Naphtha	53.8	40.4	4.6	38.4	4.3	4.2	4.1
	(-2.8)	(-3.3)	(-2.6)	(-4.9)	(-9.6)	(-10.5)	(-10.5)
Iron & Steel	28.8	21.6	2.3	21.0	2.4	2.4	2.4
	(-0.0)	(0.1)	(-3.6)	(-2.8)	(-1.9)	(-0.6)	(2.3)
-Coking coal	24.4	18.2	2.0	17.4	2.0	2.0	2.0
	(1.0)	(0.9)	(-2.6)	(-4.5)	(-2.1)	(-2.3)	(-0.1)
Fabricated metal	11.4	8.5	0.9	8.4	0.9	0.9	0.9
	(-0.1)	(0.5)	(-0.2)	(-1.2)	(1.9)	(-4.9)	(6.9)
Share of feedstock (%)	58.5	58.7	60.4	57.9	58.5	58.5	56.9

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

Source: Monthly Energy Statistics

### ► Industrial energy consumption & production index



## 12. Transport

□ **Transport energy use rose by 11% year-on-year in September due to the base effect of the same period last year when fuel tax benefits were eliminated.**

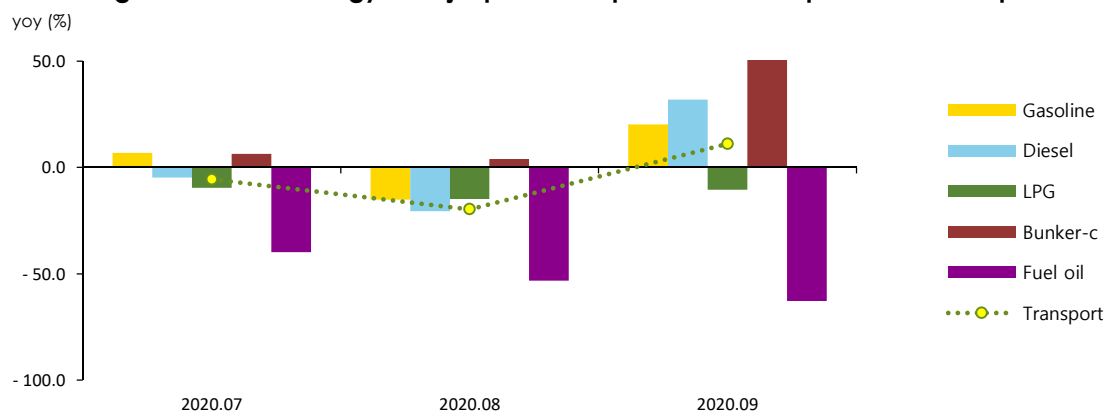
- In the road transport sector, energy use fell by 19.5% year-on-year in September 2019, because tax rates increased after the temporary fuel tax benefits terminated at the end of August. Due to such base effect, the sector's energy use grew by 20.3% year-on-year in September 2020 despite a drop in travel demand amid repeated coronavirus outbreaks.
- In the aviation sector, energy use plunged by 62.8% year-on-year, as the international air routes continued to be closed due to the COVID-19 pandemic.

► **The growth rate of petroleum consumption in the transport sector**

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>Transport (Mtoe)</b>	<b>43.0</b>	<b>32.0</b>	<b>2.9</b>	<b>28.9</b>	<b>3.3</b>	<b>3.3</b>	<b>3.2</b>
	(0.0)	(-0.7)	(-19.1)	(-9.6)	(-5.6)	(-19.7)	(11.0)
Road	35.1	26.1	2.3	24.5	2.8	2.9	2.8
	(1.9)	(1.0)	(-19.5)	(-6.0)	(-2.3)	(-18.3)	(20.3)
Navigation	2.6	2.0	0.2	2.3	0.3	0.2	0.3
	(-17.1)	(-14.3)	(-34.7)	(11.0)	(12.7)	(12.3)	(61.2)
Aviation	4.9	3.6	0.4	1.9	0.2	0.2	0.1
	(-1.7)	(-3.8)	(-8.9)	(-47.1)	(-39.8)	(-53.2)	(-62.8)
Rail	0.3	0.3	0.0	0.2	0.0	0.0	0.0
	(-2.8)	(-1.2)	(4.4)	(-9.5)	(-13.0)	(-16.8)	(-7.3)

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

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



## 13. Buildings

□ **Buildings' energy use posted a year-on-year growth of 4.9% in September due to the impact of social distancing measures and Typhoon Maysak and Haishen.**

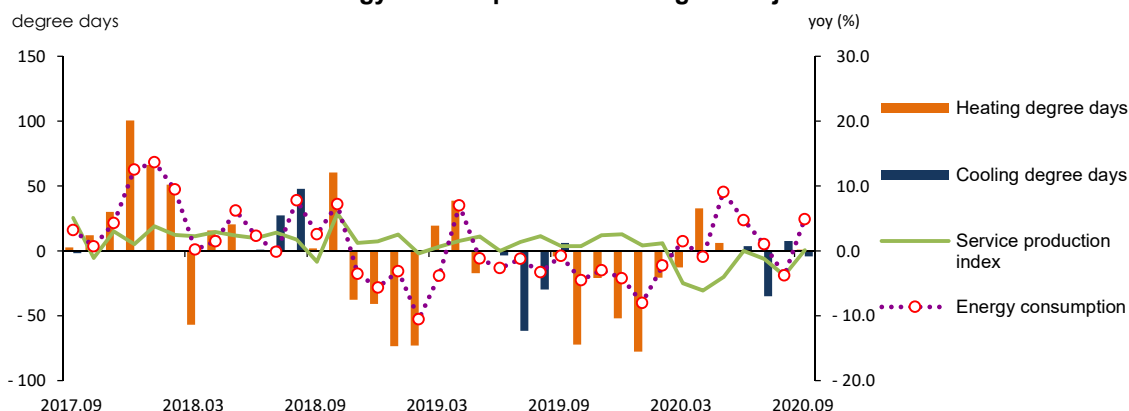
- Buildings' energy use increased, especially in residential buildings, as people stayed longer at home due to the enhanced social distancing measures (2-2.5/8.30-9.27) amid repeated COVID-19 outbreaks and the impact of Typhoon Maysak and Haishen.
- Energy use in residential buildings grew by 10.0% year-on-year, and the use of electricity, city gas and heat energy all increased (15.0%, 10.5%, 19.5%) due to long hours spent at home as a result of social distancing and typhoons.
- Energy use in commercial/public buildings was up 1.7% year-on-year, as petroleum use increased with surging demand for diesel (39.3%), although power consumption was flat (0.1%) and city gas consumption declined (-14.5%) owing to the impact of COVID-19.

### ► Energy consumption in buildings

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>Buildings (Mtoe)</b>	<b>45.4</b>	<b>33.5</b>	<b>2.9</b>	<b>33.4</b>	<b>2.7</b>	<b>3.0</b>	<b>3.0</b>
	(-3.2)	(-2.9)	(-0.8)	(-0.4)	(1.1)	(-3.8)	(4.9)
Residential	22.5	16.3	1.1	16.5	1.0	1.1	1.2
	(-4.1)	(-2.8)	(0.6)	(1.1)	(4.9)	(-1.9)	(10.0)
Commercial	17.5	13.2	1.3	12.9	1.3	1.4	1.3
	(-2.3)	(-3.0)	(0.3)	(-2.5)	(-1.2)	(-5.2)	(-0.4)
Public-others	5.4	4.1	0.4	4.1	0.4	0.4	0.5
	(-2.4)	(-2.9)	(-7.1)	(0.0)	(-0.4)	(-3.9)	(8.3)
Heating degree days	2 342.9	1 512.4	0.9	1 441.2	-	-	1.9
	(-9.8)	(-6.8)	(-82.0)	(-4.7)			(111.1)
Cooling degree days	120.4	120.4	6.1	92.5	4.5	82.4	1.9
	(-42.4)	(-42.4)		(-23.2)	(-88.6)	(10.2)	(-68.9)

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

### ► Energy consumption in buildings & major indicators



## 14. Transformation

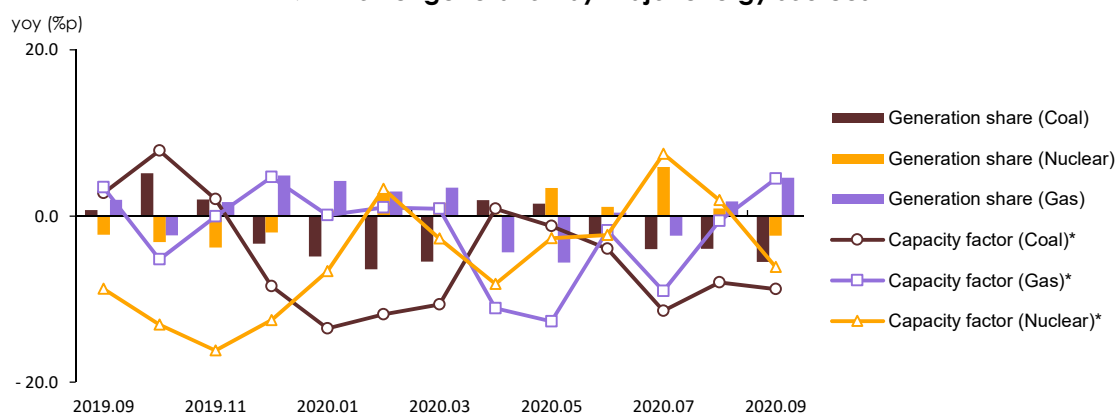
- The total power generation rose by 0.3% year-on-year in September, but the energy input fell by 1.9%, as generating efficiency increased due to a change in generation mix.
  - The energy input for power generation decreased, even though total generation slightly increased to meet growing power demand (3.3%, yoy), because highly efficient gas -fired generation surged while coal-fired and nuclear generation plunged.

### ► Energy consumption in the power generation sector

	2019p			2020p			
		M1~9	M9	M1~9	M7	M8	M9
<b>Input (Mtoe)</b>	<b>116.7</b>	<b>88.2</b>	<b>9.4</b>	<b>84.2</b>	<b>9.7</b>	<b>10.5</b>	<b>9.3</b>
	(-1.7)	(-1.1)	(1.1)	(-4.5)	(-7.5)	(-3.1)	(-1.9)
Coal	50.1	37.6	4.7	32.4	4.1	4.4	3.9
	(-7.6)	(-8.9)	(3.1)	(-13.8)	(-17.6)	(-13.1)	(-15.9)
Oil	0.8	0.7	0.0	0.3	0.0	0.1	0.1
	(-35.7)	(-38.8)	(-32.1)	(-55.0)	(-70.1)	(-24.3)	(191.7)
Gas	24.4	17.8	1.7	17.8	1.8	2.3	2.1
	(-2.9)	(-5.8)	(11.6)	(-0.3)	(-14.6)	(5.5)	(24.1)
Nuclear	31.1	24.3	2.2	25.1	2.9	2.7	2.0
	(9.3)	(17.8)	(-6.8)	(3.1)	(17.5)	(2.7)	(-10.0)
Hydro/other renewables	10.2	7.7	0.8	8.6	0.9	1.1	1.1
	(7.2)	(8.2)	(-4.7)	(11.5)	(1.0)	(15.9)	(39.6)

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

### ► Power generation by major energy sources



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

### Major Statistics & Indicators of the Economy

	2018	2019	2020				2020			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
GDP (trillion won)	1 812.0 (2.9)	1 849.0 (2.0)	1 361.5 (1.9)	- -	- -	463.1 (2.0)	1 349.8 (-0.9)	- -	- -	457.9 (-1.1)
Private consumption	875.6 (3.2)	890.2 (1.7)	661.7 (1.6)	- -	- -	222.3 (1.6)	632.7 (-4.4)	- -	- -	212.6 (-4.4)
Facilities investment	166.3 (-2.3)	153.9 (-7.5)	113.0 (-9.3)	- -	- -	36.4 (-2.3)	121.2 (7.2)	- -	- -	40.3 (10.6)
Construction investment	269.8 (-4.6)	262.9 (-2.5)	190.3 (-4.4)	- -	- -	65.9 (-2.7)	191.8 (0.8)	- -	- -	65.2 (-1.0)
Consumer price index (2015=100)	104.5	104.9	104.8	104.6	104.8	105.2	105.4	104.9	105.5	106.2
USD to KRW exchange rate (won)	1 100.2	1 165.4	1 161.9	1 175.3	1 209.0	1 197.6	1 200.7	1 198.9	1 186.9	1 178.8
Benchmark rate (%)	1.5	1.6	1.7	1.5	1.5	1.5	0.7	0.5	0.5	0.5
Coincident composite index (2015=100)	110.1	111.7	111.4	111.7	112.1	112.3	111.7	111.0	111.6	112.1
Mining & manufacturing production index (2015=100)	106.4	106.3	104.3	110.1	103.0	104.1	104.5	107.5	100.3	112.4
Manufacturing operation ratio index (2015=100)	98.8	98.5	97.2	103.6	96.2	96.9	94.0	97.4	89.5	101.0
Average temperature	13.0	13.5	15.0	24.9	26.2	21.7	15.1	22.7	26.6	20.3
- year-on-year difference	- 0.1	0.5	0.1	- 2.0	- 1.1	1.3	0.1	- 2.2	0.5	- 1.4
Heating degree days	2 597.8 (3.2)	2 342.9 (-9.8)	1 512.4 (-6.8)	- -	- -	0.9 (-82.0)	1 441.2 (-4.7)	- -	- -	1.9 (111.1)
Cooling degree days	209.0 (57.5)	120.4 (-42.4)	120.4 (-42.4)	39.5 (-60.9)	74.8 (-28.4)	6.1	92.5 (-23.2)	4.5 (-88.6)	82.4 (10.2)	1.9 (-68.9)
Energy intensity	0.17 (-1.0)	0.17 (-3.2)	0.17 (-3.0)			0.16 (-3.5)	0.16 (-3.5)			0.16 (-3.3)
Per capita consumption										
oil (bbl)	18.1 (-1.0)	17.9 (-0.7)	13.3 (-1.9)	1.5 (1.0)	1.6 (4.3)	1.4 (-6.1)	12.7 (-4.5)	1.4 (-7.6)	1.4 (-12.0)	1.4 (-1.5)
Electricity (MWh)	10.2 (3.1)	10.1 (-1.3)	7.6 (-1.4)	0.8 (-2.6)	0.9 (-4.2)	0.8 (-0.4)	7.4 (-2.7)	0.8 (-2.2)	0.9 (-6.4)	0.9 (3.2)
City gas (1 000 m <sup>3</sup> )	0.5 (6.9)	0.5 (-4.3)	0.3 (-3.1)	0.0 (-3.6)	0.0 (-4.2)	0.0 (-3.8)	0.3 (-6.4)	0.0 (-9.6)	0.0 (-2.9)	0.0 (-0.7)
Total energy (toe)	6.0 (1.3)	5.9 (-1.5)	4.4 (-1.4)	0.5 (-2.0)	0.5 (-0.4)	0.4 (-3.0)	4.2 (-4.3)	0.5 (-6.7)	0.5 (-6.6)	0.4 (0.1)

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

## The Index of Production Ratio & Output by Sectors

(2015=100)

	2018	2019					2020			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Industrial production index										
All industry	107.5 (1.6)	108.1 (0.5)	106.2 (0.1)	108.3 (0.9)	106.0 (0.2)	105.8 (0.8)	105.4 (-0.8)	106.7 (-1.5)	102.4 (-3.4)	109.4 (3.4)
Mining & manufacturing	106.4 (1.5)	106.3 (-0.0)	104.3 (-0.8)	110.1 (1.6)	103.0 (-2.4)	104.1 (1.8)	104.5 (0.2)	107.5 (-2.4)	100.3 (-2.6)	112.4 (8.0)
Semiconductor	168.4 (21.2)	188.1 (11.7)	175.8 (6.7)	195.2 (4.1)	197.4 (13.1)	203.1 (9.8)	225.6 (28.3)	228.4 (17.0)	239.2 (21.2)	255.9 (26.0)
Iron & steel	100.5 (-2.7)	98.3 (-2.2)	98.5 (-2.0)	102.4 (-0.6)	95.7 (-4.1)	93.2 (-1.2)	90.5 (-8.1)	86.9 (-15.1)	87.5 (-8.6)	92.2 (-1.1)
Cement	100.0 (-8.8)	93.8 (-6.2)	91.9 (-6.8)	95.5 (-7.0)	91.1 (1.3)	77.0 (-16.6)	83.2 (-9.5)	80.5 (-15.7)	72.1 (-20.9)	88.9 (15.5)
Basic compound	110.4 (0.1)	107.5 (-2.6)	107.8 (-3.6)	113.4 (-0.4)	112.8 (-0.1)	111.2 (0.5)	102.0 (-5.3)	102.1 (-10.0)	104.6 (-7.3)	103.8 (-6.7)
Transport equipment	93.9 (-1.2)	93.1 (-0.9)	92.1 (1.5)	100.9 (14.3)	77.0 (-12.0)	83.0 (-2.4)	80.8 (-12.2)	93.0 (-7.8)	68.2 (-11.4)	95.8 (15.4)
Electric & electronic	106.5 (-0.2)	107.7 (1.2)	104.8 (0.8)	110.1 (5.0)	102.4 (-4.5)	106.0 (4.2)	103.0 (-1.7)	108.9 (-1.1)	96.9 (-5.4)	117.1 (10.5)
Service	106.9 (2.2)	108.4 (1.4)	106.9 (1.2)	108.0 (1.4)	108.2 (2.3)	106.8 (0.8)	104.7 (-2.0)	106.7 (-1.2)	104.1 (-3.8)	106.9 (0.1)
Wholesale and retail	105.0 (1.8)	104.6 (-0.4)	103.5 (-0.3)	102.7 (-0.6)	102.8 (1.4)	102.8 (-0.3)	100.4 (-2.9)	100.6 (-2.0)	96.8 (-5.8)	106.0 (3.1)
Food & Accommodation	98.5 (-1.9)	97.5 (-1.0)	96.1 (-1.5)	99.4 (-2.5)	101.8 (-0.4)	91.5 (-4.6)	80.4 (-16.3)	90.4 (-9.1)	84.6 (-16.9)	72.1 (-21.2)
Operating ratio index										
Iron & steel - Pig iron	47 124.3 (0.1)	47 520.7 (0.8)	35 584.2 (1.2)	4 005.1 (-2.3)	4 102.0 (1.5)	3 905.1 (-2.3)	33 432.6 (-6.0)	3 905.6 (-2.5)	4 090.6 (-0.3)	3 966.9 (1.6)
Iron & steel - Crude steel	72 464.0 (2.0)	71 411.9 (-1.5)	53 664.0 (-1.0)	6 026.4 (-2.4)	5 904.9 (-3.2)	5 710.6 (-2.3)	49 543.9 (-7.7)	5 529.8 (-8.2)	5 773.4 (-2.2)	5 747.9 (0.7)
Petrochemical - Basic oil	31 139.2 (1.9)	31 804.1 (2.1)	23 662.0 (0.6)	2 878.2 (7.0)	2 804.0 (4.3)	2 747.8 (5.3)	23 348.7 (-1.3)	2 559.3 (-11.1)	2 572.1 (-8.3)	2 511.6 (-8.6)
Petrochemical - Intermediate raw material	16 981.8 (2.9)	16 014.0 (-5.7)	12 014.1 (-5.0)	1 361.3 (-8.1)	1 464.9 (-1.0)	1 380.5 (-3.0)	11 762.8 (-2.1)	1 287.5 (-5.4)	1 261.9 (-13.9)	1 257.8 (-8.9)
Petrochemical - 3 major products	21 793.6 (-1.1)	21 584.7 (-1.0)	16 400.7 (-0.6)	1 928.8 (3.9)	1 909.0 (1.5)	1 827.9 (0.1)	16 044.5 (-2.2)	1 745.3 (-9.5)	1 806.5 (-5.4)	1 731.0 (-5.3)
The number of cars	4 028.7 (-2.1)	3 950.6 (-1.9)	2 915.3 (0.5)	359.6 (17.4)	249.4 (-15.9)	278.0 (-4.8)	2 549.2 (-12.6)	345.7 (-3.8)	233.4 (-6.4)	342.5 (23.2)

Note: p means provisional  
Source: Monthly Energy Statistics



## International Energy Prices

	2018	2019					2020			
			M1~11	M9	M10	M11	M1~11	M9	M10	M11
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	56.8 (-14.2)	57.0 (-18.7)	54.0 (-23.7)	57.1 (0.7)	38.7 (-31.8)	39.6 (-30.4)	39.6 (-26.8)	41.4 (-27.5)
Dubai	69.4 (30.5)	63.5 (-8.5)	63.4 (-10.1)	61.1 (-20.8)	59.4 (-25.2)	62.0 (-5.4)	41.5 (-34.5)	41.5 (-32.1)	40.7 (-31.5)	43.4 (-30.0)
Brent	71.5 (30.5)	64.2 (-10.3)	64.1 (-12.0)	62.3 (-21.3)	59.6 (-26.0)	62.7 (-4.9)	42.6 (-33.6)	41.9 (-32.8)	41.5 (-30.4)	44.0 (-29.9)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	65.5 (-8.9)	63.1 (-17.4)	64.1 (-19.0)	64.3 (-15.6)	40.7 (-37.8)	44.5 (-29.5)	43.3 (-32.5)	- (-100.0)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	10.6 (0.6)	10.1 (-10.3)	10.0 (-14.4)	10.0 (-14.2)	8.3 (-21.6)	5.9 (-42.0)	6.2 (-38.0)	6.2 (-38.2)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	509.9 (-2.3)	509.9 (-9.3)	479.0 (-17.4)	454.5 (-22.2)	400.9 (-21.4)	263.1 (-48.4)	275.7 (-42.4)	
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	79.0 (-26.6)	66.0 (-42.2)	69.2 (-36.4)	67.0 (-33.5)	58.6 (-25.8)	54.6 (-17.2)	58.4 (-15.6)	62.8 (-6.2)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	102.2 (-10.0)	85.0 (-26.9)	92.1 (-19.4)	87.5 (-21.3)	78.7 (-22.9)	68.4 (-19.5)	70.4 (-23.5)	
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	72.3 (-11.6)	74.7 (-16.6)	74.0 (-15.6)	76.3 (11.1)	46.0 (-36.3)	47.2 (-36.8)	46.0 (-37.9)	46.8 (-38.7)
Kerosene	84.8 (29.8)	77.3 (-8.9)	77.2 (-10.3)	77.7 (-15.2)	75.4 (-20.8)	74.9 (-9.7)	43.9 (-43.1)	39.3 (-49.4)	41.6 (-44.8)	45.7 (-39.0)
Diesel	84.9 (27.9)	78.2 (-7.9)	78.1 (-9.5)	78.1 (-16.8)	77.1 (-20.7)	76.0 (-7.6)	48.9 (-37.5)	44.2 (-43.4)	43.9 (-43.0)	47.6 (-37.4)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	58.8 (-10.9)	61.3 (-13.2)	47.4 (-38.3)	39.4 (-42.3)	38.5 (-34.7)	39.6 (-35.4)	41.2 (-13.0)	43.7 (10.9)
Propane	542.1 (16.0)	434.6 (-19.8)	434.1 (-21.2)	350.0 (-41.7)	420.0 (-35.9)	430.0 (-20.4)	392.3 (-9.6)	365.0 (4.3)	375.0 (-10.7)	430.0 -
Butane	539.2 (7.5)	441.7 (-18.1)	440.5 (-20.0)	360.0 (-43.3)	435.0 (-33.6)	445.0 (-15.2)	398.6 (-9.5)	355.0 (-1.4)	380.0 (-12.6)	440.0 (-1.1)
Naphtha	67.0 (24.5)	56.9 (-15.1)	56.3 (-17.7)	54.0 (-28.1)	56.8 (-23.9)	59.5 (4.8)	39.8 (-29.3)	43.0 (-20.4)	41.7 (-26.6)	40.6 (-31.8)

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

2. Gasoline type is 95RON, diesel is 0.001%, Bunker-C is high-sulfur oil(180cst/3.5%), for propane and butane, CP is reference value  
Source: www.petronet.co.kr, IMF (primary commodity price), Monthly Energy Statistics

## Total Primary Energy Supply (TPES)

	2018	2019p					2020p			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Coal (Mton)	141.0 (0.9)	133.0 (-5.7)	99.6 (-6.2)	12.4 (-1.9)	12.7 (-4.3)	11.5 (0.8)	88.6 (-11.0)	10.7 (-13.1)	11.3 (-10.7)	10.6 (-7.7)
- Coking coal excluded	106.4 (2.8)	98.0 (-7.8)	73.5 (-8.5)	9.4 (-1.3)	9.7 (-6.1)	8.7 (2.0)	63.7 (-13.3)	7.8 (-16.5)	8.4 (-13.3)	7.8 (-10.1)
Oil (Mbbbl)	931.8 (-0.6)	927.1 (-0.5)	686.9 (-1.7)	78.4 (1.2)	81.3 (4.5)	72.3 (-6.0)	657.0 (-4.4)	72.5 (-7.5)	71.7 (-11.9)	71.4 (-1.3)
- Non-energy oil excluded	445.5 (0.4)	451.8 (1.4)	330.9 (-0.5)	36.2 (1.1)	40.5 (8.6)	32.0 (-10.2)	313.0 (-5.4)	34.4 (-5.0)	34.1 (-15.9)	34.5 (7.8)
LNG (Mton)	42.3 (16.2)	40.9 (-3.2)	29.5 (-3.8)	2.8 (-2.5)	2.8 (-1.8)	2.4 (6.4)	29.2 (-1.0)	2.6 (-9.1)	3.0 (4.6)	2.8 (15.0)
Hydro (TWh)	7.3 (3.9)	6.2 (-14.1)	4.7 (-15.6)	0.6 (-29.9)	0.6 (-14.2)	0.6 (-20.7)	5.8 (21.1)	0.6 (8.0)	1.1 (78.8)	0.9 (55.6)
Nuclear (TWh)	133.5 (-10.1)	145.9 (9.3)	114.0 (17.8)	11.7 (-10.5)	12.2 (-4.4)	10.3 (-6.8)	117.6 (3.1)	13.7 (17.5)	12.5 (2.7)	9.3 (-10.0)
Others (Mtoe)	17.1 (8.0)	18.3 (6.7)	13.9 (7.8)	1.5 (6.1)	1.6 (6.2)	1.4 (-1.6)	14.6 (5.1)	1.5 (-0.8)	1.7 (2.2)	1.8 (23.5)
<b>TPES (Mtoe)</b>	<b>307.5</b> (1.8)	<b>303.6</b> (-1.3)	<b>226.2</b> (-1.2)	<b>25.4</b> (-1.8)	<b>26.1</b> (-0.2)	<b>23.1</b> (-2.8)	<b>216.8</b> (-4.2)	<b>23.7</b> (-6.5)	<b>24.4</b> (-6.4)	<b>23.2</b> (0.3)
- Non-energy oil excluded	247.1 (2.6)	244.5 (-1.0)	181.9 (-0.8)	20.1 (-2.6)	21.1 (-0.5)	18.1 (-3.0)	173.9 (-4.4)	19.0 (-5.6)	19.7 (-6.2)	18.6 (2.7)
- Non-energy oil&coal excluded	222.9 (3.5)	220.1 (-1.3)	163.7 (-1.0)	18.0 (-2.5)	19.0 (-0.7)	16.1 (-3.0)	156.5 (-4.4)	17.0 (-6.0)	17.7 (-6.6)	16.6 (3.0)

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

## Share of TPES by Sources

(unit: %)

	2018	2019p					2020p			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Coal	28.2	27.1	27.2	30.0	29.9	30.8	25.4	28.0	28.7	28.4
- Coking coal excluded	20.3	19.0	19.1	21.9	21.9	22.2	17.3	19.5	20.3	19.8
Oil	38.5	38.6	38.5	39.0	39.3	39.2	38.2	38.4	36.9	38.9
- non-energy oil excluded	18.9	19.2	18.9	18.3	19.9	17.5	18.4	18.4	17.7	19.0
LNG	18.0	17.6	17.0	14.6	14.1	13.7	17.6	14.2	15.8	15.8
Hydro	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.9	0.8
Nuclear	9.2	10.2	10.7	9.8	9.9	9.5	11.6	12.3	10.9	8.5
Others	5.6	6.0	6.1	6.1	6.3	6.2	6.7	6.5	6.8	7.6
TPES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: p means provisional  
Source: Monthly Energy Statistics

## Total Final Consumption (TFC)

(Unit: Mtoe)

	2018	2019p					2020p			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Industry	142.9 (0.7)	142.6 (-0.2)	106.3 (-0.4)	12.3 (1.4)	12.1 (1.3)	11.6 (-0.7)	103.6 (-2.6)	11.5 (-6.1)	11.5 (-5.1)	11.5 (-0.4)
Transport	43.0 (0.4)	43.0 (0.0)	32.0 (-0.7)	3.5 (-4.6)	4.1 (6.4)	2.9 (-19.1)	28.9 (-9.6)	3.3 (-5.6)	3.3 (-19.7)	3.2 (11.0)
Residential	23.5 (4.4)	22.5 (-4.1)	16.3 (-2.8)	0.9 (-2.2)	1.1 (-3.0)	1.1 (0.6)	16.5 (1.1)	1.0 (4.9)	1.1 (-1.9)	1.2 (10.0)
Commercial	17.9 (2.9)	17.5 (-2.3)	13.2 (-3.0)	1.3 (-2.2)	1.5 (-4.7)	1.3 (0.3)	12.9 (-2.5)	1.3 (-1.2)	1.4 (-5.2)	1.3 (-0.4)
Public	5.6 (2.0)	5.4 (-2.4)	4.1 (-2.9)	0.4 (4.0)	0.5 (0.8)	0.4 (-7.1)	4.1 (0.0)	0.4 (-0.4)	0.4 (-3.9)	0.5 (8.3)
<b>TFC</b>	<b>232.7</b> (1.2)	<b>231.0</b> (-0.8)	<b>171.9</b> (-1.0)	<b>18.5</b> (-0.2)	<b>19.3</b> (1.5)	<b>17.4</b> (-4.3)	<b>165.9</b> (-3.5)	<b>17.6</b> (-4.9)	<b>17.7</b> (-8.0)	<b>17.8</b> (2.4)
Coal (Mton)	49.2 (-2.3)	48.2 (-2.1)	35.8 (-1.1)	4.0 (-2.6)	4.1 (0.2)	3.6 (-3.6)	33.7 (-6.0)	3.8 (-3.5)	3.9 (-5.6)	4.0 (10.9)
Oil (Mbbbl)	920.0 (-0.7)	918.6 (-0.2)	680.3 (-1.3)	77.8 (1.7)	80.7 (5.2)	72.0 (-6.0)	653.0 (-4.0)	72.2 (-7.1)	71.2 (-11.8)	70.7 (-1.8)
Electricity (TWh)	526.1 (3.6)	520.5 (-1.1)	394.0 (-1.2)	43.0 (-2.4)	47.6 (-4.0)	43.6 (-0.2)	384.0 (-2.5)	42.1 (-2.1)	44.6 (-6.2)	45.1 (3.3)
City gas (Bm³)	24.3 (7.4)	23.3 (-4.1)	17.1 (-2.9)	1.2 (-3.4)	1.1 (-4.0)	1.1 (-3.6)	16.0 (-6.3)	1.1 (-9.4)	1.1 (-2.8)	1.1 (-0.6)
Heat-others (1 000 toe)	11.8 (6.4)	11.9 (0.9)	8.9 (1.9)	0.9 (1.8)	0.9 (-1.3)	0.8 (-1.2)	8.9 (0.5)	0.9 (-0.7)	0.9 (-0.2)	0.9 (11.3)

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

## Share of the Total Final Consumption by Sources

(unit: %)

	2018	2019p					2020p			
			M1~9	M7	M8	M9	M1~9	M7	M8	M9
Industry	61.4	61.7	61.9	66.3	62.8	66.8	62.4	65.5	64.8	65.0
Transport	18.5	18.6	18.6	19.1	21.2	16.8	17.4	18.9	18.5	18.2
Residential	10.1	9.7	9.5	5.0	5.8	6.3	9.9	5.6	6.2	6.8
Commercial	7.7	7.6	7.7	7.3	7.8	7.7	7.8	7.6	8.0	7.5
Public	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.4	2.5	2.6
<b>Final energy</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Coal	13.9	13.9	13.9	14.4	14.3	14.1	13.6	14.6	14.7	14.8
Oil	50.2	50.3	50.1	53.1	52.9	51.9	49.6	51.6	50.5	50.1
Electricity	19.4	19.4	19.7	20.0	21.2	21.6	19.9	20.6	21.6	21.8
City gas	11.4	11.3	11.2	7.8	7.1	7.7	11.5	8.2	8.2	8.1
Heat-others	5.1	5.2	5.2	4.7	4.6	4.7	5.4	4.9	5.0	5.1

Note: p means provisional  
Source: Monthly Energy Statistics

## Statistics on Energy Production Facilities

	2017	2018	2019	2020p			M6	M7	M8
				M6	M7	M8			
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	125.3 (5.2)	121.1 (3.4)	121.1 (3.1)	123.0 (4.2)	127.3 (5.1)	127.8 (5.5)	128.1 (4.2)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	23.3 (6.4)	21.9 -	21.9 -	23.3 (6.4)	23.3 (6.4)	23.3 (6.4)	23.3 -
Bituminous coal	36.1 (16.8)	36.4 (0.7)	36.4 (0.1)	36.4 (0.3)	36.4 (0.1)	36.4 (0.1)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)
Gas	37.9	37.9 (-0.0)	39.6 (4.5)	38.3 (1.2)	38.3 (1.2)	38.3 (1.2)	41.2 (7.5)	41.2 (7.5)	41.2 (7.5)
Refinery capacity (mil BPSD)	3.1 (1.3)	3.2 (3.2)	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -

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

Source: The monthly report on major electric power statistics

## Statistics on Energy Consumption

	2017	2018	2019	2020p			M6	M7	M8
				M6	M7	M8			
The number of households demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.7 (2.8)	19.3 (2.8)	19.3 (2.8)	19.3 (2.9)	19.8 (2.5)	19.8 (2.6)	19.8 (2.6)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.7 (2.0)	23.4 (2.5)	23.5 (2.4)	23.5 (2.4)	24.0 (2.5)	24.1 (2.5)	24.1 (2.5)
- gasoline	10.4 (2.7)	10.6 (2.5)	11.0 (3.1)	10.8 (2.5)	10.8 (2.6)	10.8 (2.7)	11.2 (4.1)	11.3 (4.3)	11.3 (4.2)
- diesel	9.6 (4.4)	9.9 (3.7)	10.0 (0.3)	10.0 (2.1)	10.0 (1.9)	10.0 (1.8)	10.0 (-0.2)	10.0 (-0.3)	10.0 (-0.3)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-2.8)	2.0 (-2.6)	2.0 (-2.5)	2.0 (-0.5)	2.0 (-0.6)	2.0 (-0.7)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.5 (26.1)	0.4 (29.4)	0.4 (29.4)	0.5 (28.7)	0.6 (25.9)	0.6 (26.6)	0.6 (27.3)

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

Source: Monthly Energy Statistics

# KEEI

MONTHLY **KOREA ENERGY TRENDS** (2020, NO.105)



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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.

If you have any further inquiries, please send an email to [EnergyOutlook@keei.re.kr](mailto:EnergyOutlook@keei.re.kr)

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