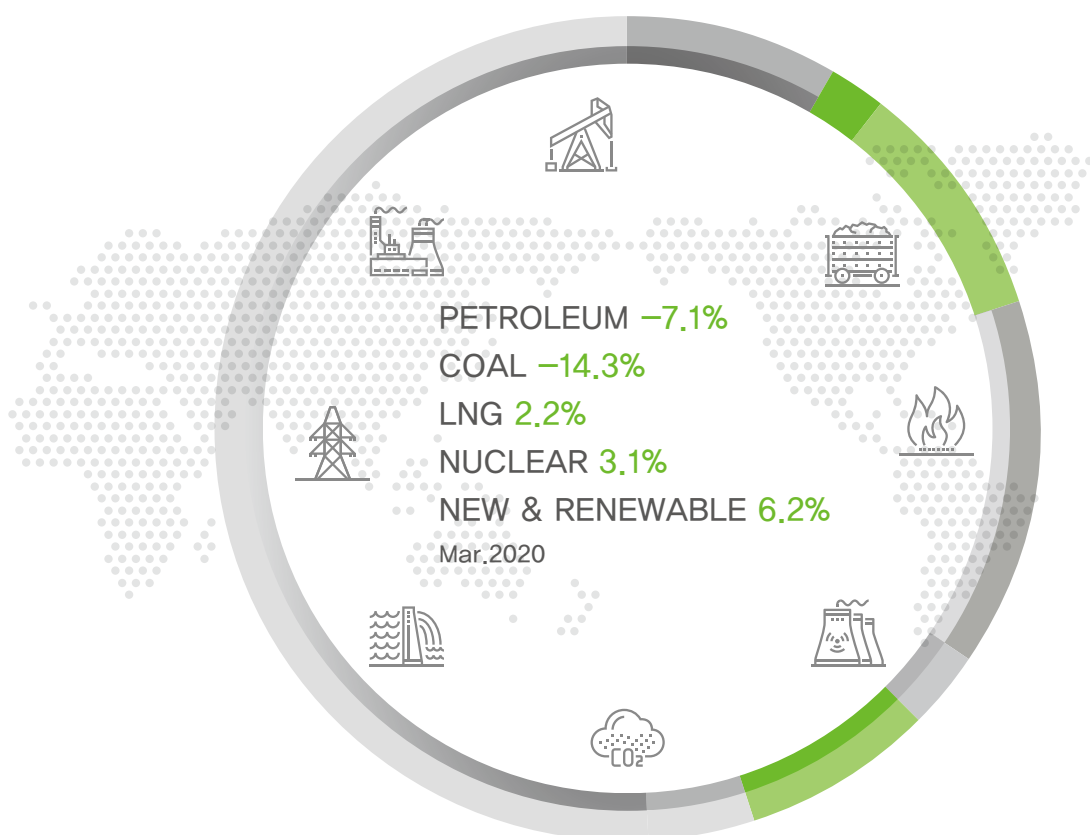


# KEEI

## MONTHLY KOREA ENERGY TRENDS

2020 / 06  
KOREA ENERGY ECONOMICS INSTITUTE



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

# Table of Contents

1.	The Economy and the Industry.....	4
2.	Energy Prices ..... 오류! 책갈피가 정의되어 있지 않습니다.	
3.	Energy Supply .....	10
4.	Energy Consumption .....	11
5.	Coal .....	13
6.	Petroleum .....	14
7.	Gas .....	15
8.	Electricity .....	16
9.	Nuclear .....	17
10.	Heat and Renewable energy .....	18
11.	Industry .....	19
12.	Transport .....	20
13.	Buildings .....	21
14.	Transformation.....	22
	<Appendix> Major Indicators & Statistics of Energy Supply and Demand .....	23

## 1. The Economy and the Industry

- **Gross Domestic Product (“GDP”) grew by 1.4% year-on-year in 1Q 2020, despite a drop in private consumption, as the government expenditure and investment increased.**
  - The government expenditure, construction and facility investment went up by 6.8%, 4.2% and 7.3% respectively (in 1Q) as a result of massive government support, which is intended to overcome the new coronavirus (“COVID-19”) crisis, although private consumption was down 4.8% amid the Covid19 pandemic.
- **Mining & manufacturing production index increased by 7.4% year-on-year in March even amid the COVID-19 pandemic, led by the semiconductor and automobile sectors.**
  - The semiconductor production index posted a year-on-year growth of 45.3% along with increased export volume, owing to the growing demand for semiconductors used in servers as a result of the growth in remote working and cloud service amid the COVID-19 pandemic and stronger demand from data centers in North America.
  - The production index of basic chemical materials dropped by 4.5% due to a disruption in benzene-toluene-xylene (BTX) production following an explosion at Lotte Chemical's naphtha cracking center (1.1 million tons/year) located in Daesan-eup (Mar. 4).
  - The iron & steel production index went down by 2.1% due to weak performance of automobile, construction and shipbuilding companies abroad, which are major source of demand, while the automobile production index went up by 4.1%, as domestic demand increased following the launch of a new model.
- **The service production index declined by 4.9% year-on-year (in March), as COVID-19 started to have significant impact on the sector.**
  - The COVID-19 outbreak started to have significant impact on the service sector since March, and accordingly, its production index decreased mostly in the sectors that provide face-to-face services such as the restaurant & accommodation (-32.5%), wholesale & retail (-6.4%) and art & sports & leisure (-47.5%) sectors.

► **Major economic and industrial indicators**

	2018	2019p	2020p				
			M1~3	M3	M1~3	M2	M3
GDP (trillion won)	1 812.0 (2.9)	487.4 (2.3)	437.2 (1.8)	437.2 (1.8)	443.2 (1.4)	- -	443.2 (1.4)
Total export (\$billion, customs clearance basis)	604.9 (5.4)	45.7 (-5.3)	132.7 (-8.5)	47.0 (-8.4)	130.3 (-1.8)	40.9 (3.5)	46.3 (-1.6)
Industrial production index (2015=100)	106.4 (1.5)	114.8 (6.1)	100.2 (-2.4)	105.7 (-2.5)	105.2 (5.0)	99.7 (11.3)	113.5 (7.4)
Semi-conductors	168.4 (21.2)	232.1 (35.3)	149.7 (3.6)	159.4 (0.4)	215.4 (43.9)	207.4 (46.8)	231.6 (45.3)
Basic compound	110.4 (0.1)	113.4 (2.7)	108.6 (-2.0)	109.3 (-2.3)	108.0 (-0.6)	106.4 (4.0)	104.4 (-4.5)
Steel	100.5 (-2.7)	98.1 (-0.4)	98.2 (-1.8)	101.4 (-0.4)	96.5 (-1.8)	95.2 (6.6)	99.3 (-2.1)
Cars	93.9 (-1.2)	94.3 (-4.9)	90.5 (2.6)	97.7 (-0.7)	81.3 (-10.2)	65.0 (-15.9)	101.7 (4.1)
Service industry performance index (2015=100)	106.9 (2.2)	118.8 (2.6)	104.6 (0.9)	108.7 (0.6)	103.6 (-1.0)	100.6 (1.2)	103.4 (-4.9)
Wholesale & Retail	105.0 (1.8)	109.7 (0.1)	101.9 (-0.7)	107.9 (-1.6)	98.7 (-3.1)	92.1 (-0.4)	101.0 (-6.4)
Restaurant & Accommodation	98.5 (-1.9)	109.9 (0.9)	92.9 (-1.2)	95.1 (-2.9)	77.6 (-16.5)	73.8 (-14.9)	64.2 (-32.5)

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

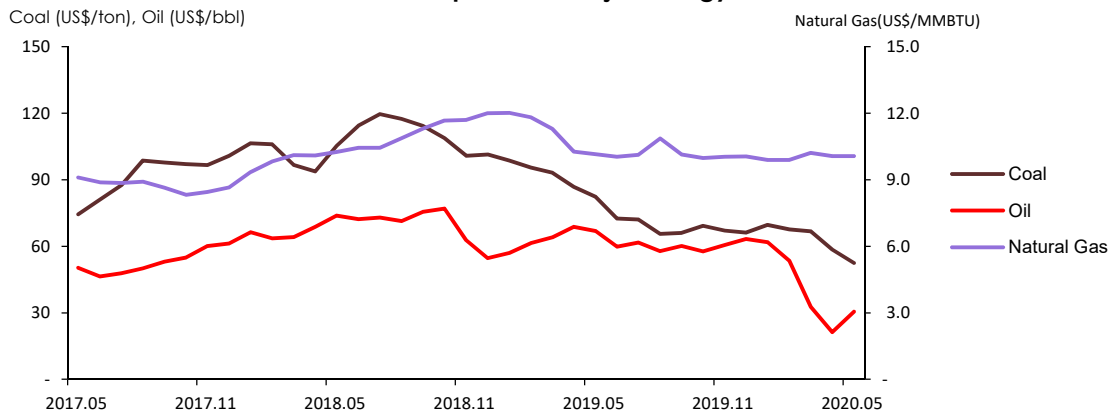
- **Global oil price was up 43.5% in May from the previous month, as oil producing countries lowered their production. On a year-on-year basis, however, it declined by 54.4%.**
  - Saudi Arabia, UAE and Kuwait announced larger cuts on their oil production (5.12) on top of already-agreed cuts for June.
  - OPEC+ members are expected to discuss extending the 9.7 million production cut, originally set for May and June, until the end of year instead of rolling it back to 7.7 million b/d from July.
  - Crude oil production has been declining in the US, since major oil companies announced their output reduction plan.
  - Global petroleum demand started to rebound— as seen in the US and India— along with the easing of lockdown restrictions that were imposed to contain the COVID-19 pandemic.

### ► Global energy prices

	2018	2019				2020			
			M3	M4	M5		M3	M4	M5
Crude oil (US\$/bbl)	68.6	61.6	64.0	68.8	66.9	32.6	21.2	30.5	
	(29.5)	(-10.2)	(-0.0)	(0.0)	(-9.4)	(-49.1)	(-69.1)	(-54.4)	
Natural gas (US\$/MMBTU)	10.7	10.6	11.3	10.3	10.1	10.2	10.1	10.1	
	(24.0)	(-1.1)	(11.7)	(1.7)	(-1.0)	(-9.6)	(-2.0)	(-0.8)	
Coal (US\$/ton)	107.0	77.9	93.1	86.8	82.3	66.7	58.6	52.5	
	(20.9)	(-27.3)	(-3.7)	(-7.4)	(-21.8)	(-28.3)	(-32.5)	(-36.2)	

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

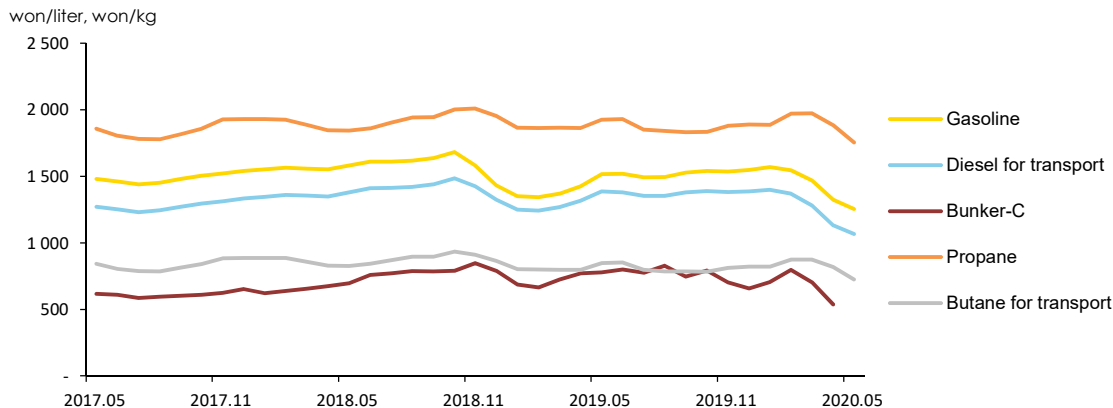
- **Gasoline and diesel prices dropped by around 5% in May from the previous month despite the global oil price increase, as the prices declined until mid-May.**
  - Domestic prices of gasoline and diesel at gas stations declined until mid-May despite the rapid recovery of global oil price, as it takes time until global price trend is reflected in domestic prices, and consequently, the prices fell by 5.2% and 5.9% respectively in May from the prior month.
  - Bunker-C price was down 23.7% in April from a month ago due to the drop in global oil price, even though the demand for low-sulfur fuel oil increased.
- **Propane and butane prices decreased in May compared to the previous month, reflecting the sharp price decline in the global market.**
  - Domestic prices of propane and butane fell by 7.0% and 11.4% respectively in May from the previous month, as Saudi Aramco's propane and butane prices plunged in April (-46.5%, -50.0%), and domestic LPG importers lowered their supply prices by KRW165 to enhance price competitiveness amid the global oil price decline.

## Domestic petroleum product prices

	2018	2019				2020			
			M3	M4	M5		M3	M4	M5
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 369.5 (-12.1)	1 424.4 (-8.2)	1 517.2 (-4.0)	1 469.1 (7.3)	1 323.7 (-7.1)	1 255.1 (-17.3)	
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 269.2 (-6.3)	1 316.4 (-2.4)	1 385.3 (0.4)	1 280.8 (0.9)	1 132.4 (-14.0)	1 065.8 (-23.1)	
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	724.0 (10.3)	771.1 (14.3)	777.0 (11.7)	703.1 (-2.9)	536.7 (-30.4)	451.3 (-41.9)	
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 864.7 (-1.2)	1 863.6 (1.0)	1 924.1 (4.4)	1 973.2 (5.8)	1 885.5 (1.2)	1 753.8 (-8.9)	
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	797.5 (-7.0)	796.5 (-3.9)	847.6 (2.5)	874.3 (9.6)	818.4 (2.8)	725.0 (-14.5)	

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

## Domestic petroleum product prices



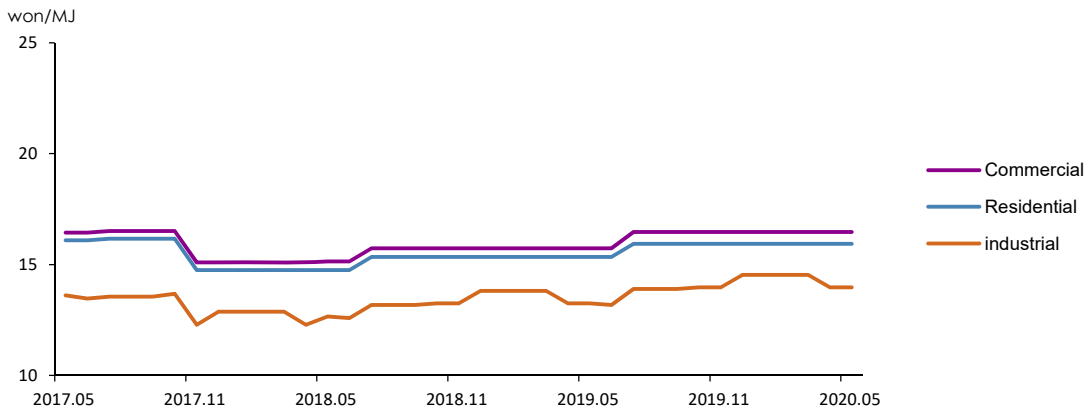
□ **City gas price has been flat for the past ten months until May, since it was raised in July 2019.**

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

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

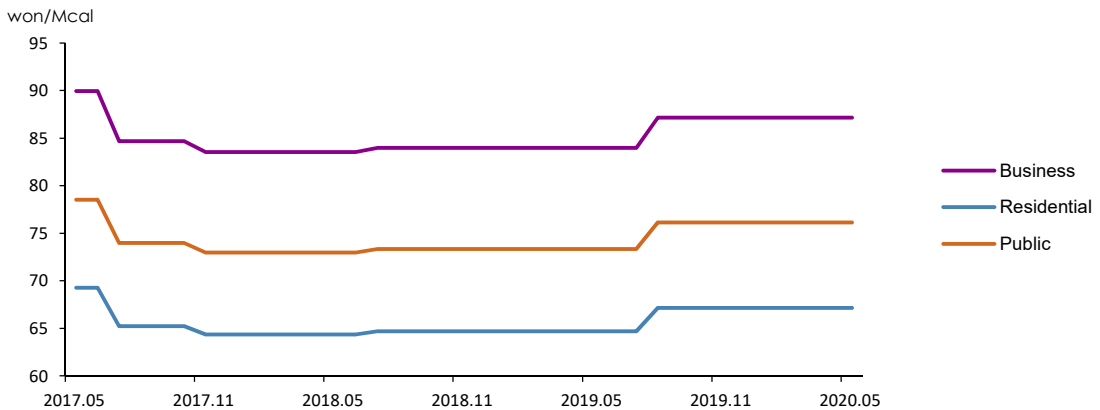
- Heat energy price was raised in August for the first time in 13 months (since July 2018), reflecting the city gas price increase in July and the energy tax reform.

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



Note: Instead of volume(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)

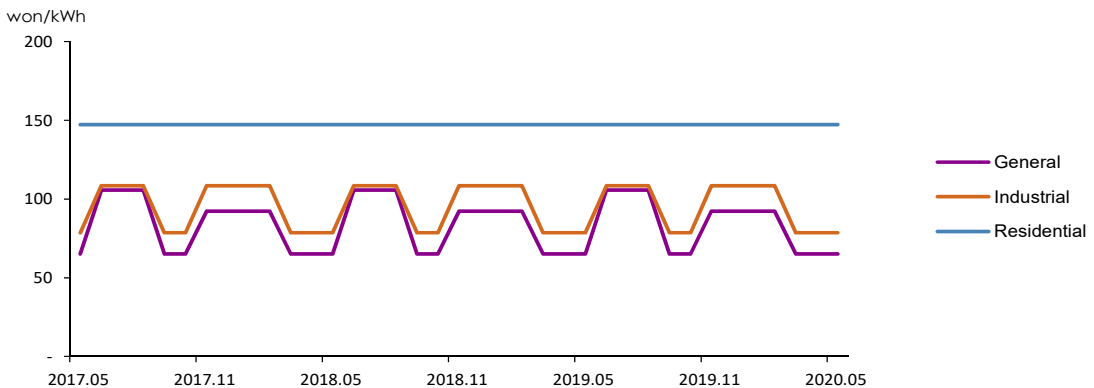
#### ► Heat energy prices by end-use sectors



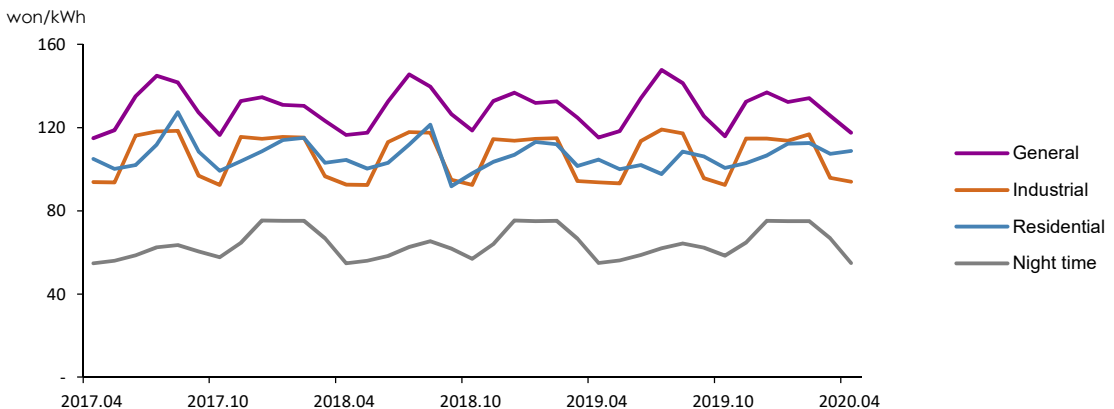


- **Electricity prices<sup>1</sup> for general and industrial use remained flat after the price adjustment to the spring/autumn season in March, and the residential electricity price was also the same as the previous month.**
  - Electricity prices for general and industrial use, which are based on time-of-use pricing, remained the same after the price adjustment from winter (Nov-Feb) to spring/autumn (Mar-May, Sept-Oct).
  - Residential electricity price has been flat since the progressive pricing scheme was restructured from six to three stages in December 2016.
- **The unit sales price of electricity for residential use increased in April, while that for industrial and general use declined from the prior month.**
  - The unit sales price of residential electricity went up by 1.2% owing to the increased electricity consumption, as people stayed home for longer than usual amid the COVID-19 pandemic.
  - The unit sales price of electricity for industrial and general use fell by 1.9% and 6.5% in April from the previous month, as their demand decreased during peak-load hours.

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



#### ► Unit sales price of electricity



<sup>1</sup> The electricity prices by end-use sectors refer to the prices for residential use ([high voltage], the 2<sup>nd</sup> stage electricity rates), general use ([A], low voltage) and Industrial use ([B], high voltage B middle load).

### 3. Energy Supply

- **The total energy import volume grew by 7.1% year-on-year in March, as the import of petroleum products, LNG and bituminous coal increased.**
  - The import volume of petroleum products posted a year-on-year growth of 32.1% in March, led by naphtha, LPG and bunker-C.
  - The import volume of LNG maintained an upward trend due to growing gas demand in the power generation sector, and that of bituminous coal slightly increased despite a drop in coal-fired generation.
- **Renewable & other energy generation went up by 6.2% year-on-year in March, as the generation from solar PV and the IGCC plant continued to increase as did in the previous month.**
  - Renewable generation, except other energy (waste), posted a year-on-year growth of 39.0%, as power generation surged from the restarted IGCC plant, which was temporarily shut down in the previous year due to safety issues, and solar power plants and fuel cells also generated more power.

#### Import and domestic production of energy

	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
Import volume							
Crude oil (Mbbbl)	1 116.3	1 071.9	278.7	87.1	263.1	86.3	84.1
	(-0.2)	(-4.0)	(0.6)	(5.2)	(-5.6)	(-12.3)	(-3.5)
Petroleum product (Mbbbl)	341.6	352.1	76.8	24.0	102.8	31.7	31.7
	(8.6)	(3.1)	(-9.8)	(-14.8)	(33.8)	(40.2)	(32.1)
Bituminous coal (Mton)	131.5	132.7	31.7	8.1	27.3	8.4	8.6
	(0.0)	(0.9)	(-5.1)	(-29.1)	(-14.1)	(-21.7)	(5.5)
Anthracite (Mton)	8.1	6.9	2.0	0.6	1.4	0.3	0.5
	(16.0)	(-15.6)	(8.6)	(9.7)	(-27.6)	(-62.8)	(-25.8)
LNG (Mton)	44.0	40.8	10.4	2.8	12.4	4.7	3.5
	(17.3)	(-7.4)	(-20.0)	(-35.4)	(19.8)	(24.9)	(28.1)
Import volume (Mtoe)	354.5	349.1	86.4	26.1	88.2	28.8	27.9
	(4.4)	(-1.5)	(-3.9)	(-10.9)	(2.1)	(1.9)	(7.1)
Import value (billion US\$, CIF)	146.0	126.7	32.2	9.8	31.8	10.7	8.9
	(33.3)	(-13.2)	(-6.8)	(-8.9)	(-1.2)	(-4.0)	(-9.3)
Energy share of total import value (%)	27.3	25.2	26.2	23.4	26.2	28.9	21.2
Foreign energy dependence (%)*	93.6	93.4	93.8	93.3	93.2	93.3	92.4
Domestic production							
Hydropower (TWh)	7.3	6.2	1.5	0.5	1.7	0.5	0.6
	(3.9)	(-14.3)	(5.6)	(-2.8)	(17.0)	(12.2)	(43.9)
Anthracite (Mton)	1.2	1.1	0.3	0.1	0.3	0.1	0.1
	(-19.2)	(-9.5)	(-20.5)	(-23.7)	(-0.7)	(11.1)	(10.0)
Natural gas (Mton)	0.2	0.2	0.0	0.0	0.1	0.0	0.0
	(-10.4)	(-21.5)	(-36.4)	(-13.7)	(19.5)	(-9.7)	(-12.4)
Renewable energy (Mtoe)	17.1	17.9	4.5	1.6	4.6	1.5	1.7
	(8.0)	(4.7)	(7.5)	(11.5)	(3.3)	(9.9)	(6.2)

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

## 4. Energy Consumption

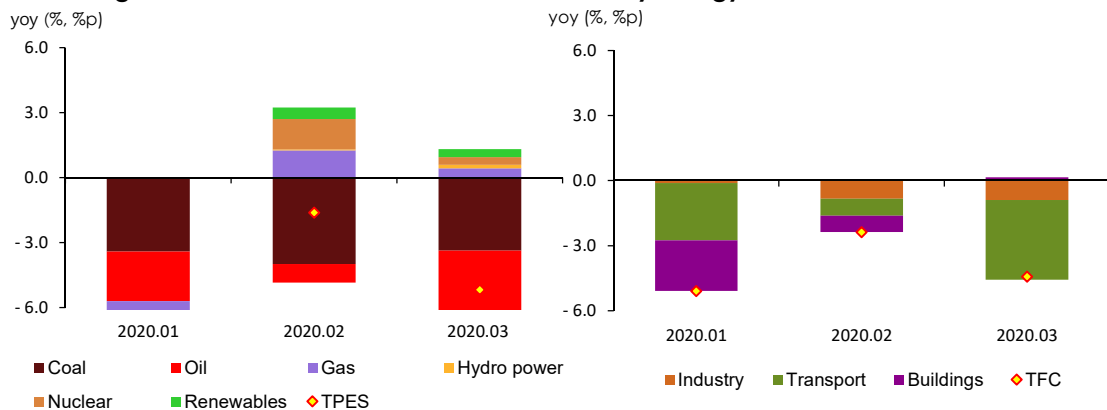
- **Total Primary Energy Supply (“TPES”) dropped by 5.2% year-on-year in March, owing to a sharp drop in petroleum and coal consumption.**
  - Petroleum consumption fell sharply by 7.1% year-on-year in March, as road and aviation traffic volume plunged as a result of strict ‘social distancing’ measures that discourage people from having non-essential gatherings and going outside due to the spreading COVID-19.
  - Coal consumption declined by 14.3% year-on-year, as coal-fired generation plunged due to the fine dust mitigation policy during the winter season, and bituminous coal use for steelmaking and cement production decreased as well.
  - Gas consumption was up 2.2% year-on-year owing to the steady growth in gas-fired generation, which offset the decline in coal-fired generation.
- **Total Final Consumption (“TFC”) went down by 4.4% year-on-year in March, as energy use declined in all the end-use sectors except the residential sector, hit by the COVID-19 outbreak.**
  - Transport energy use was most directly affected by COVID-19, posting a year-on-year decline of whopping 20%, as travel demand declined sharply in the road transport and aviation sectors.
  - The COVID-19 pandemic displayed a contrasting impact on energy use in different types of buildings; it was down 3.4% in commercial and public buildings, while it was up 4.1% in residential buildings, as people spent more hours at home complying with the ‘social distancing’ rule.
  - Industrial energy use fell by 1.5% year-on-year, because production activity slowed down in large energy consuming businesses such as the basic chemical materials, iron & steel and cement sectors although overall industrial production increased.

### ► Energy consumption

	2018	2019p		2020p			
			M1~3	M3	M1~3	M2	M3
<b>Total energy (Mtoe)</b>	<b>307.5</b>	<b>303.4</b>	<b>80.3</b>	<b>25.8</b>	<b>76.5</b>	<b>24.8</b>	<b>24.5</b>
	(1.8)	(-1.3)	(-0.9)	(0.3)	(-4.7)	(-1.6)	(-5.2)
- Non-energy oil & coal excluded	222.9	219.7	59.5	19.0	55.9	18.2	17.8
	(3.5)	(-1.5)	(-1.1)	(0.5)	(-6.1)	(-2.1)	(-6.3)
<b>Final energy (Mtoe)</b>	<b>232.7</b>	<b>231.2</b>	<b>62.2</b>	<b>19.8</b>	<b>59.7</b>	<b>19.4</b>	<b>18.9</b>
	(1.2)	(-0.6)	(-0.3)	(0.6)	(-4.0)	(-2.4)	(-4.4)

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



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

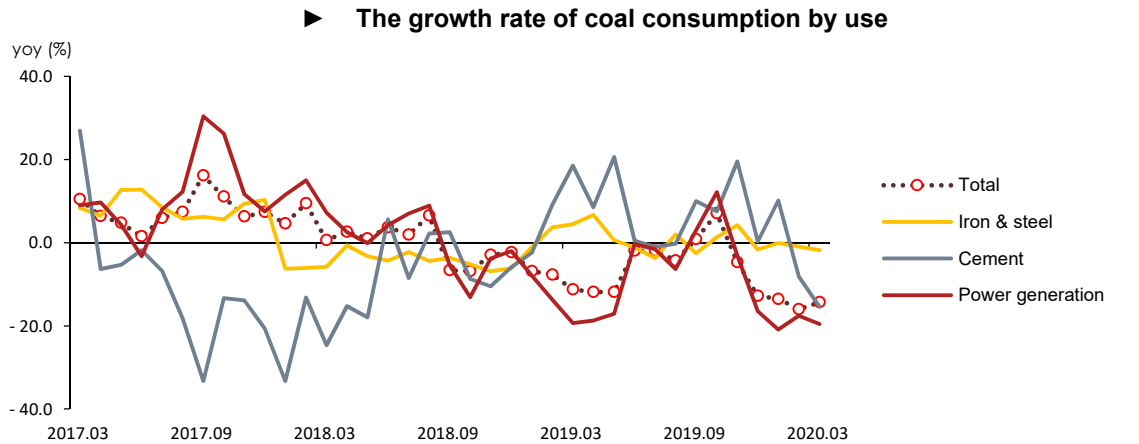
# 5. Coal

☐ **Coal consumption declined by 14.3% year-on-year in March, as it continuously declined in all sectors.**

- Industrial coal use fell more slowly by 6.5% year-on-year due to the slower pace of decline in anthracite use, though bituminous coal use for coke and cement production led the decline.
- Coal use for power generation dropped by 19.6% year-on-year, because electricity use fell by 0.5% in March from the same month last year, and nuclear generation increased, while coal-fired generation was capped to reduce fine dust pollution.
- Coal use in buildings fell in March, as the number of heating degree days fell by 3.9% year-on-year amid continuing mild weather. The pace of decline, however was much slower (-2.6%) than the previous month, considering that heating demand generally declines at this time of year.

► Coal consumption							
	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
<b>Coal (Mton)</b>	<b>141.0</b>	<b>133.0</b>	<b>33.8</b>	<b>10.4</b>	<b>28.8</b>	<b>9.3</b>	<b>8.9</b>
	(0.9)	(-5.7)	(-8.5)	(-11.3)	(-14.6)	(-16.0)	(-14.3)
Industry	48.3	47.6	11.9	4.1	11.2	3.4	3.8
	(-2.0)	(-1.6)	(2.4)	(5.0)	(-5.7)	(-13.3)	(-6.5)
-Coking-coal	34.6	35.0	8.6	2.9	8.5	2.7	2.9
	(-4.6)	(1.0)	(2.3)	(4.4)	(-0.9)	(-0.9)	(-1.8)
Buildings	0.9	0.6	0.2	0.0	0.1	0.0	0.0
	(-15.7)	(-29.8)	(-31.4)	(-35.0)	(-24.2)	(-15.8)	(-2.6)
Power generation	91.8	84.8	21.7	6.2	17.5	5.8	5.0
	(2.6)	(-7.6)	(-13.4)	(-19.3)	(-19.4)	(-17.5)	(-19.6)

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



# 6. Petroleum

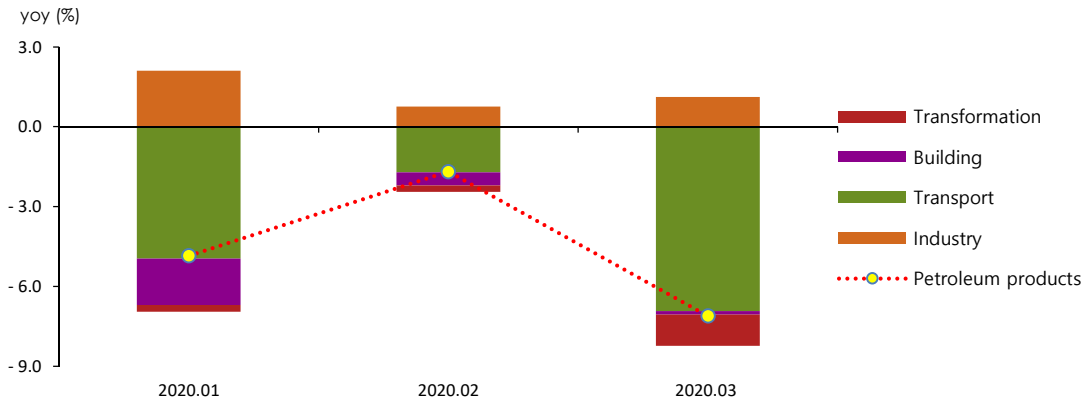
- **Petroleum consumption was down 7.1% year-on-year in March, as it declined in all sectors, except the industrial sector, affected by the COVID-19 outbreak.**
  - Industrial petroleum use grew by 1.9% year-on-year, despite a 3.0% drop in naphtha use, as the use of LPG jumped by 41.8%.
  - Transport petroleum use fell by 20.7% year-on-year, as travel demand declined due to social distancing measures aimed at preventing the spread of COVID-19, although the domestic price of transport fuel kept decreasing in line with the global oil price trend.

## ► Petroleum product consumption by end-use sectors

	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
<b>Petroleum (Mbbbl)</b>	<b>931.8</b>	<b>928.4</b>	<b>234.5</b>	<b>76.5</b>	<b>223.7</b>	<b>71.9</b>	<b>71.1</b>
	(-0.6)	(-0.4)	(-0.8)	(-1.5)	(-4.6)	(-1.7)	(-7.1)
Industry	564.1	567.2	138.8	45.0	142.0	44.8	45.9
	(-0.5)	(0.6)	(-0.7)	(-1.8)	(2.3)	(1.3)	(1.9)
-Naphtha	451.2	438.6	110.8	35.7	109.6	35.5	34.6
	(-1.6)	(-2.8)	(-2.7)	(-3.6)	(-1.1)	(-0.1)	(-3.0)
Transport	302.3	300.3	75.5	25.6	64.7	21.8	20.3
	(-0.3)	(-0.7)	(3.7)	(0.8)	(-14.2)	(-5.4)	(-20.7)
Buildings	53.7	52.8	17.3	4.6	15.4	4.9	4.5
	(-4.9)	(-1.7)	(-4.6)	(-3.2)	(-11.2)	(-6.8)	(-2.1)
Power generation	11.7	8.1	2.9	1.3	1.6	0.4	0.4
	(12.1)	(-30.8)	(-48.7)	(-20.3)	(-44.7)	(-28.3)	(-69.2)

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

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



## 7. Gas

□ **Natural gas consumption was up 2.2% year-on-year in March, led by the power generation sector, even though it declined in the city gas production sector.**

- Gas consumption for power generation posted a year-on-year growth of 8.2%, despite a drop in electricity demand, as coal-fired generation declined (-17.4%).

□ **City gas consumption was down 0.6% year-on-year in March, with the buildings sector leading the downward trend, though the industrial city gas consumption increased.**

- Industrial city gas use increased, led by the petrochemical (4.9%) and fabricated metals (10.4%) sectors, though it declined in the primary metals sector (-9.1%) due to reduced outputs of major products.
- City gas consumption in buildings fell by 0.7% year-on-year, as the consumption in commercial and public buildings fell by 15.5% and 12.8% respectively, while it grew by 3.2% in residential buildings, all of which were affected by social distancing measures adopted as a response to the COVID-19 outbreak.

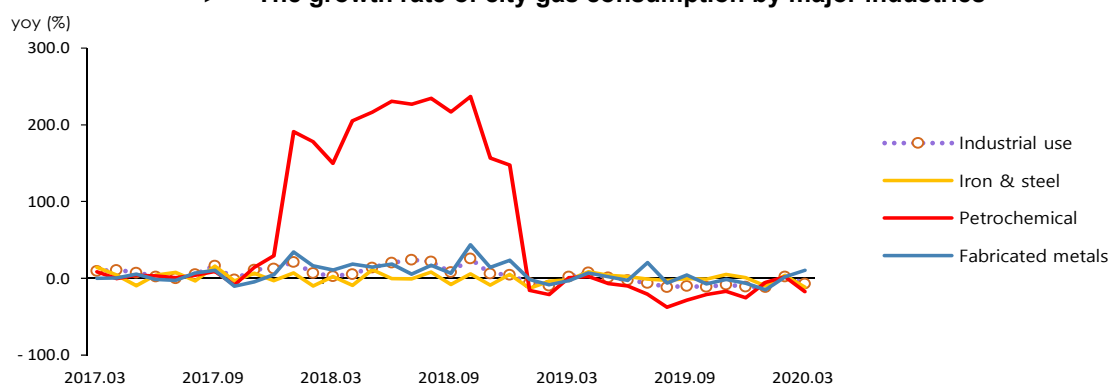
### ► Natural gas and city gas consumption

	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
<b>LNG (Mton)</b>	<b>42.3</b>	<b>40.9</b>	<b>12.9</b>	<b>3.8</b>	<b>13.1</b>	<b>4.3</b>	<b>3.9</b>
	(16.2)	(-3.2)	(-5.5)	(-3.9)	(1.2)	(5.9)	(2.2)
Power generation	18.9	18.4	4.8	1.5	5.3	1.7	1.7
	(21.5)	(-2.7)	(-5.4)	(-11.9)	(10.1)	(16.9)	(8.2)
City gas production	19.8	18.8	7.0	2.0	6.6	2.2	1.9
	(7.7)	(-5.0)	(-6.6)	(0.9)	(-5.9)	(-1.0)	(-5.0)
<b>City gas (bm<sup>3</sup>)</b>	<b>25.7</b>	<b>25.4</b>	<b>9.2</b>	<b>2.6</b>	<b>8.9</b>	<b>3.0</b>	<b>2.6</b>
	(9.9)	(-1.1)	(-3.4)	(0.3)	(-3.3)	(-1.1)	(-0.6)
Industry	10.2	10.4	2.8	0.9	2.8	0.9	0.9
	(19.2)	(2.4)	(5.4)	(11.2)	(0.4)	(6.3)	(0.9)
Buildings	14.3	13.8	6.1	1.6	5.8	2.0	1.6
	(5.1)	(-3.5)	(-7.0)	(-4.9)	(-4.9)	(-4.3)	(-0.7)

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

Source: Monthly Energy Statistics

### ► The growth rate of city gas consumption by major industries



# 8. Electricity

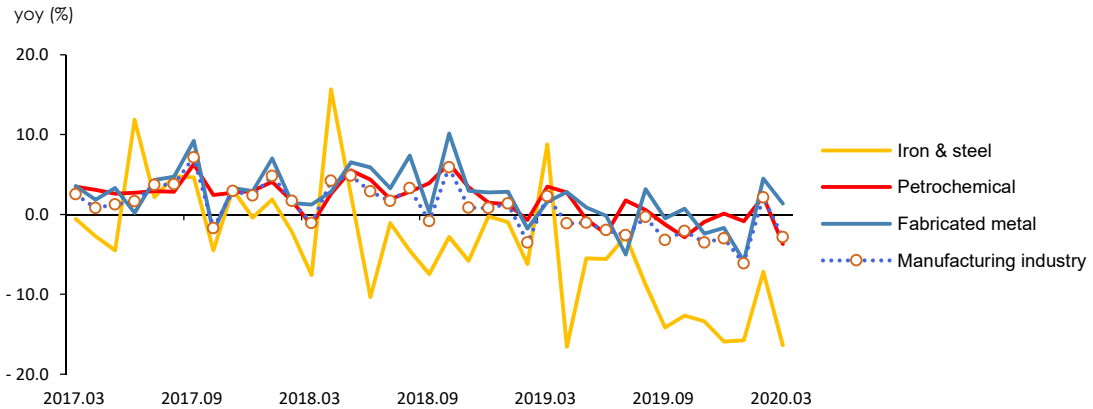
- **Electricity consumption slid by 0.5% year-on-year in March, with the industrial sector leading the downward trend, although it increased in the buildings sector.**
  - Industrial electricity consumption posted a 2.8% year-on-year drop in March, as the consumption declined or grew at slower pace in large energy consuming businesses such as the primary metals, fabricated metals and petrochemical sectors due to the COVID-19 pandemic.
  - Electricity consumption surged in residential buildings, while it remained flat in commercial buildings on a year-on-year basis.

## ► Electricity consumption by end-use sectors

	2018	2019p	2020p				
			M1~3	M3	M1~3	M2	M3
<b>Electricity (TWh)</b>	<b>526.1</b>	<b>520.5</b>	<b>136.1</b>	<b>43.1</b>	<b>133.7</b>	<b>44.5</b>	<b>42.9</b>
	(3.6)	(-1.1)	(-1.4)	(0.4)	(-1.8)	(0.3)	(-0.5)
Industry	283.7	279.8	71.0	23.8	69.1	22.4	23.1
	(2.5)	(-1.4)	(0.1)	(2.2)	(-2.7)	(1.4)	(-2.8)
Transport	3.0	2.9	0.7	0.2	0.7	0.2	0.2
	(3.6)	(-2.0)	(-1.8)	(-0.6)	(-6.8)	(-7.0)	(-4.2)
Buildings	239.5	237.8	64.3	19.1	63.9	21.8	19.5
	(4.9)	(-0.7)	(-3.1)	(-1.8)	(-0.7)	(-0.7)	(2.4)
Residential	70.7	70.5	17.7	5.4	18.4	6.3	5.9
	(6.3)	(-0.3)	(0.3)	(0.5)	(3.8)	(2.1)	(9.8)
Commercial	136.4	135.2	37.9	11.0	37.1	12.7	11.1
	(4.6)	(-0.9)	(-4.3)	(-3.1)	(-2.1)	(-2.1)	(0.9)

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

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





## 9. Nuclear

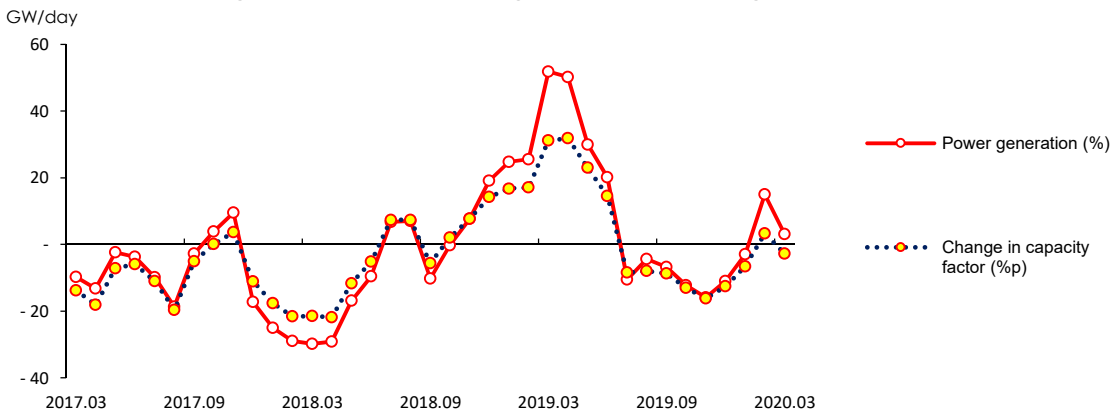
- The total nuclear generation posted a year-on year growth of 3.1% in March on the back of increased installed capacity following the commissioning of Shinkori unit 4.
- The average capacity factor at nuclear power plants fell by 2.7%p to 83.6% in March due to the high base effect of the same month last year (31.2%p), while the installed capacity grew by 6.4% with the commissioning of Shinkori unit 4 (1.4GW, 2019.8).
- Nuclear energy's share of the total generation was up 2.1%p to 31.3% on a year-on-year basis.

► Nuclear power plants operation status

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

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

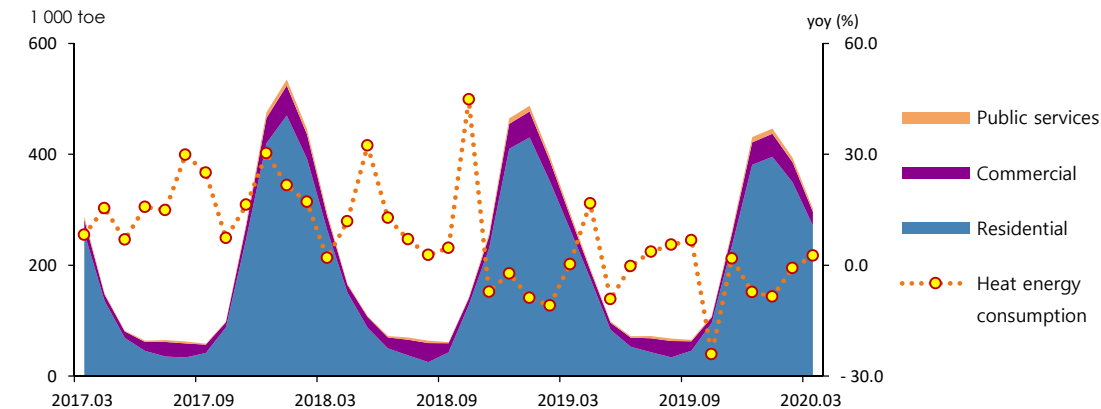
► The growth rate of nuclear generation & average capacity factor



# 10. Heat and Renewable energy

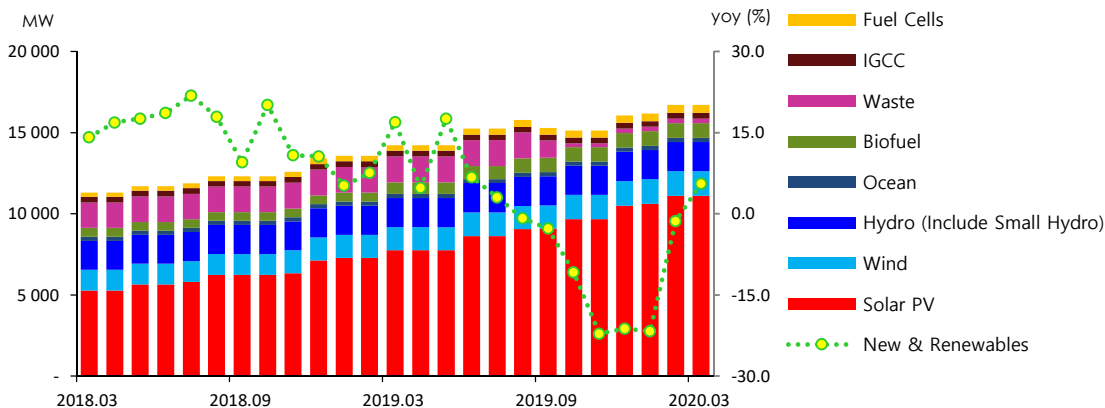
- **Heat energy use rose by 2.6% year-on-year in March, led by the residential sector, as people spent longer hours at home, even though the number of heating degree days decreased.**
  - Heat energy use went up by 2.7% in the residential sector owing to the longer hours spent at home amid the spreading COVID-19, although the number of heating degree days fell by 12.8 degree days, as the average temperature was 0.4°C higher in March (7.9°C ) than the same month last year.
- **The total renewable generation increased in March from the same month last year, with solar PV, IGCC and hydropower leading the growth, even though some energy sources were excluded from the renewable category.**
  - Renewable generation was up 5.5%, backed by the growth in solar PV installations and rapidly increased power generation from the restarted IGCC plant, although the installed capacity of and power generation from non-renewable waste energy plunged, after it was excluded from the renewable category (Oct. 2019).

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



Note: The total heat energy consumption is estimated based on the total supply from district heating & cooling companies (KEA's collective energy business). Previously, the figure reflected the monthly supply data of only three energy companies (KDHC, GS Power, SH Corp.).

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



## 11. Industry

### □ Industrial energy use fell by 1.5% year-on-year in March despite the growth in production activities.

- Industrial energy use declined, mostly in large energy consuming businesses including the basic chemical materials, cement and iron & steel sectors, even though the production activities increased in the ICT (incl. semiconductor) and automobile sectors, and both of the manufacturing production index and operating ratio increased.

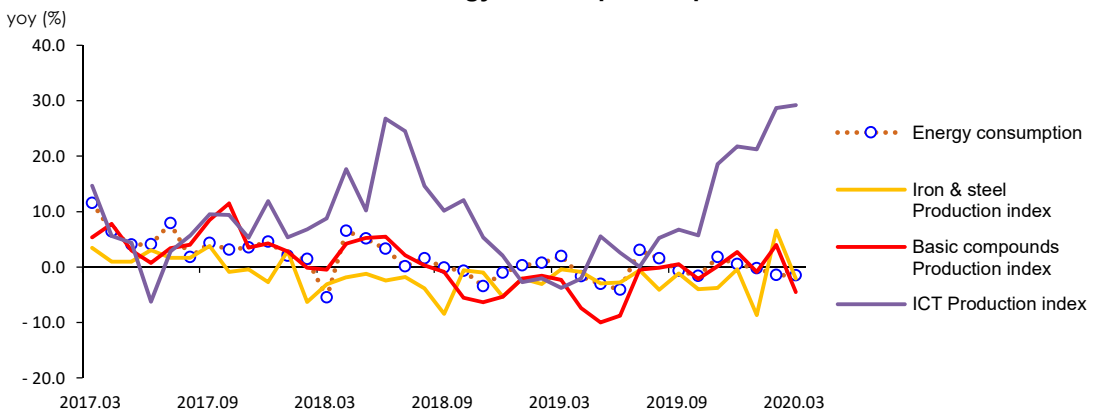
#### ► Industrial energy consumption

	2018	2019p	2020p				
			M1~3	M3	M1~3	M2	M3
<b>Industry (Mtoe)</b>	<b>142.9</b>	<b>142.7</b>	<b>35.7</b>	<b>11.8</b>	<b>35.3</b>	<b>11.2</b>	<b>11.7</b>
	(0.7)	(-0.1)	(1.0)	(2.0)	(-1.0)	(-1.5)	(-1.5)
Petrochemical	72.1	72.2	17.8	5.8	18.3	5.8	5.9
	(3.0)	(0.1)	(-0.5)	(-0.6)	(2.8)	(3.1)	(1.4)
- Naphtha	55.3	53.8	13.6	4.4	13.4	4.4	4.2
	(-1.6)	(-2.8)	(-2.7)	(-3.6)	(-1.1)	(-0.1)	(-3.0)
Iron & Steel	28.9	28.8	7.2	2.5	7.0	2.2	2.4
	(-13.0)	(-0.0)	(1.5)	(4.6)	(-2.3)	(-1.1)	(-3.7)
-Coking coal	24.1	24.4	6.0	2.0	5.9	1.9	2.0
	(-4.6)	(1.0)	(2.3)	(4.4)	(-0.9)	(-0.9)	(-1.8)
Fabricated metal	11.4	11.4	3.0	1.0	3.0	1.0	1.0
	(5.9)	(-0.0)	(0.2)	(0.8)	(-1.0)	(3.8)	(3.1)
Share of feedstock (%)	59.1	58.5	57.9	57.6	58.1	58.9	57.2

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

Source: Monthly Energy Statistics

#### ► Industrial energy consumption & production index



# 12. Transport

□ **Transport energy use dropped by 20.0% year-on-year in March, as COVID-19 developed into a global pandemic.**

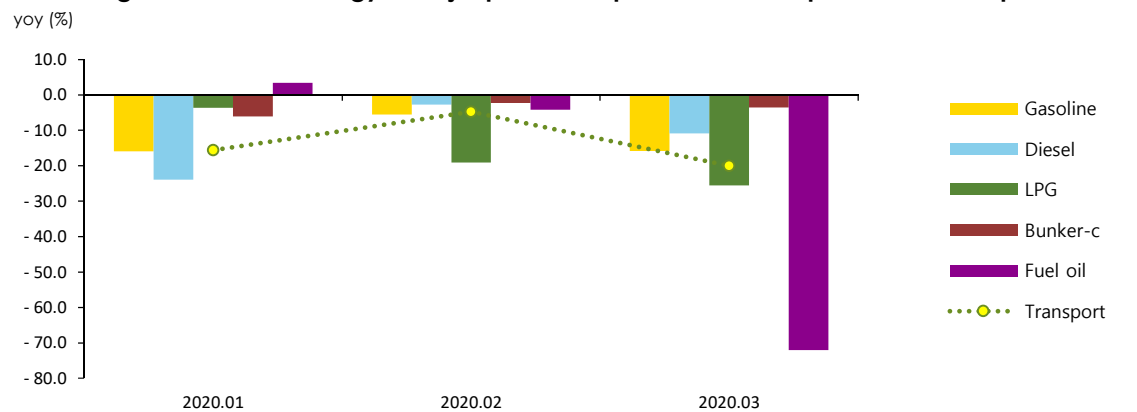
- Transport energy use fell by 20.0% year-on-year, as it declined in all sectors except the domestic navigation sector where freight transport takes the largest share, because travel demand plunged in the overall society due to ‘enhanced social distancing measures’ aimed at curbing the COVID-19 outbreak.
- Transport energy use went down by 13.8% in 1Q 2020 from the same period last year.

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

	2018	2019p	2020p				
			M1~3	M1~3	M1~3	M2	M3
<b>Transport (Mtoe)</b>	<b>43.0</b>	<b>42.6</b>	<b>10.7</b>	<b>10.7</b>	<b>9.2</b>	<b>3.1</b>	<b>2.9</b>
	(0.4)	(-0.9)	(3.4)	(3.4)	(-13.8)	(-4.8)	(-20.0)
Road	34.4	34.7	8.6	8.6	7.4	2.5	2.5
	(0.9)	(0.9)	(6.0)	(6.0)	(-13.7)	(-5.5)	(-14.5)
Navigation	3.2	2.6	0.7	0.7	0.8	0.2	0.2
	(-9.9)	(-19.6)	(-13.3)	(-13.3)	(2.8)	(2.1)	(1.8)
Aviation	5.0	4.9	1.2	1.2	0.9	0.4	0.1
	(4.4)	(-1.7)	(-1.8)	(-1.8)	(-25.2)	(-4.1)	(-72.0)
Rail	0.4	0.3	0.1	0.1	0.1	0.0	0.0
	(3.6)	(-2.9)	(-2.1)	(-2.1)	(-8.5)	(-7.1)	(-5.0)

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

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



# 13. Buildings

□ **Buildings' energy use grew by 0.7% year-on-year in March, led by residential buildings, owing to the COVID-19 pandemic, even though the number of heating degree days decreased.**

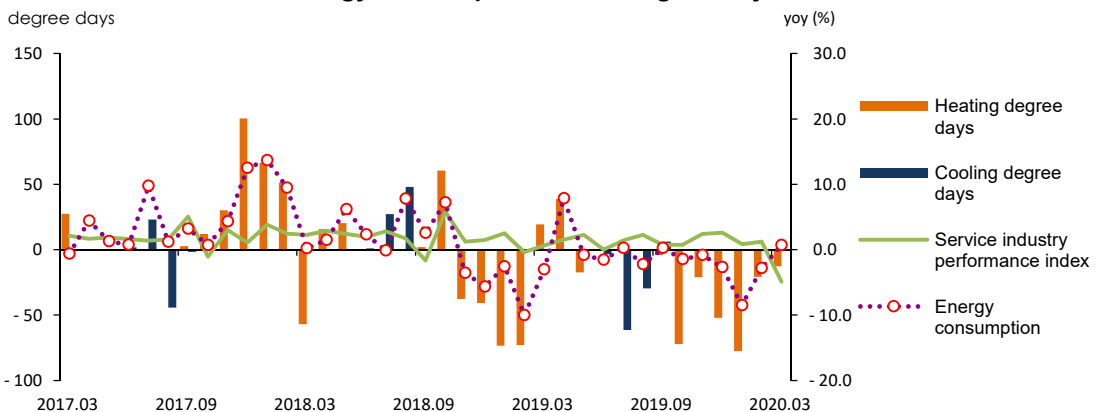
- The number of heating degree days decreased due to mild weather compared to the prior-year period, and energy use decreased in commercial and public buildings owing to the impact of COVID-19. In residential buildings, however, energy use increased, as people spent more time at home during the COVID-19 pandemic.
- Energy use in residential buildings posted a year-on-year growth of 4.1%, as more people refrained from going outside and having gatherings, and instead stayed home for longer than usual, since stricter social distancing measures were put in place due to the spreading COVID-19.
- Meanwhile, the use of all major energy sources has been down for four consecutive months (city gas -15.5%, electricity -0.5%, petroleum -3.0%) in commercial and public buildings, as businesses were temporarily closed or were open for shorter hours due to the COVID-19 pandemic, especially where face-to-face contact is necessary.

## ► Energy consumption in buildings

	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
<b>Buildings (Mtoe)</b>	<b>46.9</b>	<b>46.0</b>	<b>15.8</b>	<b>4.3</b>	<b>15.2</b>	<b>5.2</b>	<b>4.4</b>
	(3.5)	(-2.0)	(-5.3)	(-3.0)	(-4.1)	(-2.8)	(0.7)
Residential	23.5	22.6	9.0	2.4	8.6	2.9	2.5
	(4.4)	(-3.6)	(-6.1)	(-3.8)	(-3.5)	(-2.8)	(4.1)
Commercial	17.9	17.8	5.3	1.5	5.0	1.7	1.5
	(2.9)	(-0.3)	(-3.7)	(-0.9)	(-5.6)	(-4.4)	(-3.9)
Public · others	5.6	5.5	1.5	0.5	1.5	0.5	0.5
	(2.0)	(-1.2)	(-6.0)	(-5.8)	(-1.8)	(2.8)	(-1.8)
Heating degree days	2 597.8	2 342.9	1 310.4	325.0	1 199.3	416.2	312.2
	(3.2)	(-9.8)	(-8.8)	(6.3)	(-8.5)	(-4.8)	(-3.9)
Cooling degree days	209.0	120.4	-	-	-	-	-
	(57.5)	(-42.4)	-	-	-	-	-

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

## ► Energy consumption in buildings & major indicators



# 14. Transformation

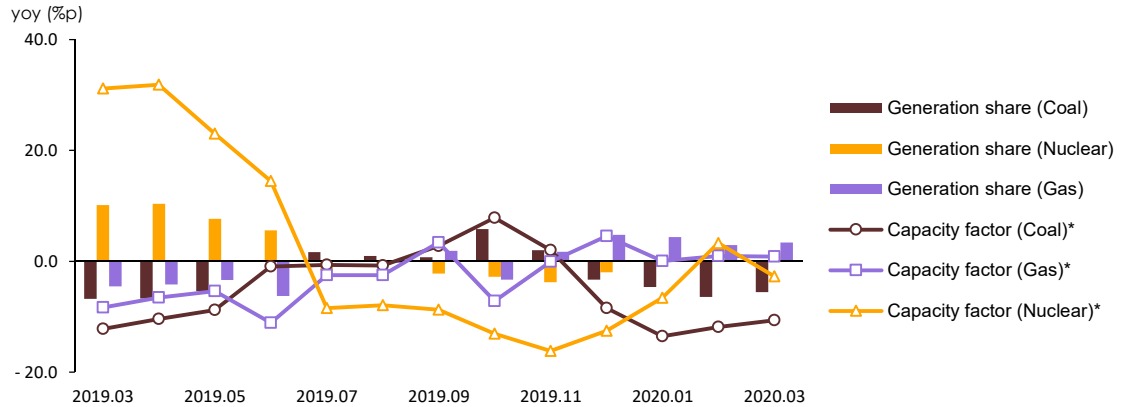
- The energy input to power stations dropped by 4.5% year-on-year in March, owing to the sharp drop in coal-fired generation, even though nuclear and gas-fired generation increased.
  - The total power generation went down by 4.0% year-on-year, despite the growth in gas-fired generation, as baseload generation decreased.
  - The energy input to power stations fell more rapidly (-4.5%) compared to the pace of decline in total power generation (1.5%), which is because less efficient baseload generation took a smaller share, while highly efficient gas generation took a larger share.

## ► Energy consumption in the power generation sector

	2018	2019p			2020p		
			M1~3	M3	M1~3	M2	M3
<b>Input (Mtoe)</b>	<b>118.7</b>	<b>116.3</b>	<b>29.9</b>	<b>9.7</b>	<b>28.4</b>	<b>9.3</b>	<b>9.3</b>
	(3.1)	(-2.0)	(-1.5)	(-0.6)	(-4.9)	(0.5)	(-4.5)
Coal	54.2	50.1	12.8	3.7	10.3	3.4	3.0
	(2.7)	(-7.6)	(-13.5)	(-19.5)	(-19.4)	(-17.6)	(-19.5)
Oil	1.3	0.8	0.3	0.2	0.1	0.0	0.0
	(7.5)	(-39.3)	(-48.2)	(-1.7)	(-70.4)	(-63.6)	(-88.7)
Gas	25.1	24.4	6.4	2.0	7.0	2.3	2.2
	(21.4)	(-2.9)	(-5.5)	(-11.9)	(9.7)	(16.5)	(7.9)
Nuclear	28.4	31.1	7.9	3.0	8.3	2.7	3.1
	(-10.1)	(9.3)	(34.0)	(51.8)	(4.6)	(15.0)	(3.1)
Hydro/other renewables	9.6	9.9	2.4	0.9	2.7	0.9	1.0
	(9.9)	(3.6)	(8.8)	(11.4)	(10.7)	(18.1)	(19.9)

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
			3Q	4Q	1Q		3Q	4Q	1Q
GDP (trillion won)	1 760.8 (3.2)	1 812.0 (2.9)	454.2 (2.4)	476.4 (3.1)	437.2 (1.8)	1 849.0 (2.0)	463.1 (2.0)	487.4 (2.3)	443.2 (1.4)
Private consumption	848.6 (2.8)	875.6 (3.2)	218.8 (2.7)	224.3 (2.7)	222.6 (1.4)	890.2 (1.7)	222.3 (1.6)	228.5 (1.9)	212.0 (-4.8)
Facilities investment	170.3 (16.5)	166.3 (-2.3)	37.3 (-9.2)	41.7 (-5.5)	36.5 (-17.4)	153.9 (-7.5)	36.4 (-2.3)	40.8 (-2.0)	39.2 (7.3)
Construction investment	282.9 (7.3)	269.8 (-4.6)	67.7 (-9.1)	70.8 (-6.4)	52.3 (-8.1)	262.9 (-2.5)	65.9 (-2.7)	72.6 (2.6)	54.5 (4.2)
Consumer price index (2015=100)	102.9	104.5	104.8	104.8	104.5	104.9	104.9	105.2	105.7
USD to KRW exchange rate (won)	1 131.0	1 100.2	1 121.5	1 127.4	1 125.1	1 165.4	1 193.9	1 175.8	1 192.7
Benchmark rate (%)	1.3	1.5	1.5	1.7	1.8	1.6	1.5	1.3	1.1
Coincident composite index (2015=100)	107.6	110.1	110.4	110.6	110.7	111.7	112.0	112.9	113.1
Mining & manufacturing production index (2015=100)	104.8	106.4	105.4	110.1	100.2	106.3	105.7	112.5	105.2
Manufacturing operation ratio index (2015=100)	98.4	98.8	97.3	101.8	92.5	98.5	98.9	102.4	95.0
Average temperature	13.1	13.0	24.8	7.4	3.4	13.5	24.3	9.1	4.8
- year-on-year difference	- 0.5	- 0.1	0.7	0.1	1.4	0.5	- 0.6	1.7	1.4
Heating degree days	2 517.1 (5.5)	2 597.8 (3.2)	5.0 (72.4)	975.9 (-1.8)	1 310.4 (-8.8)	2 342.9 (-9.8)	0.9 (-82.0)	830.5 (-14.9)	1 199.3 (-8.5)
Cooling degree days	132.7 (-13.9)	209.0 (57.5)	205.5 (57.7)	- -	- -	120.4 (-42.4)	120.4 (-41.4)	- -	- -
Energy intensity	0.17 (-0.4)	0.17 (-1.0)	0.17 (0.1)	0.17 (-3.9)	0.18 (-2.6)	0.16 (-3.3)	0.16 (-3.2)	0.16 (-3.8)	0.17 (-6.0)
Per capita consumption									
oil (bbl)	18.2 (1.5)	18.1 (-1.0)	4.5 (-1.3)	4.5 (-5.4)	4.5 (-1.0)	18.0 (-0.6)	4.5 (0.3)	4.7 (3.1)	4.3 (-4.7)
Electricity (MWh)	9.9 (1.9)	10.2 (3.1)	2.7 (4.4)	2.5 (0.9)	2.6 (-1.6)	10.1 (-1.3)	2.6 (-2.5)	2.4 (-0.8)	2.6 (-1.9)
City gas (1 000 m <sup>3</sup> )	0.4 (6.0)	0.5 (6.9)	0.1 (8.0)	0.1 (2.6)	0.2 (-6.4)	0.5 (-4.3)	0.1 (-3.9)	0.1 (-7.6)	0.2 (-5.2)
Total energy (toe)	5.9 (2.5)	6.0 (1.3)	1.5 (1.9)	1.5 (-1.4)	1.6 (-1.1)	5.9 (-1.5)	1.4 (-1.5)	1.5 (-1.8)	1.5 (-4.9)

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

## The Index of Production & Operating Ratio by Sectors

(2015=100)

2015=100

	2018	2019					2020			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Industrial production index										
All industry	107.5 (1.6)	108.1 (0.5)	103.1 (-0.9)	105.0 (0.6)	95.9 (-2.2)	108.4 (-1.0)	104.8 (1.6)	104.4 (-0.6)	100.6 (4.9)	109.3 (0.8)
Mining & manufacturing	106.4 (1.5)	106.3 (-0.0)	100.2 (-2.4)	105.2 (-0.9)	89.6 (-4.1)	105.7 (-2.5)	105.2 (5.0)	102.3 (-2.8)	99.7 (11.3)	113.5 (7.4)
Iron & steel	100.5 (-2.7)	98.3 (-2.2)	98.2 (-1.8)	103.9 (-2.1)	89.3 (-3.0)	101.4 (-0.4)	96.5 (-1.8)	94.9 (-8.7)	95.2 (6.6)	99.3 (-2.1)
Cement	100.0 (-8.8)	93.8 (-6.2)	82.7 (-5.0)	82.7 (4.8)	66.3 (-10.8)	99.1 (-8.2)	77.0 (-6.9)	66.6 (-19.5)	71.6 (8.0)	92.7 (-6.5)
Basic compound	110.4 (0.1)	107.5 (-2.6)	108.6 (-2.0)	114.2 (-2.1)	102.3 (-1.5)	109.3 (-2.3)	108.0 (-0.6)	113.2 (-0.9)	106.4 (4.0)	104.4 (-4.5)
Transport equipment	93.9 (-1.2)	93.1 (-0.9)	90.5 (2.6)	96.6 (8.4)	77.3 (0.3)	97.7 (-0.7)	81.3 (-10.2)	77.2 (-20.1)	65.0 (-15.9)	101.7 (4.1)
Electric & electronic	106.5 (-0.2)	107.7 (1.2)	100.0 (-1.3)	104.2 (1.7)	88.8 (-4.9)	107.1 (-1.1)	101.2 (1.1)	97.0 (-6.9)	95.4 (7.4)	111.1 (3.7)
Service	106.9 (2.2)	108.4 (1.4)	104.6 (0.9)	105.8 (2.5)	99.4 (-0.4)	108.7 (0.6)	103.6 (-1.0)	106.7 (0.9)	100.6 (1.2)	103.4 (-4.9)
Operating ratio index										
Manufacturing	98.8 (0.4)	98.5 (-0.3)	92.5 (-2.7)	96.8 (-0.8)	82.4 (-4.4)	98.3 (-3.1)	95.0 (2.7)	91.6 (-5.4)	90.2 (9.5)	103.2 (5.0)
Iron & steel	100.1 (-2.6)	98.1 (-2.0)	98.0 (-1.6)	103.7 (-2.2)	89.0 (-2.8)	101.2 (0.1)	96.2 (-1.8)	94.5 (-8.9)	94.9 (6.6)	99.2 (-2.0)
Cement	108.4 (1.1)	101.7 (-6.2)	89.9 (0.1)	90.4 (15.0)	72.1 (-2.7)	107.1 (-8.1)	83.2 (-7.4)	72.2 (-20.1)	77.6 (7.6)	99.9 (-6.7)
Basic compound	103.5 (-2.3)	99.4 (-4.0)	100.9 (-3.1)	106.1 (-3.3)	95.1 (-2.7)	101.6 (-3.2)	100.3 (-0.6)	104.0 (-2.0)	97.8 (2.8)	99.2 (-2.4)
Transport equipment	89.6 (2.3)	92.9 (3.6)	89.2 (7.6)	95.5 (14.8)	75.7 (5.6)	96.4 (2.7)	82.4 (-7.6)	77.7 (-18.6)	67.2 (-11.2)	102.3 (6.1)
Electric & electronic	102.2 (-1.7)	103.5 (1.3)	96.3 (-2.1)	99.7 (-0.1)	85.7 (-5.2)	103.4 (-1.4)	97.0 (0.7)	92.0 (-7.7)	92.2 (7.6)	106.7 (3.2)

Note: p means provisional  
Source: Monthly Energy Statistics



## International Energy Prices

	2018	2019					2020			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	57.9 (-10.9)	58.2 (-7.3)	63.9 (-3.7)	60.9 (-13.0)	36.8 (-36.5)	30.5 (-47.7)	16.7 (-73.9)	28.5 (-53.1)
Dubai	69.4 (30.5)	63.5 (-8.5)	66.2 (-1.0)	66.9 (6.7)	70.9 (3.9)	69.4 (-6.8)	40.6 (-38.6)	33.7 (-49.6)	20.4 (-71.3)	30.5 (-56.1)
Brent	71.5 (30.5)	64.2 (-10.3)	66.7 (-4.8)	67.0 (0.5)	71.6 (-0.2)	70.3 (-8.7)	42.4 (-36.5)	33.7 (-49.7)	26.6 (-62.8)	32.4 (-53.9)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	66.0 (-1.2)	65.3 (0.7)	68.9 (4.0)	71.1 (-0.2)	49.2 (-25.5)	52.8 (-19.1)	34.1 (-50.6)	25.8 (-63.7)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	11.1 (11.9)	11.3 (11.7)	10.3 (1.7)	10.1 (-1.0)	10.0 (-9.7)	10.2 (-9.6)	10.1 (-2.0)	10.1 (-0.8)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	545.6 (11.2)	563.3 (15.3)	481.9 (-0.6)	481.5 (-5.6)	464.7 (-14.8)	461.4 (-18.1)	478.1 (-0.8)	467.0 (-3.0)
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	91.2 (-10.2)	93.1 (-3.7)	86.8 (-7.4)	82.3 (-21.8)	63.0 (-30.9)	66.7 (-28.3)	58.6 (-32.5)	52.5 (-36.2)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	109.9 (-3.6)	112.9 (-5.5)	107.7 (-5.3)	111.8 (-2.6)	86.7 (-21.1)	89.3 (-20.9)	89.6 (-16.8)	83.6 (-25.3)
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	71.8 (-10.7)	74.4 (-3.5)	80.8 (-0.8)	76.3 (-12.9)	45.2 (-37.0)	36.4 (-51.0)	20.5 (-74.6)	33.5 (-56.2)
Kerosene	84.8 (29.8)	77.3 (-8.9)	78.7 (-5.2)	79.8 (1.1)	82.6 (-3.0)	81.5 (-9.3)	45.6 (-42.1)	39.3 (-50.8)	21.3 (-74.3)	28.9 (-64.6)
Diesel	84.9 (27.9)	78.2 (-7.9)	79.7 (-3.5)	81.0 (3.4)	83.3 (-1.2)	82.7 (-8.6)	51.1 (-35.9)	45.5 (-43.9)	31.4 (-62.3)	36.1 (-56.4)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	63.8 (5.7)	66.2 (16.2)	66.8 (9.5)	64.4 (-5.3)	36.0 (-43.6)	31.5 (-52.5)	23.3 (-65.1)	26.7 (-58.6)
Propane	542.1 (16.0)	434.6 (-19.8)	480.0 (-6.6)	490.0 (2.1)	515.0 (8.4)	525.0 (5.0)	414.0 (-13.8)	430.0 (-12.2)	230.0 (-55.3)	340.0 (-35.2)
Butane	539.2 (7.5)	441.7 (-18.1)	495.0 (-1.6)	520.0 (11.8)	535.0 (13.8)	530.0 (5.0)	439.0 (-11.3)	480.0 (-7.7)	240.0 (-55.1)	340.0 (-35.8)
Naphtha	67.0 (24.5)	56.9 (-15.1)	58.3 (-12.2)	60.1 (-4.5)	63.2 (-5.4)	60.0 (-19.5)	37.4 (-35.8)	30.3 (-49.6)	17.3 (-72.6)	26.3 (-56.1)

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			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Coal (Mton)	141.0 (0.9)	133.0 (-5.7)	33.8 (-8.5)	12.4 (-6.9)	11.0 (-7.7)	10.4 (-11.3)	28.8 (-14.6)	10.7 (-13.6)	9.3 (-16.0)	8.9 (-14.3)
- Coking coal excluded	106.4 (2.8)	98.0 (-7.8)	25.2 (-11.7)	9.4 (-8.5)	8.3 (-10.9)	7.4 (-16.2)	20.3 (-19.3)	7.8 (-17.7)	6.6 (-21.0)	6.0 (-19.3)
Oil (Mbbl)	931.8 (-0.6)	928.4 (-0.4)	234.5 (-0.8)	84.9 (1.2)	73.1 (-2.3)	76.5 (-1.5)	223.7 (-4.6)	80.7 (-4.8)	71.9 (-1.7)	71.1 (-7.1)
- Non-energy oil excluded	445.5 (0.4)	451.8 (1.4)	115.7 (0.2)	42.6 (3.6)	35.0 (-3.0)	38.0 (-0.5)	105.5 (-8.8)	38.4 (-10.0)	33.7 (-3.7)	33.4 (-12.2)
LNG (Mton)	42.3 (16.2)	40.9 (-3.2)	12.9 (-5.5)	5.0 (-6.2)	4.1 (-6.1)	3.8 (-3.9)	13.1 (1.2)	4.9 (-3.4)	4.3 (5.9)	3.9 (2.2)
Hydro (TWh)	7.3 (3.9)	6.2 (-14.3)	1.5 (5.6)	0.5 (12.5)	0.5 (7.0)	0.5 (-2.8)	1.7 (17.0)	0.5 (-1.2)	0.5 (12.2)	0.6 (43.9)
Nuclear (TWh)	133.5 (-10.1)	145.9 (9.3)	37.3 (34.0)	12.3 (24.7)	11.0 (25.5)	14.0 (51.8)	39.1 (4.6)	11.9 (-2.9)	12.7 (15.0)	14.5 (3.1)
Others (Mtoe)	17.1 (8.0)	17.9 (4.7)	4.5 (7.5)	1.6 (8.3)	1.4 (2.5)	1.6 (11.5)	4.6 (3.3)	1.5 (-5.3)	1.5 (9.9)	1.7 (6.2)
<b>TPES (Mtoe)</b>	<b>307.5 (1.8)</b>	<b>303.4 (-1.3)</b>	<b>80.3 (-0.9)</b>	<b>29.2 (-0.8)</b>	<b>25.2 (-2.3)</b>	<b>25.8 (0.3)</b>	<b>76.5 (-4.7)</b>	<b>27.2 (-7.0)</b>	<b>24.8 (-1.6)</b>	<b>24.5 (-5.2)</b>
- Non-energy oil excluded	247.1 (2.6)	244.0 (-1.2)	65.5 (-0.8)	24.0 (-0.8)	20.5 (-2.5)	21.0 (0.9)	61.8 (-5.6)	21.9 (-8.6)	20.1 (-2.0)	19.8 (-5.9)
- Non-energy oil&coal excluded	222.9 (3.5)	219.7 (-1.5)	59.5 (-1.1)	22.0 (-0.7)	18.6 (-3.1)	19.0 (0.5)	55.9 (-6.1)	19.9 (-9.4)	18.2 (-2.1)	17.8 (-6.3)

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

## Share of TPES by Sources

(unit: %)

	2018	2019p					2020p			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Coal	28.2	27.0	25.9	26.0	26.9	24.8	23.4	24.2	23.3	22.7
- Coking coal excluded	20.3	19.0	18.4	19.0	19.3	16.9	15.7	16.8	15.6	14.4
Oil	38.5	38.7	37.1	36.9	36.8	37.8	36.8	37.2	36.5	36.5
- non-energy oil excluded	18.9	19.2	18.8	19.0	18.1	19.2	17.6	17.9	17.5	17.4
LNG	18.0	17.6	21.1	22.5	21.2	19.3	22.4	23.4	22.8	20.8
Hydro	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6
Nuclear	9.2	10.2	9.9	8.9	9.3	11.6	10.9	9.3	10.9	12.6
Others	5.6	5.9	5.6	5.3	5.4	6.1	6.1	5.4	6.1	6.8
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			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Industry	142.9 (0.7)	142.7 (-0.1)	35.7 (1.0)	12.5 (0.3)	11.4 (0.7)	11.8 (2.0)	35.3 (-1.0)	12.5 (-0.2)	11.2 (-1.5)	11.7 (-1.5)
Transport	43.0 (0.4)	42.6 (-0.9)	10.7 (3.4)	3.8 (6.8)	3.2 (2.7)	3.6 (0.8)	9.2 (-13.8)	3.2 (-15.6)	3.1 (-4.8)	2.9 (-20.0)
Residential · commercial	41.3 (3.7)	40.5 (-2.2)	14.3 (-5.2)	5.6 (-2.8)	4.8 (-9.8)	3.9 (-2.7)	13.7 (-4.3)	5.1 (-8.8)	4.7 (-3.4)	3.9 (1.0)
Public	5.6 (2.0)	5.5 (-1.2)	1.5 (-6.0)	0.6 (-0.6)	0.5 (-11.9)	0.5 (-5.8)	1.5 (-1.8)	0.5 (-5.5)	0.5 (2.8)	0.5 (-1.8)
<b>TFC</b>	<b>232.7</b> (1.2)	<b>231.2</b> (-0.6)	<b>62.2</b> (-0.3)	<b>22.4</b> (0.5)	<b>19.9</b> (-2.1)	<b>19.8</b> (0.6)	<b>59.7</b> (-4.0)	<b>21.3</b> (-5.1)	<b>19.4</b> (-2.4)	<b>18.9</b> (-4.4)
Coal (Mton)	49.2 (-2.3)	48.2 (-2.1)	12.1 (1.6)	4.0 (-4.5)	4.0 (5.4)	4.1 (4.4)	11.4 (-6.0)	4.0 (1.8)	3.5 (-13.3)	3.9 (-6.4)
Oil (Mbbbl)	920.0 (-0.7)	920.3 (0.0)	231.6 (0.4)	83.9 (2.6)	72.5 (-0.6)	75.2 (-1.1)	222.1 (-4.1)	80.0 (-4.6)	71.5 (-1.5)	70.7 (-6.0)
Electricity (TWh)	526.1 (3.6)	520.5 (-1.1)	136.1 (-1.4)	48.6 (0.6)	44.4 (-5.1)	43.1 (0.4)	133.7 (-1.8)	46.3 (-4.8)	44.5 (0.3)	42.9 (-0.5)
City gas (Bm³)	24.3 (7.4)	23.3 (-4.1)	8.8 (-6.2)	3.4 (-4.6)	2.9 (-10.8)	2.5 (-2.6)	8.3 (-5.1)	3.1 (-8.9)	2.8 (-2.5)	2.4 (-3.0)
Heat · others (1 000 toe)	11.8 (6.4)	11.9 (0.9)	3.6 (1.2)	1.3 (0.9)	1.1 (-3.6)	1.1 (7.0)	3.5 (-2.5)	1.3 (-6.1)	1.2 (1.3)	1.1 (-2.2)

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			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Industry	61.4	61.7	57.4	55.7	57.0	59.8	59.2	58.6	57.6	61.6
Transport	18.5	18.4	17.1	16.9	16.3	18.3	15.4	15.0	15.9	15.3
Residential · commercial	17.8	17.5	23.0	24.8	24.2	19.6	22.9	23.9	24.0	20.7
Public	2.4	2.4	2.5	2.6	2.5	2.3	2.5	2.6	2.6	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	13.9	13.8	12.8	11.8	13.1	13.8	12.7	12.6	12.0	13.6
Oil	50.2	50.4	47.3	47.4	46.2	48.2	46.8	47.0	46.4	46.9
Electricity	19.4	19.4	18.8	18.6	19.2	18.7	19.3	18.7	19.7	19.5
City gas	11.4	11.3	15.3	16.3	15.8	13.7	15.4	15.9	16.0	14.3
Heat · others	5.1	5.1	5.8	5.9	5.7	5.6	5.8	5.9	6.0	5.7

Note: p means provisional

Source: Monthly Energy Statistics

## Statistics on Energy Production Facilities

	2017	2018	2019	2020p			M1	M2	M3
				M1	M2	M3			
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	125.3 (5.2)	118.9 (2.1)	119.4 (2.5)	119.8 (2.6)	125.4 (5.4)	125.9 (5.5)	125.9 (5.1)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	23.3 (6.4)	21.9 (-3.0)	21.9 (-3.0)	21.9 (-3.0)	23.3 (6.4)	23.3 (6.4)	23.3 (6.4)
Bituminous coal	36.1 (16.8)	36.4 (0.7)	36.4 (0.1)	36.5 (1.0)	36.5 (1.0)	36.5 (1.0)	36.5 (-0.0)	36.5 (-0.0)	36.5 (-0.0)
Gas	37.9 -	37.9 (-0.0)	39.6 (4.5)	37.9 (1.5)	37.9 (1.5)	37.9 (1.5)	41.2 (8.5)	41.2 (8.5)	41.2 (8.5)
Refinery capacity (mil BPSD)	3.1 (1.3)	3.2 (3.2)	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -	3.2 -

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

Source: The monthly report on major electric power statistics

## Statistics on Energy Consumption

	2017	2018	2019	2020p			M1	M2	M3
				M1	M2	M3			
The number of household demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.7 (2.8)	19.3 (3.3)	19.3 (3.0)	19.3 (3.0)	19.7 (2.3)	19.8 (2.4)	19.8 (2.4)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.7 (2.0)	23.3 (3.0)	23.3 (2.9)	23.3 (2.8)	23.7 (2.0)	23.7 (1.9)	23.8 (2.0)
- gasoline	10.4 (2.7)	10.6 (2.5)	11.0 (3.1)	10.7 (2.5)	10.7 (2.4)	10.7 (2.4)	11.0 (3.1)	11.0 (3.1)	11.0 (3.3)
- diesel	9.6 (4.4)	9.9 (3.7)	10.0 (0.3)	10.0 (3.7)	10.0 (3.6)	10.0 (3.2)	10.0 (0.0)	10.0 (-0.1)	10.0 (-0.1)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-3.2)	2.0 (-1.1)	2.0 (-1.0)	2.0 (-0.7)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.5 (26.1)	0.4 (30.7)	0.4 (30.3)	0.4 (29.5)	0.5 (25.1)	0.5 (24.3)	0.5 (24.2)

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

Source: Monthly Energy Statistics

# KEEI

MONTHLY **KOREA ENERGY TRENDS** (2020, NO.99)



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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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