

# KEEI MONTHLY KOREA ENERGY TRENDS



COAL -4.1%  
PETROLEUM 2.0%  
LNG -4.9%  
NUCLEAR 24.8%  
NEW & RENEWABLE 11.8%  
JULY. 2022





**This publication is derived from Energy Demand & Supply  
Statistics and Energy Price Statistics issued until July 2022**



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## 1. The Economy and the Industry

- **The mining & manufacturing production index posted a year-on-year growth of 1.5% in July, led by the semiconductor and automobile sectors, although the production declined in the iron & steel and basic chemical sectors.**
  - The semiconductor production index jumped 17.3% year-on-year, but the pace of growth slowed in line with the lower utilization rate of factories (-4.0%, based on the index) and decreased shipments (-16.8%, based on the index). The semiconductor inventory increased (80.0%, based on the index).
  - The automobile production index rose by 11.0% year-on-year, despite fewer work days (-1 day), with factories running at increased capacity (11.0%, based on the index), as the auto parts supply shortage was alleviated.
  - The production index of basic chemical materials dropped by 6.5% year-on-year as a result of a steady decline in the facility utilization rate (-8.1%, based on the index), the narrowing spread between ethylene and naphtha (-59.1%) and continuously sluggish petrochemical business.
  - The iron & steel production index fell by 3.8% year-on-year, as the construction industry remained in the doldrums, and the steel scrap price declined, which led to a drop in demand for steel products including some delayed purchases.
- **The service production index went up by 4.6% year-on-year (in July), as production increased, especially in the food & accommodation sectors.**
  - The wholesale & retail production index grew slightly by 0.9% year-on-year, while that of the art, sport & leisure businesses surged by around 40%, as outdoor activities increased during the first summer vacation season since the removal of social distancing rules.
  - The food & accommodation production index increased by around 30% year-on-year, as the economy returns to normal, and outdoor activities increased. By sub-categories, the accommodation production index jumped about 56%, and that of restaurants and bars grew by around 30%.

### ► Major economic and industrial indicators

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
GDP (trillion won)	1 915.8 (4.1)	932.0 (4.2)	- -	959.5 (3.0)	- -	492.2 (2.9)	- -
Total export (\$billion, customs clearance basis)	644.4 (25.7)	358.6 (26.6)	55.5 (29.6)	410.8 (14.6)	61.6 (21.4)	57.7 (5.3)	60.3 (8.6)
Industrial production index (2015=100)	114.3 (7.4)	112.8 (8.7)	116.6 (8.5)	117.2 (4.0)	119.9 (7.5)	118.8 (1.4)	118.3 (1.5)
Semi-conductors	298.6 (29.4)	273.2 (26.0)	307.0 (34.6)	345.4 (26.5)	351.6 (24.2)	371.6 (23.9)	360.2 (17.3)
Basic chemical products	107.9 (6.7)	107.2 (5.0)	113.0 (10.5)	105.5 (-1.5)	104.0 (-2.4)	99.9 (-3.5)	105.6 (-6.5)
Iron&Steel	97.4 (5.8)	97.3 (7.0)	102.3 (19.1)	96.9 (-0.5)	98.3 (0.3)	96.5 (-1.7)	98.4 (-3.8)
Cars	88.2 (4.5)	91.1 (13.7)	90.1 (-3.7)	92.8 (1.9)	95.5 (15.8)	99.4 (3.7)	100.0 (11.0)
Service production index (2015=100)	110.9	108.8	111.0	113.9	117.6	118.0	116.1

	(4.3)	(4.0)	(4.0)	(4.7)	(7.4)	(4.0)	(4.6)
Wholesale & Retail	106.0	104.6	105.9	107.3	111.6	107.9	106.8
	(4.0)	(4.3)	(5.4)	(2.5)	(4.8)	(0.6)	(0.9)
Food & Accommodation	80.7	76.2	83.2	91.4	102.5	100.7	108.1
	(1.4)	(-5.9)	(-8.0)	(20.0)	(20.7)	(19.6)	(29.9)

Note: Figures are based on the real price of 2015, P means provisional, ( ) is year-on-year growth rates (%)

Source: BOK Economic statistics system, Korea International Trade Association, Korea Statistical Information Service

## 2. Energy Prices<sup>1</sup>

### Global Energy Prices

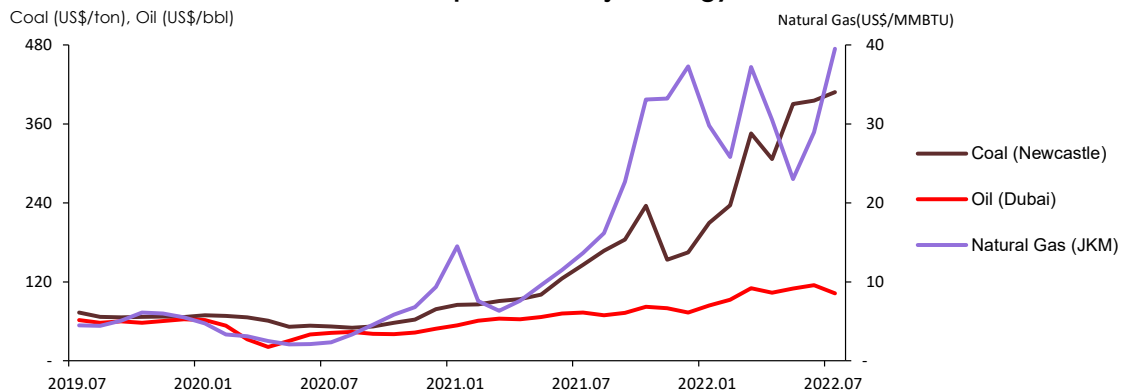
- **Global oil price declined in July partly amid concerns on the global economic recession, even though geopolitical risks surrounding Russia persisted.**
  - Global oil price fell by 8.9% in July from the previous month amid growing number of Covid-19 cases (60.8%) and concerns over the global economic recession, despite the ongoing conflict between the West and Russia, with the western countries trying to introduce a price threshold for Russian crude oil.
  - Global coal price rose by 3.4% than the previous month, as its demand increased in the power generation sector, affected by worries over the global supply chain disruption.
  - Global natural gas price rapidly increased during the current gas stockpiling season, as the competition grew more intense to secure power generation fuels amid a forecast that the temperature will be above the seasonal average during this summer in Europe and Asia, while Russia's gas supply dwindled.

#### ► Global energy prices

	2020	2021				2022			
			M5	M6	M7		M5	M6	M7
Crude oil (US\$/bbl)	42.2	69.3	66.3	71.6	72.9	108.2	113.3	103.1	
	(-33.5)	(64.2)	(5.4)	(7.9)	(1.9)	(5.2)	(4.7)	(-8.9)	
Coal (US\$/ton)	60.2	136.4	100.4	125.3	145.9	390.4	395.0	408.4	
	(-22.8)	(126.5)	(7.0)	(24.8)	(16.4)	(27.3)	(1.2)	(3.4)	
Natural gas (US\$/MMBtu)									
TTF	3.2	16.2	8.9	10.3	12.5	29.2	33.5	51.3	
	(-32.3)	(398.7)	(23.9)	(15.4)	(21.7)	(-9.5)	(14.8)	(53.2)	
JKM	4.2	17.8	9.6	11.5	13.6	23.0	28.9	39.5	
	(-25.2)	(326.0)	(25.3)	(20.5)	(18.4)	(-24.6)	(25.7)	(36.6)	

Note: Oil and coal prices are based on Dubai oil and Newcastle thermal coal in Australia, respectively. ( ) is month-on-month growth rates (%)  
Source: www.petronet.co.kr, World Bank(Commodity Markets), CME Group

#### ► Global prices of major energy sources



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

## Domestic energy prices

- **Gasoline and diesel prices fell by 2.6% and 0.2% respectively in July from the previous month, owing to the global price decline and an additional fuel tax cut.**
  - Global gasoline and diesel prices recorded \$153.6/bbl and \$186.1/bbl respectively on June 21 before starting to decline. In the domestic market, the fuel tax cut rate was adjusted (flexible tax rate, 30%→37%), starting from July 1.
  - The price of butane, which is used as a transportation fuel, fell by 3.0% than the previous month, affected by lower supply price of LPG and a bigger fuel tax cut.
- **The relative price of propane in terms of city gas for industrial customers (propane/city gas) dropped by 12.2% to 1.35 in July from the previous month.**
  - The price of city gas for industrial use rose by 10.8%, while that of propane increased 2.7%.

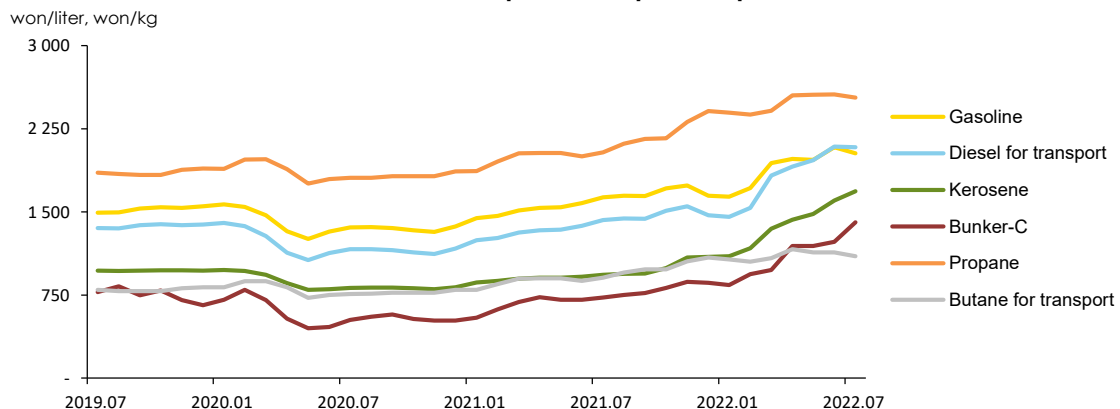
### ► Domestic petroleum product prices

	2020	2021				2022		
			M5	M6	M7	M5	M6	M7
Gasoline (won/liter)	1 381.2 (-6.2)	1 591.1 (15.2)	1 541.5 (0.5)	1 577.3 (2.3)	1 629.3 (3.3)	1 967.1 (-0.5)	2 084.0 (5.9)	2 030.0 (-2.6)
Diesel for transport (won/liter)	1 189.5 (-11.3)	1 392.0 (17.0)	1 338.8 (0.5)	1 374.4 (2.7)	1 425.5 (3.7)	1 964.3 (3.0)	2 089.0 (6.4)	2 084.9 (-0.2)
Bunker-C (won/liter)	572.9 (-23.0)	732.2 (27.8)	706.4 (-3.2)	706.4 -	728.4 (3.1)	1 190.4 (-0.1)	1 229.3 (3.3)	1 405.7 (14.3)
Propane (won/kg)	1 850.3 (-1.0)	2 093.4 (13.1)	2 031.6 (-0.1)	1 999.6 (-1.6)	2 036.4 (1.8)	2 558.2 (0.2)	2 558.8 (0.0)	2 531.2 (-1.1)
Butane for transport (won/liter)	790.8 (-1.9)	932.3 (17.9)	899.4 (0.0)	878.5 (-2.3)	906.3 (3.2)	1 134.6 (-2.5)	1 133.7 (-0.1)	1 100.2 (-3.0)

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

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

### ► Domestic petroleum product prices



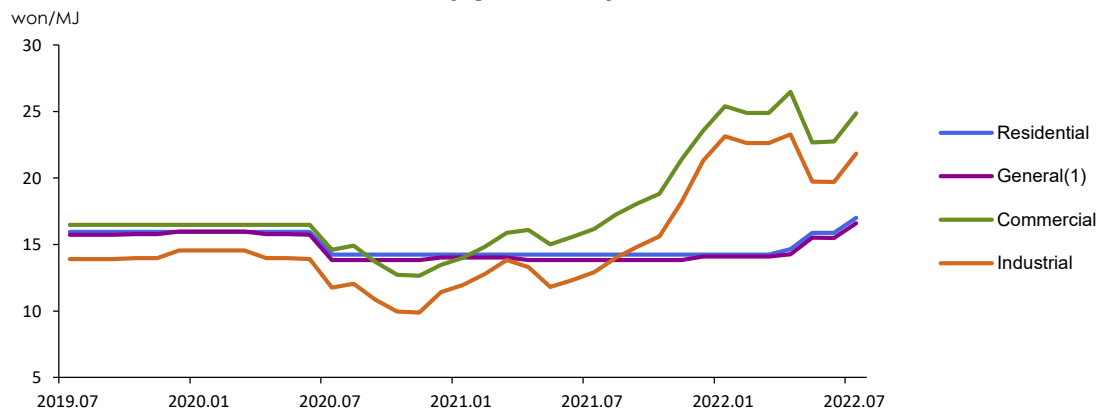
□ **City gas rates increased in all end-use sectors in July, as the increase in LNG import price was reflected in raw material costs.**

- City gas rates for office heating and industrial customers increased by 9.3% and 10.8% from the previous month, as their raw material costs were raised by KRW 2.12/MJ respectively.
- City gas rates for residential and general customers went up by 7.0% and 7.2% than the prior month, as their raw material costs were raised by KRW 1.11/MJ respectively.

□ **Electric rates increased in all end-use sectors by around 4% in July, as the fuel cost pass-through adjustment rate was revised upward in 3Q.**

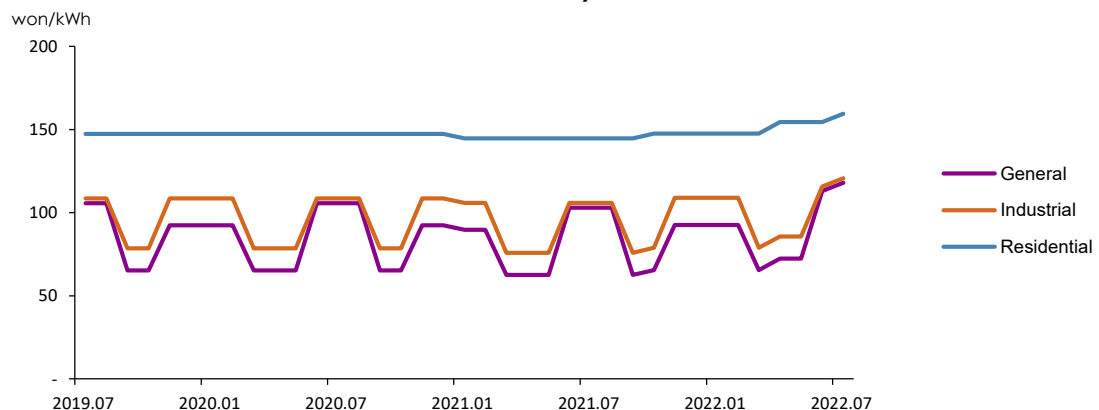
- Though the fuel cost pass-through adjustment rate was calculated to be KRW 33.6/kWh, the actual rate applied was KRW 5.0/kWh due to the upper & lower and quarterly limits in the adjustment range.
- Korea Electric Power Corporation (KEPCO) raised energy charge and climate & environmental charge by KRW 4.9/kWh and KRW 2.0/kWh respectively in April.

► **City gas rates by end-use sectors**



Source: Seoulgas

► **Electric rates by end-use sectors**



Note: The electric rates by end-use sectors refer to the rates for residential use ([high voltage], the 2<sup>nd</sup> stage price), general use ([A], low voltage) and Industrial use ([B], high voltage B middle load), including Climate & Environmental Charge

Source: KEPCO

### 3. Energy Supply

- **The total energy import volume was down 1.6% year-on-year in July, as the import volume of all energy resources declined except crude oil.**
  - The import volume of crude oil, which had shrunk for three consecutive months, posted a year-on-year growth of 25.8%, as refiners' regular maintenance scheduled for 1H was completed, and refining capacity factors increased (13.2%).
  - The import volume of petroleum products declined by 7.4% year-on-year, with bunker-C oil leading the downward slide.
  - The import volume of bituminous coal fell by 7.8% year-on-year, which was affected by a steady growth in global bituminous coal prices, supply instability caused by disruptions to the rail service in Australia – a major coal exporting country – as well as falling demand in the domestic power generation sector.
  - The gas import volume fell by 19.1%, as prices remain at high level (310.0% YoY, based on JKM) amid ongoing supply chain challenges, and due to high base effect of the same month last year (70.4%).
  - The energy's share of the total import value had decreased since March but rebounded to 32.2% in July.

#### ► Import and domestic production of energy

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Import volume</b>							
Crude oil (Mbbl)	960.1	546.3	78.0	599.7	81.6	74.1	98.2
	(-2.1)	(-6.7)	(-9.7)	(9.8)	(0.8)	(-7.6)	(25.8)
Petroleum product (Mbbl)	392.3	219.3	36.8	218.8	28.6	26.5	34.1
	(12.9)	(-0.1)	(15.9)	(-0.3)	(-7.5)	(-19.5)	(-7.4)
Bituminous coal (Mton)	108.0	61.7	11.4	61.6	8.6	8.4	10.5
	(-6.4)	(-6.8)	(6.0)	(-0.2)	(4.5)	(-0.9)	(-7.8)
Anthracite (Mton)	6.5	3.6	0.6	3.5	0.7	0.7	0.4
	(3.0)	(2.6)	(5.3)	(-2.8)	(31.6)	(86.4)	(-26.6)
LNG (Mton)	45.9	27.2	4.0	26.0	3.4	2.5	3.3
	(14.9)	(16.0)	(70.4)	(-4.2)	(-0.2)	(-19.7)	(-19.1)
Import volume (Mtoe)	335.6	191.7	30.5	197.7	27.7	25.4	30.1
	(3.1)	(-0.6)	(12.5)	(3.2)	(1.8)	(-2.9)	(-1.6)
Import value (billion US\$, CIF)	137.2	69.0	12.2	123.6	17.1	16.0	21.0
	(58.5)	(27.3)	(89.7)	(79.1)	(75.5)	(54.8)	(73.0)
Energy share of total import value (%)	22.1	20.3	22.7	28.9	27.0	26.7	32.2
Foreign energy dependence (%)*	92.8	92.6	92.5	92.0	91.0	91.6	91.9
<b>Domestic production</b>							
Hydropower (TWh)	6.74	4.10	0.71	3.82	0.54	0.56	0.69
	(-5.7)	(7.9)	(16.3)	(-6.8)	(-15.5)	(-19.0)	(-3.7)
Anthracite (Mton)	0.90	0.54	0.08	0.50	0.07	0.07	0.07
	(-11.9)	(-12.5)	(-8.1)	(-8.7)	(2.9)	(-13.4)	(-13.9)
Natural gas (Mton)	0.04	0.03	0.00	-	-	-	-
	(-70.3)	(-70.7)	(-83.6)	(-100.0)	(-100.0)	(-100.0)	(-100.0)
Renewable energy (Mtoe)	20.04	11.87	1.75	13.37	2.08	1.81	1.95
	(5.6)	(9.9)	(18.7)	(12.6)	(14.2)	(8.5)	(11.8)

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

## 4. Energy Consumption

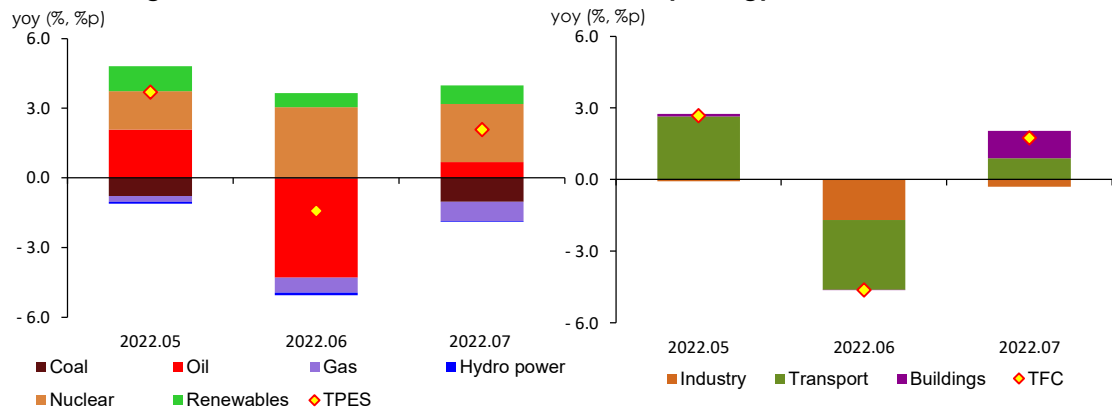
- **Total Primary Energy Supply (TPES) increased by 2.1% year-on-year in July, led by growing use of nuclear and renewable energy, while coal and petroleum use decreased.**
  - Coal use dropped by 4.1% year-on-year, as it continuously declined in the power generation sector partly due to higher generation cost, and as its industrial use started to decline owing to the sluggish iron & steel and construction businesses.
  - Petroleum use went up by 2.0% year-on-year, as its industrial use increased, mostly naphtha, following the construction of additional petrochemical facilities, and as it also increased in the transport sector owing to the bigger fuel tax cut and higher mobility demand.
  - Gas use dropped by 4.9% year-on-year, as industrial gas use declined, especially in the primary metals (iron & steel) sector, and as it continuously declined in the power generation sector amid the growth in baseload generation and global LNG price hikes.
- **Total Final Consumption posted a year-on-year growth of 1.7% in July, led by the building and transport sectors, although the industrial energy use slightly declined.**
  - With fewer work days (- 1 day), the industrial energy use fell by 0.4% year-on-year, due to steadily falling energy use in the primary metals sector, although it increased in the petrochemical and fabricated metals sectors.
  - Transport energy use increased by 4.9% year-on-year, as the domestic gasoline price decreased due to the additional fuel tax cut and global oil price decrease, and as the mobility demand increased during the first vacation season since the complete removal of social distancing requirements.
  - Energy use in buildings jumped 7.6% year-on-year, because it grew fast in both of the residential and commercial sectors.

### ► Energy consumption

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>TPES (Mtoe)</b>	<b>305.4</b>	<b>176.1</b>	<b>25.9</b>	<b>180.6</b>	<b>24.9</b>	<b>23.5</b>	<b>26.4</b>
	(4.6)	(4.1)	(9.3)	(2.5)	(3.7)	(-1.4)	(2.1)
- Feedstock exclude	217.8	126.3	18.5	130.8	17.9	16.9	18.9
	(2.5)	(3.3)	(8.9)	(3.5)	(6.4)	(0.3)	(2.6)
<b>TFC (Mtoe)</b>	<b>234.7</b>	<b>136.0</b>	<b>19.0</b>	<b>138.2</b>	<b>19.0</b>	<b>17.4</b>	<b>19.3</b>
	(5.5)	(4.5)	(8.0)	(1.6)	(2.7)	(-4.6)	(1.7)

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

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



## 5. Coal

□ Coal use declined by 4.1% year-on-year in July, as it started to decline in the industrial sector and continued to decline in the power generation sector.

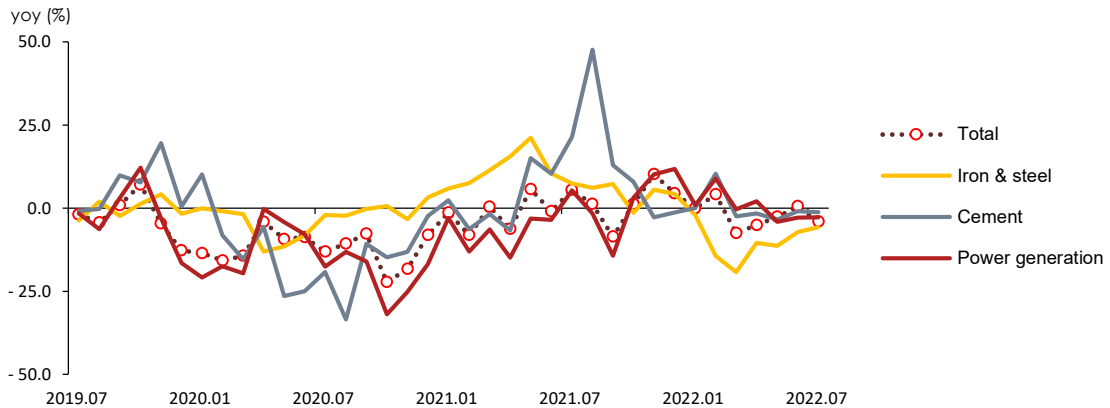
- Industrial coal use decreased, as the iron & steel and cement production index declined along with sluggish business activities.
- Coal use dropped in the power generation sector on a year-on-year basis despite the eased voluntary cap on coal power plants, as coal-fired generation decreased for three consecutive months (-8.0%), due to steadily rising fuel cost and increased power generation from nuclear and renewable energy.

### ► Coal consumption

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Coal (Mton)</b>	<b>116.8</b>	<b>66.2</b>	<b>11.3</b>	<b>64.8</b>	<b>8.9</b>	<b>9.5</b>	<b>10.9</b>
	(0.2)	(-0.7)	(5.4)	(-2.1)	(-2.6)	(0.6)	(-4.1)
Industry	47.4	27.3	4.0	25.9	4.0	3.9	3.8
	(4.6)	(6.4)	(5.5)	(-5.2)	(-0.8)	(5.8)	(-6.4)
-Coking-coal	35.3	20.6	3.0	19.1	2.8	2.7	2.9
	(4.5)	(7.4)	(3.9)	(-7.0)	(-8.3)	(-3.8)	(-2.5)
Buildings	0.4	0.2	0.0	0.2	0.0	0.0	0.0
	(-12.0)	(-17.1)	(20.0)	(-1.3)	(28.6)	(33.3)	(50.0)
Power generation	68.9	38.7	7.3	38.7	4.8	5.6	7.1
	(-2.5)	(-5.1)	(5.4)	(0.0)	(-4.1)	(-2.9)	(-2.8)

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 increased by 2.0% year-on-year in July, with the transport and industrial sectors driving the growth.

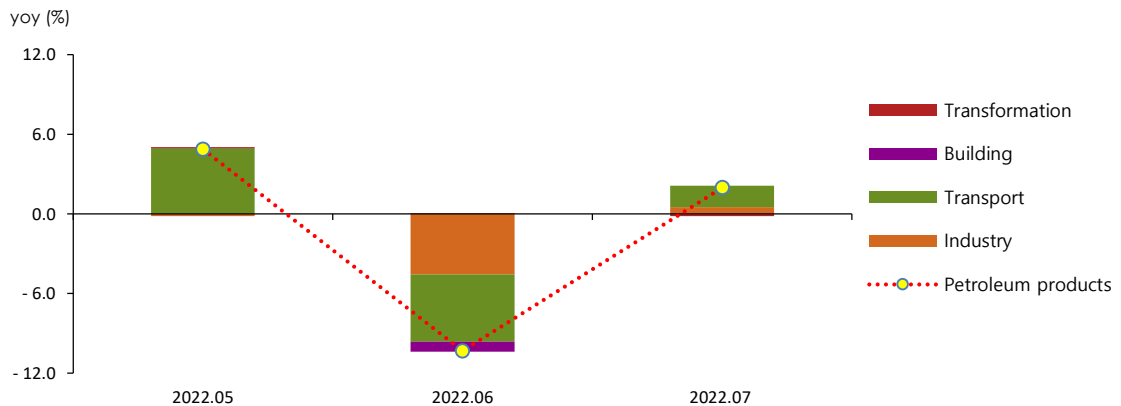
- Industrial petroleum use went up by 0.8% year-on-year, owing to a small rally in naphtha consumption, which had been weak.
- Transport petroleum use rose by 2.0% year-on-year, led by the road transport sector, affected by falling fuel prices and growing mobility demand.

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

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Petroleum (Mbbbl)</b>	<b>932.4</b>	<b>531.8</b>	<b>78.9</b>	<b>545.0</b>	<b>79.8</b>	<b>68.9</b>	<b>80.4</b>
	(6.9)	(3.6)	(9.0)	(2.5)	(4.9)	(-10.3)	(2.0)
Industry	597.2	338.6	51.6	351.6	48.8	45.3	52.1
	(9.8)	(4.3)	(11.8)	(3.8)	(-0.2)	(-7.2)	(0.8)
-Naphtha	450.9	254.1	38.5	261.4	35.6	33.5	39.6
	(11.3)	(3.4)	(9.6)	(2.9)	(-0.3)	(-4.0)	(2.8)
Transport	281.7	162.1	24.1	160.8	27.7	20.9	25.4
	(1.6)	(1.6)	(2.3)	(-0.8)	(15.8)	(-15.8)	(5.3)
Buildings	44.7	26.0	2.4	25.5	2.8	2.2	2.4
	(-0.1)	(-0.3)	(3.6)	(-2.2)	(0.3)	(-20.5)	(-0.2)
Power generation	8.8	5.0	0.8	7.1	0.5	0.6	0.6
	(34.0)	(61.3)	(136.9)	(40.7)	(10.4)	(7.7)	(-16.5)

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

### □ Gas use decreased by 4.9% year-on-year in July, as it continued to decline in the power generation sector and started to decline in the industrial sector.

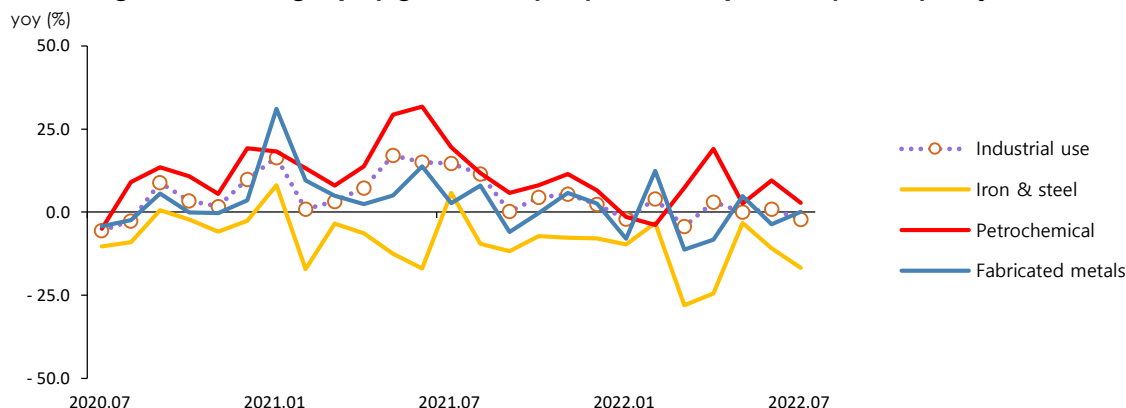
- Gas use for power generation kept falling, which was affected by continuously rising global natural gas prices and a rapid increase in nuclear and renewable & other energy generation, even though electricity use grew by over 5%.
- Gas use increased in the fabricated metals and petrochemical sectors, although the rate of growth fell sharply amid the economic slowdown. It plunged by almost 17% in the primary metals sector due to the slump in the iron & steel industry and lower direct import volume as a result of price hikes.
- As for the gas use in buildings, it grew by around 10% YoY in the residential sector due to low base effect, despite higher city gas rates, and it was up 5.3% in the commercial sector, driven by stronger service production, mostly in the food & accommodation industry (29.9%, based on the production index).

#### ► Natural gas and city gas consumption

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>LNG (Mton)</b>	<b>45.8</b>	<b>27.5</b>	<b>3.4</b>	<b>27.4</b>	<b>3.0</b>	<b>2.9</b>	<b>3.2</b>
	(8.9)	(15.5)	(29.6)	(-0.4)	(-1.5)	(-3.9)	(-4.9)
Power generation	21.5	13.0	2.0	12.2	1.6	1.6	1.9
	(15.7)	(28.8)	(49.6)	(-6.0)	(-0.9)	(-9.7)	(-8.2)
City gas production	19.3	11.7	1.0	12.2	1.1	1.0	1.0
	(5.9)	(8.3)	(7.7)	(4.6)	(-1.9)	(4.4)	(6.2)
Industry (Direct private importer)	2.7	1.6	0.3	1.5	0.2	0.2	0.2
	(-1.4)	(1.4)	(8.9)	(-3.9)	(-8.4)	(-12.6)	(-24.9)
<b>City gas (Bm³)</b>	<b>27.1</b>	<b>16.8</b>	<b>1.5</b>	<b>17.3</b>	<b>1.7</b>	<b>1.6</b>	<b>1.5</b>
	(4.2)	(6.4)	(7.5)	(3.3)	(-2.1)	(-0.2)	(1.1)
Industry (including directly imported)	12.0	7.0	1.0	7.0	0.9	0.9	0.9
	(7.8)	(10.3)	(14.7)	(-0.2)	(0.0)	(0.9)	(-2.2)
Buildings	14.1	9.2	0.5	9.8	0.7	0.5	0.5
	(2.0)	(4.3)	(-2.7)	(6.3)	(-4.7)	(-1.0)	(8.6)

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

#### ► The growth rate of gas(city gas+directly imported LNG)consumption by major industries



## 8. Electricity

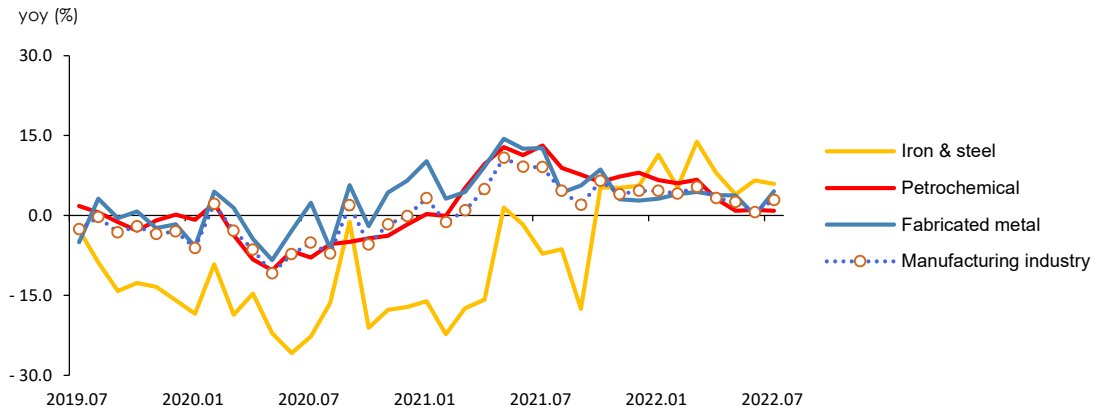
- Electricity use surged in the building sector and grew quite fast in the industrial sector, and overall, the total electricity use grew by 5.6% year-on-year in July.
- Industrial electricity use went up by 3.1%, driven by a strong growth in the fabricated metals and iron & steel sectors, although it remained stagnant in the petrochemical sector.
- Electricity use in buildings posted a year-on-year growth of 8.4%, which was attributed to the increased cooling demand and the recovery of the service industry.

### ► Electricity consumption by end-use sectors

	2021p			2022p			
		M1~7	M7		M1~7	M5	M6
<b>Electricity (TWh)</b>	<b>533.4</b>	<b>307.8</b>	<b>46.0</b>	<b>320.7</b>	<b>42.2</b>	<b>43.0</b>	<b>48.5</b>
	(4.7)	(4.6)	(9.3)	(4.2)	(3.3)	(2.3)	(5.6)
Industry	282.4	163.6	24.4	169.5	23.6	23.3	25.2
	(5.1)	(5.3)	(9.3)	(3.6)	(2.7)	(1.2)	(3.1)
Transport	3.4	1.9	0.3	2.0	0.3	0.3	0.3
	(7.3)	(9.0)	(12.1)	(4.2)	(7.4)	(-3.7)	(6.7)
Buildings	247.7	142.3	21.2	149.2	18.3	19.5	23.0
	(4.3)	(3.7)	(9.2)	(4.9)	(4.1)	(3.8)	(8.4)
Residential	77.6	43.5	6.8	44.6	5.6	5.8	7.3
	(4.7)	(4.4)	(13.0)	(2.5)	(0.2)	(-0.5)	(8.4)
Commercial	136.6	79.5	11.6	85.6	10.3	11.1	12.8
	(3.4)	(2.4)	(7.2)	(7.7)	(6.9)	(7.3)	(9.7)

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

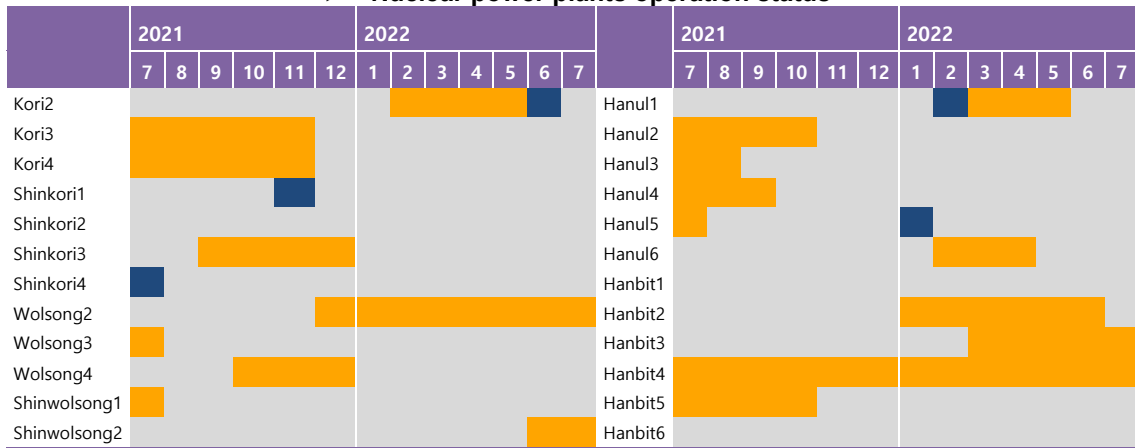
### ► The growth rate of electricity consumption in manufacturing industry



## 9. Nuclear

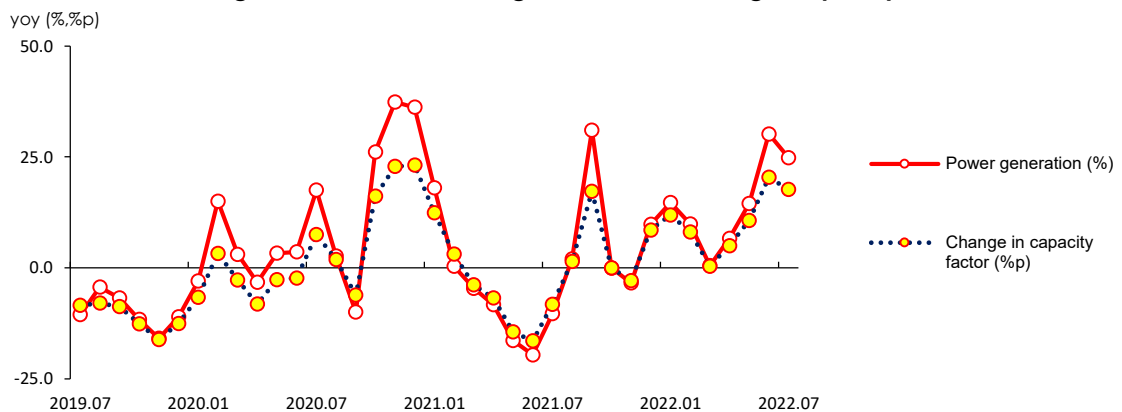
- **The total nuclear generation jumped 24.8% year-on-year in July, as its capacity factor increased due to a drop in the number of reactors that were subject to the planned preventive maintenance.**
  - The nuclear capacity factor went up by around 17%p year-on-year, as the number of reactors that were under planned preventive maintenance and faced an unscheduled shutdown decreased by six and one respectively from the same month last year.
  - Nuclear energy's share of the total power generation grew by around 5%p year-on-year to mid-to-high 20% range.

► **Nuclear power plants operation status**



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

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



Note: Capacity factor = Ratio of actual power generated to possible power generation when utilizing 100% of available facility. Facility capacity values are based on end-of-the-month data

## 10. Heat and Renewable energy

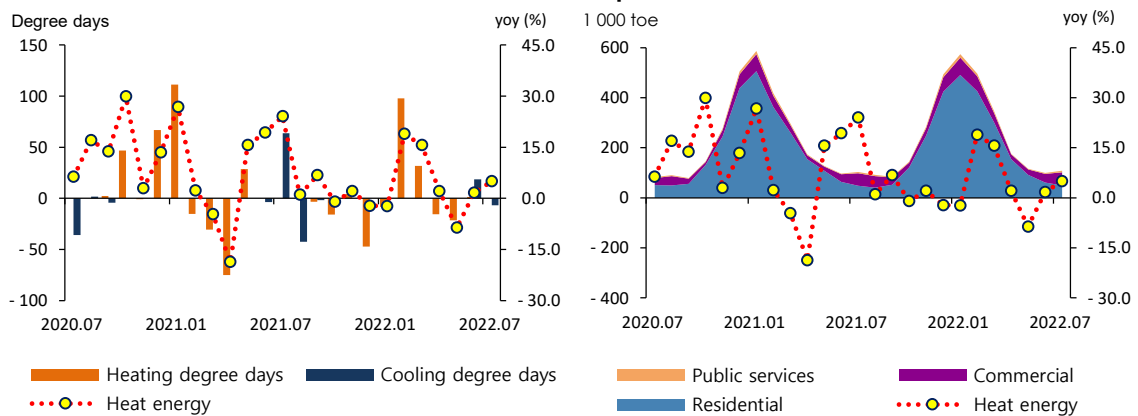
### □ Heat energy use grew by 5.0% year-on-year in July, as it increased in all end-use sectors.

- Heat energy use increased by 2.4% year-on-year in the residential sector that accounts for a large share of the total heat energy use, partly due to low base effect of the same month last year (-5.6%).
- Heat energy use increased by 6.9% year-on-year in the commercial sector, affected by increased outdoor activities during summer and stronger production in the food & accommodation sector (29.9%, based on the production index), though the pace of growth slowed.

### □ Renewable & other energy use posted a year-on-year growth of 11.8% in July, and it grew more strongly in the power generation and transport sectors.

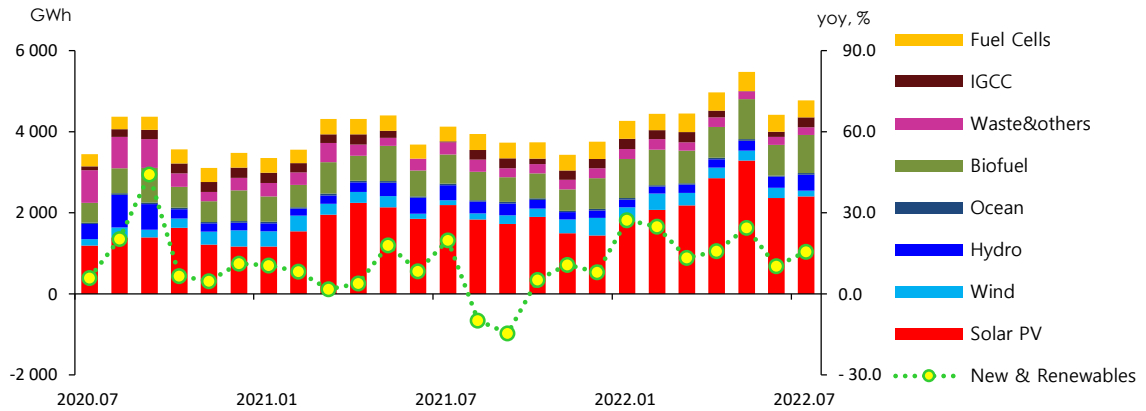
- Renewable & other energy generation<sup>2</sup> grew by 20.0% year-on-year, driven by strong growth in IGCC, solar PV and bioenergy generation.
- As for the final use of renewable & other energy, it rose by 1.4% in the industrial sector that accounts for a large share of the total heat energy use, and it also grew in the transport and building sectors by 12.1% and 6.5% respectively.

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



<sup>2</sup> The power generation from and installed capacity of renewable & other energy sources are based on the data from KEPCO's 'The Monthly Report on Electric Power Statistics'. In the current Energy Balance report, renewable & other energy and hydropower (including pumped storage) data are collected in separate categories, and therefore, hydropower is not included in the renewable & other energy category.

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



## 11. Industry

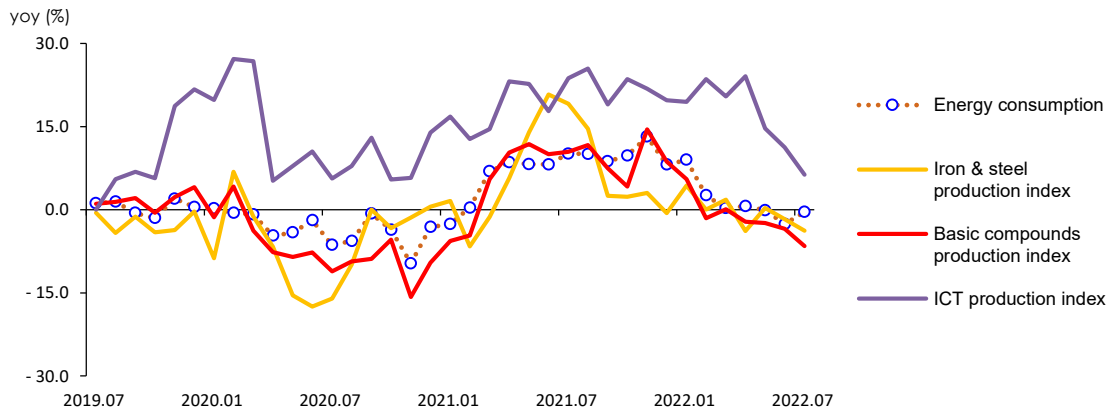
- **Industrial energy use slid by 0.4% year-on-year in July, with the primary metals sector leading the downward trend, although it increased in the petrochemical and fabricated metals sectors.**
  - Energy use bounced back in the petrochemical and fabricated metals sectors despite fewer work days (-1 day, YoY), while it has declined in the primary metals sector for seven straight months.
  - In the iron & steel (primary metals) sector, energy use has been steadily decreasing since January, as the production of converter steel, electric steel and other major iron & steel products decreased due to weak performance of some industries that are major source of demand, mostly the construction industry.

### ► Industrial energy consumption

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Industry (Mtoe)</b>	<b>148.1</b>	<b>85.0</b>	<b>12.7</b>	<b>86.1</b>	<b>12.2</b>	<b>11.6</b>	<b>12.6</b>
	(7.3)	(5.5)	(10.1)	(1.3)	(-0.1)	(-2.6)	(-0.4)
Petrochemical	76.7	43.5	6.6	45.6	6.3	5.9	6.8
	(11.0)	(5.9)	(13.1)	(4.7)	(1.3)	(-2.7)	(2.6)
- Naphtha	55.3	31.1	4.7	32.0	4.4	4.1	4.9
	(11.3)	(3.4)	(9.6)	(2.9)	(-0.3)	(-4.0)	(2.8)
Iron & Steel	29.7	17.3	2.5	15.8	2.3	2.2	2.4
	(5.2)	(7.3)	(5.9)	(-8.9)	(-9.5)	(-6.3)	(-5.5)
-Coking coal	24.6	14.3	2.1	13.3	1.9	1.9	2.0
	(4.5)	(7.4)	(3.9)	(-7.0)	(-8.3)	(-3.8)	(-2.5)
Fabricated metal	12.2	7.2	1.0	7.3	1.0	1.0	1.1
	(7.0)	(9.4)	(10.7)	(2.5)	(3.9)	(-0.5)	(4.2)
Share of feedstock (%)	59.0	58.5	58.7	57.7	57.0	56.6	59.4

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

### ► Industrial energy consumption & production index



## 12. Transport

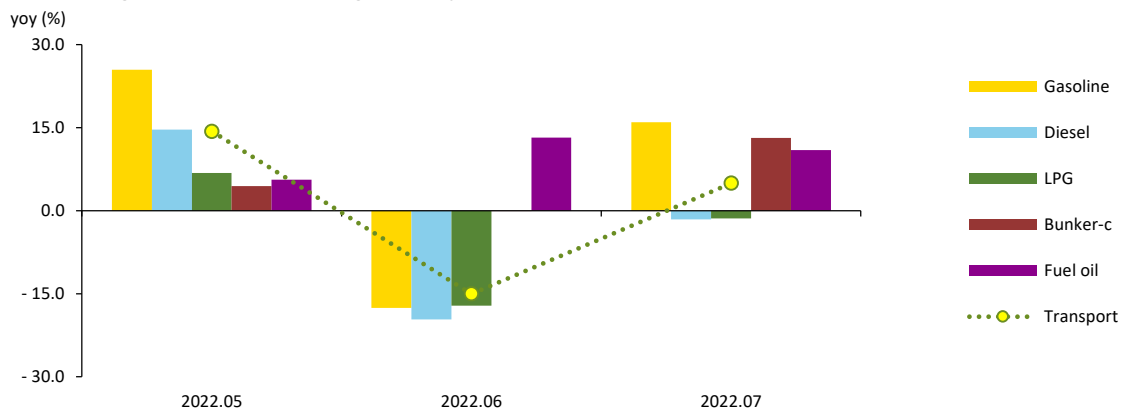
- **Transport energy use increased by 4.9% year-on-year in July, as it increased in all sub-sectors including the road transport and aviation sectors.**
  - In the road transport sector, energy use grew by 3.2% year-on-year, because fuel demand increased following the additional fuel tax cut of 7%p.
  - In the aviation sector, energy use increased by 11.0% year-on-year, as the number of international flights surged.
  - In the navigation sector, diesel and bunker-C oil use went up by 39.2% and 14.9% respectively, and as a result, the total energy use grew by 19.2% year-on-year.

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

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Transport (Mtoe)</b>	<b>40.03</b>	<b>23.06</b>	<b>3.43</b>	<b>22.88</b>	<b>3.91</b>	<b>3.00</b>	<b>3.60</b>
	(1.5)	(1.5)	(1.7)	(-0.8)	(14.3)	(-15.1)	(4.9)
Road	34.09	19.63	2.92	19.04	3.32	2.48	3.01
	(1.9)	(2.8)	(2.5)	(-3.0)	(15.1)	(-19.1)	(3.2)
Navigation	3.18	1.85	0.27	2.10	0.33	0.27	0.33
	(2.3)	(0.9)	(4.4)	(13.3)	(14.1)	(10.7)	(19.2)
Aviation	2.46	1.40	0.21	1.57	0.24	0.24	0.23
	(-3.9)	(-12.9)	(-11.1)	(12.0)	(5.6)	(13.2)	(11.0)
Rail	0.31	0.18	0.03	0.17	0.02	0.02	0.03
	(-4.5)	(-5.1)	(0.1)	(-1.8)	(0.5)	(-11.0)	(2.6)

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

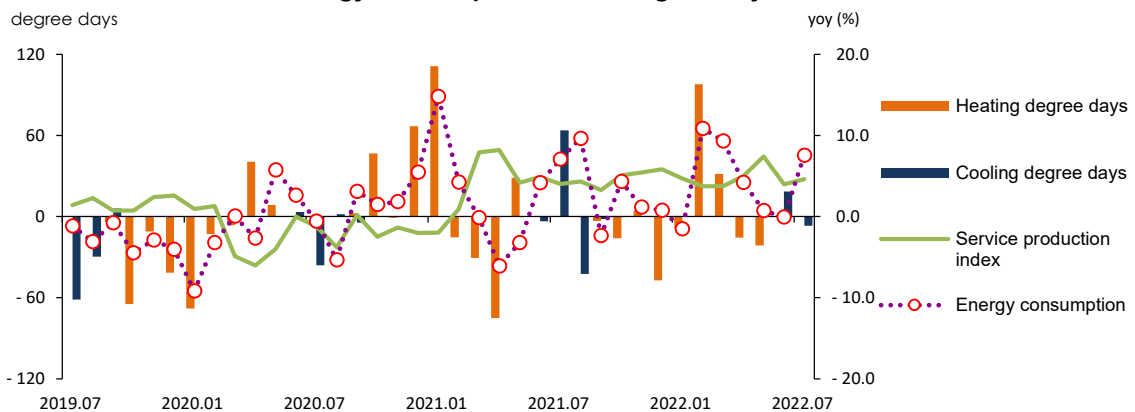
- **Energy use in buildings grew by 7.6% year-on-year in July, as it grew in the residential, commercial and public sectors all together.**
  - In the residential sector, energy use went up by 7.0% year-on-year, especially electricity (8.4%), driven by growing demand for cooling.
  - In the commercial sector, energy use rose by 7.5% year-on-year, as the service industry recovers, backed by the growth in social activities.

### ► Energy consumption in buildings

	2021p	2022p					
		M1~7	M7	M1~7	M5	M6	M7
<b>Buildings (Mtoe)</b>	<b>46.6</b>	<b>28.0</b>	<b>2.9</b>	<b>29.3</b>	<b>2.9</b>	<b>2.8</b>	<b>3.1</b>
	(3.2)	(3.8)	(7.1)	(4.5)	(0.7)	(-0.1)	(7.6)
Residential	23.7	14.7	1.0	15.1	1.2	1.0	1.1
	(2.4)	(3.9)	(5.1)	(3.1)	(-8.0)	(-7.9)	(7.0)
Commercial	17.3	10.1	1.4	10.9	1.3	1.3	1.5
	(3.6)	(3.0)	(8.6)	(7.6)	(9.1)	(6.7)	(7.5)
Public+others	5.6	3.2	0.4	3.3	0.4	0.4	0.5
	(5.8)	(6.0)	(6.8)	(1.4)	(6.2)	(0.4)	(9.0)
Heating degree days	2 404.7	1 492.3	-	1 577.8	36.1	1.4	-
	(-1.8)	(1.3)	-	(5.7)	(-37.3)	-	-
Cooling degree days	101.3	67.3	67.3	79.1	-	18.5	60.6
	(18.9)	(861.4)	-	(17.5)	-	-	-
Service production index (2015=100)	110.9	108.8	111.0	113.9	117.6	118.0	116.1
	( 4.3)	( 4.0)	-	( 4.7)	-	-	-

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

### ► Energy consumption in buildings & major indicators



## 14. Power Generation

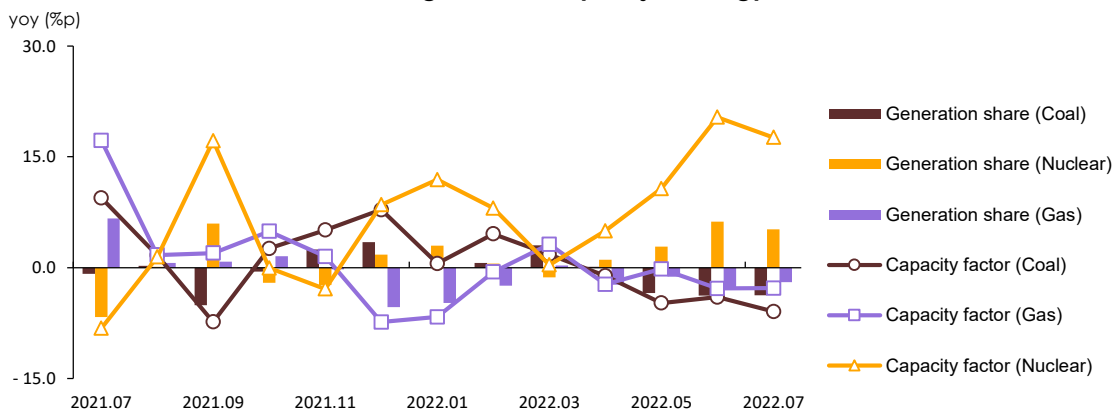
- The total power generation and fuel input grew by 1.6% and 4.2% respectively in July on a year-on-year basis, as a result of growing electricity consumption.
  - Nuclear and renewable & other energy generation surged from the same month last year, while coal and gas-fired generation decreased.
  - In the power generation mix, relatively more efficient gas-fired generation accounted for lower share, while less efficient baseload generation accounted for the increased share, and consequently, the total fuel input grew faster (4.2%) than the power generation (1.6%).

### ► Power generation by energy sources

	2021p			2022p			
		M1~7	M7	M1~7	M5	M6	M7
<b>Power Generation (TWh)</b>	<b>576.7</b>	<b>333.1</b>	<b>54.1</b>	<b>346.6</b>	<b>46.2</b>	<b>47.6</b>	<b>55.0</b>
	(4.5)	(5.2)	(16.0)	(4.0)	(4.2)	(3.9)	(1.6)
Coal	198.0	110.9	21.4	110.3	13.6	15.5	19.7
	(0.8)	(-1.9)	(13.6)	(-0.5)	(-6.6)	(-6.8)	(-8.0)
Oil	2.4	1.4	0.3	1.3	0.1	0.1	0.1
	(4.4)	(47.8)	(293.8)	(-3.7)	(-27.2)	(-29.8)	(-65.1)
Gas	168.3	101.3	15.6	97.8	12.2	12.5	14.8
	(15.4)	(27.1)	(50.9)	(-3.5)	(-0.3)	(-6.2)	(-5.3)
Nuclear	158.0	89.5	12.3	102.0	14.6	14.7	15.4
	(-1.4)	(-6.6)	(-10.3)	(14.0)	(14.5)	(30.2)	(24.8)
Hydro/other renewables	50.1	30.0	4.5	35.1	5.8	4.7	5.1
	(5.5)	(9.9)	(21.5)	(16.9)	(22.7)	(9.1)	(13.1)
Baseload	356.0	200.4	33.7	212.4	28.2	30.3	35.0
	(-0.2)	(-4.0)	(3.5)	(6.0)	(3.3)	(8.2)	(4.0)

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

	2020	2021					2022			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
GDP (trillion won)	1 839.5 (-0.7)	1 915.8 (4.1)	932.0 (4.2)	- (-)	478.3 (6.2)	- (-)	959.5 (3.0)	- (-)	492.2 (2.9)	- (-)
Private consumption	851.0 (-4.8)	882.5 (3.7)	432.7 (2.6)	- (-)	217.0 (3.8)	- (-)	450.6 (4.1)	- (-)	225.6 (3.9)	- (-)
Facilities investment	166.6 (7.2)	181.6 (9.0)	93.3 (14.1)	- (-)	48.3 (13.7)	- (-)	87.3 (-6.4)	- (-)	45.1 (-6.6)	- (-)
Construction investment	269.3 (1.5)	265.0 (-1.6)	127.4 (-1.7)	- (-)	73.0 (-1.2)	- (-)	121.7 (-4.5)	- (-)	70.3 (-3.7)	- (-)
Consumer price index (2015=100)	105.4	102.5	101.8	102.1	102.1	102.3	106.8	107.6	108.2	108.7
USD to KRW exchange rate (won)	1 180.3	1 144.0	1 121.2	1 123.3	1 121.3	1 144.0	1 242.9	1 269.9	1 277.4	1 307.4
Benchmark rate (%)	0.7	0.6	0.5	0.5	0.5	0.5	1.6	1.8	1.8	2.3
Coincident composite index (2015=100)	112.5	116.9	115.9	116.6	116.9	117.3	121.0	121.0	121.4	122.2
Mining & manufacturing production index (2015=100)	106.4	114.3	112.8	111.5	117.2	116.6	117.2	119.9	118.8	118.3
Manufacturing operation ratio index (2015=100)	95.3	99.8	98.8	98.6	102.9	102.1	102.1	105.1	103.2	102.2
Average temperature	13.0	13.3	12.6	16.6	21.7	26.0	12.4	18.0	22.4	25.9
- year-on-year difference	- 0.4	0.3	0.2	- 0.9	- 1.0	3.5	- 0.2	1.4	0.6	- 0.1
Heating degree days	2 448.0 (3.3)	2 404.7 (-1.8)	1 492.3 (1.3)	57.6 (99.3)	- (-)	- (-)	1 577.8 (5.7)	36.1 (-37.3)	1.4 (-)	- (-)
Cooling degree days	85.2 (- 29.2)	101.3 ( 18.9)	67.3 ( 861.4)	- (-)	- (- 100.0)	67.3 (1 822.9)	79.1 ( 17.5)	- (-)	18.5 (-)	60.6 (- 10.0)
Energy intensity	0.16 (-3.1)	0.16 (0.4)	0.16 (-0.8)	- (-)	0.15 (-1.9)	- (-)	0.16 (-0.3)	- (-)	0.15 (-2.5)	- (-)
Per capita consumption										
oil (bbl)	16.8 (-6.0)	18.0 (7.1)	10.3 (3.7)	1.5 (-2.2)	1.5 (8.3)	1.5 (9.2)	10.6 (2.7)	1.5 (5.1)	1.3 (-10.1)	1.6 (2.2)
Electricity (MWh)	9.8 (-2.3)	10.3 (4.9)	5.9 (4.8)	0.8 (6.7)	0.8 (5.9)	0.9 (9.5)	6.2 (4.4)	0.8 (3.6)	0.8 (2.6)	0.9 (5.8)
City gas (1 000 m <sup>3</sup> )	0.4 (-3.7)	0.5 (5.3)	0.3 (7.3)	0.0 (8.7)	0.0 (12.1)	0.0 (7.3)	0.3 (4.4)	0.0 (-0.7)	0.0 (3.0)	0.0 (8.7)
Total energy (toe)	5.6 (-3.8)	5.9 (4.7)	3.4 (4.3)	0.5 (3.6)	0.5 (5.0)	0.5 (9.5)	3.5 (2.8)	0.5 (3.9)	0.5 (-1.2)	0.5 (2.3)

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

## The Index of Production Ratio & Output by Sectors

(2015=100)

	2020	2021					2022			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industrial production index										
All industry	107.4 (-1.0)	112.7 (4.9)	110.6 (4.9)	110.2 (7.0)	117.6 (6.5)	111.9 (4.6)	115.3 (4.2)	118.0 (7.1)	120.2 (2.2)	116.1 (3.8)
Mining & manufacturing	106.4 (-0.3)	114.3 (7.4)	112.8 (8.7)	111.5 (15.1)	117.2 (12.2)	116.6 (8.5)	117.2 (4.0)	119.9 (7.5)	118.8 (1.4)	118.3 (1.5)
Semiconductor	230.7 (22.7)	298.6 (29.4)	273.2 (26.0)	283.0 (26.6)	300.0 (25.8)	307.0 (34.6)	345.4 (26.5)	351.6 (24.2)	371.6 (23.9)	360.2 (17.3)
Iron & steel	92.1 (-6.3)	97.4 (5.8)	97.3 (7.0)	98.0 (14.0)	98.2 (20.8)	102.3 (19.1)	96.9 (-0.5)	98.3 (0.3)	96.5 (-1.7)	98.4 (-3.8)
Cement	87.2 (-7.5)	91.6 (5.0)	90.8 (6.7)	96.7 (9.8)	98.6 (6.0)	94.2 (15.3)	88.3 (-2.8)	99.5 (2.9)	88.0 (-10.8)	93.8 (-0.4)
Basic compound	101.1 (-7.1)	107.9 (6.7)	107.2 (5.0)	106.6 (11.9)	103.5 (10.0)	113.0 (10.5)	105.5 (-1.5)	104.0 (-2.4)	99.9 (-3.5)	105.6 (-6.5)
Transport equipment	84.4 (-9.6)	88.2 (4.5)	91.1 (13.7)	82.5 (29.5)	95.9 (20.9)	90.1 (-3.7)	92.8 (1.9)	95.5 (15.8)	99.4 (3.6)	100.0 (11.0)
Electric & electronic	108.5 (-1.0)	115.2 (6.1)	112.8 (8.9)	110.0 (16.0)	120.7 (11.4)	118.8 (6.4)	115.1 (2.1)	115.3 (4.8)	121.3 (0.5)	-
Service	106.2 (-2.0)	110.9 (4.3)	108.8 (4.0)	109.5 (4.2)	113.5 (4.9)	111.0 (4.0)	113.9 (4.7)	117.6 (7.4)	118.0 (4.0)	116.1 (4.6)
Wholesale and retail	101.9 (-2.6)	106.0 (4.0)	104.6 (4.3)	106.5 (3.2)	107.3 (3.5)	105.9 (5.4)	107.3 (2.5)	111.6 (4.8)	107.9 (0.6)	106.8 (0.8)
Food & Accommodation	79.6 (-18.4)	80.7 (1.4)	76.2 (-5.9)	84.9 (-2.0)	84.2 (-0.5)	83.2 (-8.0)	91.4 (20.0)	102.5 (20.7)	100.7 (19.6)	108.1 (29.9)
Production output										
Iron & steel - Pig iron	45 359.6 (-4.5)	46 440.5 (2.4)	26 989.8 (6.4)	3 728.6 (7.0)	3 788.6 (8.8)	4 015.3 (2.8)	25 417.7 (-5.8)	3 581.6 (-3.9)	3 699.8 (-2.3)	3 955.1 (-1.5)
Iron & steel - Crude steel	67 078.8 (-6.1)	70 418.0 (5.0)	41 322.3 (8.7)	5 880.0 (9.2)	5 970.9 (17.3)	6 124.3 (10.8)	40 004.3 (-3.2)	5 801.6 (-1.3)	5 584.8 (-6.5)	6 172.5 (0.8)
Petrochemical - Basic petrochemicals	30 542.7 (-4.0)	34 434.5 (12.7)	19 393.3 (5.4)	2 814.2 (7.4)	2 651.1 (5.2)	3 099.1 (19.3)	20 036.7 (3.3)	2 794.3 (-0.7)	2 572.0 (-3.0)	2 917.3 (-5.9)
Petrochemical - Intermediate raw material	15 369.0 (-4.0)	15 764.6 (2.6)	9 104.5 (-1.5)	1 316.4 (3.8)	1 121.5 (-9.3)	1 337.5 (3.9)	8 324.8 (-8.6)	1 206.1 (-8.4)	1 062.2 (-5.3)	1 156.0 (-13.6)
Petrochemical - 3 major products	21 268.9 (-1.5)	23 197.8 (9.1)	13 228.8 (5.7)	1 923.7 (9.7)	1 849.8 (10.9)	2 062.1 (18.0)	13 623.6 (3.0)	1 940.3 (0.9)	1 768.2 (-4.4)	1 876.7 (-9.0)
The number of cars	3 506.8 (-11.2)	3 462.4 (-1.3)	2 112.3 (7.0)	256.3 (10.9)	325.8 (9.7)	297.6 (-13.9)	2 103.7 (-0.4)	307.0 (19.8)	328.4 (0.8)	324.7 (9.1)

Note: p means provisional

Source: Monthly Energy Statistics, Korea Petrochemical Industry Association

## International Energy Prices

	2020	2021					2022			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Crude oil (USD/bbl)										
WTI	39.4 (-30.9)	67.9 (72.4)	63.5 (69.0)	65.2 (128.4)	71.4 (86.2)	72.4 (77.7)	101.1 (59.3)	109.3 (67.7)	114.3 (60.3)	99.4 (37.2)
Dubai	42.2 (-33.6)	69.3 (64.1)	64.8 (58.0)	66.3 (117.7)	71.6 (75.5)	72.9 (68.4)	102.0 (57.3)	108.2 (63.0)	113.3 (58.2)	103.1 (41.4)
Brent	43.2 (-32.7)	70.8 (63.8)	66.4 (57.0)	68.3 (110.8)	73.4 (80.1)	74.3 (71.9)	104.7 (57.7)	112.0 (63.9)	117.5 (60.1)	105.1 (41.5)
Unit value of import (C&F)	44.8 (-31.7)	70.2 (56.9)	64.9 (44.0)	67.5 (158.0)	70.6 (136.7)	73.9 (88.5)	103.6 (59.7)	109.9 (62.8)	116.5 (65.0)	115.9 (56.7)
LNG										
TTF (USD/MMBTU)	3.2 (-32.5)	16.1 (396.9)	8.3 (254.0)	8.9 (465.9)	10.3 (486.8)	12.5 (594.6)	34.8 (317.5)	29.2 (227.3)	33.5 (225.6)	51.3 (310.0)
JKM (USD/MMBTU)	4.2 (-25.4)	17.8 (324.9)	10.1 (249.6)	9.6 (364.1)	11.5 (441.0)	13.6 (479.5)	30.7 (203.2)	23.0 (140.5)	28.9 (151.0)	39.5 (189.7)
Import price(Japan) (USD/MMBTU)	8.3 (-21.3)	10.8 (29.5)	9.1 (-4.3)	8.9 (-11.5)	9.6 (7.2)	10.4 (33.0)	16.3 (78.5)	16.7 (87.1)	15.5 (61.5)	18.9 (82.3)
Unit value of import (USD/ton, CIF)	390.2 (-22.8)	550.7 (41.2)	448.0 (-0.6)	408.1 (-13.0)	460.9 (3.9)	498.1 (29.7)	887.3 (98.1)	723.3 (77.2)	762.1 (65.4)	1 032.4 (107.3)
Bituminous coal (USD/ton)										
From Australia	60.3 (-22.8)	136.0 (125.8)	103.9 (72.3)	100.4 (94.4)	125.3 (133.2)	145.9 (179.3)	327.4 (215.0)	390.4 (288.7)	395.0 (215.3)	408.4 (179.9)
Unit value of import (CIF)	77.7 (-22.9)	115.1 (48.1)	90.5 (9.4)	94.5 (13.2)	98.0 (29.9)	102.8 (49.4)	232.9 (157.2)	266.9 (182.5)	258.9 (164.2)	254.6 (147.8)
Petroleum product (USD/bbl)										
Gasoline	46.7 (-35.7)	80.3 (72.2)	73.9 (62.6)	76.2 (127.7)	80.4 (77.3)	85.4 (83.0)	127.3 (72.2)	147.0 (92.9)	155.2 (93.2)	121.7 (42.6)
Kerosene	44.7 (-42.1)	75.1 (67.9)	68.8 (53.9)	71.7 (148.3)	75.9 (84.3)	77.3 (75.9)	130.3 (89.3)	143.0 (99.3)	164.3 (116.4)	134.9 (74.6)
Diesel	49.4 (-36.8)	77.6 (57.2)	71.3 (41.7)	73.9 (104.9)	78.8 (69.1)	79.9 (59.3)	139.5 (95.6)	153.5 (107.6)	176.8 (124.3)	145.3 (81.9)
Bunker-C	39.2 (-31.9)	64.4 (64.3)	59.9 (63.7)	59.7 (124.0)	64.7 (75.6)	66.2 (68.3)	93.7 (56.4)	104.5 (74.9)	99.1 (53.1)	79.4 (20.0)
Propane	397.1 (-8.6)	647.9 (63.2)	569.3 (43.3)	495.0 (45.6)	530.0 (51.4)	620.0 (72.2)	810.7 (42.4)	850.0 (71.7)	750.0 (41.5)	725.0 (16.9)
Butane	403.8 (-8.6)	629.6 (55.9)	551.4 (34.7)	475.0 (39.7)	525.0 (59.1)	620.0 (82.4)	814.3 (47.7)	860.0 (81.1)	750.0 (42.9)	725.0 (16.9)
Naphtha	40.5 (-28.9)	70.6 (74.6)	65.1 (69.1)	65.7 (149.6)	70.5 (80.9)	75.5 (73.6)	92.5 (42.1)	94.7 (44.2)	84.3 (19.6)	81.6 (8.1)

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, World Bank, Monthly energy statistics, CME Group, Korea International Trade Association

## Domestic Energy Prices

	2020	2021					2022			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Petroleum product										
Gasoline (won/liter)	1 381.6 (-6.1)	1 590.5 (15.1)	1 528.7 (8.7)	1 541.5 (22.8)	1 577.3 (19.2)	1 629.3 (19.8)	1 906.6 (24.7)	1 967.1 (27.6)	2 084.0 (32.1)	2 030.0 (24.6)
Diesel (won/liter)	1 189.8 (-11.2)	1 391.3 (16.9)	1 327.1 (8.8)	1 338.8 (25.6)	1 374.4 (21.9)	1 425.5 (22.6)	1 837.4 (38.5)	1 964.3 (46.7)	2 089.0 (52.0)	2 084.9 (46.3)
Bunker-C (won/liter)	573.6 (-22.9)	731.7 (27.6)	674.6 (12.9)	706.4 (56.5)	706.4 (52.6)	728.4 (38.8)	1 109.9 (64.5)	1 190.4 (68.5)	1 229.3 (74.0)	1 405.7 (93.0)
Propane (won/kg)	1 850.7 (-1.0)	2 092.6 (13.1)	1 992.9 (6.7)	2 031.6 (15.8)	1 999.6 (11.4)	2 036.4 (12.8)	2 483.8 (24.6)	2 558.2 (25.9)	2 558.8 (28.0)	2 531.2 (24.3)
Butane (won/liter)	791.1 (-1.9)	931.9 (17.8)	875.3 (9.0)	899.4 (24.1)	878.5 (17.2)	906.3 (19.3)	1 105.3 (26.3)	1 134.6 (26.2)	1 133.7 (29.1)	1 100.2 (21.4)
City gas(won/MJ)										
Residential	15.1 (-3.6)	14.2 (-5.7)	14.2 (-9.3)	14.2 (-10.7)	14.2 (-10.7)	14.2 -	15.2 (6.5)	15.9 (11.6)	15.9 (11.6)	17.0 (19.5)
General(1)	14.9 (-4.7)	13.9 (-6.5)	13.9 (-10.7)	13.8 (-12.3)	13.8 (-12.2)	13.8 (-0.0)	14.9 (7.0)	15.5 (12.1)	15.5 (12.1)	16.6 (20.2)
Commercial	15.1 (-6.4)	17.2 (14.2)	15.4 (-5.2)	15.0 (-8.9)	15.6 (-5.5)	16.2 (10.7)	24.6 (60.0)	22.7 (51.3)	22.7 (46.2)	24.9 (54.0)
Industry	12.6 (-8.4)	14.4 (14.2)	12.7 (-8.6)	11.8 (-15.5)	12.3 (-11.4)	12.9 (9.9)	21.8 (72.1)	19.7 (67.0)	19.7 (60.0)	21.8 (69.1)
Heat(won/Mcal)										
Residential	66.2 (0.7)	65.2 (-1.4)	65.2 (-2.4)	65.2 (-2.8)	65.2 (-2.8)	65.2 -	67.3 (3.2)	67.0 (2.7)	67.0 (2.7)	74.5 (14.2)
Commercial	85.9 (0.7)	84.7 (-1.4)	84.7 (-2.4)	84.7 (-2.8)	84.7 (-2.8)	84.7 -	87.4 (3.2)	87.0 (2.7)	87.0 (2.7)	96.7 (14.2)
Public	75.1 (0.7)	74.0 (-1.4)	74.0 (-2.5)	74.0 (-2.9)	74.0 (-2.9)	74.0 -	76.3 (3.2)	76.0 (2.7)	76.0 (2.7)	84.5 (14.2)
Electricity(won/kWh)										
Residential	147.3 -	142.3 (-3.4)	142.3 (-3.4)	142.3 (-3.4)	142.3 (-3.4)	142.3 (-3.4)	145.1 (2.0)	147.2 (3.4)	147.2 (3.4)	147.2 (3.4)
General	84.4 -	79.4 (-5.9)	79.5 (-5.9)	60.2 (-7.7)	100.7 (-4.7)	100.7 (-4.7)	82.3 (3.5)	65.1 (8.1)	105.6 (4.9)	105.6 (4.9)
Industry	96.0 -	91.0 (-5.2)	90.6 (-5.2)	73.5 (-6.4)	103.5 (-4.6)	103.5 (-4.6)	93.4 (3.1)	78.4 (6.7)	108.4 (4.7)	108.4 (4.7)

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

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

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

## Total Primary Energy Supply (TPES)

	2020	2021p					2022p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal (Mton)	116.6 (-12.4)	116.8 (0.2)	66.2 (-0.7)	9.1 (5.7)	9.5 (-1.0)	11.3 (5.4)	64.8 (-2.1)	8.9 (-2.6)	9.5 (0.6)	10.9 (-4.1)
- Coking coal excluded	82.8 (-15.6)	81.5 (-1.6)	45.6 (-3.9)	6.1 (0.8)	6.7 (-3.8)	8.3 (6.0)	45.6 (0.1)	6.1 (0.2)	6.8 (2.4)	7.9 (-4.6)
Oil (Mbbbl)	872.4 (-5.9)	932.4 (6.9)	531.8 (3.6)	76.1 (-2.4)	76.9 (8.1)	78.9 (9.0)	545.0 (2.5)	79.8 (4.9)	68.9 (-10.3)	80.4 (2.0)
- Non-energy oil excluded	423.6 (-6.2)	429.6 (1.4)	248.3 (1.8)	35.8 (-5.8)	36.9 (9.4)	36.1 (5.4)	253.6 (2.1)	39.7 (10.9)	31.4 (-15.0)	36.8 (1.8)
LNG (Mton)	42.1 (2.7)	45.8 (8.9)	27.5 (15.5)	3.1 (32.9)	3.1 (25.2)	3.4 (29.6)	27.4 (-0.4)	3.0 (-1.5)	2.9 (-3.9)	3.2 (-4.9)
Hydro (TWh)	7.1 (14.4)	6.7 (-5.7)	4.1 (7.9)	0.6 (13.3)	0.7 (33.9)	0.7 (16.3)	3.8 (-6.8)	0.5 (-15.5)	0.6 (-19.0)	0.7 (-3.7)
Nuclear (TWh)	160.2 (9.8)	158.0 (-1.4)	89.5 (-6.6)	12.8 (-16.4)	11.3 (-19.6)	12.3 (-10.3)	102.0 (14.0)	14.6 (14.5)	14.7 (30.2)	15.4 (24.8)
Others (Mtoe)	19.0 (7.3)	20.0 (5.6)	11.9 (9.9)	1.8 (17.4)	1.7 (10.9)	1.7 (18.7)	13.4 (12.6)	2.1 (14.2)	1.8 (8.5)	2.0 (11.8)
TPES (Mtoe)	292.1 (-3.6)	305.4 (4.6)	176.1 (4.1)	24.0 (3.4)	23.8 (4.8)	25.9 (9.3)	180.6 (2.5)	24.9 (3.7)	23.5 (-1.4)	26.4 (2.1)
- Non-energy oil excluded	236.1 (-3.2)	242.4 (2.7)	140.7 (3.7)	18.9 (4.1)	18.8 (4.1)	20.6 (8.4)	144.1 (2.4)	19.8 (4.7)	18.8 (-0.2)	21.0 (2.1)
- Non-energy oil&coal excluded	212.5 (-3.2)	217.8 (2.5)	126.3 (3.3)	16.8 (2.7)	16.8 (3.8)	18.5 (8.9)	130.8 (3.5)	17.9 (6.4)	16.9 (0.3)	18.9 (2.6)

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

## Share of TPES by Sources

(unit: %)

	2020	2021p					2022p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Coal	24.7	23.8	23.4	23.7	24.7	27.0	22.3	22.1	25.0	25.4
- Coking coal excluded	16.7	15.7	15.2	14.9	16.5	18.9	14.9	14.3	17.0	17.7
Oil	37.7	38.6	38.1	40.1	40.8	38.4	38.0	40.7	37.1	38.2
- non-energy oil excluded	18.6	18.0	18.0	19.1	19.7	17.7	17.8	20.5	17.0	17.6
LNG	18.8	19.6	20.4	16.7	16.8	17.2	19.8	15.9	16.4	16.1
Hydro	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6
Nuclear	11.7	11.0	10.8	11.3	10.1	10.1	12.0	12.5	13.4	12.4
Others	6.5	6.6	6.7	7.6	7.0	6.7	7.4	8.4	7.7	7.4
TPES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: p means provisional  
Source: Monthly energy statistics

## Total Final Consumption (TFC)

(Unit: Mtoe)

	2020	2021p					2022p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	138.0 (-3.5)	148.1 (7.3)	85.0 (5.5)	12.2 (8.2)	11.9 (8.1)	12.7 (10.1)	86.1 (1.3)	12.2 (-0.1)	11.6 (-2.6)	12.6 (-0.4)
Transport	39.4 (-8.3)	40.0 (1.5)	23.1 (1.5)	3.4 (-7.0)	3.5 (5.2)	3.4 (1.7)	22.9 (-0.8)	3.9 (14.3)	3.0 (-15.1)	3.6 (4.9)
Residential	23.2 (2.8)	23.7 (2.4)	14.7 (3.9)	1.4 (-7.5)	1.1 (5.6)	1.0 (5.1)	15.1 (3.1)	1.2 (-8.0)	1.0 (-7.9)	1.1 (7.0)
commercial	16.7 (-4.4)	17.3 (3.6)	10.1 (3.0)	1.2 (-0.3)	1.3 (3.4)	1.4 (8.6)	10.9 (7.6)	1.3 (9.1)	1.3 (6.7)	1.5 (7.5)
Public	5.3 (-2.7)	5.6 (5.8)	3.2 (6.0)	0.4 (4.5)	0.4 (2.9)	0.4 (6.8)	3.3 (1.4)	0.4 (6.2)	0.4 (0.4)	0.5 (9.0)
<b>TFC</b>	<b>222.6</b> (-3.8)	<b>234.7</b> (5.5)	<b>136.0</b> (4.5)	<b>18.5</b> (3.2)	<b>18.3</b> (6.9)	<b>19.0</b> (8.0)	<b>138.2</b> (1.6)	<b>19.0</b> (2.7)	<b>17.4</b> (-4.6)	<b>19.3</b> (1.7)
Coal (Mton)	45.8 (-4.9)	47.8 (4.4)	27.4 (6.3)	4.1 (19.1)	3.7 (3.4)	4.0 (5.6)	26.0 (-5.1)	4.0 (-0.8)	3.9 (5.9)	3.8 (-6.4)
Oil (Mbbbl)	865.8 (-5.7)	923.5 (6.7)	526.7 (3.2)	75.7 (-2.5)	76.3 (8.0)	78.1 (8.4)	537.9 (2.1)	79.3 (4.9)	68.4 (-10.4)	79.8 (2.2)
Electricity (TWh)	509.3 (-2.2)	533.4 (4.7)	307.8 (4.6)	40.8 (6.6)	42.0 (5.7)	46.0 (9.3)	320.7 (4.2)	42.2 (3.3)	43.0 (2.3)	48.5 (5.6)
City gas (Bm³)	22.4 (-3.5)	23.6 (5.1)	14.8 (7.1)	1.5 (8.5)	1.3 (11.9)	1.2 (7.1)	15.4 (4.2)	1.5 (-0.9)	1.3 (2.7)	1.3 (8.5)
Heat-others (1 000 toe)	12.3 (6.1)	12.5 (2.0)	7.5 (4.4)	0.9 (9.8)	0.9 (6.0)	0.9 (5.5)	7.7 (3.4)	0.9 (-1.5)	0.9 (0.1)	1.0 (3.6)

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

## Share of the Total Final Consumption by Sources

(unit: %)

	2020	2021p					2022p			
			M1~7	M5	M6	M7	M1~7	M5	M6	M7
Industry	62.0	63.1	62.4	65.8	65.4	66.7	62.3	64.0	66.8	65.3
Transport	17.7	17.1	17.0	18.4	19.4	18.1	16.6	20.5	17.2	18.6
Residential	10.4	10.1	10.8	7.3	6.0	5.4	10.9	6.6	5.8	5.7
Commercial	7.5	7.4	7.5	6.3	6.9	7.4	7.9	6.7	7.7	7.8
Public	2.4	2.4	2.4	2.1	2.3	2.4	2.4	2.2	2.4	2.5
Final energy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal	13.7	13.6	13.5	14.6	13.6	14.2	12.5	13.9	14.7	13.2
Oil	49.1	49.7	48.9	51.6	52.9	51.8	49.0	52.8	49.6	52.0
Electricity	19.7	19.5	19.5	18.9	19.8	20.8	19.9	19.1	21.2	21.6
City gas	12.0	11.9	12.7	9.8	8.8	8.2	12.9	9.3	9.2	8.2
Heat-others	5.5	5.3	5.5	5.1	5.0	5.0	5.6	4.9	5.2	5.1

Note: p means provisional  
Source: Monthly energy statistics

## Statistics on Energy Production Facilities

	2018	2019	2021	2022			2022		
				M5	M6	M7	M5	M6	M7
Total capacity (GW)	119.1 (1.9)	125.3 (5.2)	134.0 (3.7)	129.6 (2.2)	131.1 (2.9)	131.3 (2.7)	134.1 (3.4)	134.2 (2.4)	134.3 (2.3)
Nuclear	21.9 (-3.0)	23.3 (6.4)	23.3 -	23.3 -	23.3 -	23.3 -	23.3 -	23.3 -	23.3 -
Bituminous coal	36.4 (0.7)	36.4 (0.1)	36.9 (1.3)	35.4 (-2.9)	36.4 (-0.2)	36.4 (-0.2)	36.3 (2.5)	36.3 (-0.4)	36.3 (-0.4)
Gas	37.9 (-0.0)	39.6 (4.5)	41.2 (0.1)	41.2 (-0.0)	41.2 -	41.2 -	41.2 (0.1)	41.2 (0.1)	41.2 (0.1)
Refinery capacity (mil BPSD)	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, Monthly energy statistics

## Statistics on Energy Consumption

	2018	2019	2021	2022			2022		
				M5	M6	M7	M5	M6	M7
The number of household demanding city gas (mil)	19.1 (3.1)	19.7 (2.8)	20.5 (2.0)	20.2 (2.4)	20.1 (1.8)	20.2 (1.9)	20.6 (1.8)	20.6 (2.3)	20.6 (2.0)
Registered cars (mil)	23.2 (3.0)	23.7 (2.0)	24.9 (2.2)	24.6 (2.8)	24.6 (2.6)	24.7 (2.5)	25.2 (2.4)	25.2 (2.3)	25.3 (2.3)
- gasoline	10.6 (2.5)	11.0 (3.1)	11.8 (3.1)	11.6 (3.8)	11.6 (3.5)	11.6 (3.4)	11.9 (2.8)	11.9 (2.7)	12.0 (2.7)
- diesel	9.9 (3.7)	10.0 (0.3)	9.9 (-1.2)	9.9 (-0.1)	9.9 (-0.3)	9.9 (-0.4)	9.8 (-1.0)	9.8 (-1.0)	9.8 (-1.1)
- LPG	2.0 (-3.3)	2.0 (-1.5)	1.9 (-1.7)	2.0 (-1.9)	2.0 (-2.0)	2.0 (-2.0)	1.9 (-1.9)	1.9 (-1.9)	1.9 (-1.9)
- hybrid	0.4 (30.9)	0.5 (26.1)	0.9 (34.0)	0.7 (37.3)	0.8 (36.9)	0.8 (37.0)	1.0 (32.8)	1.0 (32.2)	1.0 (31.7)

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

Source: Monthly energy statistics