

KEEI MONTHLY KOREA ENERGY TRENDS



COAL -2.6%
PETROLEUM 4.1%
LNG -1.5%
NUCLEAR 14.5%
NEW & RENEWABLE 14.2%
MAY. 2022

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



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1. The Economy and the Industry

□ The mining & manufacturing production index went up by 7.4% year-on-year in May, as production activities increased in most of the sectors.

- The semiconductor production index was up 24.2% year-on-year, driven by strong export demand and steady growth in utilization rates at semiconductor factories, even though the spread of the contactless environment slowed down after social distancing rules were lifted (Apr 18).
- The automobile production index increased by 15.8% year-on-year as a result of base effect and the increased number of (factory) operation days.
- The iron & steel production index rose slightly by 0.3% year-on-year, which was affected by sluggish business in some of the sectors that are major source of demand, such as the construction business.
- Meanwhile, the production index of basic chemical materials dropped by 2.3% yoy because of a fire accident at S-oil's Onsan factory (2022.5.19~), and the maintenance of some petrochemical plants.

□ The service production index grew by 7.3% yoy, as businesses started to recover following the termination of social distancing measures and a drop in the number of Covid-19 cases.

- The wholesale & retail production index went up by 5.2% year-on-year due to the removal of social distancing rules and business recovery. The transportation production index also jumped 14.0%.
- The food & accommodation production index was up 20.5% year-on-year, as social distancing measures were lifted, and the Covid-19 cases declined, which contributed to the improved business conditions in the face-to-face service sector.

► Major economic and industrial indicators

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
GDP (trillion won)	1 915.8 (4.1)	453.8 (2.2)	- -	467.4 (3.0)	467.4 (3.0)	- -	- -
Total export (\$billion, customs clearance basis)	644.4 (25.7)	248.4 (23.4)	50.7 (45.5)	292.8 (17.9)	63.8 (18.8)	57.9 (12.9)	61.6 (21.4)
Industrial production index (2015=100)	114.3 (7.4)	111.1 (8.1)	111.5 (15.1)	116.7 (5.0)	123.3 (3.7)	118.1 (3.6)	119.8 (7.4)
Semi-conductors	298.6 (29.4)	261.0 (24.2)	283.0 (26.6)	337.2 (29.2)	359.9 (26.5)	335.9 (34.8)	351.6 (24.2)
Basic chemical products	107.9 (6.7)	106.7 (3.0)	106.6 (11.9)	106.7 (-0.1)	111.6 (0.1)	104.0 (-2.2)	104.2 (-2.3)
Iron&Steel	97.4 (5.8)	96.1 (2.4)	98.0 (14.0)	96.6 (0.5)	100.5 (1.8)	95.0 (-3.8)	98.3 (0.3)
Cars	88.2 (4.5)	90.4 (16.4)	82.5 (29.5)	90.1 (-0.3)	94.5 (-6.3)	94.5 (-2.5)	95.5 (15.8)
Service production index (2015=100)	110.9 (4.3)	107.4 (3.8)	109.5 (4.2)	112.7 (4.9)	115.8 (3.8)	115.0 (5.0)	117.5 (7.3)
Wholesale & Retail	106.0 (4.0)	103.8 (4.3)	106.5 (3.2)	107.3 (3.4)	112.4 (2.7)	109.7 (2.6)	112.0 (5.2)
Food & Accommodation	80.7 (1.4)	73.2 (-6.7)	84.9 (-2.0)	86.2 (17.8)	81.4 (6.1)	91.8 (16.9)	102.3 (20.5)

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 Prices¹

Global Energy Prices

- **Global oil price increased, after the Chinese government decided to ease lockdown measures, and OPEC-plus stuck to the original plan for oil output increases.**
 - Global oil price climbed 5.2% from the prior month as demand was expected to recover following the Chinese government's decision to ease lockdown measures in June, and as OPEC adhered to the existing plan for oil output increases (432,000 b/d in June).
 - Global coal price surged amid concerns on supply chain disruptions caused by Russia's invasion of Ukraine, and also affected by heat-induced power shortages in India.
 - The US natural gas price rose by 21.6% than the previous month, as its LNG export grew by 4.3% to 9.9 Bcm (about 348 Bcf), and the natural gas inventory was 15.1% lower at the end of the month compared to the average of the past five years (2,239 Bcf).
 - Gas prices in Europe and Asia fell by 9.5% and 24.6% respectively amid mild weather and stable supply.

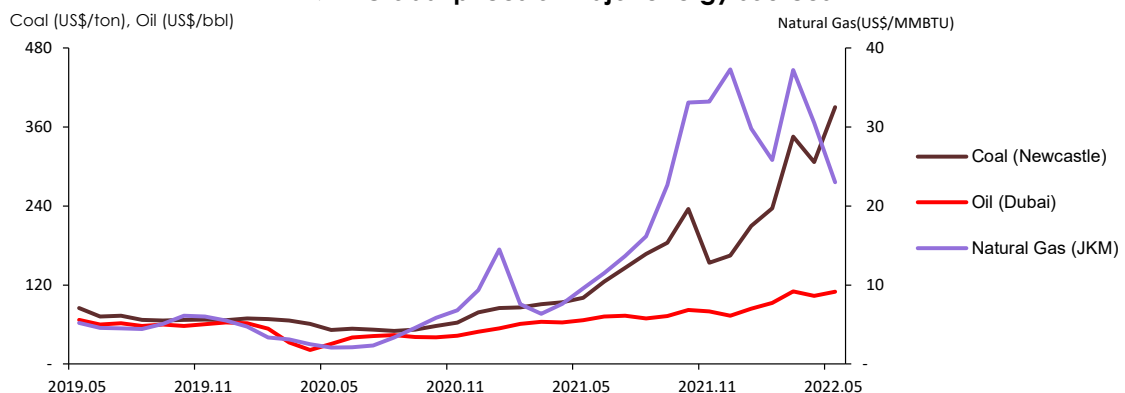
► Global energy prices

	2020	2021				2022		
			M3	M4	M5	M3	M4	M5
Crude oil (US\$/bbl)	41.6	69.4	64.2	63.3	66.6	110.6	103.5	109.8
	(-32.4)	(66.7)	(5.6)	(-1.3)	(5.2)	(19.3)	(-6.4)	(6.1)
Coal (US\$/ton)	60.2	136.4	90.9	93.9	100.4	345.3	306.6	390.4
	(-22.8)	(126.5)	(5.6)	(3.3)	(7.0)	(46.1)	(-11.2)	(27.3)
Natural gas (US\$/MMBTU)								
TTF	3.2	16.2	6.1	7.2	8.9	42.3	32.2	29.2
	(-32.3)	(398.7)	(-0.5)	(17.4)	(23.9)	(55.6)	(-23.9)	(-9.5)
JKM	4.2	17.8	6.3	7.6	9.6	37.2	30.5	23.0
	(-25.2)	(326.0)	(-16.5)	(20.3)	(25.3)	(44.1)	(-18.0)	(-24.6)

Note: All data are futures prices., Oil price is the average of Brent, Dubai and WTI, Coal price is based on Australian coal. () is month-on-month growth rates (%)

Source: www.petronet.co.kr, World Bank(Commodity Markets), CME Group

► Global prices of major energy sources



¹ 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 price fell by 0.5%, and diesel price grew by 3.0% from the prior month due to the global prices increase, despite of the additional fuel tax cut.**
 - Starting May, the fuel tax cut was expanded (flexible tax rate, 20%→30%), and accordingly, gasoline and diesel prices (VAT included) fell by KRW 83/liter and KRW 58/liter respectively.
- **The price of butane, which is used as transportation fuel, dropped by 2.5% from the previous month, owing to the reduction in domestic prices, bigger fuel tax cut and sales charge exemption.**
 - Domestic LPG importers (SK Gas, E1) cut the supply price of butane, used as transportation fuel, by KRW 54.7/kg in May, even though Saudi Aramco raised its global contract price in April.
- **The relative price of propane in terms of city gas for industrial customers (propane/city gas) rose by 18.1% to 1.54 in May from the previous month.**
 - Industrial city gas price fell by 15.3%, while industrial propane price remained flat, and consequently, their relative price increased sharply.

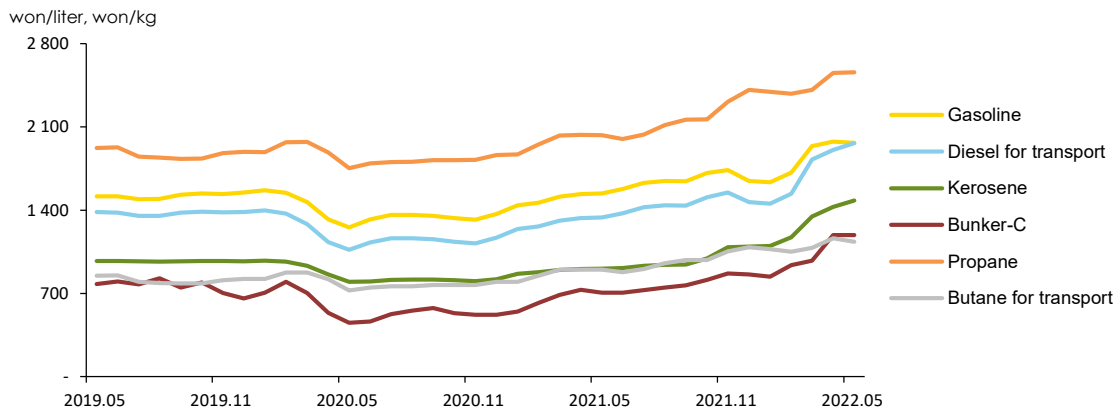
► Domestic petroleum product prices

	2020	2021				2022			
			M3	M4	M5		M3	M4	M5
Gasoline (won/liter)	1 381.2	1 591.1	1 513.3	1 534.5	1 541.5	1 938.5	1 976.5	1 967.1	
	(-6.2)	(15.2)	(3.4)	(1.4)	(0.5)	(13.1)	(2.0)	(-0.5)	
Diesel for transport (won/liter)	1 189.5	1 392.0	1 312.6	1 332.7	1 338.8	1 826.9	1 906.4	1 964.3	
	(-11.3)	(17.0)	(3.9)	(1.5)	(0.5)	(18.9)	(4.4)	(3.0)	
Bunker-C (won/liter)	572.9	732.2	686.0	730.1	706.4	974.0	1 191.7	1 190.4	
	(-23.0)	(27.8)	(10.7)	(6.4)	(-3.2)	(3.9)	(22.3)	(-0.1)	
Propane (won/kg)	1 850.3	2 093.4	2 029.2	2 032.9	2 031.6	2 412.1	2 552.2	2 558.2	
	(-1.0)	(13.1)	(3.9)	(0.2)	(-0.1)	(1.4)	(5.8)	(0.2)	
Butane for transport (won/liter)	790.8	932.3	898.6	899.2	899.4	1 083.0	1 163.2	1 134.6	
	(-1.9)	(17.9)	(6.0)	(0.1)	(0.0)	(3.1)	(7.4)	(-2.5)	

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

► Domestic petroleum product prices



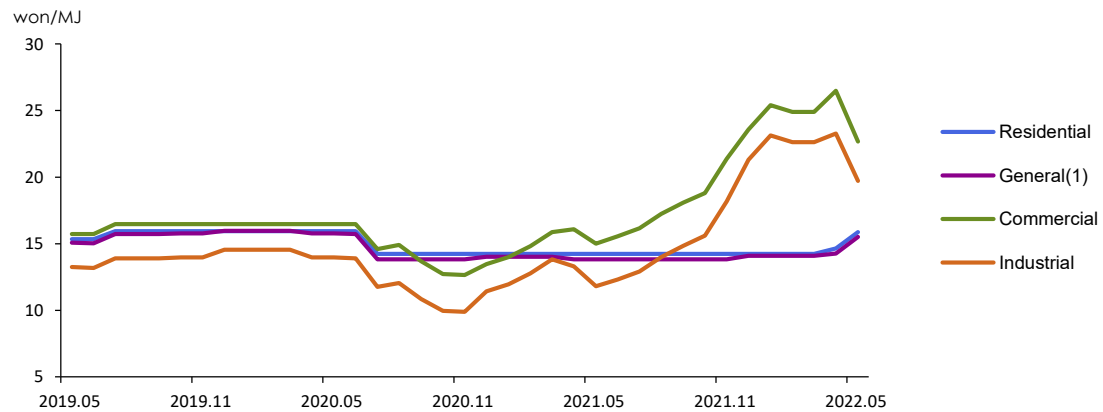
□ **City gas rates for office heating and industrial customers declined in May, while the rates for residential and general customers increased.**

- City gas rates for residential and general customers went up by 8.4% and 8.7% respectively from the previous month, as the raw material cost was raised (KRW 1.23/MJ).
- City gas rates for office heating and industrial customers are subjected to the monthly adjustment according to the fuel cost pass-through scheme, and the rates fell by 14.3% and 15.3% from the prior month, as the raw material cost declined (-KRW 3.7/MJ) in line with a drop in LNG import price.

□ **Electric rate has not changed in May since it was raised in the previous month.**

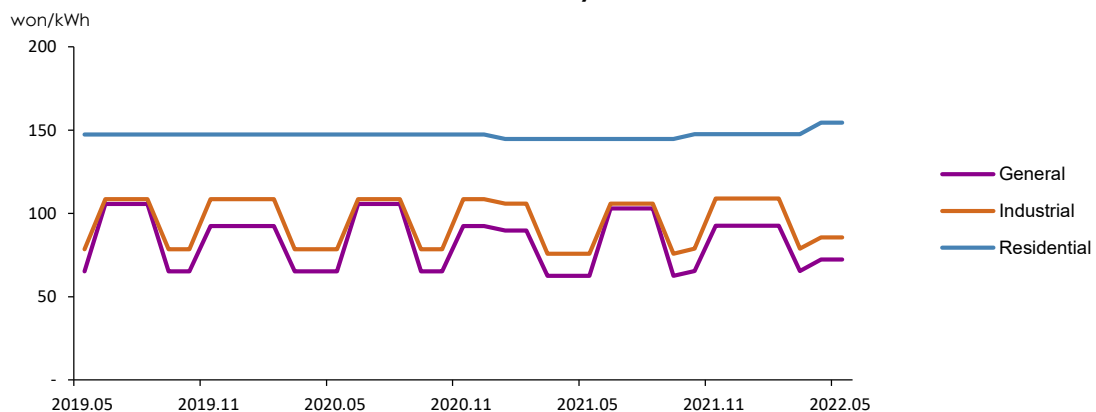
- In April, Korea Electric Power Corporation (KEPCO) raised energy charge and climate change & environmental charge by KRW 4.9/kWh and KRW 2.0/kWh respectively.

► **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 prices for residential use ([high voltage], the 2nd stage price), general use ([A], low voltage) and Industrial use ([B], high voltage B middle load), including Climate Environmental Price

Source: KEPCO

3. Energy Supply

□ **The total energy import volume posted a year-on-year growth of 1.4% in May, led by bituminous coal and crude oil.**

- The import volume of crude oil went up by 0.8% year-on-year, amid the import sanctions on Russian crude oil and the upward trend of global oil price.
- The import volume of petroleum products dropped by 7.5% year-on-year, with naphtha leading the downward slide.
- The import volume of bituminous coal increased by 4.5% despite the growth in global coal price, owing to a low base effect from the same month last year (-10.0%).
- The import volume of gas slid by 0.2% year-on-year partly due to the rising natural gas prices in the international market.
- Major energy's share of the total import value has been about 30% for the past three months, even though the growth of energy import volume and value slowed down since March, that is because the growth of import volume slowed faster than the import value due to the rising energy prices.

► **Import and domestic production of energy**

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Import volume							
Crude oil (Mbbbl)	960.1	388.1	81.0	427.5	85.6	86.2	81.6
	(-2.1)	(-8.5)	(2.7)	(10.1)	(19.0)	(3.4)	(0.8)
Petroleum product (Mbbbl)	392.3	149.5	30.9	158.1	31.6	28.7	28.6
	(12.9)	(-5.4)	(1.8)	(5.7)	(8.3)	(-6.2)	(-7.5)
Bituminous coal (Mton)	108.0	41.9	8.2	42.7	8.6	7.4	8.6
	(-6.4)	(-9.6)	(-10.0)	(2.0)	(-7.8)	(-3.8)	(4.5)
Anthracite (Mton)	6.5	2.6	0.6	2.3	0.5	0.3	0.7
	(3.0)	(8.2)	(39.7)	(-11.3)	(-28.6)	(-45.1)	(31.6)
LNG (Mton)	45.9	20.0	3.4	20.3	5.0	3.4	3.4
	(14.9)	(8.3)	(14.5)	(1.2)	(18.1)	(21.4)	(-0.2)
Import volume (Mtoe)	335.6	135.0	27.2	141.8	29.9	25.9	27.6
	(3.1)	(-3.7)	(4.1)	(5.0)	(7.5)	(3.5)	(1.4)
Import value (billion US\$, CIF)	137.2	46.5	9.7	86.3	18.7	17.3	17.1
	(58.5)	(8.6)	(94.7)	(85.7)	(100.3)	(79.5)	(75.5)
Energy share of total import value (%)	22.1	19.8	20.3	27.8	29.4	28.7	27.0
Foreign energy dependence (%)	92.8	92.7	91.7	92.0	92.2	91.1	91.0
Domestic production							
Hydropower (TWh)	6.74	2.70	0.64	2.58	0.55	0.47	0.54
	(-5.7)	(1.0)	(13.3)	(-4.6)	(8.1)	(-15.0)	(-15.5)
Anthracite (Mton)	0.90	0.38	0.07	0.36	0.08	0.08	0.07
	(-11.9)	(-13.7)	(-13.6)	(-6.6)	(-7.3)	(-14.6)	(2.9)
Natural gas (Mton)	0.04	0.03	0.01	-	-	-	-
	(-70.3)	(-65.0)	(-65.1)	(-100.0)	(-100.0)	(-100.0)	(-100.0)
Renewable energy (Mtoe)	20.04	8.45	1.82	9.60	1.89	1.96	2.08
	(5.6)	(8.0)	(17.4)	(13.6)	(10.5)	(10.0)	(14.2)

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

4. Energy Consumption

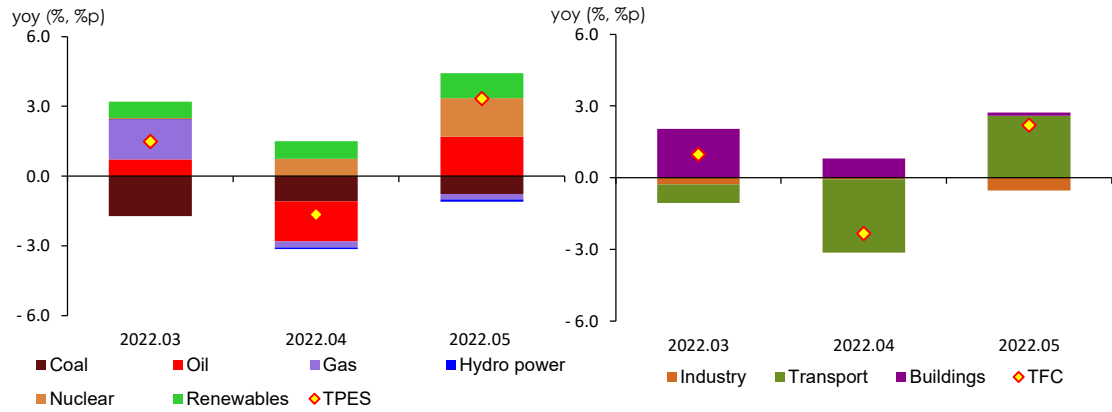
- **The Total Primary Energy Supply (TPES) went up by 3.3% year-on-year in May, due to growing use of petroleum and nuclear energy, although coal and gas use declined.**
 - Coal use fell by 2.6% year-on-year, as coal demand decreased in the power generation sector in line with a drop in coal-fired generation, although industrial coal use that had been plunging dropped at much slower pace despite decreased use of coking coal in the steelmaking sector, due to a surge in anthracite use.
 - Petroleum use grew by 4.1% year-on-year with its demand surging in the transport sector (15.5%) as a result of the bigger fuel tax cut, although it declined in the industrial sector (-1.3%) due to sluggish petrochemical business and facility maintenance.
 - Gas use fell by 1.5% year-on-year, because the growth in industrial gas use slowed to a standstill, it continuously declined in the power generation sector due to increased baseload generation, and it also decreased in the building sector, affected by higher city gas rates for residential and general customers and temperature conditions.
- **Total Final Consumption (TFC) rose by 2.2% year-on-year (in May), despite a drop in industrial energy use, as it rebounded in the transport sector.**
 - Industrial energy use fell by 0.8% year-on-year, as it continuously plunged in the primary metals sector, although it grew in the fabricated metals sector amid the increased number of work days (1.5 days).
 - Transport energy use soared by 15.5% year-on-year, because the demand for stockpiling strongly rebounded from the sharp fall in the previous month due to the additional fuel tax cut, and travel demand also increased following the removal of social distancing measures.
 - Energy use in buildings increased by 0.8% year-on-year, led by the commercial sector, affected by the termination of social distancing restrictions (Apr 18).

► Energy consumption

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
TPES (Mtoe)	305.2	126.3	24.0	130.2	26.0	23.5	24.8
	(4.5)	(2.9)	(3.4)	(3.0)	(1.5)	(-1.7)	(3.3)
- Feedstock exclude	217.7	91.0	16.8	94.9	18.8	16.4	17.9
	(2.4)	(2.1)	(2.7)	(4.3)	(3.8)	(-1.9)	(6.4)
TFC (Mtoe)	234.7	98.8	18.5	101.1	20.2	18.4	18.9
	(5.4)	(3.3)	(3.2)	(2.3)	(1.0)	(-2.3)	(2.2)

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 consumption declined by 2.6% year-on-year in May, as it continued to decline in the industrial sector and started to decline in the power generation sector.**

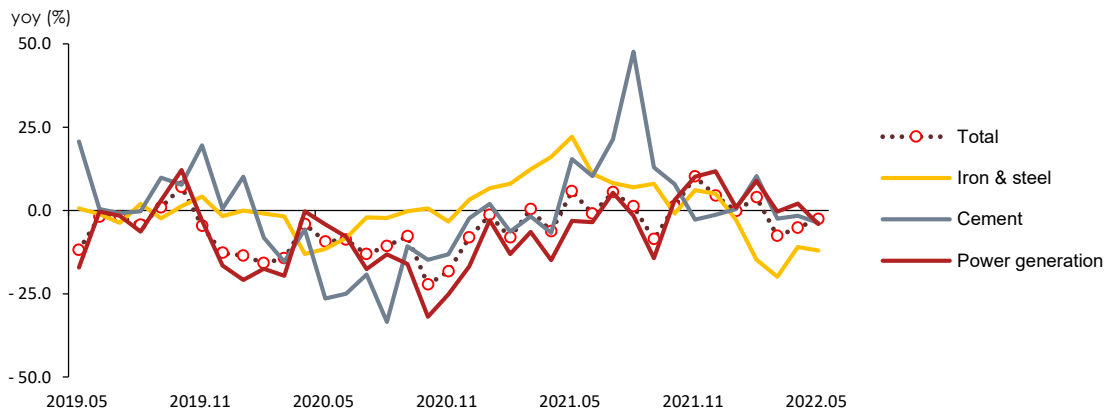
- Industrial coal use declined, but the pace of decline was much slower, as the iron & steel production index rose slightly (0.3%), driven by increased automobile production.
- Coal use for power generation decreased, despite the eased voluntary cap on coal-fired generation, as coal-fired generation dropped compared to the same month last year (-6.6%) due to increased fuel cost and strong growth in nuclear generation.

► Coal consumption

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Coal (Mton)	116.8	45.4	9.1	44.4	8.2	7.9	8.9
	(0.2)	(-2.0)	(5.7)	(-2.3)	(-7.7)	(-5.2)	(-2.6)
Industry	47.4	19.6	4.1	18.2	3.5	3.3	4.0
	(4.6)	(7.2)	(19.4)	(-7.2)	(-15.9)	(-13.7)	(-0.7)
-Coking-coal	35.3	14.8	3.0	13.5	2.6	2.6	2.8
	(4.5)	(8.3)	(17.2)	(-8.5)	(-16.5)	(-7.2)	(-8.3)
Buildings	0.5	0.1	0.0	0.1	0.0	0.0	0.0
	(-11.6)	(-18.8)	(-36.4)	(-4.1)	(3.6)	(-10.5)	(28.6)
Power generation	68.9	25.7	5.0	26.1	4.7	4.6	4.8
	(-2.5)	(-8.0)	(-3.1)	(1.5)	(-0.4)	(2.0)	(-4.1)

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

► The growth rate of coal consumption by use



6. Petroleum

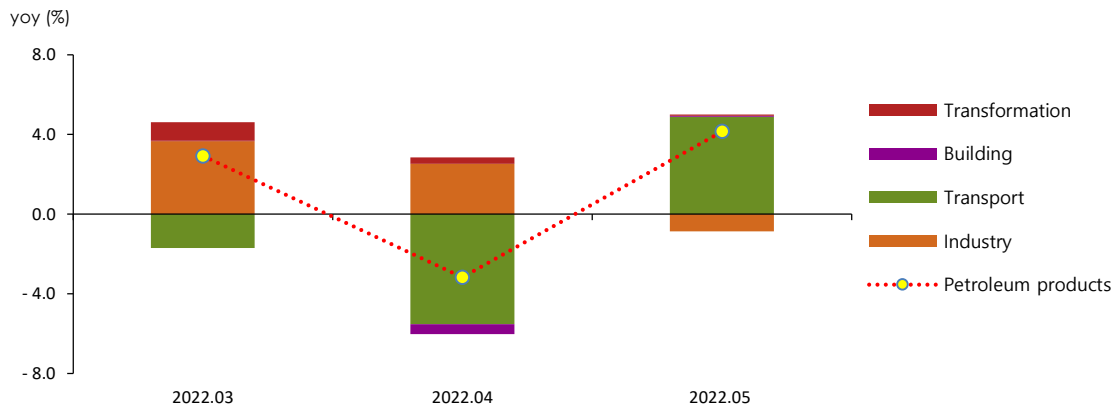
- **Petroleum use went up by 4.1% year-on-year in May, led by strong growth in the transport sector, although it slightly decreased in the industrial sector.**
 - Industrial petroleum use dropped by 1.3% year-on-year, as naphtha use declined due to stagnant petrochemical business and increased maintenance work.
 - Transport petroleum use jumped 15.5% year-on-year, as it surged nearly 15% in the road transport sector following the additional fuel tax cut.
 - Petroleum use in buildings was up 1.3% year-on-year, as it drastically increased in the commercial sector owing to the increased face-to-face activities.

► Petroleum product consumption by end-use sectors

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Petroleum (Mbbbl)	932.4	376.0	76.1	392.9	78.8	73.3	79.2
	(6.9)	(1.6)	(-2.4)	(4.5)	(2.9)	(-3.2)	(4.1)
Industry	597.2	238.2	49.0	251.7	52.7	50.2	48.3
	(9.8)	(1.9)	(2.4)	(5.6)	(5.6)	(4.0)	(-1.3)
-Naphtha	450.9	180.7	35.8	188.3	39.2	38.7	35.6
	(11.3)	(2.0)	(0.2)	(4.2)	(1.8)	(4.3)	(-0.3)
Transport	281.7	113.2	23.9	114.2	20.9	19.7	27.6
	(1.6)	(0.6)	(-7.6)	(0.9)	(-5.9)	(-17.5)	(15.5)
Buildings	44.7	20.9	2.8	21.2	4.0	2.7	2.8
	(-0.1)	(-1.9)	(-29.5)	(1.7)	(0.4)	(-12.4)	(1.3)
Power generation	8.8	3.8	0.4	5.8	1.2	0.6	0.5
	(34.0)	(55.6)	(27.3)	(55.5)	(146.5)	(61.9)	(13.0)

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 declined by 1.5% year-on-year in May, as it grew more slowly in the industrial sector and decreased in the power generation and building sectors.**

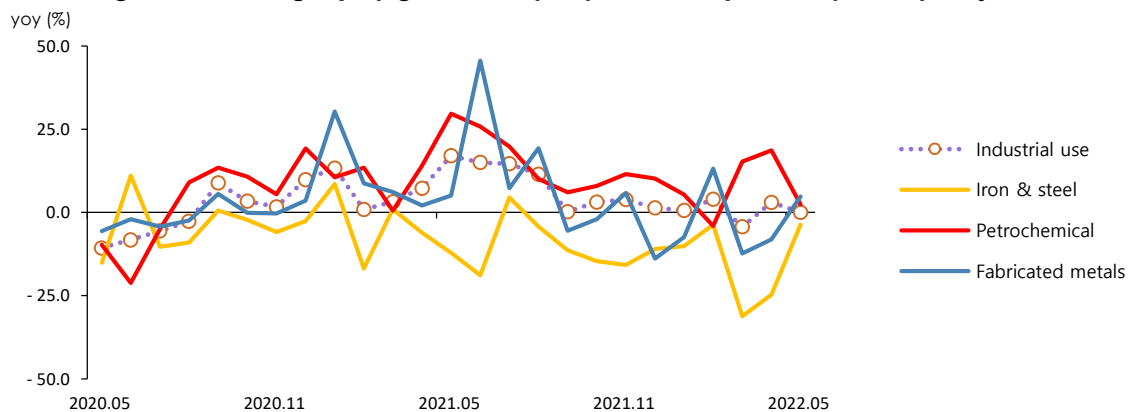
- Gas use for power generation declined despite growing electricity demand (3.3%), owing to the 3.3% growth in baseload generation (coal + nuclear). The pace of decline, however, slowed, as the unit fuel cost of LNG plunged on a month-on-month basis (-27.4%).
- Gas use grew faster in the fabricated metals sector, driven by increased semiconductor and automobile production, while it grew more slowly in the petrochemical sector with factories running at lower capacity, and it continued to drop in the primary metals sector amid the sluggish iron & steel business. Overall, the industrial gas use remained flat.
- Gas use in buildings fell by 12.9% year-on-year in the residential sector due to the decreased number of heating degree days, less time spent at home and higher city gas rates, while it was up 19.4% in the commercial sector along with the growing production in the face-to-face service sector following the removal of social distancing measures (Apr 18).

► **Natural gas and city gas consumption**

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
LNG (Mton)	45.8	21.0	3.1	21.2	4.6	3.4	3.0
	(8.7)	(12.1)	(32.8)	(1.0)	(7.7)	(-1.4)	(-1.5)
Power generation	21.5	9.2	1.6	8.8	2.1	1.6	1.6
	(15.7)	(23.2)	(59.9)	(-4.8)	(4.5)	(-3.5)	(-0.9)
City gas production	19.3	9.7	1.1	10.2	2.1	1.4	1.1
	(5.9)	(7.8)	(17.2)	(4.5)	(9.0)	(4.2)	(-1.9)
Industry(Direct private importer)	2.7	1.0	0.2	1.1	0.2	0.2	0.2
	(-3.4)	(-3.2)	(4.5)	(5.8)	(0.1)	(-10.7)	(-8.4)
City gas (Bm³)	27.0	13.7	1.8	14.2	2.9	2.2	1.7
	(4.0)	(5.6)	(7.9)	(4.1)	(6.6)	(6.1)	(-2.1)
Industry(including directly imported)	11.9	5.1	0.9	5.1	1.0	1.0	0.9
	(7.2)	(8.0)	(17.0)	(0.6)	(-4.3)	(3.1)	(0.0)
Buildings	14.1	8.2	0.8	8.7	1.8	1.2	0.7
	(2.0)	(4.7)	(-0.6)	(6.7)	(14.4)	(9.7)	(-4.7)

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 increased by 3.3% year-on-year in May, as it grew quite strongly in the commercial and industrial sectors.

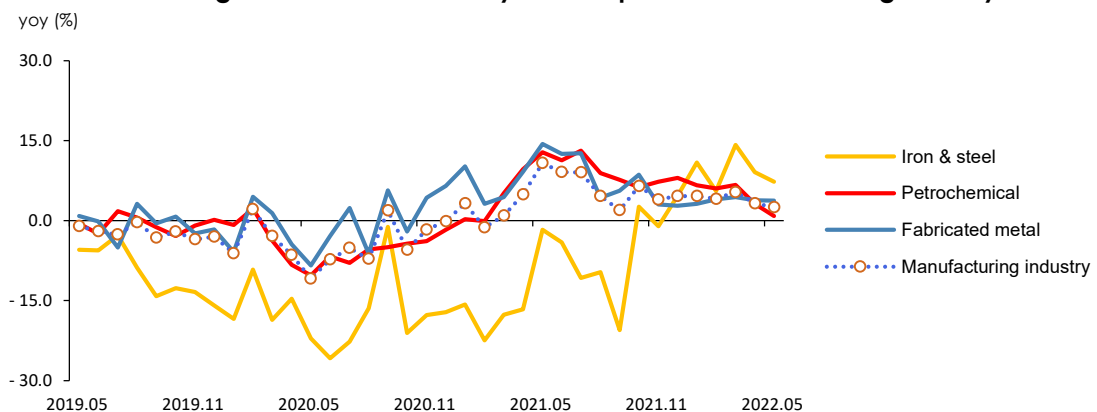
- In the petrochemical sector, electricity use remained flat compared to the same month last year, while it grew fast in the iron & steel and fabricated metals sectors.
- Electricity use in buildings rapidly increased in the commercial sector, as service business recovered amid a sharp drop in Covid-19 infections, while it was flat in the residential sector with less time spent at home.

► Electricity consumption by end-use sectors

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Electricity (TWh)	533.4	219.8	40.8	229.1	45.8	43.8	42.2
	(4.7)	(3.4)	(6.6)	(4.3)	(6.4)	(4.4)	(3.3)
Industry	282.4	116.1	23.0	121.0	24.7	23.7	23.6
	(5.1)	(3.8)	(10.3)	(4.2)	(5.8)	(3.5)	(2.7)
Transport	3.1	1.2	0.2	1.4	0.3	0.3	0.3
	(-1.3)	(-1.9)	(1.2)	(15.1)	(12.1)	(8.2)	(16.6)
Buildings	247.9	102.4	17.6	106.7	20.8	19.8	18.3
	(4.4)	(3.0)	(2.1)	(4.2)	(7.1)	(5.5)	(4.0)
Residential	77.6	30.9	5.6	31.4	6.0	6.1	5.6
	(4.7)	(3.3)	(0.5)	(1.7)	(4.8)	(3.2)	(0.2)
Commercial	136.9	57.6	9.7	61.7	11.9	11.1	10.3
	(3.6)	(1.8)	(1.9)	(7.1)	(8.7)	(7.5)	(6.7)

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

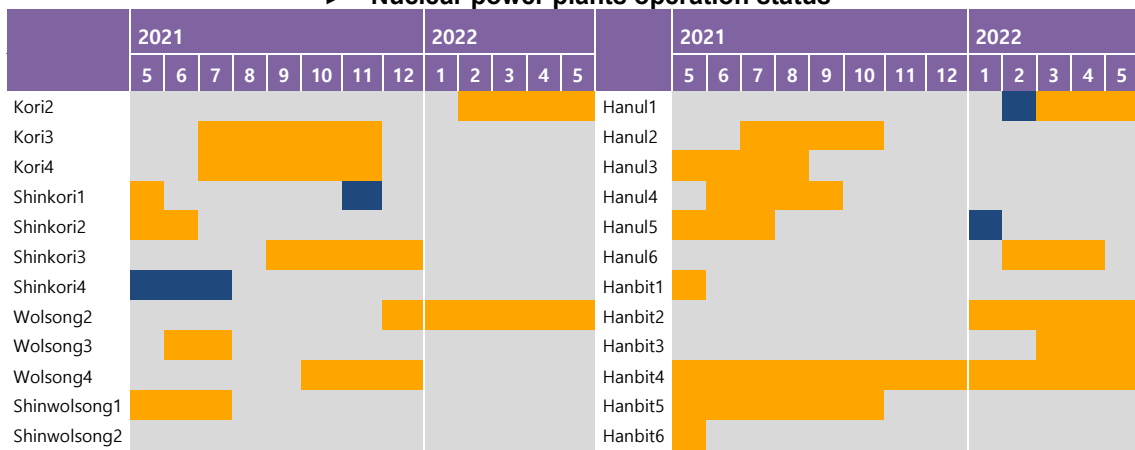
► The growth rate of electricity consumption in manufacturing industry



9. Nuclear

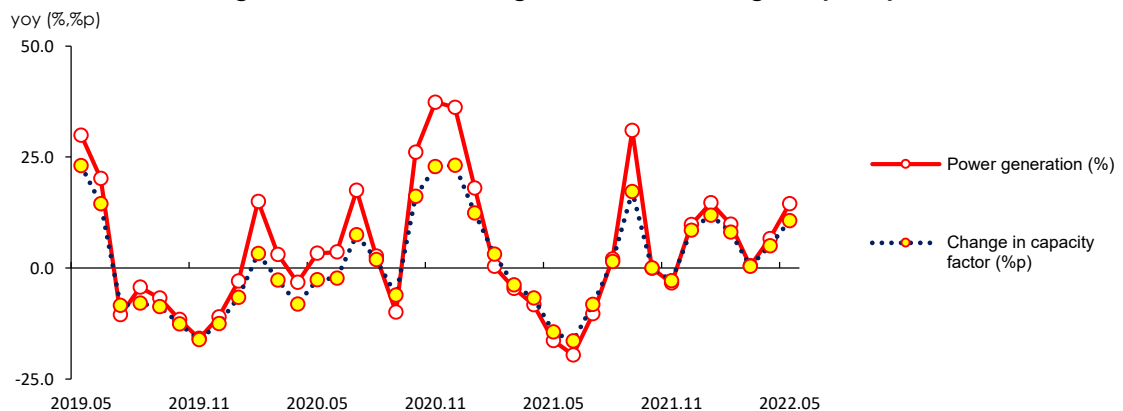
- **The total nuclear generation went up by 14.5% year-on-year in May, as nuclear capacity factor increased due to a drop in the number of reactors that were shut down.**
 - The nuclear capacity factor rose by 11%p year-on-year, as the number of reactors that were under preventive maintenance dropped by three than the same period last year, and none of the reactors experienced an unscheduled shutdown.
 - Nuclear energy's share of the total generation went up by 2.8%p year-on-year, surpassing 30% in five months since December 2021. Nuclear energy accounted for 31.6% of the total power generation, followed by coal (29.3%) and gas (26.3%).

► 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

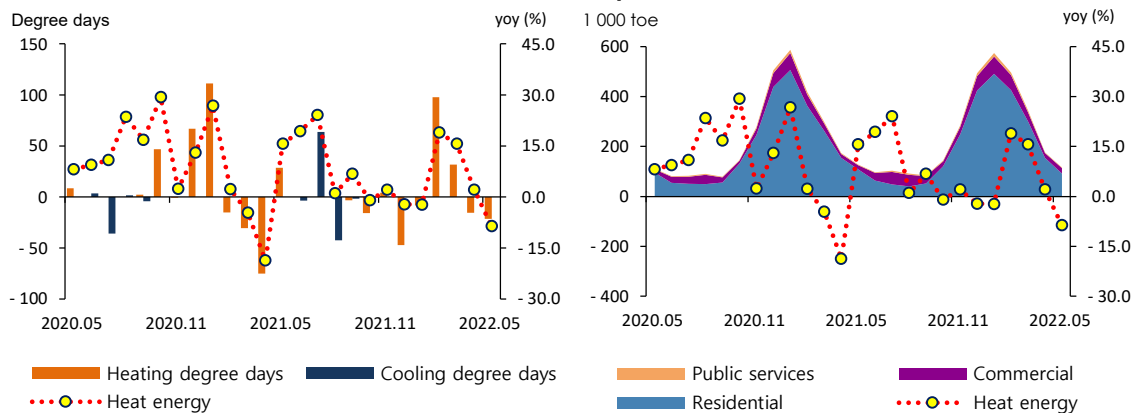
□ Heat energy use declined by 8.6% year-on-year in May, as it plunged in the residential sector.

- Heat energy use increased for three consecutive months in the residential sector, which accounts for a large share of the total heat energy use. On a year-on-year basis, however, it declined by 15.1%, as the number of heating degree days decreased (-37.3%), and less time was spent at home amid a slowdown in the spread of Covid-19.
- Heat energy use jumped 29.3% year-on-year in the commercial sector, as the business environment of the face-to-face service sector much improved with the termination of social distancing measures (Apr 18) and the downward trend of Covid-19 cases.

□ Renewable & other energy use posted a year-on-year growth of 12.2%, with the power generation sector leading the growth, although it declined in the final energy consumption.

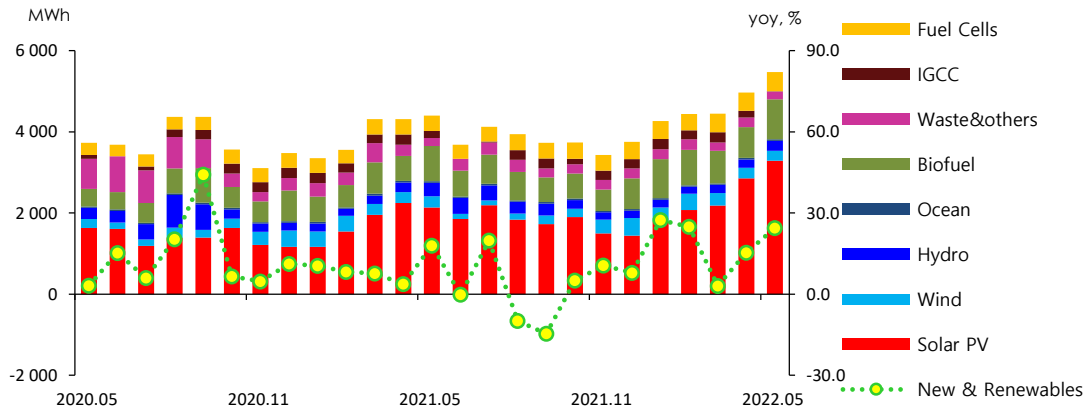
- Renewable & other energy generation² grew by 23.2% year-on-year, and the growth was led by solar PV and fuel cell.
- Renewable & other energy use fell by 0.4% year-on-year in the final energy consumption, owing to a sharp drop in the transport sector, although it increased in the industrial sector.

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



² 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

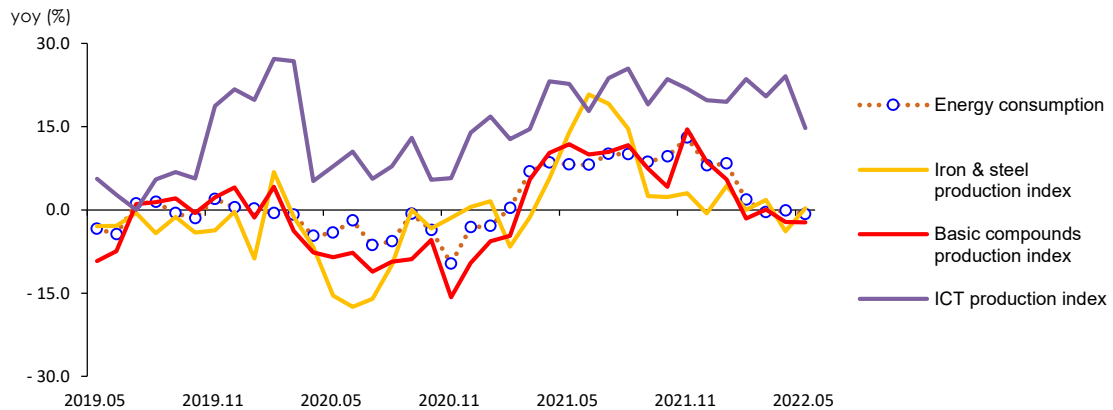
- Industrial energy use decreased by 0.8% year-on-year in May, with the primary metals sector leading the downward trend, although the fabricated metals sector consumed more energy.
 - Energy use decreased in the petrochemical and primary metals sectors, while it grew more rapidly in the fabricated metals sector amid the increased number of work days (1.5 days). Overall, the industrial energy use decreased.

► Industrial energy consumption

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Industry (Mtoe)	148.0	60.3	12.2	61.4	12.5	12.0	12.1
	(7.3)	(4.1)	(8.2)	(1.8)	(-0.4)	(-0.1)	(-0.8)
Petrochemical	76.7	30.7	6.2	32.4	6.7	6.6	6.2
	(10.9)	(3.4)	(5.3)	(5.3)	(5.6)	(5.0)	(-0.2)
- Naphtha	55.3	22.1	4.4	23.1	4.8	4.7	4.4
	(11.3)	(2.0)	(0.2)	(4.2)	(1.8)	(4.3)	(-0.3)
Iron & Steel	29.7	12.5	2.5	11.2	2.2	2.2	2.3
	(5.5)	(8.3)	(16.8)	(-10.5)	(-18.2)	(-10.3)	(-9.8)
-Coking coal	24.6	10.3	2.1	9.4	1.8	1.8	1.9
	(4.5)	(8.3)	(17.2)	(-8.5)	(-16.5)	(-7.2)	(-8.3)
Fabricated metal	12.2	5.1	1.0	5.3	1.1	1.0	1.0
	(7.2)	(8.5)	(12.4)	(2.8)	(1.2)	(2.1)	(3.9)
Share of feedstock (%)	59.0	58.5	58.5	57.4	57.5	59.0	56.6

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

► Industrial energy consumption & production index



12. Transport

□ **Transport energy use climbed by 14.1% year-on-year in May, as it grew in all sub-sectors, and especially, strongly rebounded in the road transport sector.**

- Energy use increased by 14.9% year-on-year in the road transport sector, as its demand for stockpiling rebounded as a result of the 10%p additional fuel tax cut.
- Energy use grew by 5.6% year-on-year in the aviation sector, with the number of international flights increasing amid the improved Covid-19 situation.
- Energy use went up by 13.0% year-on-year in the navigation sector, as diesel consumption surged by as much as 50% due to the growth in coastal cargo.

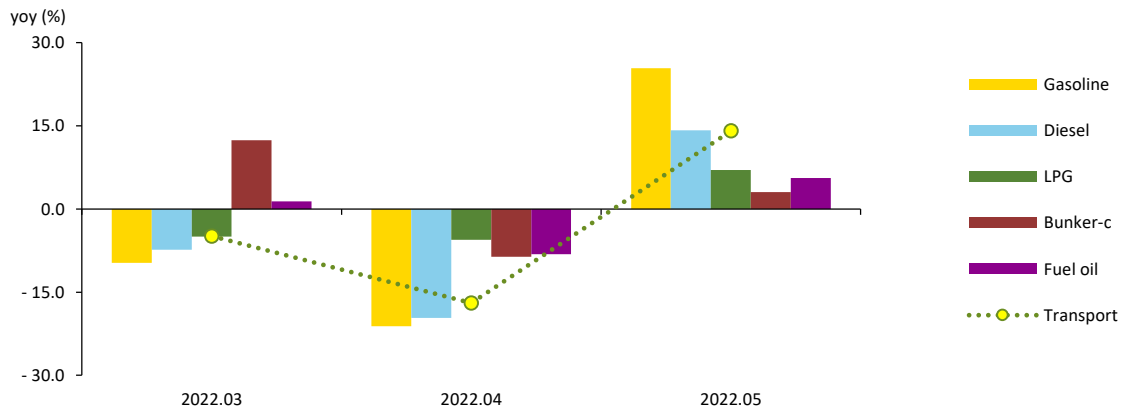
► The growth rate of petroleum consumption in the transport sector

	2021p	2022p		2022p			
		M1~5	M5	M1~5	M3	M4	M5
Transport (Mtoe)	40.01	16.09	3.42	16.23	3.01	2.83	3.90
	(1.5)	(0.6)	(-7.1)	(0.9)	(-4.9)	(-17.0)	(14.1)
Road	34.07	13.64	2.88	13.49	2.44	2.35	3.31
	(1.8)	(2.0)	(-9.3)	(-1.1)	(-8.0)	(-19.6)	(14.9)
Navigation	3.18	1.34	0.29	1.51	0.33	0.28	0.33
	(2.3)	(3.0)	(9.9)	(12.9)	(20.3)	(4.6)	(13.0)
Aviation	2.46	0.98	0.22	1.10	0.21	0.18	0.24
	(-3.9)	(-16.9)	(5.9)	(12.0)	(1.3)	(-8.1)	(5.6)
Rail	0.31	0.12	0.02	0.12	0.02	0.02	0.02
	(-4.5)	(-8.1)	(-10.0)	(-0.9)	(-3.1)	(-6.2)	(0.4)

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

Source: Monthly energy statistics

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



13. Buildings

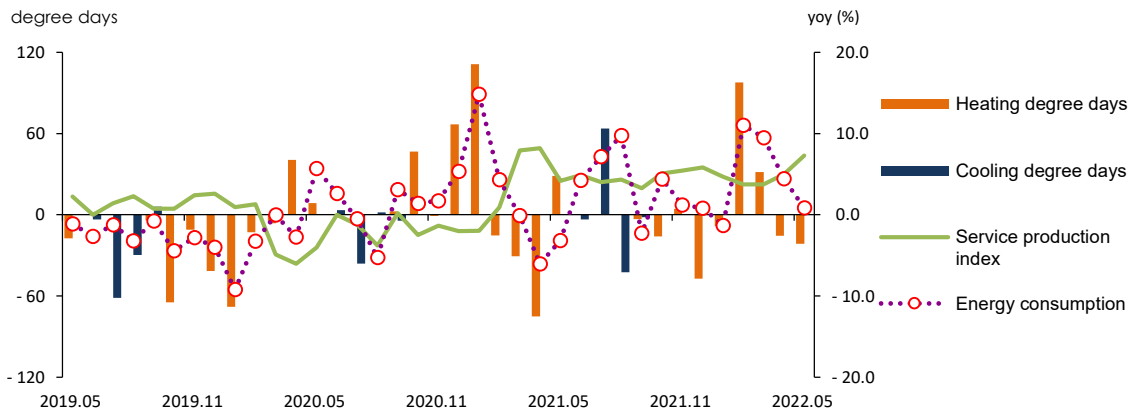
- **Energy use in buildings was up 0.8% year-on-year in May, with the commercial & public sectors leading the growth amid a steady recovery of the service sector.**
 - Energy use increased by 8.8% year-on-year in the commercial & public sectors, as demand picked up in the face-to-face service industry.
 - Energy use declined by 7.4% year-on-year in the residential sector, offsetting the growth in buildings' total energy use, partly because people spent less time at home.

► Energy consumption in buildings

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Buildings (Mtoe)	46.6	22.4	2.9	23.5	4.7	3.6	2.9
	(3.3)	(3.4)	(-3.2)	(4.9)	(9.5)	(4.4)	(0.8)
Residential	23.8	12.5	1.4	13.0	2.6	1.8	1.3
	(2.4)	(3.6)	(-7.5)	(3.9)	(10.9)	(3.6)	(-7.4)
Commercial	17.3	7.5	1.2	8.1	1.6	1.3	1.3
	(3.6)	(2.0)	(-0.2)	(7.9)	(9.9)	(6.0)	(8.8)
Public:others	5.6	2.4	0.4	2.4	0.5	0.4	0.4
	(6.0)	(6.4)	(4.5)	(0.1)	(1.3)	(3.2)	(5.7)
Heating degree days	2 404.7	1 492.3	57.6	1 576.4	319.7	130.8	36.1
	(-1.8)	(1.3)	(99.3)	(5.6)	(11.0)	(-10.5)	(-37.3)
Cooling degree days	101.3	-	-	-	-	-	-
	(18.9)	-	-	-	-	-	-
Service production index (2015=100)	110.9	107.4	109.5	112.7	115.8	115.0	117.5
	(4.3)	(3.8)	-	(4.9)	-	-	-

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

► Energy consumption in buildings & major indicators



14. Transformation

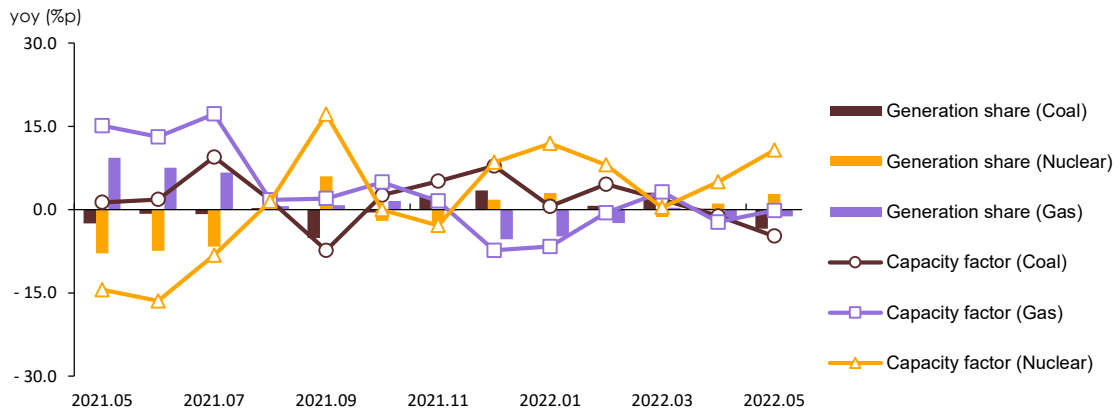
- The total power generation and fuel input increased by 4.2% and 5.6% respectively in May from the same month last year in line with the fast growth in electricity use.
 - Gas-fired generation remained flat, and coal-fired generation plunged, while nuclear and renewable & other energy generation rapidly increased.

► Electricity Generation in the power generation sector

	2021p			2022p			
		M1~5	M5	M1~5	M3	M4	M5
Electricity Generation (TWh)	576.7	233.2	44.3	243.9	49.7	44.8	46.2
	(4.5)	(3.1)	(6.5)	(4.6)	(5.2)	(2.7)	(4.2)
Coal	198.0	72.8	14.5	75.1	14.0	13.3	13.6
	(0.8)	(-6.5)	(-1.1)	(3.1)	(6.0)	(3.2)	(-6.6)
Oil	2.4	0.9	0.1	1.1	0.2	0.1	0.1
	(4.4)	(14.6)	(81.5)	(25.9)	(36.3)	(-9.6)	(-27.2)
Gas	168.3	72.4	12.2	70.5	16.7	12.8	12.2
	(15.4)	(20.7)	(61.2)	(-2.6)	(6.3)	(-4.9)	(-0.3)
Nuclear	158.0	65.9	12.8	72.0	13.9	13.4	14.6
	(-1.4)	(-3.1)	(-16.4)	(9.2)	(0.5)	(6.7)	(14.5)
Hydro/other renewables	50.1	21.3	4.7	25.3	5.0	5.2	5.8
	(5.5)	(7.8)	(17.1)	(19.2)	(13.2)	(13.0)	(22.7)
Baseload	356.0	138.7	27.3	147.1	27.9	26.7	28.2
	(-0.2)	(-4.9)	(-8.9)	(6.0)	(3.2)	(4.9)	(3.3)

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 Statistics & Indicators of the Economy

	2020	2021					2022			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
GDP (trillion won)	1 839.5 (-0.7)	1 915.8 (4.1)	453.8 (2.2)	453.8 (2.2)	- -	- -	467.4 (3.0)	467.4 (3.0)	- -	- -
Private consumption	851.0 (-4.8)	882.5 (3.7)	215.7 (1.4)	215.7 -	- -	- -	225.0 (4.3)	225.0 -	- -	- -
Facilities investment	166.6 (7.2)	181.6 (9.0)	45.0 (14.5)	45.0 -	- -	- -	42.2 (-6.2)	42.2 -	- -	- -
Construction investment	269.3 (1.5)	265.0 (-1.6)	54.5 (-2.3)	54.5 (-2.3)	- -	- -	51.4 (-5.5)	51.4 (-5.5)	- -	- -
Consumer price index (2015=100)	105.4	102.5	101.7	101.8	102.0	102.1	106.1	106.1	106.9	107.6
USD to KRW exchange rate (won)	1 180.3	1 144.0	1 116.6	1 131.0	1 119.4	1 123.3	1 223.1	1 221.0	1 232.3	1 269.9
Benchmark rate (%)	0.7	0.6	0.5	0.5	0.5	0.5	1.4	1.3	1.5	1.8
Coincident composite index (2015=100)	112.5	116.9	115.4	115.3	116.3	116.6	120.7	120.8	120.7	121.0
Mining & manufacturing production index (2015=100)	106.4	114.3	111.1	118.9	114.0	111.5	116.7	123.3	118.1	119.8
Manufacturing operation ratio index (2015=100)	95.3	99.8	97.3	103.7	100.4	98.6	101.8	107.2	103.6	105.0
Average temperature	13.0	13.3	8.2	8.7	13.2	16.6	7.7	7.7	13.8	18.0
- year-on-year difference	- 0.4	0.3	- 0.2	1.0	2.5	- 0.9	- 0.4	- 1.0	0.6	1.4
Heating degree days	2 448.0 (3.3)	2 404.7 (-1.8)	1 492.3 (1.3)	288.1 (-9.6)	146.2 (-33.9)	57.6 (99.3)	1 576.4 (5.6)	319.7 (11.0)	130.8 (-10.5)	36.1 (-37.3)
Cooling degree days	85.2 (- 29.2)	101.3 (18.9)	- -	- -	- -	- -	- -	- -	- -	- -
Energy intensity	0.16 (-3.1)	0.16 (0.4)	0.17 (0.0)	0.17 (0.0)	- -	- -	0.18 (1.3)	0.18 (1.3)	- -	- -
Per capita consumption										
oil (bbl)	16.8 (-6.0)	18.0 (7.1)	7.3 (1.8)	1.5 (8.1)	1.5 (10.6)	1.5 (-2.2)	7.6 (4.7)	1.5 (3.2)	1.4 (-3.0)	1.5 (4.4)
Electricity (MWh)	9.8 (-2.3)	10.3 (4.9)	4.2 (3.6)	0.8 (0.7)	0.8 (3.7)	0.8 (6.7)	4.4 (4.5)	0.9 (6.7)	0.8 (4.7)	0.8 (3.6)
City gas (1 000 m ³)	0.4 (-3.7)	0.5 (5.3)	0.2 (6.8)	0.0 (1.8)	0.0 (-4.4)	0.0 (8.7)	0.2 (4.2)	0.1 (7.6)	0.0 (9.0)	0.0 (-0.7)
Total energy (toe)	5.6 (-3.8)	5.9 (4.7)	2.4 (3.1)	0.5 (4.3)	0.5 (4.6)	0.5 (3.6)	2.5 (3.3)	0.5 (1.7)	0.5 (-1.4)	0.5 (3.6)

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			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industrial production index										
All industry	107.4 (-1.0)	112.7 (4.9)	109.0 (4.6)	116.1 (5.7)	111.1 (8.3)	110.2 (7.0)	114.1 (4.7)	120.0 (3.4)	116.1 (4.5)	118.0 (7.1)
Mining & manufacturing	106.4 (-0.3)	114.3 (7.4)	111.1 (8.1)	118.9 (4.7)	114.0 (12.2)	111.5 (15.1)	116.7 (5.0)	123.3 (3.7)	118.1 (3.6)	119.8 (7.4)
Semiconductor	230.7 (22.7)	298.6 (29.4)	261.0 (24.2)	284.4 (25.5)	249.2 (29.6)	283.0 (26.6)	337.2 (29.2)	359.9 (26.5)	335.9 (34.8)	351.6 (24.2)
Iron & steel	92.1 (-6.3)	97.4 (5.8)	96.1 (2.4)	98.7 (-1.3)	98.8 (5.7)	98.0 (14.0)	96.6 (0.5)	100.5 (1.8)	95.0 (-3.8)	98.3 (0.3)
Cement	87.2 (-7.5)	91.6 (5.0)	88.6 (5.2)	101.7 (8.0)	105.1 (6.5)	96.7 (9.8)	87.3 (-1.5)	92.5 (-9.0)	97.6 (-7.1)	99.5 (2.9)
Basic compound	101.1 (-7.1)	107.9 (6.7)	106.7 (3.0)	111.5 (5.5)	106.3 (10.3)	106.6 (11.9)	106.7 (-0.1)	111.6 (0.1)	104.0 (-2.2)	104.2 (-2.3)
Transport equipment	84.4 (-9.6)	88.2 (4.5)	90.4 (16.4)	100.9 (-0.4)	96.9 (18.5)	82.5 (29.5)	90.1 (-0.3)	94.5 (-6.3)	94.5 (-2.5)	95.5 (15.8)
Electric & electronic	108.5 (-1.0)	115.2 (6.1)	110.0 (8.8)	119.6 (6.4)	114.7 (11.3)	110.0 (16.0)	113.1 (2.8)	118.6 (-0.8)	114.2 (-0.4)	115.2 (4.7)
Service	106.2 (-2.0)	110.9 (4.3)	107.4 (3.8)	111.6 (7.9)	109.5 (8.2)	109.5 (4.2)	112.7 (4.9)	115.8 (3.8)	115.0 (5.0)	117.5 (7.3)
Wholesale and retail	101.9 (-2.6)	106.0 (4.0)	103.8 (4.3)	109.4 (8.3)	106.9 (9.3)	106.5 (3.2)	107.3 (3.4)	112.4 (2.7)	109.7 (2.6)	112.0 (5.2)
Food & Accommodation	79.6 (-18.4)	80.7 (1.4)	73.2 (-6.7)	76.7 (19.5)	78.5 (8.3)	84.9 (-2.0)	86.2 (17.8)	81.4 (6.1)	91.8 (16.9)	102.3 (20.5)
Production output										
Iron & steel - Pig iron	45 359.6 (-4.5)	46 440.5 (2.4)	19 185.9 (6.7)	3 983.7 (8.3)	3 635.1 (10.5)	3 728.6 (7.0)	17 762.7 (-7.4)	3 549.6 (-10.9)	3 422.7 (-5.8)	3 581.6 (-3.9)
Iron & steel - Crude steel	67 078.8 (-6.1)	70 418.0 (5.0)	29 227.1 (6.7)	6 062.1 (4.8)	5 753.0 (13.3)	5 880.0 (9.2)	28 247.0 (-3.4)	5 707.6 (-5.8)	5 521.6 (-4.0)	5 801.6 (-1.3)
Petrochemical - Basic petrochemicals	30 542.7 (-4.0)	34 434.5 (12.7)	13 643.1 (2.7)	2 828.2 (7.5)	2 797.7 (13.5)	2 814.2 (7.4)	14 547.4 (6.6)	3 015.5 (6.6)	2 856.7 (2.1)	2 794.3 (-0.7)
Petrochemical - Intermediate raw material	15 369.0 (-4.0)	15 764.6 (2.6)	6 645.6 (-1.1)	1 409.0 (5.3)	1 281.2 (-0.4)	1 316.4 (3.8)	6 106.6 (-8.1)	1 294.3 (-8.1)	1 185.9 (-7.4)	1 206.1 (-8.4)
Petrochemical - 3 major products	21 268.9 (-1.5)	23 197.8 (9.1)	9 316.8 (2.4)	1 920.4 (3.1)	1 858.4 (5.9)	1 923.7 (9.7)	9 978.6 (7.1)	2 079.8 (8.3)	1 911.6 (2.9)	1 940.3 (0.9)
The number of cars	3 506.8 (-11.2)	3 462.4 (-1.3)	1 488.9 (11.9)	333.9 (-9.6)	323.6 (11.8)	256.3 (10.9)	1 450.7 (-2.6)	302.2 (-9.5)	306.5 (-5.3)	307.0 (19.8)

Note: p means provisional

Source: Monthly Energy Statistics, Korea Petrochemical Industry Association

International Energy Prices

	2020	2021					2022			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Crude oil (USD/bbl)										
WTI	39.4 (-30.9)	67.9 (72.4)	60.1 (63.5)	62.4 (104.8)	61.7 (269.5)	65.2 (128.4)	98.8 (64.4)	108.3 (73.6)	101.6 (64.7)	109.3 (67.7)
Dubai	42.2 (-33.6)	69.3 (64.1)	61.9 (52.3)	64.4 (91.2)	62.9 (208.6)	66.3 (117.7)	99.5 (60.9)	110.9 (72.1)	102.8 (63.4)	108.2 (63.0)
Brent	43.2 (-32.7)	70.8 (63.8)	63.4 (49.6)	65.7 (94.8)	65.3 (145.3)	68.3 (110.8)	102.0 (60.9)	112.5 (71.2)	105.9 (62.1)	112.0 (63.9)
Unit value of import (C&F)	44.8 (-31.7)	70.2 (56.9)	61.9 (25.7)	64.1 (21.4)	65.1 (91.2)	67.5 (158.0)	98.6 (59.1)	100.9 (57.4)	110.2 (69.2)	109.9 (62.8)
LNG										
TTF (USD/MMBTU)	3.2 (-32.5)	16.1 (396.9)	7.1 (175.1)	6.1 (125.1)	7.2 (239.0)	8.9 (465.9)	31.8 (346.7)	42.3 (591.5)	32.2 (348.5)	29.2 (227.3)
JKM (USD/MMBTU)	4.2 (-25.4)	17.8 (324.9)	9.1 (189.4)	6.3 (103.4)	7.6 (204.3)	9.6 (364.1)	29.3 (220.4)	37.2 (486.7)	30.5 (299.7)	23.0 (140.5)
Import price(Japan) (USD/MMBTU)	8.3 (-21.3)	10.8 (29.5)	8.8 (-12.2)	7.9 (-22.7)	8.3 (-17.3)	8.9 (-11.5)	16.0 (81.4)	15.1 (91.4)	16.3 (96.8)	16.7 (87.1)
Unit value of import (USD/ton, CIF)	390.2 (-22.8)	550.7 (41.2)	435.4 (-6.4)	438.5 (-5.1)	385.4 (-19.5)	408.1 (-13.0)	883.4 (102.9)	1 016.7 (131.9)	694.9 (80.3)	723.3 (77.2)
Bituminous coal (USD/ton)										
From Australia	60.3 (-22.8)	136.0 (125.8)	91.2 (44.3)	90.9 (37.3)	93.9 (54.4)	100.4 (94.4)	297.6 (226.2)	345.3 (279.8)	306.6 (226.6)	390.4 (288.7)
Unit value of import (CIF)	77.7 (-22.9)	115.1 (48.1)	86.6 (-0.5)	89.6 (-0.4)	91.4 (2.1)	94.5 (13.2)	223.2 (157.8)	215.5 (140.4)	253.4 (177.2)	266.9 (182.5)
Petroleum product (USD/bbl)										
Gasoline	46.7 (-35.7)	80.3 (72.2)	70.3 (55.5)	73.5 (101.6)	74.0 (260.7)	76.2 (127.7)	122.8 (74.6)	131.2 (78.5)	127.0 (71.5)	147.0 (92.9)
Kerosene	44.7 (-42.1)	75.1 (67.9)	65.7 (44.1)	66.8 (69.9)	66.8 (214.0)	71.7 (148.3)	122.6 (86.5)	133.5 (99.8)	134.4 (101.4)	143.0 (99.3)
Diesel	49.4 (-36.8)	77.6 (57.2)	68.1 (33.3)	69.7 (53.3)	68.9 (119.2)	73.9 (104.9)	130.8 (92.1)	141.8 (103.3)	148.8 (116.1)	153.5 (107.6)
Bunker-C	39.2 (-31.9)	64.4 (64.3)	57.7 (60.3)	60.7 (93.0)	59.0 (153.0)	59.7 (124.0)	95.5 (65.4)	103.1 (69.7)	111.1 (88.3)	104.5 (74.9)
Propane	397.1 (-8.6)	647.9 (63.2)	567.0 (37.0)	625.0 (45.3)	560.0 (143.5)	495.0 (45.6)	840.0 (48.1)	895.0 (43.2)	940.0 (67.9)	850.0 (71.7)
Butane	403.8 (-8.6)	629.6 (55.9)	543.0 (23.7)	595.0 (24.0)	530.0 (120.8)	475.0 (39.7)	845.0 (55.6)	920.0 (54.6)	960.0 (81.1)	860.0 (81.1)
Naphtha	40.5 (-28.9)	70.6 (74.6)	62.0 (65.6)	64.8 (114.0)	62.2 (259.2)	65.7 (149.6)	96.3 (55.4)	110.6 (70.7)	96.6 (55.3)	94.7 (44.2)

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			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Petroleum product										
Gasoline (won/liter)	1 381.6 (-6.1)	1 590.5 (15.1)	1 498.9 (4.6)	1 513.3 (3.0)	1 534.5 (15.9)	1 541.5 (22.8)	1 846.4 (23.2)	1 938.5 (28.1)	1 976.5 (28.8)	1 967.1 (27.6)
Diesel (won/liter)	1 189.8 (-11.2)	1 391.3 (16.9)	1 298.0 (3.9)	1 312.6 (2.5)	1 332.7 (17.7)	1 338.8 (25.6)	1 737.6 (33.9)	1 826.9 (39.2)	1 906.4 (43.0)	1 964.3 (46.7)
Bunker-C (won/liter)	573.6 (-22.9)	731.7 (27.6)	657.5 (2.9)	686.0 (-2.4)	730.1 (36.0)	706.4 (56.5)	1 026.8 (56.2)	974.0 (42.0)	1 191.7 (63.2)	1 190.4 (68.5)
Propane (won/kg)	1 850.7 (-1.0)	2 092.6 (13.1)	1 982.9 (4.7)	2 029.2 (2.8)	2 032.9 (7.8)	2 031.6 (15.8)	2 459.3 (24.0)	2 412.1 (18.9)	2 552.2 (25.5)	2 558.2 (25.9)
Butane (won/liter)	791.1 (-1.9)	931.9 (17.8)	868.5 (5.6)	898.6 (2.8)	899.2 (9.9)	899.4 (24.1)	1 100.7 (26.7)	1 083.0 (20.5)	1 163.2 (29.3)	1 134.6 (26.2)
City gas(won/MJ)										
Residential	15.1 (-3.6)	14.2 (-5.7)	14.2 (-10.7)	14.2 (-10.7)	14.2 (-10.7)	14.2 (-10.7)	14.6 (2.9)	14.2 -	14.7 (3.0)	15.9 (11.6)
General(1)	14.9 (-4.7)	13.9 (-6.5)	13.9 (-12.3)	14.0 (-12.3)	13.8 (-12.3)	13.8 (-12.3)	14.4 (3.4)	14.1 (0.6)	14.3 (3.1)	15.5 (12.1)
Commercial	15.1 (-6.4)	17.2 (14.2)	15.1 (-8.0)	15.9 (-3.7)	16.1 (-2.4)	15.0 (-8.9)	24.9 (64.2)	24.9 (56.9)	26.5 (64.7)	22.7 (51.3)
Industry	12.6 (-8.4)	14.4 (14.2)	12.7 (-11.1)	13.8 (-4.9)	13.3 (-4.8)	11.8 (-15.5)	22.3 (75.0)	22.6 (63.7)	23.3 (75.1)	19.7 (67.0)
Heat(won/Mcal)										
Residential	66.2 (0.7)	65.2 (-1.4)	65.2 (-2.8)	65.2 (-2.8)	65.2 (-2.8)	65.2 (-2.8)	65.9 (1.1)	65.2 -	67.0 (2.7)	67.0 (2.7)
Commercial	85.9 (0.7)	84.7 (-1.4)	84.7 (-2.8)	84.7 (-2.8)	84.7 (-2.8)	84.7 (-2.8)	85.6 (1.1)	84.7 -	87.0 (2.7)	87.0 (2.7)
Public	75.1 (0.7)	74.0 (-1.4)	74.0 (-2.9)	74.0 (-2.9)	74.0 (-2.9)	74.0 (-2.9)	74.8 (1.1)	74.0 -	76.0 (2.7)	76.0 (2.7)
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)	144.3 (1.4)	142.3 -	147.2 (3.4)	147.2 (3.4)
General	84.4 -	79.4 (-5.9)	71.0 (-6.6)	60.2 (-7.7)	60.2 (-7.7)	60.2 (-7.7)	73.0 (2.8)	60.2 -	65.1 (8.1)	65.1 (8.1)
Industry	96.0 -	91.0 (-5.2)	85.5 (-5.5)	73.5 (-6.4)	73.5 (-6.4)	73.5 (-6.4)	87.5 (2.3)	73.5 -	78.4 (6.7)	78.4 (6.7)

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			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Coal (Mton)	116.6 (-12.4)	116.8 (0.2)	45.4 (-2.0)	8.9 (0.4)	8.3 (-6.3)	9.1 (5.7)	44.4 (-2.3)	8.2 (-7.7)	7.9 (-5.2)	8.9 (-2.6)
- Coking coal excluded	82.8 (-15.6)	81.5 (-1.6)	30.7 (-6.3)	5.8 (-3.2)	5.5 (-13.4)	6.1 (0.8)	30.9 (0.7)	5.6 (-2.9)	5.3 (-4.2)	6.1 (0.3)
Oil (Mbbbl)	872.4 (-5.9)	932.4 (6.9)	376.0 (1.6)	76.6 (8.0)	75.7 (10.4)	76.1 (-2.4)	392.9 (4.5)	78.8 (2.9)	73.3 (-3.2)	79.2 (4.1)
- Non-energy oil excluded	423.6 (-6.2)	429.6 (1.4)	175.3 (-0.3)	33.8 (1.7)	34.3 (5.1)	35.8 (-5.8)	185.4 (5.7)	35.5 (5.2)	31.1 (-9.4)	39.7 (10.9)
LNG (Mton)	42.1 (2.7)	45.8 (8.7)	21.0 (12.1)	4.3 (6.6)	3.4 (13.9)	3.1 (32.8)	21.2 (1.0)	4.6 (7.7)	3.4 (-1.4)	3.0 (-1.5)
Hydro (TWh)	7.1 (14.4)	6.7 (-5.7)	2.7 (1.0)	0.5 (-4.1)	0.6 (8.8)	0.6 (13.3)	2.6 (-4.6)	0.6 (8.1)	0.5 (-15.0)	0.5 (-15.5)
Nuclear (TWh)	160.2 (9.8)	158.0 (-1.4)	65.9 (-3.1)	13.8 (-4.6)	12.6 (-8.3)	12.8 (-16.4)	72.0 (9.2)	13.9 (0.5)	13.4 (6.7)	14.6 (14.5)
Others (Mtoe)	19.0 (7.3)	20.0 (5.6)	8.5 (8.0)	1.7 (2.1)	1.8 (4.5)	1.8 (17.4)	9.6 (13.6)	1.9 (10.5)	2.0 (10.0)	2.1 (14.2)
TPES (Mtoe)	292.1 (-3.6)	305.2 (4.5)	126.3 (2.9)	25.6 (4.1)	23.9 (4.4)	24.0 (3.4)	130.2 (3.0)	26.0 (1.5)	23.5 (-1.7)	24.8 (3.3)
- Non-energy oil excluded	236.1 (-3.2)	242.3 (2.6)	101.3 (2.7)	20.2 (1.8)	18.7 (1.8)	18.9 (4.1)	104.3 (3.0)	20.6 (1.6)	18.2 (-2.5)	19.8 (4.8)
- Non-energy oil&coal excluded	212.5 (-3.2)	217.7 (2.4)	91.0 (2.1)	18.1 (1.1)	16.7 (0.8)	16.8 (2.7)	94.9 (4.3)	18.8 (3.8)	16.4 (-1.9)	17.9 (6.4)

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

Share of TPES by Sources

(unit: %)

	2020	2021p					2022p			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Coal	24.7	23.8	22.4	21.7	21.8	23.7	21.2	19.7	21.1	22.2
- Coking coal excluded	16.7	15.7	14.3	13.3	13.6	14.9	14.0	12.8	13.3	14.4
Oil	37.7	38.6	37.6	37.8	40.2	40.1	37.9	38.0	39.1	40.5
- non-energy oil excluded	18.6	18.0	17.8	16.9	18.5	19.1	18.0	17.2	16.7	20.5
LNG	18.8	19.6	21.7	21.8	18.8	16.7	21.3	23.2	18.9	15.9
Hydro	0.5	0.5	0.5	0.4	0.5	0.6	0.4	0.5	0.4	0.5
Nuclear	11.7	11.0	11.1	11.5	11.2	11.3	11.8	11.4	12.2	12.6
Others	6.5	6.6	6.7	6.7	7.5	7.6	7.4	7.3	8.4	8.4
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			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industry	138.0 (-3.5)	148.0 (7.3)	60.3 (4.1)	12.5 (6.9)	12.0 (8.5)	12.2 (8.2)	61.4 (1.8)	12.5 (-0.4)	12.0 (-0.1)	12.1 (-0.8)
Transport	39.4 (-8.2)	40.0 (1.5)	16.1 (0.6)	3.2 (7.1)	3.4 (14.2)	3.4 (-7.1)	16.2 (0.9)	3.0 (-4.9)	2.8 (-17.0)	3.9 (14.1)
Residential	23.2 (2.6)	23.8 (2.4)	12.5 (3.6)	2.4 (-3.2)	1.8 (-12.5)	1.4 (-7.5)	13.0 (3.9)	2.6 (10.9)	1.8 (3.6)	1.3 (-7.4)
commercial	16.7 (-4.3)	17.3 (3.6)	7.5 (2.0)	1.4 (1.3)	1.3 (0.8)	1.2 (-0.2)	8.1 (7.9)	1.6 (9.9)	1.3 (6.0)	1.3 (8.8)
Public	5.3 (-2.6)	5.6 (6.0)	2.4 (6.4)	0.5 (13.1)	0.4 (5.4)	0.4 (4.5)	2.4 (0.1)	0.5 (1.3)	0.4 (3.2)	0.4 (5.7)
TFC	222.6 (-3.8)	234.7 (5.4)	98.8 (3.3)	20.0 (5.3)	18.8 (6.5)	18.5 (3.2)	101.1 (2.3)	20.2 (1.0)	18.4 (-2.3)	18.9 (2.2)
Coal (Mton)	45.8 (-4.9)	47.9 (4.4)	19.7 (7.0)	4.2 (9.2)	3.9 (6.2)	4.1 (19.2)	18.3 (-7.2)	3.6 (-15.8)	3.3 (-13.6)	4.0 (-0.7)
Oil (Mbbbl)	865.8 (-5.7)	923.5 (6.7)	372.3 (1.3)	76.1 (7.9)	75.3 (10.4)	75.7 (-2.5)	387.1 (4.0)	77.6 (2.0)	72.6 (-3.5)	78.8 (4.1)
Electricity (TWh)	509.3 (-2.2)	533.4 (4.7)	219.8 (3.4)	43.1 (0.5)	41.9 (3.5)	40.8 (6.6)	229.1 (4.3)	45.8 (6.4)	43.8 (4.4)	42.2 (3.3)
City gas (Bm³)	22.4 (-3.5)	23.6 (5.1)	12.4 (6.6)	2.5 (1.7)	1.8 (-4.6)	1.5 (8.5)	12.8 (4.0)	2.6 (7.3)	2.0 (8.8)	1.5 (-0.9)
Heat-others (1 000 toe)	12.3 (6.1)	12.5 (2.0)	5.6 (4.0)	1.1 (0.4)	1.0 (1.6)	0.9 (9.8)	5.8 (3.9)	1.2 (9.0)	1.0 (1.4)	0.9 (-1.5)

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			
			M1~5	M3	M4	M5	M1~5	M3	M4	M5
Industry	62.0	63.1	61.1	62.7	63.7	65.8	60.7	61.8	65.2	63.9
Transport	17.7	17.1	16.3	15.8	18.1	18.4	16.1	14.9	15.4	20.6
Residential	10.4	10.1	12.7	11.9	9.3	7.3	12.9	13.0	9.9	6.6
Commercial	7.5	7.4	7.6	7.2	6.7	6.3	8.0	7.8	7.2	6.7
Public	2.4	2.4	2.4	2.5	2.2	2.1	2.3	2.5	2.3	2.2
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	13.3	14.0	13.6	14.6	12.1	11.7	12.3	13.9
Oil	49.1	49.7	47.6	48.0	50.6	51.6	48.2	48.1	49.4	52.6
Electricity	19.7	19.6	19.1	18.5	19.1	18.9	19.5	19.5	20.5	19.2
City gas	12.0	11.8	14.2	14.0	11.4	9.8	14.5	14.7	12.4	9.4
Heat-others	5.5	5.3	5.7	5.5	5.3	5.1	5.8	5.9	5.5	4.9

Note: p means provisional
Source: Monthly energy statistics

Statistics on Energy Production Facilities

	2018	2019	2021	2022			M3	M4	M5
				M3	M4	M5			
Total capacity (GW)	119.1 (1.9)	125.3 (5.2)	134.0 (3.7)	129.4 (2.8)	128.4 (1.7)	129.6 (2.2)	133.7 (3.3)	133.9 (4.3)	134.1 (3.4)
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)	35.5 (-2.7)	34.3 (-5.8)	35.4 (-2.9)	36.3 (2.4)	36.3 (5.8)	36.3 (2.5)
Gas	37.9 (-0.0)	39.6 (4.5)	41.2 (0.1)	41.2 -	41.2 -	41.2 (-0.0)	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			M3	M4	M5
				M3	M4	M5			
The number of household demanding city gas (mil)	19.1 (3.1)	19.7 (2.8)	20.5 (2.0)	20.3 (2.5)	20.2 (2.5)	20.2 (2.4)	20.6 (1.8)	20.6 (1.8)	20.6 (1.8)
Registered cars (mil)	23.2 (3.0)	23.7 (2.0)	24.9 (2.2)	24.5 (3.1)	24.6 (2.9)	24.6 (2.8)	25.1 (2.2)	25.1 (2.3)	25.2 (2.4)
- gasoline	10.6 (2.5)	11.0 (3.1)	11.8 (3.1)	11.5 (4.1)	11.5 (4.0)	11.6 (3.8)	11.8 (2.9)	11.9 (2.8)	11.9 (2.8)
- diesel	9.9 (3.7)	10.0 (0.3)	9.9 (-1.2)	10.0 (0.5)	10.0 (0.2)	9.9 (-0.1)	9.9 (-1.4)	9.9 (-1.2)	9.8 (-1.0)
- LPG	2.0 (-3.3)	2.0 (-1.5)	1.9 (-1.7)	2.0 (-1.7)	2.0 (-1.8)	2.0 (-1.9)	1.9 (-1.7)	1.9 (-1.9)	1.9 (-1.9)
- hybrid	0.4 (30.9)	0.5 (26.1)	0.9 (34.0)	0.7 (37.2)	0.7 (37.7)	0.7 (37.3)	0.9 (32.6)	1.0 (32.5)	1.0 (32.8)

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

Source: Monthly energy statistics