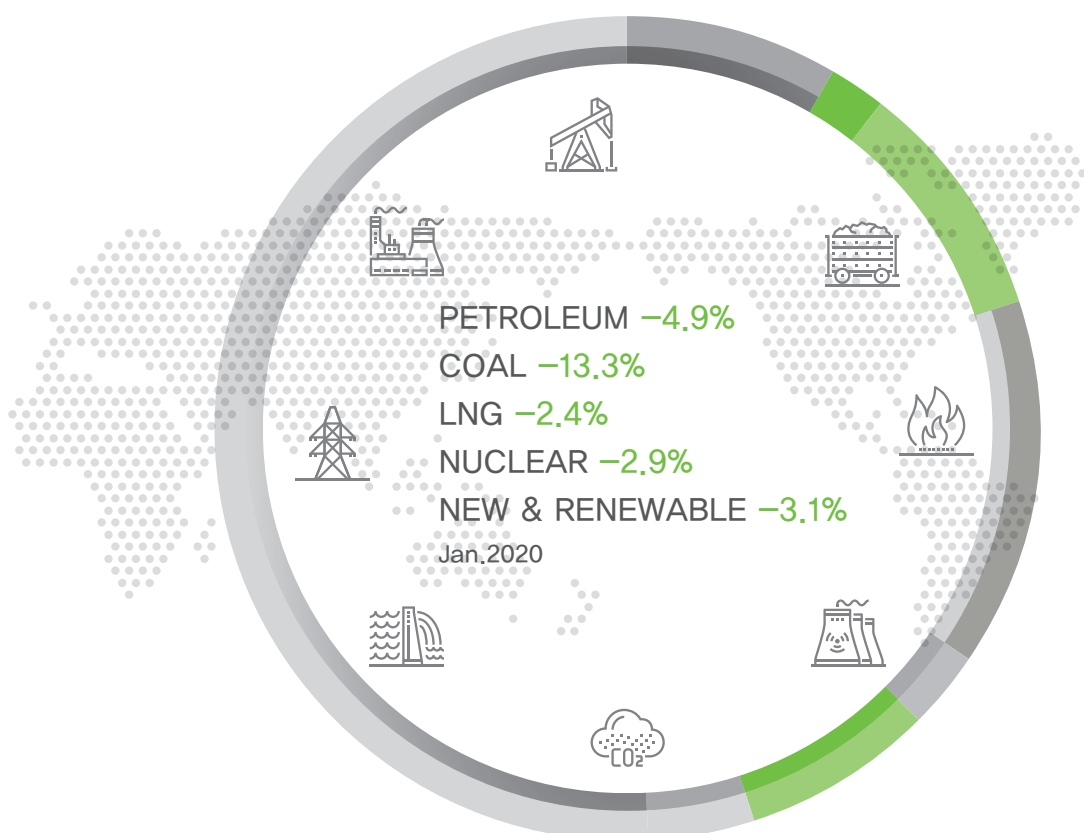


# KEEI

## MONTHLY KOREA ENERGY TRENDS

2020 / 04  
KOREA ENERGY ECONOMICS INSTITUTE



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## 1. The Economy and the Industry

- **The mining & manufacturing production index fell by 2.6% year-on-year in January due to reduced output in major industries except the semiconductor sector.**
  - The semiconductor production index continued its rapid growth, posting a year-on-year increase of 39.6%, even though its export volume grew at slower pace (1.3%), and its inventory index also rose by 11.9%.
  - The production index of basic chemical materials dropped by 0.9% year-on-year due to reduced output of intermediary materials and three major petrochemical products(synthetic resin, synthetic material, synthetic rubber), although the basic petrochemicals production increased following the construction of a new naphtha cracking center (LG Chemical, 230,000 tons, 2019.4).
  - The iron & steel production index fell by 8.7% year-on-year due to the sluggish construction and automobile businesses, which are the main sources of demand, along with decreased export demand.
  - The production index of automobiles went down by 20.0% from the same month last year, as the number of working days declined due to the Lunar New Year holiday and shutdown of some auto factories amid labor strikes. The number of automobiles produced and exported also fell by 29.0% and 28.1% respectively on a year-on-year basis.
- **The service production index grew by mere 0.8%, as the index declined in the wholesale & retail and restaurant & accommodation sectors.**
  - The service production index grew more slowly, as the index declined in the wholesale & retail and restaurant & accommodation sectors (-2.0%, -3.0%) and grew at slower pace in the information & communications and health & social welfare sectors (3.1%, 6.7%).

► **Major economic and industrial indicators**

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
GDP (trillion won)	1 760.8 (3.2)	1 807.7 (2.7)	- -	1 844.5 (2.0)	- -	486.3 (2.3)	- -
Total export (\$billion, customs clearance basis)	573.7 (15.8)	604.9 (5.4)	46.2 (-6.2)	539.9 (-10.7)	44.0 (-14.5)	45.7 (-5.3)	43.1 (-6.6)
Industrial production index (2015=100)	104.8 (2.5)	106.4 (1.5)	105.2 (-0.9)	106.3 (-0.0)	111.1 (1.3)	114.8 (6.1)	102.5 (-2.6)
Semi-conductors	138.9 (10.8)	168.4 (21.2)	148.4 (7.0)	188.1 (11.7)	229.3 (32.1)	232.1 (35.3)	207.1 (39.6)
Basic compound	110.4 (5.6)	110.4 (0.1)	114.2 (-2.1)	107.5 (-2.6)	101.9 (0.2)	113.4 (2.7)	113.2 (-0.9)
Steel	103.4 (1.9)	100.5 (-2.7)	103.9 (-2.1)	98.3 (-2.2)	97.2 (-3.8)	98.1 (-0.4)	94.9 (-8.7)
Cars	95.1 (-2.6)	93.9 (-1.2)	96.6 (8.4)	93.1 (-0.9)	94.9 (-11.3)	94.3 (-4.9)	77.3 (-20.0)
Service production index (2015=100)	104.5 (1.9)	106.9 (2.2)	105.8 (2.5)	108.4 (1.4)	110.3 (2.4)	118.8 (2.6)	106.6 (0.8)
Wholesale & Retail	103.2 (0.7)	105.0 (1.8)	105.2 (3.2)	104.6 (-0.4)	108.7 (-0.3)	109.7 (0.1)	103.1 (-2.0)
Restaurant & Accommodation	100.4 (-1.9)	98.5 (-1.9)	96.9 (1.4)	97.5 (-1.0)	97.3 (0.2)	109.9 (0.9)	94.8 (-2.2)

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

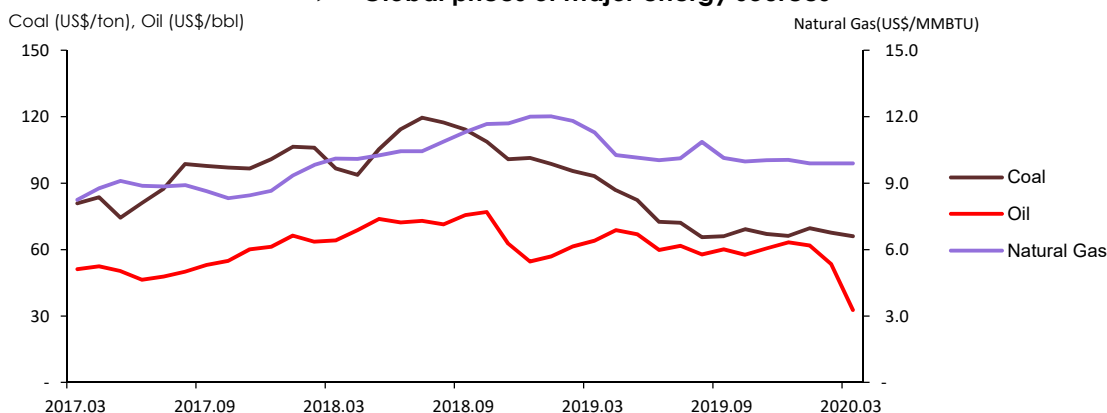
- **Global oil price plunged by 38.9% in March from the previous month, which is attributed to weak demand amid the COVID-19 pandemic, disagreement on production cuts and announcement of a planned increase in oil production.**
  - Global oil price decreased rapidly with the expectation of a sharp drop in petroleum demand caused by the global COVID-19 spread, and as the OPEC+ countries failed to reach an agreement on oil production cuts at the ministerial meeting, which was followed by Saudi Arabia and Russia's decisions on increasing oil production.
  - The price of Australian coal was down 2.3% (in March) from the previous month, which was affected by the global oil price decline and a lack of coal demand in the midst of the coronavirus spread. Japan's natural gas import price remained flat despite the sharp drop in global oil price.

#### ► Global energy prices

	2018	2019			2020			
		M1	M2	M3	M1	M2	M3	
Crude oil (US\$/bbl)	68.6 (29.5)	61.6 (-10.2)	57.0 (-14.1)	61.3 (-3.5)	64.0 (-0.0)	61.8 (8.6)	53.4 (-12.9)	32.6 (-49.1)
Natural gas (US\$/MMBTU)	10.7 (24.0)	10.6 (-1.1)	12.0 (28.5)	11.8 (20.2)	11.3 (11.7)	9.9 (-17.7)	9.9 (-16.3)	9.9 (-12.5)
Coal (US\$/ton)	107.0 (20.9)	77.9 (-27.3)	98.6 (-7.4)	95.4 (-9.9)	93.1 (-3.7)	69.7 (-29.3)	67.6 (-29.1)	66.1 (-29.1)

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

#### ► Global prices of major energy sources



## Domestic energy prices

- **Gasoline and diesel prices fell in March from a month ago reflecting the global oil price trend amid the COVID-19 pandemic.**
  - Gasoline and diesel prices at gas stations dropped by 4.9% and 6.5% respectively in March than the previous month, as the global oil price fell sharply due to lower demand, caused by the outbreak of COVID-19 and disagreement on oil production cuts.
  - The price of Bunker-c oil rose by 12.9% in February from a month earlier, as the demand for low sulfur fuel oil increased as a result of the International Maritime Organization's environmental regulations.
- **Propane and butane prices remained at the previous month's level in March despite a drop in global prices, considering global price trend that wasn't fully reflected in domestic prices previously.**
  - Although Saudi Aramco's global propane and butane prices declined in February (-10.6%, -7.6%), the domestic prices were fixed in March, considering that the sharp increase in global prices (28.4%, 29.7%) in January was not fully reflected in domestic prices.

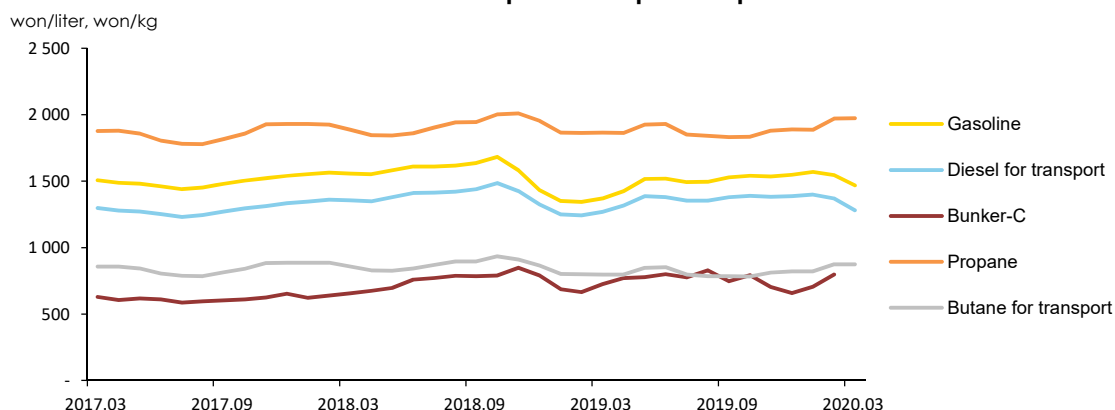
### ► Domestic petroleum product prices

	2018	2019				2020		
			M1	M2	M3		M1	M2
Gasoline (won/liter)	1 581.4 (6.0)	1 472.3 (-6.9)	1 351.2 (-12.9)	1 343.8 (-14.1)	1 369.5 (-12.1)	1 568.4 (16.1)	1 545.3 (15.0)	1 469.1 (7.3)
Diesel for transport (won/liter)	1 392.0 (8.5)	1 340.4 (-3.7)	1 249.4 (-7.1)	1 242.9 (-8.6)	1 269.2 (-6.3)	1 398.4 (11.9)	1 369.9 (10.2)	1 280.8 (0.9)
Bunker-C (won/liter)	735.2 (18.7)	744.2 (1.2)	685.9 (10.3)	665.8 (4.3)	724.0 (10.3)	706.5 (3.0)	797.7 (19.8)	-
Propane (won/kg)	1 920.5 (4.7)	1 869.6 (-2.7)	1 864.4 (-3.4)	1 863.3 (-3.3)	1 864.7 (-1.2)	1 887.6 (1.2)	1 971.5 (5.8)	1 973.2 (5.8)
Butane for transport (won/liter)	874.6 (5.8)	806.2 (-7.8)	801.3 (-9.5)	798.7 (-9.9)	797.5 (-7.0)	820.8 (2.4)	874.5 (9.5)	874.3 (9.6)

Note: Gasoline, diesel and butane prices are based on charging station prices, 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



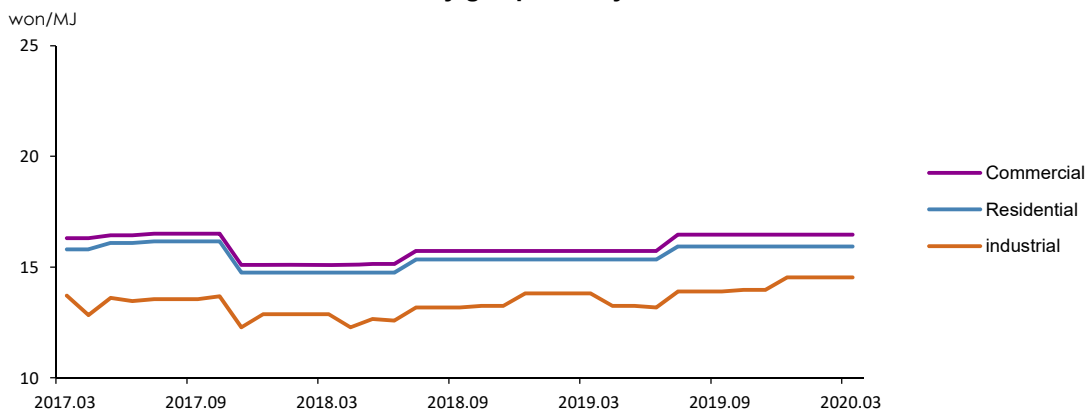
☐ **City gas price has been flat for the past nine months until April, since it was raised in July 2019.**

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

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

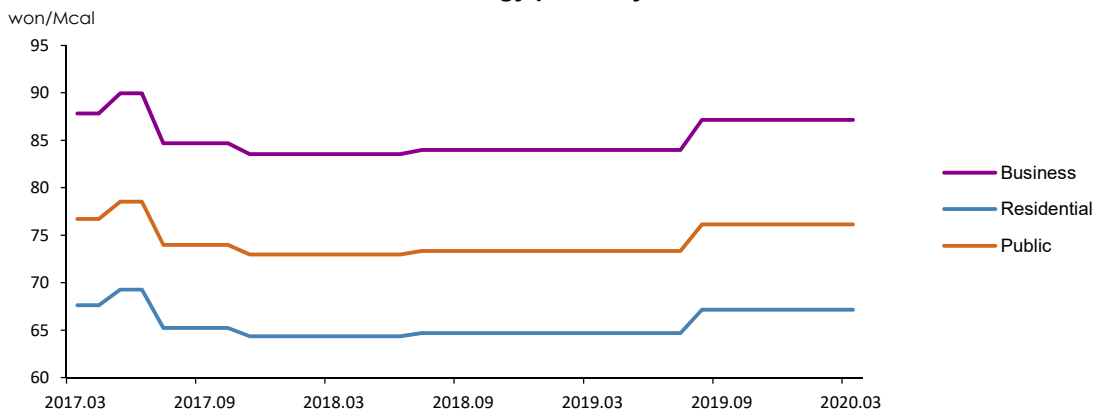
- Heat energy price was raised in August 2019 for the first time in 13 months (since July 2018), reflecting the city gas price increase in July and the energy tax reform.

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



Note: Instead of volume(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



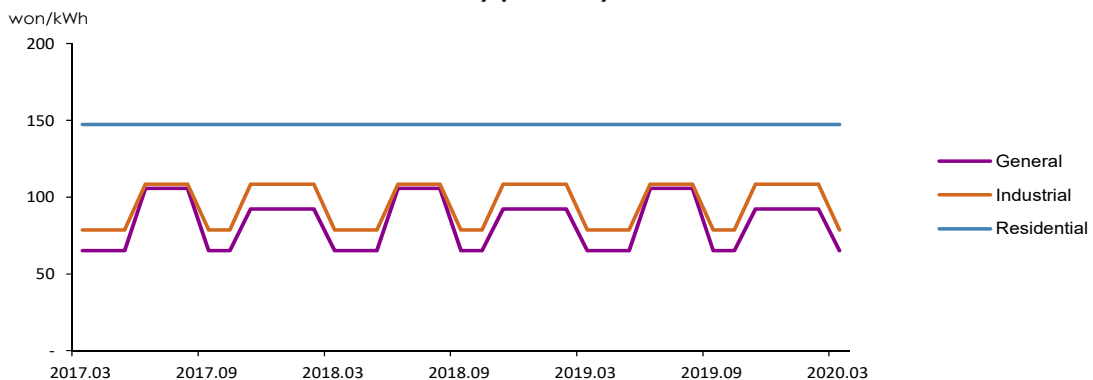
□ **Electricity prices<sup>1</sup> for general and industrial use declined in March following the price adjustment to the spring/autumn season, while the price for residential use remained at the previous month's level.**

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

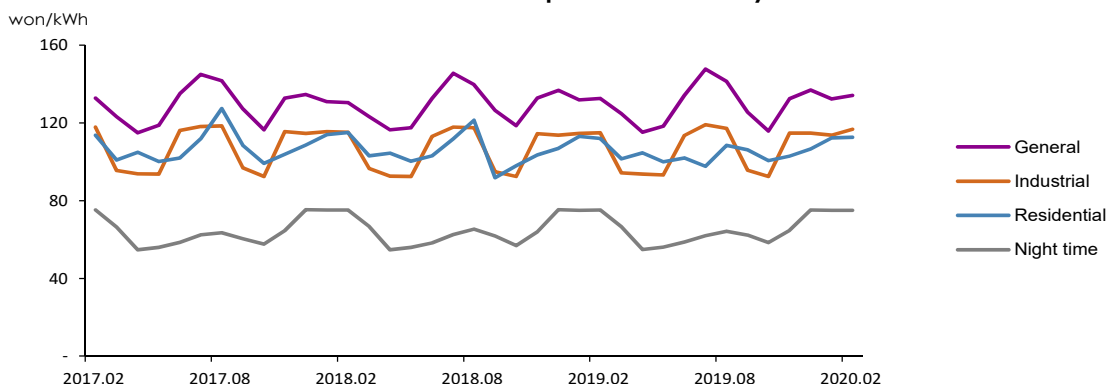
□ **The unit sales price of electricity for residential, industrial and general use all increased in February from the previous month.**

- The unit sales price of residential electricity was up 0.2% despite increased temperatures, as people stayed home for longer due to the spreading COVID-19 virus.
- In the case of industrial and general use, it rose by 2.6% and 1.4% respectively, as electricity use decreased during off-peak hours partly due to reduced working 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 decreased by 1.7% year-on-year in January, led by bituminous coal, although the imports of petroleum products and LNG increased.**
  - The import volume of petroleum products jumped up 30.4%, led by LPG and naphtha.
  - Coal-fired power generation was curbed during the winter months in order to reduce fine dust emissions, and it had an impact on the import volume of LNG and coal.
- **Renewable & other energy generation fell by 3.1%, as waste energy use decreased following some changes to the classification of renewable energy sources.**
  - Renewable energy generation, except waste energy that falls into the 'other energy' category, has been growing steadily.

#### ► Import and domestic production of energy

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
Import volume							
Crude oil (Mbbbl)	1 118.2 (3.7)	1 116.3 (-0.2)	93.1 (-6.7)	1 071.9 (-4.0)	93.1 (-2.3)	89.5 (-3.8)	92.7 (-0.4)
Petroleum product (Mbbbl)	314.5 (-6.0)	341.6 (8.6)	30.2 (9.2)	352.1 (3.1)	28.6 (0.1)	36.0 (12.2)	39.3 (30.4)
Bituminous coal (Mton)	131.5 (11.0)	131.5 (0.0)	12.9 (11.3)	132.7 (0.9)	11.1 (-5.1)	11.6 (11.9)	10.4 (-19.8)
Anthracite (Mton)	7.0 (-25.7)	8.1 (16.0)	0.5 (-15.6)	6.9 (-15.6)	0.4 (-53.2)	0.6 (-25.1)	0.7 (21.4)
LNG (Mton)	37.5 (12.2)	44.0 (17.3)	3.8 (-7.5)	40.8 (-7.4)	3.8 (-2.7)	4.8 (2.1)	4.1 (8.7)
Import volume (Mtoe)	339.7 (5.5)	354.5 (4.4)	32.0 (3.2)	349.1 (-1.5)	29.1 (-4.8)	32.5 (2.3)	31.5 (-1.7)
Import value (billion US\$, CIF)	109.5 (35.2)	146.0 (33.3)	11.2 (-4.3)	126.7 (-13.2)	10.4 (-23.9)	11.3 (-8.8)	12.2 (8.7)
Energy share of total import value (%)	22.9	27.3	24.8	25.2	25.6	25.9	28.5
Foreign energy dependence (%)*	93.9	93.6	94.1	93.4	93.7	94.1	93.7
Domestic production							
Hydropower (TWh)	7.0 (5.5)	7.3 (3.9)	0.5 (12.5)	6.2 (-14.3)	0.5 (-15.2)	0.5 (-16.7)	0.5 (-1.2)
Anthracite (Mton)	1.5 (-14.0)	1.2 (-19.2)	0.1 (-20.0)	1.1 (-9.5)	0.1 (1.0)	0.1 (15.4)	0.1 (-20.0)
Natural gas (Mton)	0.3 (120.5)	0.2 (-10.4)	0.0 (-75.7)	0.2 (-21.5)	0.0 (-30.1)	0.0 (-15.6)	0.0 (216.9)
Renewable energy (Mtoe)	15.8 (16.7)	17.1 (8.0)	1.6 (8.3)	17.9 (4.7)	1.4 (1.5)	1.5 (1.3)	1.5 (-3.1)

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

Source: Monthly Energy Statistics

## 4. Energy Consumption

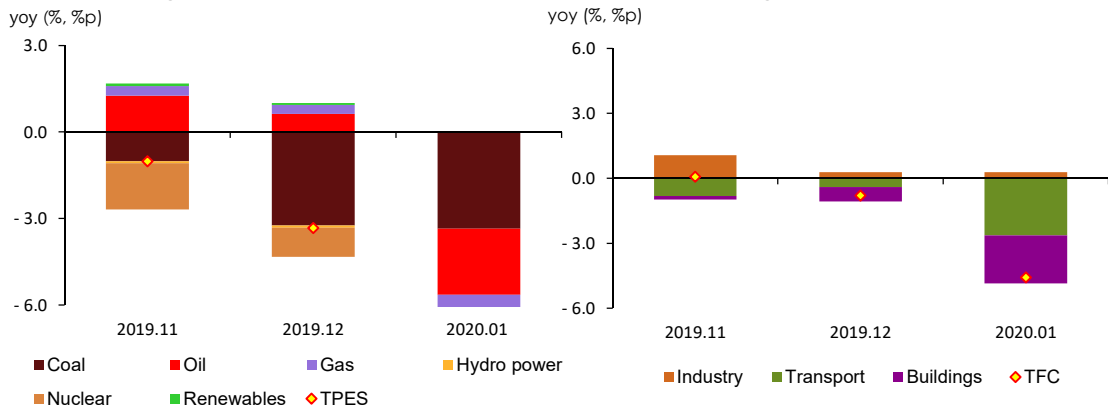
- **Total Primary Energy Supply (“TPES”) fell by 6.6% year-on-year in January, as the use of all energy sources declined including coal and petroleum.**
  - Coal use dropped by 13.3% year-on-year, as coal-fired generation plunged owing to the fine dust mitigation policy during the winter season, though bituminous coal use for steelmaking and industrial anthracite use slightly increased.
  - Petroleum use declined by 4.9% year-on-year despite steadily growing LPG use as petrochemical feedstock, as demand for transport fuel fell sharply partly due to the mandatory ‘alternate no-driving day’ scheme for public vehicles.
  - Natural gas use fell by 2.4%, as city gas use declined in the buildings sector, although gas use for power generation increased due to reduced coal-fired generation as a means of fine dust mitigation.
- **Total Final Consumption (“TFC”) decreased by 4.6% (in January) on a year-on-year basis, led by big drops in the transport and buildings sectors, though the industrial energy consumption increased.**
  - Transport energy use was down 15.6% year-on-year with the road transport sector leading the downward trend due to the high base effect of the same period last year when the temporary fuel tax cut boosted demand.
  - Energy use in buildings fell by 8.1%, as enduring warm weather reduced energy demand for heating, especially in the residential buildings.
  - Industrial energy use grew by 0.5% year-on-year owing to the increased LPG use as petrochemical feedstock.

### ► Energy consumption

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Total energy (Mtoe)</b>	<b>302.1</b>	<b>307.5</b>	<b>29.2</b>	<b>303.4</b>	<b>25.3</b>	<b>28.0</b>	<b>27.3</b>
	(2.8)	(1.8)	(-0.8)	(-1.3)	(-1.0)	(-3.3)	(-6.6)
- Non-energy oil&coal excluded	215.4	222.9	22.0	219.7	18.3	20.7	20.0
	(1.4)	(3.5)	(-0.7)	(-1.5)	(-2.9)	(-4.5)	(-8.9)
<b>Final energy (Mtoe)</b>	<b>230.0</b>	<b>232.7</b>	<b>22.4</b>	<b>231.2</b>	<b>19.4</b>	<b>21.6</b>	<b>21.4</b>
	(3.9)	(1.2)	(0.5)	(-0.6)	(0.1)	(-0.8)	(-4.6)

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

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



## 5. Coal

### □ Coal use fell by 13.3% year-on-year in January, led by a sharp drop in the power generation sector.

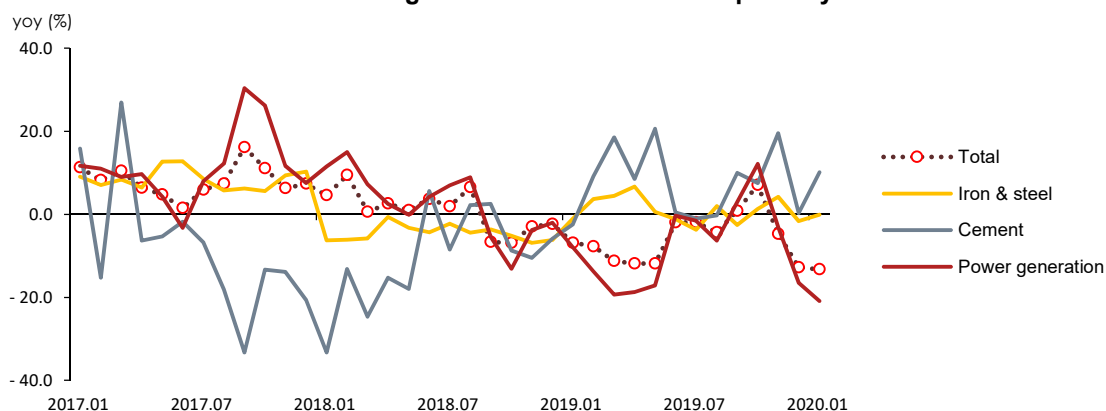
- As mild weather continues, electricity use dropped by 4.8% year-on-year in January, and accordingly, coal use fell by 20.8% in the power generation sector.
- Industrial coal use went up by 2.8% in January from the same month last year due to much increased use of anthracite and bituminous coal for cement production.

#### ► Coal consumption

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Coal (Mton)</b>	<b>139.8</b>	<b>141.0</b>	<b>12.4</b>	<b>133.0</b>	<b>10.9</b>	<b>10.9</b>	<b>10.7</b>
	(8.1)	(0.9)	(-6.9)	(-5.7)	(-4.7)	(-12.8)	(-13.3)
Industry	49.3	48.3	3.9	47.6	3.9	4.0	4.0
	(3.2)	(-2.0)	(-4.0)	(-1.6)	(-6.7)	(-5.1)	(2.8)
-Coking-coal	36.3	34.6	2.9	35.0	2.9	2.9	2.9
	(8.5)	(-4.6)	(-1.1)	(1.0)	(4.2)	(-1.7)	(-0.1)
Buildings	1.1	0.9	0.1	0.6	0.1	0.1	0.1
	(-14.0)	(-15.7)	(-21.0)	(-29.8)	(-22.0)	(-26.6)	(-3.2)
Power generation	89.4	91.8	8.4	84.8	6.8	6.8	6.6
	(11.3)	(2.6)	(-7.9)	(-7.6)	(-3.1)	(-16.5)	(-20.8)

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

#### ► The growth rate of coal consumption by use



## 6. Petroleum

□ **Petroleum use fell by 4.9% year-on-year in January, despite continuously growing industrial use, as it declined in all other sectors.**

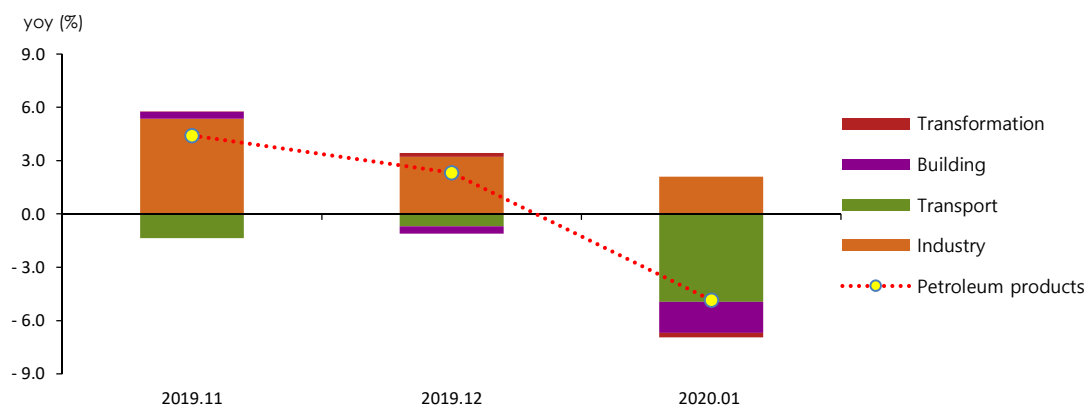
- Industrial petroleum use posted a year-on-year growth of 3.6%, as the use of energy oil increased including LPG, for which demand has been rising in the petrochemical sector.
- Transport petroleum use went down by 15.7% partly due to the high base effect (7.3%) of the same month last year.
- Petroleum use in buildings dropped by 19.9%, as the number of heating degree days fell by 14% in January amid ongoing warm weather.

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

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Petroleum (Mbbbl)</b>	<b>937.1</b>	<b>931.8</b>	<b>84.9</b>	<b>928.4</b>	<b>79.5</b>	<b>85.3</b>	<b>80.7</b>
	(1.7)	(-0.6)	(1.2)	(-0.4)	(4.4)	(2.3)	(-4.9)
Industry	567.0	564.1	49.6	567.2	48.4	51.9	51.4
	(4.5)	(-0.5)	(0.4)	(0.6)	(9.2)	(5.4)	(3.6)
-Naphtha	458.4	451.2	39.6	438.6	36.3	38.4	39.5
	(6.6)	(-1.6)	(-1.8)	(-2.8)	(3.5)	(-0.9)	(-0.2)
Transport	303.2	302.3	26.8	300.3	25.3	26.2	22.6
	(0.9)	(-0.3)	(7.3)	(-0.7)	(-3.9)	(-2.2)	(-15.7)
Buildings	56.4	53.7	7.4	52.8	5.2	6.2	5.9
	(0.3)	(-4.9)	(0.9)	(-1.7)	(6.4)	(-5.2)	(-19.9)
Power generation	10.5	11.7	1.0	8.1	0.5	1.0	0.8
	(-51.9)	(12.1)	(-53.0)	(-30.8)	(0.7)	(23.2)	(-22.6)

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 slid by 2.4% year-on-year in January due to decreased city gas demand, although the consumption increased in the power generation sector.**

- Gas use for power generation rose by 6.2% year-on-year as a result of decreased baseload (nuclear + coal) generation (-11.9%), while its use for city gas production continued the downward trend.

□ **City gas consumption was down 5.4% year-on-year in January despite growing industrial use, as the consumption fell more sharply in the buildings sector.**

- Industrial city gas use went up by 1.1% year-on-year, led by the primary metals and petrochemical sectors (37.9%, 8.9%), though it declined in the fabricated metals sector.
- City gas use in buildings was down 8.2% year-on-year amid the decreased number of heating degree days (-77.5degree days) and fewer working days (-2.5days), leading the downward trend in total city gas use.

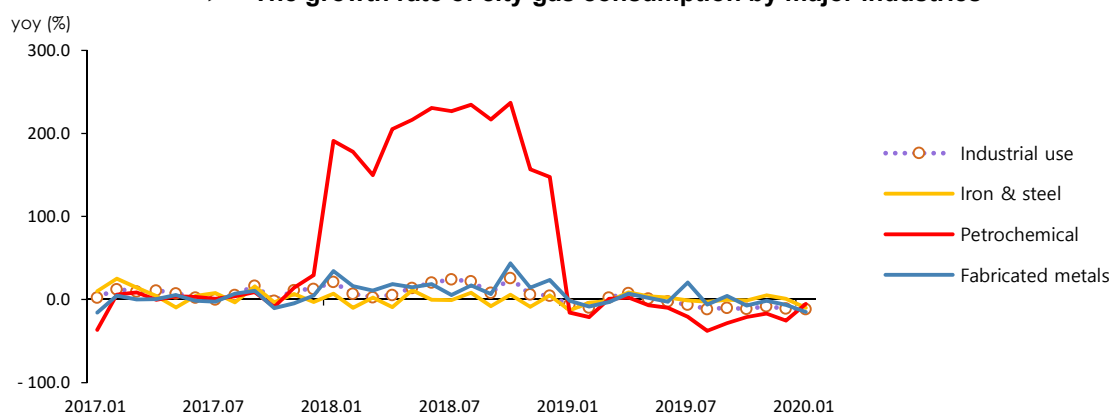
### ► Natural gas and city gas consumption

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>LNG (Mton)</b>	<b>36.4</b>	<b>42.3</b>	<b>5.0</b>	<b>40.9</b>	<b>3.7</b>	<b>5.0</b>	<b>4.9</b>
	(4.3)	(16.2)	(-6.2)	(-3.2)	(1.8)	(1.4)	(-2.4)
Power generation	15.6	18.9	1.8	18.4	1.6	2.0	1.9
	(0.6)	(21.5)	(-4.9)	(-2.7)	(10.9)	(16.3)	(6.2)
City gas production	18.4	19.8	2.8	18.8	1.8	2.5	2.5
	(5.8)	(7.7)	(-7.7)	(-5.0)	(-3.4)	(-8.6)	(-10.4)
<b>City gas (bm<sup>3</sup>)</b>	<b>23.4</b>	<b>25.7</b>	<b>3.5</b>	<b>25.4</b>	<b>2.2</b>	<b>3.1</b>	<b>3.4</b>
	(7.4)	(9.9)	(-2.1)	(-1.1)	(-5.2)	(-3.6)	(-5.4)
Industry	8.6	10.2	1.0	10.4	0.9	1.0	1.0
	(10.9)	(19.2)	(3.3)	(2.4)	(-4.8)	(-4.0)	(1.1)
Buildings	13.6	14.3	2.4	13.8	1.2	2.0	2.2
	(6.0)	(5.1)	(-4.2)	(-3.5)	(-5.6)	(-3.5)	(-8.2)

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

Source: Monthly Energy Statistics

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



## 8. Electricity

□ **Electricity consumption fell by 4.8% year-on-year in January, as the consumption declined in both of the industrial and buildings sectors.**

- Industrial electricity consumption was down 6.3% on a year-on-year basis, as the consumption continued to plunge in the primary metals sector amid generally weak production in the mining & manufacturing sector due to fewer working days.
- Electricity use in buildings decreased by 3.1% year-on-year due to weather conditions and fewer working days.

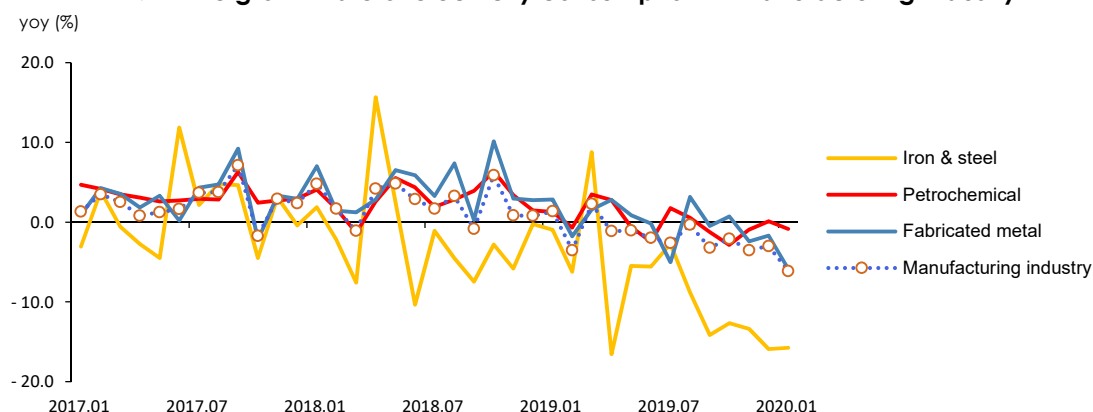
### ► Electricity consumption by end-use sectors

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Electricity (TWh)</b>	<b>507.7</b>	<b>526.1</b>	<b>48.6</b>	<b>520.5</b>	<b>41.1</b>	<b>44.7</b>	<b>46.3</b>
	(2.2)	(3.6)	(0.6)	(-1.1)	(-1.9)	(-1.3)	(-4.8)
Industry	276.7	283.7	25.1	279.8	22.8	23.6	23.5
	(2.5)	(2.5)	(1.5)	(-1.4)	(-3.6)	(-3.1)	(-6.3)
Transport	2.9	3.0	0.3	2.9	0.2	0.2	0.2
	(6.5)	(3.6)	(-1.0)	(-2.0)	(-6.6)	(-7.8)	(-9.0)
Buildings	228.2	239.5	23.3	237.8	18.1	20.9	22.5
	(1.7)	(4.9)	(-0.4)	(-0.7)	(0.4)	(1.0)	(-3.1)
Residential	66.5	70.7	6.2	70.5	5.5	5.8	6.3
	(0.5)	(6.3)	(1.8)	(-0.3)	(1.4)	(1.5)	(0.2)
Commercial	130.4	136.4	13.9	135.2	10.1	12.1	13.2
	(2.3)	(4.6)	(-1.2)	(-0.9)	(-0.3)	(0.9)	(-4.6)

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

Source: Monthly Energy Statistics

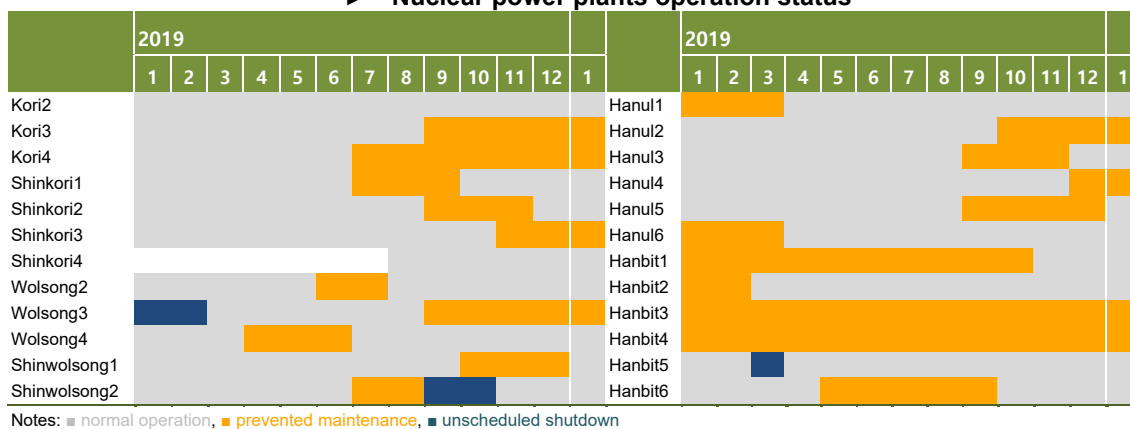
### ► The growth rate of electricity consumption in manufacturing industry



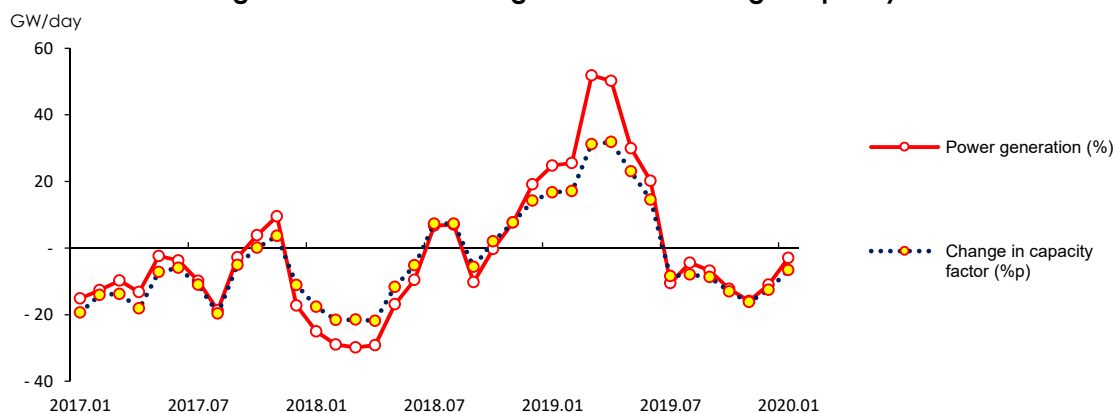
## 9. Nuclear

- The total nuclear generation dropped by 2.9% year-on-year in January with nuclear plants running at lower capacity factors owing to the increased preventive maintenance.
  - The average capacity factor at nuclear power plants was down 6.6%p year-on-year to 68.8%, due to the increased number of reactors that were offline for maintenance and the high base effect of the same period last year (16.8%).
  - Nuclear energy's share of the total generation was up 0.8%p year-on-year to 24.0%.

► Nuclear power plants operation status



► The growth rate of nuclear generation & average capacity factor





## 10. Heat and Renewable energy

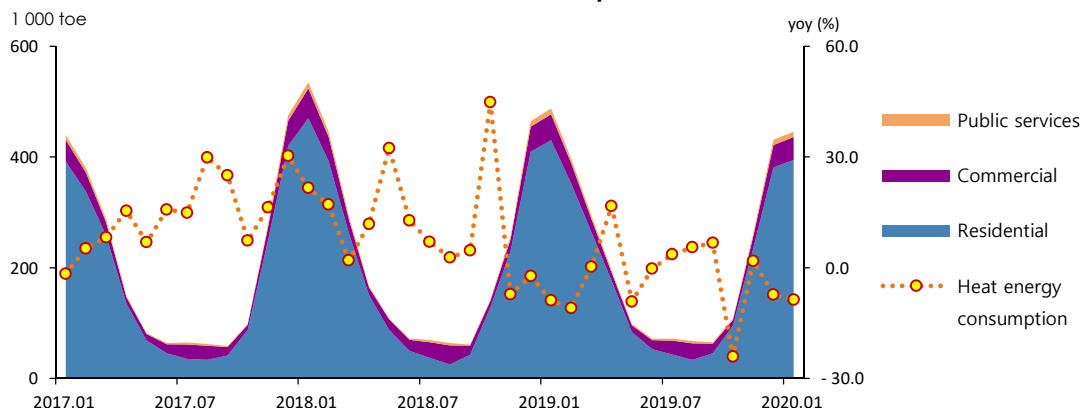
### □ Heat energy use declined by 8.6% year-on-year in January because of unseasonably warm weather.

- Heat energy use declined in the residential, commercial and public sectors all together amid decreased number of heating degree days (-77.5), as the average temperature in January stood at 2.8°C, the highest since 1973 when the nationwide weather observation started.

### □ The total renewable generation fell by over 20% despite the restart of the IGCC plant, as a result of some changes to the classification of renewable energy sources.

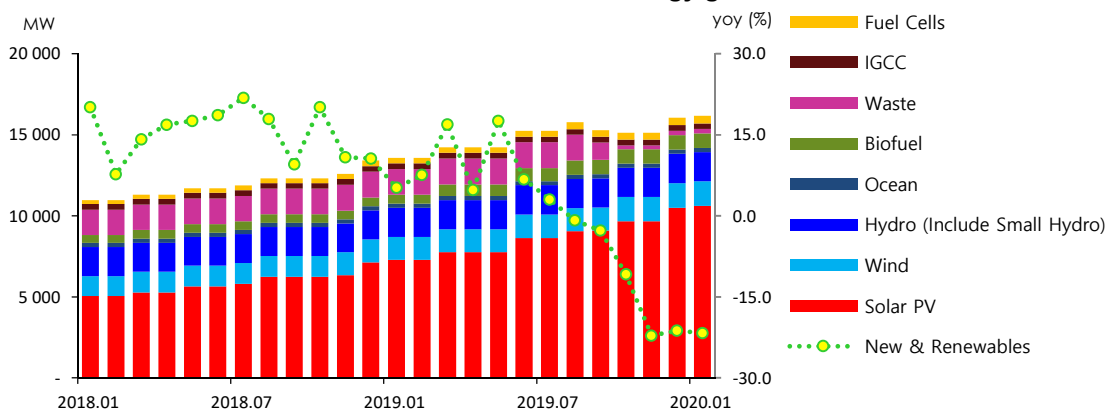
- Renewable generation has been down over 20% for three months in a row, even though the power generation grew rapidly with the restart of the IGCC plant, because non-renewable waste energy was excluded from the renewable category (2019.10), and accordingly, the total renewable installed capacity and power generation plunged.

#### ► 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 consumption was stagnant, posting just 0.5% year-on-year growth, which was attributed to the sluggish industrial activities.

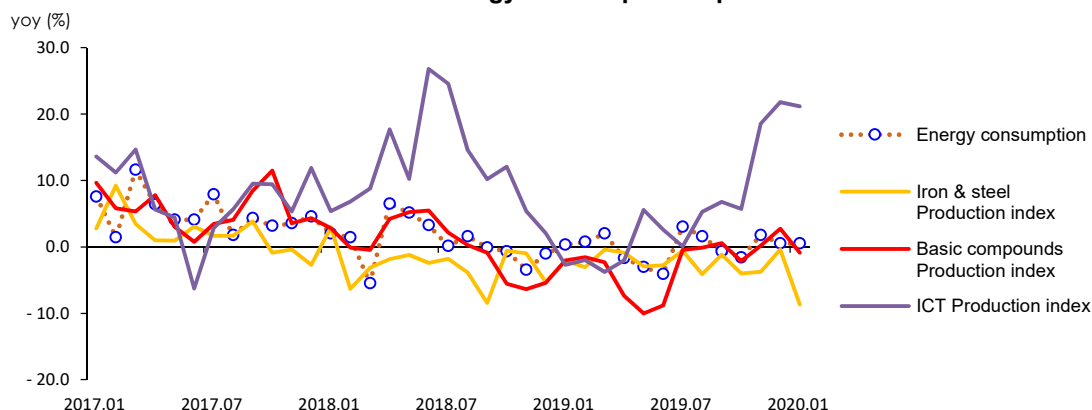
- The mining & manufacturing production fell by 2.6% year-on-year; almost all industries posted lower production figures, except the ICT sector including the semiconductor business.

### ► Industrial energy consumption

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Industry (Mtoe)</b>	<b>141.9</b>	<b>142.9</b>	<b>12.5</b>	<b>142.7</b>	<b>12.0</b>	<b>12.6</b>	<b>12.6</b>
	(5.0)	(0.7)	(0.3)	(-0.1)	(1.8)	(0.5)	(0.5)
Petrochemical	70.0	72.1	6.3	72.2	6.1	6.4	6.6
	(4.9)	(3.0)	(0.4)	(0.1)	(5.8)	(2.4)	(3.7)
- Naphtha	56.2	55.3	4.9	53.8	4.5	4.7	4.8
	(6.6)	(-1.6)	(-1.8)	(-2.8)	(3.5)	(-0.9)	(-0.2)
Iron & Steel	33.2	28.9	2.4	28.8	2.4	2.4	2.5
	(7.4)	(-13.0)	(-1.7)	(-0.0)	(2.6)	(-2.8)	(0.5)
-Coking coal	25.3	24.1	2.0	24.4	2.1	2.0	2.0
	(8.0)	(-4.6)	(-1.1)	(1.0)	(4.2)	(-1.7)	(-0.1)
Fabricated metal	10.8	11.4	1.1	11.4	0.9	1.0	1.0
	(1.9)	(5.9)	(2.6)	(-0.0)	(-2.4)	(-2.8)	(-8.6)
Share of feedstock (%)	60.9	59.1	57.8	58.5	58.5	57.6	57.7

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

### ► Industrial energy consumption & production index



## 12. Transport

□ **Transport energy use declined by 15.6% year-on-year in January, led by a sharp drop in the road transport sector due to base effect.**

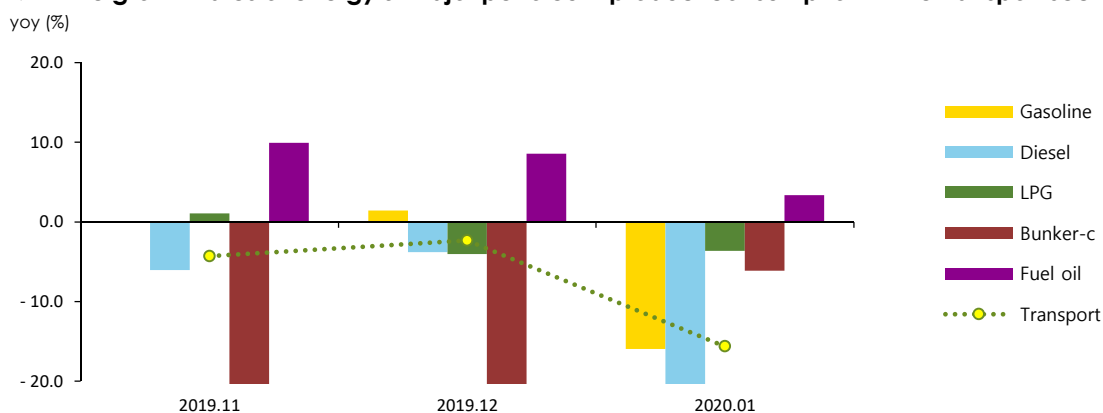
- Energy use for road transport was down 19.9% year-on-year owing to the base effect of the same month last year when energy use increased temporarily.
- Energy use grew by 4.5% and 3.4% year-on-year in the domestic navigation and aviation sectors without significant changes in the cargo volume and number of flights.

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

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Transport (Mtoe)</b>	<b>42.8</b>	<b>43.0</b>	<b>3.8</b>	<b>42.6</b>	<b>3.6</b>	<b>3.7</b>	<b>3.2</b>
	(1.2)	(0.4)	(6.8)	(-0.9)	(-4.3)	(-2.3)	(-15.6)
Road	34.1	34.4	3.1	34.7	2.9	3.0	2.5
	(0.5)	(0.9)	(11.4)	(0.9)	(-4.0)	(-2.7)	(-19.9)
Navigation	3.5	3.2	0.3	2.6	0.2	0.2	0.3
	(5.8)	(-9.9)	(-16.5)	(-19.6)	(-28.0)	(-14.6)	(4.5)
Aviation	4.8	5.0	0.4	4.9	0.4	0.5	0.4
	(3.2)	(4.4)	(-5.2)	(-1.7)	(9.9)	(8.6)	(3.4)
Rail	0.3	0.4	0.0	0.3	0.0	0.0	0.0
	(2.5)	(3.6)	(0.2)	(-2.9)	(-7.9)	(-8.4)	(-12.6)

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

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



## 13. Buildings

□ **Energy use in buildings dropped by 8.1% year-on-year in January, as energy demand for heating plunged amid unusually warm weather.**

- The number of heating degree days dropped sharply amid warm weather, and accordingly, the use of energy sources for heating such as petroleum, city gas and heat energy fell by 19.9%, 8.2% and 8.6% respectively, leading the downward spiral in buildings' energy use.
- Residential buildings led the downward trend in buildings' energy use, as the use of all heating energy declined (coal -3.2%, petroleum -24.9%, city gas -7.3%, heat energy -8.3%), except electricity (0.2%).
- Energy use in commercial & public buildings started to decline after some growth in the previous month, as the use of all energy sources decreased except renewable energy (petroleum -14.2%, city gas -11.8%, electricity -4.3%, heat energy -11.3%).

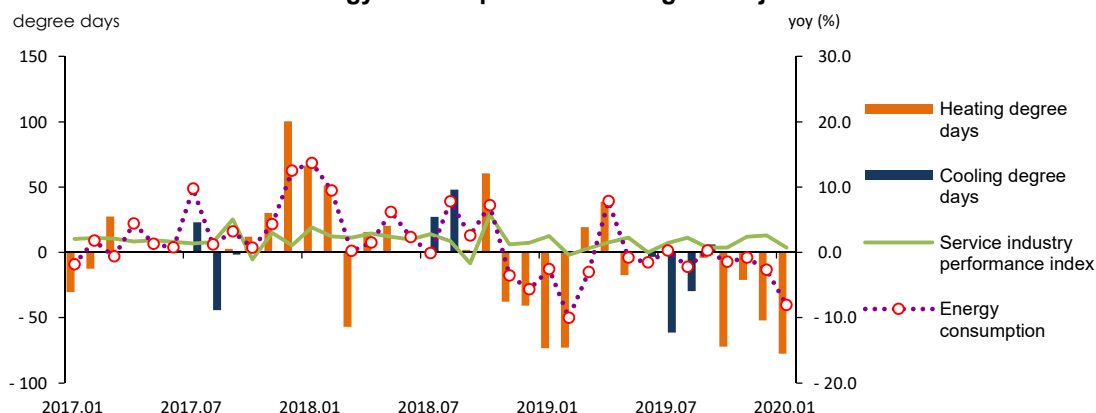
### ► Energy consumption in buildings

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Buildings (Mtoe)</b>	<b>45.3</b>	<b>46.9</b>	<b>6.2</b>	<b>46.0</b>	<b>3.9</b>	<b>5.2</b>	<b>5.7</b>
	(3.1)	(3.5)	(-2.6)	(-2.0)	(-0.8)	(-2.7)	(-8.1)
Residential	22.5	23.5	3.6	22.6	2.0	3.0	3.3
	(3.7)	(4.4)	(-3.3)	(-3.6)	(-3.4)	(-4.9)	(-8.5)
Commercial	17.4	17.9	2.0	17.8	1.4	1.7	1.9
	(1.9)	(2.9)	(-1.7)	(-0.3)	(2.2)	(-0.1)	(-7.9)
Public+others	5.5	5.6	0.6	5.5	0.5	0.5	0.5
	(4.1)	(2.0)	(-0.6)	(-1.2)	(2.2)	(1.7)	(-6.0)
Heating degree days	2 517.1	2 597.8	548.4	2 342.9	277.2	470.2	470.9
	(5.5)	(3.2)	(-11.8)	(-9.8)	(-7.0)	(-10.0)	(-14.1)
Cooling degree days	132.7	209.0	-	120.4	-	-	-
	(-13.9)	(57.5)	-	(-42.4)	-	-	-

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

Source: Monthly Energy Statistics

### ► Energy consumption in buildings & major indicators



## 14. Transformation

- The energy input to power stations was down 9.6% year-on-year in January, because the power generation declined and the share of energy sources in energy mix changed.
  - The total power generation declined by 6.3% year-on-year partly due to decreased electricity use (-4.8%) especially in the industrial sector.
  - The energy input to power stations fell more sharply (-9.6%) compared to the pace of decline in the total power generation, which is because less efficient baseload generation plunged while highly efficient gas generation increased.

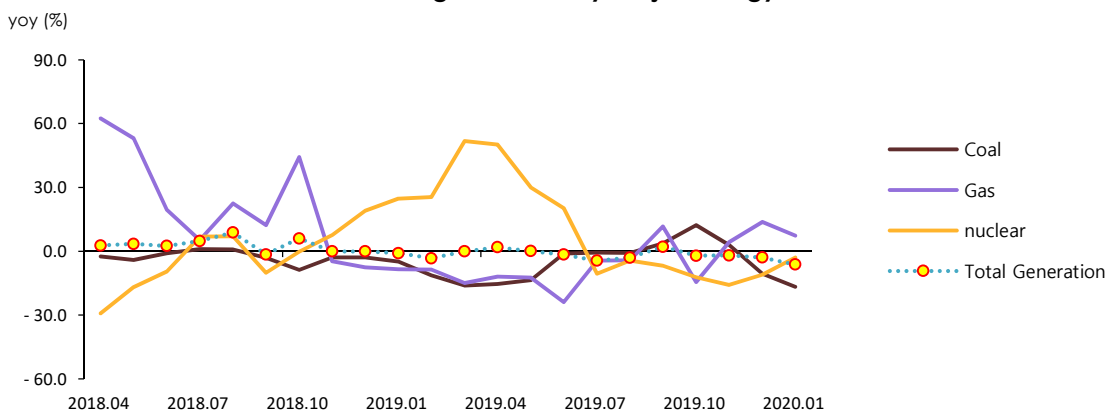
### ► Energy consumption in the power generation sector

	2017	2018p	2019p				2020p
			M1		M11	M12	M1
<b>Input (Mtoe)</b>	<b>115.1</b>	<b>118.7</b>	<b>10.9</b>	<b>10.9</b>	<b>9.2</b>	<b>10.0</b>	<b>9.9</b>
	(0.3)	(3.1)	(-1.3)	(-1.3)	(-3.7)	(-6.6)	(-9.6)
Coal	52.8	54.2	4.9	4.9	4.0	4.0	3.9
	(7.4)	(2.7)	(-8.1)	(-8.1)	(-3.0)	(-16.6)	(-20.9)
Oil	1.2	1.3	0.1	0.1	0.0	0.1	0.1
	(-59.5)	(7.5)	(-64.2)	(-64.2)	(-22.1)	(38.1)	(-41.3)
Gas	20.7	25.1	2.4	2.4	2.1	2.7	2.6
	(0.9)	(21.4)	(-5.1)	(-5.1)	(10.5)	(15.9)	(5.7)
Nuclear	31.6	28.4	2.6	2.6	2.2	2.4	2.5
	(-7.5)	(-10.1)	(24.7)	(24.7)	(-15.9)	(-11.0)	(-2.9)
Hydro/other renewables	8.7	9.6	0.8	0.8	0.8	0.8	0.8
	(11.5)	(9.9)	(9.7)	(9.7)	(-0.5)	(-1.6)	(-5.3)

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 economic statistics & indicators

	2017	2018				2019			
			2Q	3Q	4Q		2Q	3Q	4Q
GDP (trillion won)	1 760.8 (3.2)	1 807.7 (2.7)	450.8 (2.9)	453.0 (2.1)	475.2 (2.9)	1 844.5 (2.0)	460.1 (2.0)	462.3 (2.0)	486.3 (2.3)
Private consumption	848.6 (2.8)	872.3 (2.8)	212.2 (2.9)	217.8 (2.3)	223.5 (2.4)	889.0 (1.9)	216.5 (2.0)	221.7 (1.8)	227.9 (1.9)
Facilities investment	170.3 (16.5)	166.2 (-2.4)	43.2 (-4.3)	37.3 (-9.4)	41.7 (-5.3)	153.5 (-7.7)	40.2 (-7.0)	36.3 (-2.6)	40.6 (-2.5)
Construction investment	282.9 (7.3)	270.9 (-4.3)	74.4 (-2.5)	68.0 (-8.7)	71.3 (-5.7)	262.4 (-3.1)	71.8 (-3.5)	65.5 (-3.7)	72.1 (1.1)
Consumer price index (2015=100)	102.9	104.5	104.3	104.8	104.8	104.9	104.9	104.9	105.2
USD to KRW exchange rate (won)	1 131.0	1 100.2	1 079.0	1 121.5	1 127.4	1 165.4	1 166.6	1 193.9	1 175.8
Benchmark rate (%)	1.3	1.5	1.5	1.5	1.7	1.6	1.8	1.5	1.3
Coincident composite index (2015=100)	107.6	110.1	110.1	110.4	110.6	111.7	111.3	112.0	112.9
Mining & manufacturing production index (2015=100)	104.8	106.4	107.2	105.4	110.1	106.3	106.9	105.7	112.5
Manufacturing operation ratio index (2015=100)	98.4	98.8	101.1	97.3	101.8	98.5	100.3	98.9	102.4
Average temperature	13.1	13.0	17.8	24.8	7.4	13.5	17.3	24.3	9.1
- year-on-year difference	- 0.5	- 0.1	- 0.3	0.7	0.1	0.5	- 0.5	- 0.6	1.7
Heating degree days	2 517.1 (5.5)	2 597.8 (3.2)	179.7 (25.1)	5.0 (72.4)	975.9 (-1.8)	2 342.9 (-9.8)	201.1 (11.9)	0.9 (-82.0)	830.5 (-14.9)
Cooling degree days	132.7 (-13.9)	209.0 (57.5)	3.5 (45.8)	205.5 (57.7)	- (-)	120.4 (-42.4)	- (-100.0)	120.4 (-41.4)	- (-)
Energy intensity	0.17 (-0.4)	0.17 (-0.8)	0.16 (0.8)	0.17 (0.3)	0.17 (-3.7)	0.17 (-3.3)	0.15 (-3.4)	0.16 (-3.3)	0.16 (-3.8)
Per capita consumption									
oil (bbl)	18.2 (1.5)	18.1 (-1.0)	4.5 (2.8)	4.5 (-1.3)	4.5 (-5.4)	18.0 (-0.6)	4.3 (-4.6)	4.5 (0.3)	4.7 (3.1)
Electricity (MWh)	9.9 (1.9)	10.2 (3.1)	2.4 (3.2)	2.7 (4.4)	2.5 (0.9)	10.1 (-1.3)	2.4 (-0.1)	2.6 (-2.5)	2.4 (-0.8)
City gas (1 000 m <sup>3</sup> )	0.4 (6.0)	0.5 (6.9)	0.1 (7.5)	0.1 (8.0)	0.1 (2.6)	0.5 (-4.3)	0.1 (4.1)	0.1 (-3.9)	0.1 (-7.6)
Total energy (toe)	5.9 (2.5)	6.0 (1.3)	1.4 (3.3)	1.5 (1.9)	1.5 (-1.4)	5.9 (-1.5)	1.4 (-1.6)	1.4 (-1.5)	1.5 (-1.8)

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

## Production & operating ratio index by sectors

(2015=100)

	2017	2018			2019			2020	
			M11	M12	M1		M11	M12	M1
Industrial production index									
All industry	105.9 (2.7)	107.5 (1.6)	108.8 (0.4)	116.7 (0.4)	105.0 (0.6)	108.1 (0.5)	110.5 (1.6)	121.3 (3.9)	104.4 (-0.6)
Mining & manufacturing	104.8 (2.5)	106.4 (1.5)	109.7 (0.3)	108.2 (0.7)	105.2 (-0.9)	106.3 (-0.0)	111.1 (1.3)	114.8 (6.1)	102.5 (-2.6)
Iron & steel	103.4 (1.9)	100.5 (-2.7)	101.0 (-1.0)	98.5 (-5.3)	103.9 (-2.1)	98.3 (-2.2)	97.2 (-3.8)	98.1 (-0.4)	94.9 (-8.7)
Cement	109.7 (1.7)	100.0 (-8.8)	110.5 (-7.1)	91.4 (-13.6)	82.7 (4.8)	93.8 (-6.2)	102.9 (-6.9)	95.4 (4.4)	66.6 (-19.5)
Basic compound	110.4 (5.6)	110.4 (0.1)	101.7 (-6.4)	110.4 (-5.4)	114.2 (-2.1)	107.5 (-2.6)	101.9 (0.2)	113.4 (2.7)	113.2 (-0.9)
Transport equipment	95.1 (-2.6)	93.9 (-1.2)	107.0 (3.3)	99.2 (20.7)	96.6 (8.4)	93.1 (-0.9)	94.9 (-11.3)	94.3 (-4.9)	77.3 (-20.0)
Electric & electronic	106.6 (3.0)	106.5 (-0.2)	117.1 (-0.8)	111.5 (0.2)	104.2 (1.7)	107.7 (1.2)	112.7 (-3.8)	120.6 (8.2)	98.3 (-5.7)
Service	104.5 (1.9)	106.9 (2.2)	107.7 (1.2)	115.8 (1.5)	105.8 (2.5)	108.4 (1.4)	110.3 (2.4)	118.8 (2.6)	106.6 (0.8)
Operating ratio index									
Manufacturing	98.4 (-0.6)	98.8 (0.4)	101.8 (-0.1)	99.0 (2.0)	96.8 (-0.8)	98.5 (-0.3)	100.8 (-1.0)	102.7 (3.7)	92.0 (-5.0)
Iron & steel	102.8 (1.7)	100.1 (-2.6)	100.9 (-0.7)	98.3 (-4.9)	103.7 (-2.2)	98.1 (-2.0)	97.0 (-3.9)	97.8 (-0.5)	94.5 (-8.9)
Cement	107.2 (0.5)	108.4 (1.1)	122.0 (3.7)	102.5 (-2.1)	90.4 (15.0)	101.7 (-6.2)	111.3 (-8.8)	103.4 (0.9)	72.1 (-20.2)
Basic compound	105.9 (3.0)	103.5 (-2.3)	94.6 (-8.5)	102.7 (-7.1)	106.1 (-3.3)	99.4 (-4.0)	93.6 (-1.1)	103.8 (1.1)	104.0 (-2.0)
Transport equipment	87.7 (-6.5)	89.6 (2.3)	102.5 (7.2)	95.0 (25.8)	95.5 (14.8)	92.9 (3.6)	95.4 (-6.9)	94.3 (-0.7)	77.9 (-18.4)
Electric & electronic	104.0 (1.2)	102.2 (-1.7)	112.6 (-2.9)	105.8 (0.1)	99.7 (-0.1)	103.5 (1.3)	109.0 (-3.2)	115.3 (9.0)	93.3 (-6.4)

Note: p means provisional  
Source: Monthly Energy Statistics

## Global energy prices

	2018	2019					2020			
			M1~3	M1	M2	M3	M1~3	M1	M2	M3
Crude oil (USD/bbl)										
WTI	64.8 (27.1)	57.0 (-11.9)	54.9 (-12.7)	51.6 (-19.0)	55.0 (-11.6)	58.2 (-7.3)	46.2 (-15.9)	57.5 (11.6)	50.5 (-8.1)	30.5 (-47.7)
Dubai	69.4 (30.5)	63.5 (-8.5)	63.5 (-0.5)	59.1 (-10.7)	64.6 (3.0)	66.9 (6.7)	50.8 (-20.1)	64.3 (8.9)	54.2 (-16.0)	33.7 (-49.6)
Brent	71.5 (30.5)	64.2 (-10.3)	63.9 (-4.9)	60.2 (-12.8)	64.4 (-2.0)	67.0 (0.5)	51.0 (-20.3)	63.7 (5.7)	55.5 (-13.9)	33.7 (-49.7)
Unit value of import (C&F)	71.4 (34.0)	65.5 (-8.3)	63.4 (-3.3)	61.8 (-4.7)	63.0 (-5.8)	65.3 (0.7)	62.1 (-2.0)	69.1 (11.8)	64.2 (1.9)	53.1 (-18.8)
LNG										
From Indonesia (USD/MMBTU)	10.7 (24.0)	10.6 (-1.0)	11.7 (19.9)	12.0 (28.5)	11.8 (20.2)	11.3 (11.7)	9.9 (-15.5)	9.9 (-17.7)	9.9 (-16.3)	9.9 (-12.5)
Unit value of import (USD/ton, CIF)	526.3 (26.4)	505.4 (-4.0)	588.2 (21.0)	587.0 (29.5)	614.3 (18.8)	563.3 (15.3)	459.3 (-21.9)	470.1 (-19.9)	446.9 (-27.3)	461.0 (-18.2)
Bituminous coal (USD/ton)										
From Australia	107.0 (20.9)	77.9 (-27.2)	95.7 (-7.1)	98.6 (-7.4)	95.4 (-9.9)	93.1 (-3.7)	67.8 (-29.2)	69.7 (-29.3)	67.6 (-29.1)	66.1 (-29.1)
Unit value of import (CIF)	113.6 (8.9)	100.7 (-11.3)	110.0 (-3.4)	106.6 (-4.2)	110.4 (-0.5)	112.9 (-5.5)	86.9 (-20.9)	86.6 (-18.8)	85.0 (-23.0)	89.3 (-20.9)
Petroleum product (USD/bbl)										
Gasoline	79.9 (17.4)	72.5 (-9.3)	67.2 (-13.4)	61.0 (-22.4)	66.3 (-13.9)	74.4 (-3.5)	57.4 (-14.6)	71.3 (16.8)	64.5 (-2.7)	36.4 (-51.0)
Kerosene	84.8 (29.8)	77.3 (-8.9)	76.5 (-4.4)	71.8 (-11.3)	77.9 (-2.7)	79.8 (1.1)	59.3 (-22.6)	75.4 (5.0)	63.1 (-19.0)	39.3 (-50.8)
Diesel	84.9 (27.9)	78.2 (-7.9)	77.5 (-2.4)	72.6 (-11.3)	78.9 (1.0)	81.0 (3.4)	62.7 (-19.2)	76.5 (5.4)	66.0 (-16.4)	45.5 (-43.9)
Bunker-C	65.2 (31.3)	57.5 (-11.8)	62.6 (8.7)	57.8 (-1.8)	63.9 (12.1)	66.2 (16.2)	43.4 (-30.8)	51.9 (-10.2)	46.7 (-27.0)	31.5 (-52.5)
Propane	542.1 (16.0)	434.6 (-19.8)	453.3 (-14.7)	430.0 (-27.1)	440.0 (-16.2)	490.0 (2.1)	500.0 (10.3)	565.0 (31.4)	505.0 (14.8)	430.0 (-12.2)
Butane	539.2 (7.5)	441.7 (-18.1)	470.0 (-8.4)	420.0 (-26.3)	470.0 (-6.9)	520.0 (11.8)	538.3 (14.5)	590.0 (40.5)	545.0 (16.0)	480.0 (-7.7)
Naphtha	67.0 (24.5)	56.9 (-15.1)	56.0 (-11.6)	51.7 (-21.9)	56.4 (-7.9)	60.1 (-4.5)	47.8 (-14.7)	60.9 (17.8)	52.3 (-7.2)	30.3 (-49.6)

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

2. Gasoline type is 95RON, diesel is 0.001%, Bunker-C is high-sulfur oil(180cst/3.5%), for propane and butane, CP is reference value

Source: www.petronet.co.kr, IMF (primary commodity price), Monthly Energy Statistics



## Total Primary Energy Supply (TPES)

	2017	2018			2019p			2020p	
			M11	M12	M1		M11	M12	M1
Coal (Mton)	139.8 (8.1)	141.0 (0.9)	11.4 (-3.0)	12.5 (-2.3)	12.4 (-6.9)	133.0 (-5.7)	10.9 (-4.7)	10.9 (-12.8)	10.7 (-13.3)
- Coking coal excluded	103.5 (7.9)	106.4 (2.8)	8.6 (-1.6)	9.6 (-1.0)	9.4 (-8.5)	98.0 (-7.8)	8.0 (-7.6)	8.0 (-16.2)	7.8 (-17.3)
Oil (Mbbbl)	937.1 (1.7)	931.8 (-0.6)	76.1 (-5.1)	83.4 (-2.0)	84.9 (1.2)	928.4 (-0.4)	79.5 (4.4)	85.3 (2.3)	80.7 (-4.8)
- Non-energy oil excluded	443.7 (-2.5)	445.5 (0.4)	37.8 (-0.4)	41.5 (1.2)	42.6 (3.6)	451.8 (1.4)	39.5 (4.7)	43.1 (3.9)	38.4 (-10.0)
LNG (Mton)	36.4 (4.3)	42.3 (16.2)	3.7 (-0.7)	4.9 (-2.9)	5.0 (-6.2)	40.9 (-3.2)	3.7 (1.8)	5.0 (1.4)	4.9 (-2.4)
Hydro (TWh)	7.0 (5.5)	7.3 (3.9)	0.5 (17.7)	0.6 (28.2)	0.5 (12.5)	6.2 (-14.3)	0.5 (-15.2)	0.5 (-16.7)	0.5 (-1.2)
Nuclear (TWh)	148.4 (-8.4)	133.5 (-10.1)	12.2 (7.7)	12.4 (19.1)	12.3 (24.7)	145.9 (9.3)	10.2 (-15.9)	11.1 (-11.0)	11.9 (-2.9)
Others (Mtoe)	15.8 (16.7)	17.1 (8.0)	1.4 (5.4)	1.5 (3.4)	1.6 (8.3)	17.9 (4.7)	1.4 (1.5)	1.5 (1.3)	1.5 (-3.1)
<b>TPES (Mtoe)</b>	<b>302.1</b> (2.8)	<b>307.5</b> (1.8)	<b>25.6</b> (-2.2)	<b>28.9</b> (-0.5)	<b>29.2</b> (-0.8)	<b>303.4</b> (-1.3)	<b>25.3</b> (-1.0)	<b>28.0</b> (-3.3)	<b>27.3</b> (-6.6)
- Non-energy oil excluded	240.7 (2.1)	247.1 (2.6)	20.8 (-0.3)	23.7 (0.5)	24.0 (-0.8)	244.0 (-1.2)	20.3 (-2.2)	22.7 (-4.3)	22.1 (-8.1)
- Non-energy oil&coal excluded	215.4 (1.4)	222.9 (3.5)	18.8 (0.4)	21.6 (1.2)	22.0 (-0.7)	219.7 (-1.5)	18.3 (-2.9)	20.7 (-4.5)	20.0 (-8.9)

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

## Share of TPES by sources

(unit: %)

	2017	2018			2019p			2020p	
			M11	M12	M1		M11	M12	M1
Coal	28.5	28.2	27.3	26.6	26.0	27.0	26.6	24.1	24.2
- Coking coal excluded	20.2	20.3	19.6	19.4	19.0	19.0	18.5	16.8	16.8
Oil	39.5	38.5	38.0	36.7	36.9	38.7	39.6	38.6	37.0
- non-energy oil excluded	19.2	18.9	19.3	18.7	19.0	19.2	20.0	19.8	17.8
LNG	15.7	18.0	18.7	22.1	22.5	17.6	19.2	23.1	23.5
Hydro	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nuclear	10.5	9.2	10.1	9.2	8.9	10.2	8.6	8.4	9.3
Others	5.2	5.6	5.5	5.0	5.3	5.9	5.6	5.3	5.5
<b>TPES</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>

Note: p means provisional  
Source: Monthly energy statistics

## Total Final Consumption (TFC)

(unit: Mtoe)

	2017	2018			2019p				2020p
			M11	M12	M1		M11	M12	M1
Industry	141.9 (5.0)	142.9 (0.7)	11.8 (-3.5)	12.6 (-1.0)	12.5 (0.3)	142.7 (-0.1)	12.0 (1.8)	12.6 (0.5)	12.6 (0.5)
Transport	42.8 (1.2)	43.0 (0.4)	3.7 (3.9)	3.8 (4.4)	3.8 (6.8)	42.6 (-0.9)	3.6 (-4.3)	3.7 (-2.3)	3.2 (-15.6)
Residential-commercial	39.9 (2.9)	41.3 (3.7)	3.5 (-3.5)	4.9 (-5.7)	5.6 (-2.8)	40.5 (-2.2)	3.4 (-1.2)	4.7 (-3.2)	5.1 (-8.3)
Public	5.5 (4.1)	5.6 (2.0)	0.4 (-4.0)	0.5 (-5.7)	0.6 (-0.6)	5.5 (-1.2)	0.5 (2.2)	0.5 (1.7)	0.5 (-6.0)
<b>TFC</b>	<b>230.0</b> (3.9)	<b>232.7</b> (1.2)	<b>19.4</b> (-2.2)	<b>21.7</b> (-1.3)	<b>22.4</b> (0.5)	<b>231.2</b> (-0.6)	<b>19.4</b> (0.1)	<b>21.6</b> (-0.8)	<b>21.4</b> (-4.6)
Coal (Mton)	50.4 (2.7)	49.2 (-2.3)	4.4 (-1.6)	4.3 (-2.8)	4.0 (-4.5)	48.2 (-2.1)	4.1 (-7.3)	4.1 (-5.7)	4.1 (2.7)
Oil (Mbbl)	926.6 (3.0)	920.0 (-0.7)	75.6 (-4.9)	82.6 (-1.0)	83.9 (2.6)	920.3 (0.0)	78.9 (4.4)	84.3 (2.1)	80.0 (-4.6)
Electricity (TWh)	507.7 (2.2)	526.1 (3.6)	41.9 (1.5)	45.3 (-1.0)	48.6 (0.6)	520.5 (-1.1)	41.1 (-1.9)	44.7 (-1.3)	46.3 (-4.8)
City gas (Bm <sup>3</sup> )	22.6 (6.3)	24.3 (7.4)	2.1 (1.7)	3.0 (-3.9)	3.4 (-4.6)	23.3 (-4.1)	2.0 (-6.4)	2.8 (-5.6)	3.1 (-8.9)
Heat-others (1 000 toe)	11.1 (18.4)	11.8 (6.4)	1.0 (0.2)	1.2 (-0.2)	1.3 (0.9)	11.9 (0.9)	1.0 (1.3)	1.2 (-1.9)	1.3 (-3.5)

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

## Share of TFC by sources

(unit: %)

	2017	2018			2019p				2020p
			M11	M12	M1		M11	M12	M1
Industry	61.7	61.4	60.6	57.8	55.7	61.7	61.6	58.5	58.7
Transport	18.6	18.5	19.2	17.4	16.9	18.4	18.4	17.2	14.9
Residential-commercial	17.3	17.8	17.9	22.4	24.8	17.5	17.7	21.8	23.9
Public	2.4	2.4	2.3	2.4	2.6	2.4	2.3	2.5	2.5
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	14.5	13.9	14.6	13.1	11.8	13.8	13.9	12.6	12.6
Oil	51.2	50.2	49.6	48.3	47.4	50.4	51.3	49.4	46.7
Electricity	19.0	19.4	18.6	17.9	18.6	19.4	18.2	17.8	18.6
City gas	10.5	11.4	12.1	15.0	16.3	11.3	11.5	14.6	16.1
Heat-others	4.8	5.1	5.1	5.7	5.9	5.1	5.2	5.6	6.0

Note: p means provisional  
Source: Monthly Energy Statistics

## Statistics on energy production facilities

	2017	2018	2019p						2020p
			M11	M12	M1		M11	M12	M1
Total capacity (GW)	116.9 (10.4)	119.1 (1.9)	118.3 (1.7)	119.1 (1.9)	119.4 (12.3)	125.3 (7.2)	124.4 (7.0)	125.3 (7.2)	125.4 (7.7)
Nuclear	22.5 (-2.5)	21.9 (-3.0)	21.9 (-3.0)	21.9 (-3.0)	21.9 (-5.5)	23.3 (3.2)	23.3 (3.2)	23.3 (3.2)	23.3 (3.2)
Bituminous coal	36.1 (16.8)	36.4 (0.7)	36.4 (0.4)	36.4 (0.7)	36.5 (17.6)	36.4 (0.8)	36.4 (0.5)	36.4 (0.8)	36.5 (1.0)
Gas	37.9 (16.0)	37.9 (-0.0)	37.9 (1.0)	37.9 (-0.0)	37.9 (16.0)	39.6 (4.5)	39.5 (5.5)	39.6 (4.5)	41.2 (10.2)
Refinery capacity (mil BPSD)	3.1 (1.3)	3.2 (3.2)	3.2 (3.2)	3.2 (3.2)	3.2 (3.2)	3.2 (3.2)	3.2 (3.2)	3.2 (3.2)	3.2 -

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

Source: The monthly report on major electric power statistics

## Energy consumption statistics

	2017	2018	2019p						2020p
			M11	M12	M1		M11	M12	M1
The number of households demanding city gas (mil)	18.6 (3.3)	19.1 (3.1)	19.0 (3.2)	19.1 (3.1)	19.3 (3.3)	19.7 (2.8)	19.5 (2.6)	19.7 (2.8)	19.7 (2.3)
Registered cars (mil)	22.5 (3.3)	23.2 (3.0)	23.2 (3.0)	23.2 (3.0)	23.3 (3.0)	23.7 (2.0)	23.6 (2.1)	23.7 (2.0)	23.7 (2.0)
- gasoline	10.4 (2.7)	10.6 (2.5)	10.6 (2.5)	10.6 (2.5)	10.7 (2.5)	11.0 (3.1)	10.9 (3.0)	11.0 (3.1)	11.0 (3.1)
- diesel	9.6 (4.4)	9.9 (3.7)	9.9 (3.7)	9.9 (3.7)	10.0 (3.7)	10.0 (0.3)	10.0 (0.6)	10.0 (0.3)	10.0 (0.0)
- LPG	2.1 (-2.9)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-3.3)	2.0 (-1.5)	2.0 (-1.8)	2.0 (-1.5)	2.0 (-1.1)
- hybrid	0.3 (37.6)	0.4 (30.9)	0.4 (31.1)	0.4 (30.9)	0.4 (30.7)	0.5 (26.1)	0.5 (26.2)	0.5 (26.1)	0.5 (25.1)

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

Source: Monthly Energy Statistics

# KEEI

MONTHLY **KOREA ENERGY TRENDS** (2020, NO.97)



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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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