

KEEI MONTHLY KOREA ENERGY TRENDS

2024/05
KOREA ENERGY ECONOMICS INSTITUTE

COAL	-4.1%
PETROLEUM	1.4%
GAS	-0.1%
NUCLEAR	8.2%
NEW & RENEWABLE	-0.6%
FEBRUARY, 2024	



Editor's Note:

- Total final consumption increased by 0.4% in the trend of economic recovery, driven by a slight increase in consumption for raw materials in energy-intensive sectors, especially petrochemicals.

This publication is derived from Energy Demand & Supply Statistics and Energy Price Statistics issued until January 2024.

Disclaimer: The translations provided here are the result of an automatic translation of Korean Energy Trends for the convenience of international readers. They have been reviewed by our editors, but in case of any confusion in interpretation, the Korean version takes precedence.

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1. The Economy and the Industry

- **The Industrial Production Index for February rose 4.6% y/y, driven by increased production in the semiconductor industry despite sluggish performance in other sectors.**
 - The Semiconductor Production Index rose 65.4% y/y, driven by a surge in exports due to the recovery in global semiconductor demand, despite a decrease in business days (-1.5 days) by the Lunar New Year holiday observance.
 - In basic chemicals, the production index declined (-1.1%) due to the slowdown in the industry, while the capacity utilization rate and shipment index declined by 0.7% and 4.3% year-on-year, respectively. The steel production index also declined by 3.8% y/y due to a slowdown in the construction industry and reduced import demand from China (Lunar New Year).
 - Despite the boom of automotive industry, the automobile production index fell by 11.7% y/y due to a decrease in working days, expansion of eco-friendly vehicle production facilities, and the base effects from increased exports and production in the same month last year.
- **The service industry production index rose slightly by 0.9% y/y due to increases in production in some industries, despite declines in production in wholesale and retail sectors.**
 - The service industry continued slowdown in wholesale and retail trade, accommodation and food services as private consumption contracted amid high interest rates and inflation.

► Major economic and industrial indicators

	2022	2023p				2024p		
		M1	M2		M12	M1	M2	
GDP (trillion won)	1 968.8 (2.6)	-	-	1 995.6 (1.4)	525.1 (2.2)	-	-	
Total export (\$billion, customs clearance basis)	683.6 (6.1)	46.3 (-16.4)	50.0 (-7.7)	632.2 (-7.5)	57.6 (5.0)	54.8 (18.2)	52.4 (4.8)	
Industrial production index (2020=100)	109.6 (1.0)	96.9 (-12.5)	96.4 (-6.4)	106.8 (-2.6)	116.1 (6.3)	109.4 (12.9)	100.8 (4.6)	
Semi-conductors	135.7 (5.4)	95.4 (-33.5)	85.6 (-38.0)	133.0 (-2.0)	172.2 (47.1)	138.0 (44.7)	141.6 (65.4)	
Basic chemical products	98.9 (-6.5)	100.4 (-9.6)	93.3 (-4.8)	95.5 (-3.5)	98.6 (2.0)	102.2 (1.8)	92.3 (-1.1)	
Iron&Steel	96.3 (-8.4)	91.0 (-17.2)	94.7 (-2.2)	98.9 (2.8)	96.2 (11.7)	103.3 (13.5)	91.1 (-3.8)	
Cars	115.8 (9.1)	112.4 (10.5)	124.5 (27.0)	127.6 (10.2)	130.5 (-0.4)	128.0 (13.9)	109.9 (-11.7)	
Service production index (2020=100)	112.3 (6.9)	109.1 (4.2)	108.5 (8.9)	115.9 (3.2)	130.9 (1.2)	113.8 (4.3)	109.5 (0.9)	
Wholesale & Retail	107.1 (2.7)	104.7 (-0.2)	102.6 (7.8)	106.4 (-0.6)	111.3 (-0.9)	104.5 (-0.2)	97.3 (-5.2)	
Food & Accommodation	119.1 (16.9)	114.0 (8.3)	112.9 (23.0)	120.0 (0.7)	126.9 (-2.3)	114.2 (0.2)	108.0 (-4.3)	

Note: Figures are based on the real price of 2020, P means provisional, () is year-on-year growth rates (%).
Source: Bank of Korea, Korea International Trade Association, Korea Statistical Information Service

2. Energy Prices

Global Energy Prices

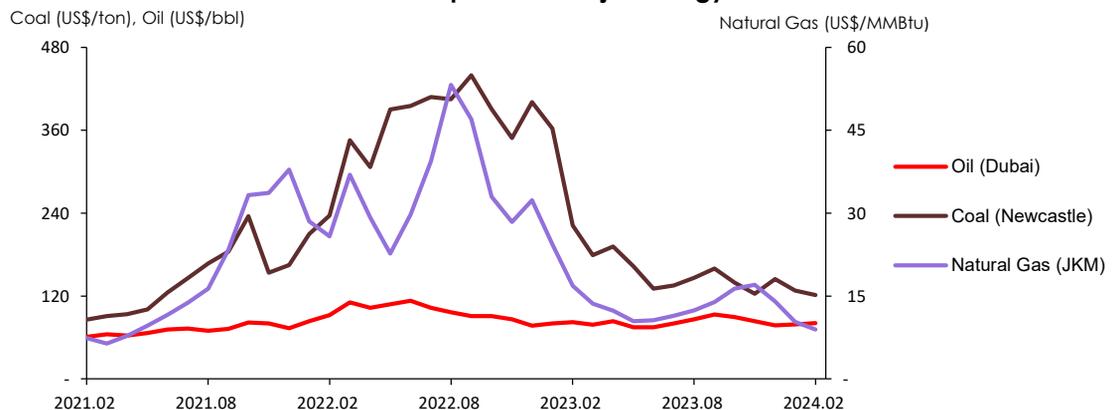
- **International oil prices rose in February due to ongoing geopolitical risks despite the stronger US dollar and increased U.S. commercial crude oil inventories.**
 - The US CPI (Consumer Price Index) for January exceeded market expectations, reducing expectations of an earlier interest rate cut by FED and boosting the dollar index.
 - US commercial crude oil inventories (estimated) increased for four consecutive weeks from February 2.
 - Unrest in the Middle East continues, including Israel’s airstrikes on the southern Palestinian city of Rafah in the Gaza Strip.
 - International bituminous coal prices fell despite the rise in international oil prices, due to the expectations of increased coal production in India.
 - International natural gas prices fell due to warmer weather and high inventory levels in Europe and Northeast Asia.

► Global energy prices

	2021	2022	2023			2024		
			M1	M2		M12	M1	M2
Crude oil (US\$/bbl)	69.3 (64.2)	96.4 (39.1)	80.4 (4.1)	82.1 (2.1)	82.1 (-14.8)	77.3 (-7.5)	78.8 (2.0)	80.9 (2.6)
Coal (US\$/ton)	136.4 (126.5)	357.1 (161.8)	362.3 (-9.6)	222.1 (-38.7)	174.7 (-51.1)	144.3 (17.2)	128.0 (-11.3)	121.2 (-5.3)
Natural gas (US\$/MMBtu)								
Henry Hub	3.7 (74.6)	6.5 (75.3)	3.4 (-40.7)	2.4 (-28.8)	2.7 (-59.1)	2.5 (-16.9)	2.7 (6.9)	1.8 (-33.9)
TTF	16.1 (397.9)	40.2 (149.6)	19.8 (-46.1)	16.5 (-16.5)	13.0 (-67.6)	11.6 (-20.1)	9.6 (-17.3)	8.1 (-14.9)
JKM	17.9 (325.7)	33.9 (89.2)	24.3 (-24.7)	16.9 (-30.7)	14.4 (-57.4)	14.0 (-17.5)	10.3 (-26.5)	8.9 (-13.5)

Note: Oil and coal prices are based on Dubai oil and Newcastle thermal coal in Australia, respectively. () is month-on-month growth rates (%).
Source: Korea National Oil Corporation, World Bank, CME Group

► Global prices of major energy sources



Domestic energy prices

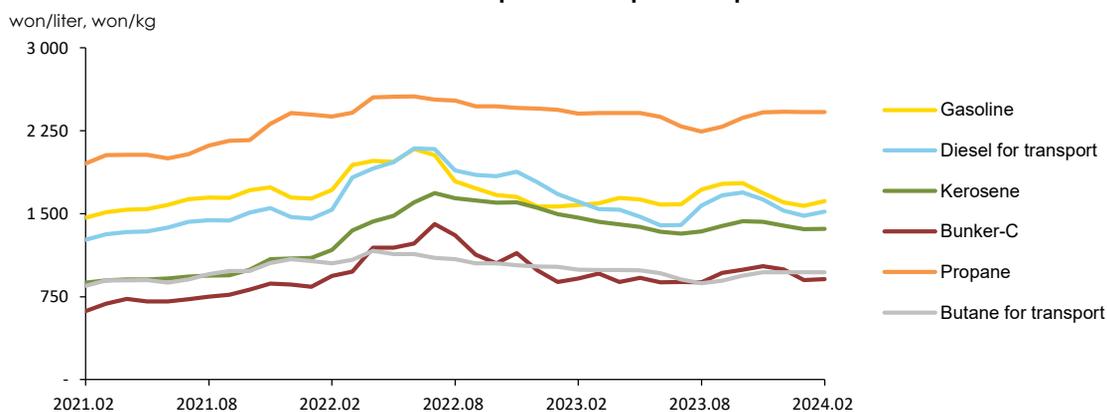
- In February, gasoline and diesel prices increased by 2.9% and 2.5% month-on-month, respectively, due to the rise in international petroleum product prices.
 - In January, Singapore spot market prices for gasoline (RON 92) and diesel rose by 4.5% and 3.1% month-on-month, respectively.
 - The fuel tax rates reduction(based on the flexible tax rate) for gasoline and diesel in February remained unchanged at 25% and 37% respectively, and the fuel tax reduction scheduled to end at the end of February, was extended for two more months, first on February 16 and then on April 15.
 - Heavy oil prices rose by 1.0% month-on-month due to the rise in international heavy oil prices, but fell by 0.7% year-on-year.
 - Retail prices of propane and butane remained stagnant for three consecutive months due to the unchanged supply prices by LPG importers (SK Gas, E1, etc.).
 - The relative price of industrial propane prices to city gas retail price (propane/city gas) was 1.18, up 9.5% month-on-month.

► Domestic petroleum product prices

	2021	2022	2023			2024		
			M1	M2		M12	M1	M2
Gasoline (won/liter)	1 591.2 (15.2)	1 812.7 (13.9)	1 562.9 (-0.1)	1 578.5 (1.0)	1 643.3 (-9.3)	1 600.6 (-5.0)	1 569.2 (-2.0)	1 614.5 (2.9)
Diesel for transport (won/liter)	1 392.0 (17.0)	1 843.4 (32.4)	1 675.4 (-6.1)	1 606.4 (-4.1)	1 558.4 (-15.5)	1 526.3 (-6.3)	1 480.1 (-3.0)	1 517.8 (2.5)
Bunker-C (won/liter)	732.2 (27.8)	1 116.1 (52.4)	883.8 (-10.4)	915.6 (3.6)	931.5 (-16.5)	994.7 (-2.9)	900.9 (-9.4)	909.5 (1.0)
Propane (won/kg)	2 093.4 (13.1)	2 480.1 (18.5)	2 440.0 (-0.4)	2 405.4 (-1.4)	2 372.0 (-4.4)	2 420.1 (0.1)	2 418.8 (-0.1)	2 418.9 (0.0)
Butane for transport (won/liter)	932.3 (17.9)	1 081.8 (16.0)	1 019.7 (-0.2)	992.2 (-2.7)	957.4 (-11.5)	970.8 (-0.0)	970.5 (-0.0)	970.5 (0.0)

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: Korea National Oil Corporation

► Domestic petroleum product prices



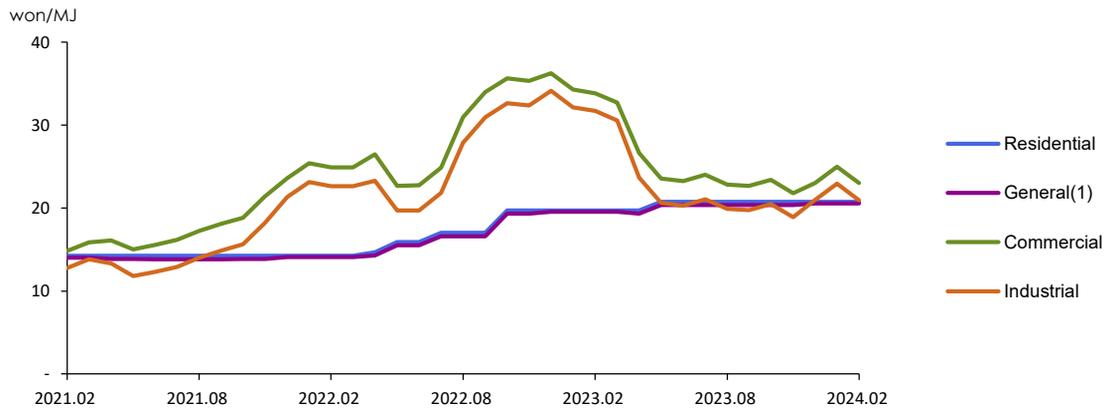
□ **In February, residential and general city gas rates were frozen, while tariffs for business heating and industrial use fell.**

- Residential and general city gas rates remained at KRW 20.7 and KRW 20.6 per MJ, respectively, due to the freezing of “raw material” and “supply” costs for civilian use. Civilian-use raw material costs have been frozen for nine consecutive months since being raised to 16.7 won in May 2023.
- Business heating and industrial rates fell by 8.0% and 8.7% month-on-month, respectively, due to higher raw material costs for commercial use.

□ **Electricity rates have remained frozen for three consecutive months for all uses since the industrial rate increase in November 2023.**

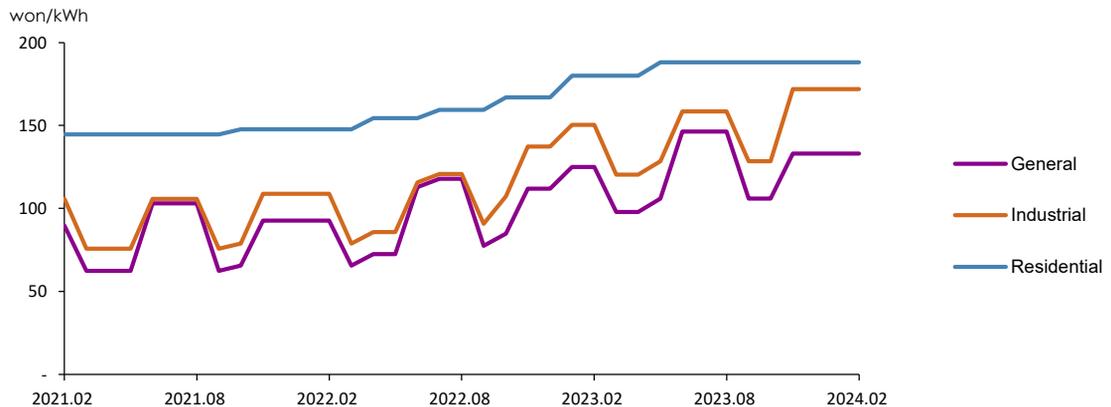
- Residential rates have been frozen for nine consecutive months since May 2023, when the metered rate increased by 4.8% to KRW 174.0 per kWh.
- General rates have been frozen for three consecutive months following a 29.5 percent increase in the winter (November through February) rate.
- Industrial rates have been frozen for three consecutive months after the additional increase in November 2023 for industrial large capacity (contracted power over 300 kW) users.

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



Source: Seoul City Gas

▶ **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

- **Energy imports decreased by 2.9% y/y in February due to lower imports of natural gas and petroleum products despite higher crude oil and coal imports.**
 - Crude oil imports increased by 2.1% y/y in the trend of declining import unit prices.
 - Petroleum product imports decreased by 11.7% y/y due to lower imports of naphtha and propane, despite higher B-C oil imports.
 - Total coal imports increased by 7.4% year-on-year, with bituminous coal, the largest share of coal imports, increasing by 7.5% due to lower unit prices and increased domestic industrial demand, and anthracite coal increasing by 4.1%.
 - Natural gas imports decreased by 17.4% y/y despite the decline in international gas prices, mostly attributed by the base effect from the surge in imports due to price effects in the same month last year.
 - Energy imports decreased by 21.7% y/y due to the decline in import volumes (-2.9%) and import unit prices (per unit calorie) (-19.4%). Meanwhile, exports decreased by 3.7% y/y due to the decline in export unit prices (-6.0%) despite increased export volumes (2.4%).

► Import and domestic production of energy

	2022	2023p			M12	2024p	
		M1	M2			M1	M2
Import volume (Mtoe)	333.4	28.8	29.6	324.4	30.0	31.1	28.7
	(2.8)	(-9.3)	(12.7)	(-2.7)	(3.5)	(8.0)	(-2.9)
Crude oil (Mbbbl)	1 031.3	81.6	87.2	1 005.8	89.9	89.1	89.0
	(7.4)	(-13.9)	(9.9)	(-2.5)	(2.6)	(9.2)	(2.1)
Petroleum product (Mbbbl)	367.1	33.4	34.4	372.1	30.9	35.9	30.4
	(-6.4)	(-7.9)	(4.3)	(1.4)	(1.0)	(7.8)	(-11.7)
Coal (Mton)	125.6	10.7	9.7	119.8	10.7	11.6	10.4
	(-0.4)	(-5.1)	(-2.1)	(-4.6)	(-0.9)	(8.2)	(7.4)
LNG (Mton)	46.4	4.8	5.1	44.1	5.0	4.9	4.2
	(1.0)	(-4.2)	(46.4)	(-4.9)	(10.3)	(1.3)	(-17.4)
Import value (billion US\$, CIF)	222.8	18.4	18.2	176.4	15.8	15.8	14.2
	(58.0)	(-3.3)	(16.9)	(-20.8)	(-15.1)	(-14.2)	(-21.7)
Energy share of total import value (%)	30.4	31.2	32.8	27.4	29.8	29.1	29.6
Foreign energy dependence (%)	94.3	95.2	94.1	93.8	95.9	95.1	94.2
Export volume (Mtoe)	69.0	5.4	5.6	68.2	6.1	6.1	5.8
	(11.2)	(5.8)	(7.3)	(-1.2)	(2.6)	(11.8)	(2.4)
Export value (billion US\$, FOB)	63.1	4.2	4.6	52.2	4.5	4.8	4.5
	(63.5)	(14.3)	(10.1)	(-17.3)	(-4.1)	(13.6)	(-3.7)
Domestic production							
Hydropower (TWh)	3.5	0.2	0.2	3.7	0.3	0.2	0.2
	(16.0)	(7.6)	(0.4)	(4.9)	(41.2)	(7.3)	(46.6)
Renewable energy (Mtoe)	15.9	1.3	1.2	16.8	1.3	1.4	1.2
	(10.7)	(-1.7)	(-5.9)	(5.9)	(1.7)	(6.9)	(-2.0)

Note: p means provisional, () is year-on-year growth rates (%), 'Foreign energy dependence (%) including Nuclear energy, Most of exports are petroleum products.

Source: Korea Energy Economics Institute, Korea International Trade Association

4. Energy Consumption

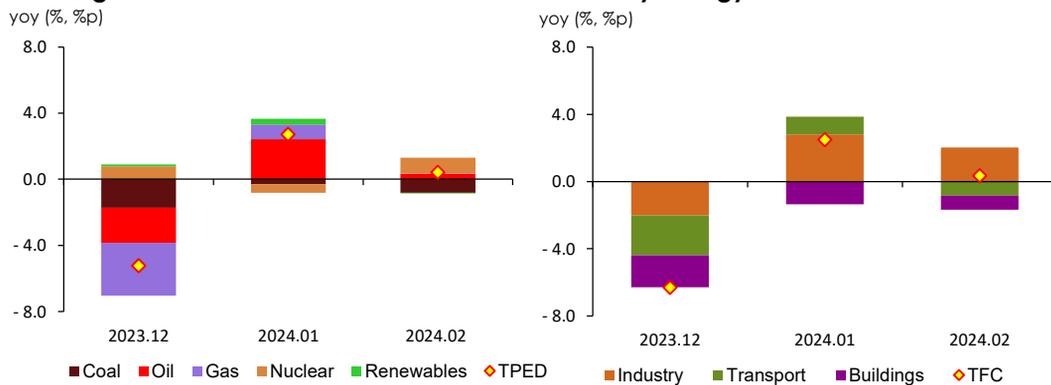
- **Total primary energy consumption increased by 0.4% y/y in February, with consumption of all sources except coal either flat or increasing.**
 - Coal consumption increased in the final consumption sector due to increased production in the steel industry and the base effect of decreased consumption in the same month last year, but decreased in the power generation sector due to the decline in total power generation and transmission line constraints.
 - Oil consumption increased by 0.9% y/y despite a decrease in transportation and buildings, due to increased consumption for raw materials such as naphtha and LPG in the industrial sector led by an increase in exports of basic petrochemicals.
 - Gas consumption decreased by only 0.1% y/y, despite being decreased by 6.2% and 3.2% y/y in the major consumer sectors such as power generation and buildings, respectively, contributed by a significant increase in the transformation own use, which limited the decline.
- **Total final consumption of energy increased by 0.4% y/y, with declines in the transportation and buildings but gains in the industrial sector.**
 - Consumption in the industrial sector increased by 3.6% y/y, driven by increased production in the energy-intensive sectors such as semiconductors, steel, and petrochemicals, which are mainly export-oriented, in the signs of economic recovery, despite a 1.5-day y/y decrease in business days.
 - Consumption in the transportation sector decreased by 5.9% y/y despite increased gasoline consumption in the road sector, due to decreased diesel consumption affected by fewer business days and sluggish domestic economy.
 - Consumption in the building sector decreased by 2.8% due to a 7.1% year-on-year decrease in heating degree days amid the unusually warm winter season, leading to reduced heating demand, and a decline in the production index for “wholesale and retail trade” and “accommodation and food services,” which are energy-intensive industries.

► Energy consumption

	2022	2023p				2024p	
		M1	M2		M12	M1	M2
TPED (Mtoe)	305.1	28.0	25.0	297.6	27.5	28.7	25.1
	(0.6)	(-6.6)	(-4.1)	(-2.5)	(-5.2)	(2.7)	(0.4)
TFC (Mtoe)	214.5	20.1	18.1	207.6	19.3	20.6	18.2
	(-0.5)	(-7.3)	(-5.4)	(-3.2)	(-6.3)	(2.5)	(0.4)
- Feedstock exclude	142.2	14.1	12.7	138.1	13.3	14.3	12.4
	(0.7)	(-5.6)	(-5.5)	(-2.9)	(-7.8)	(1.7)	(-2.6)

Note: p means provisional, () is year-on-year growth rates.
Source: Korea Energy Economics Institute

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



5. Coal

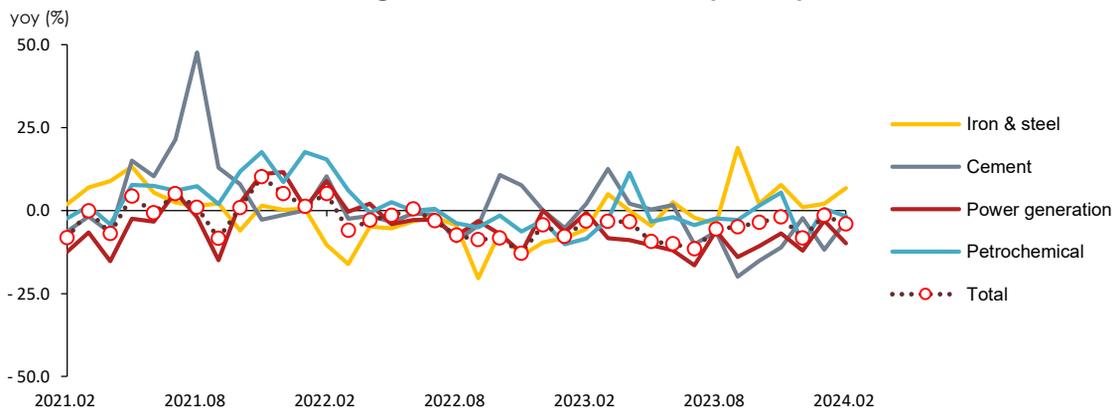
- **Coal consumption in February decreased by 4.1% y/y, largely due to a significant decrease in power generation offsetting an increase in the industrial sector.**
 - Coal consumption in the industrial sector increased by 5.1% y/y, despite the decrease in petrochemicals and cement, supported by sharply increased consumption in the steel sector.
 - Coal consumption for electricity generation decreased by 9.8% y/y amid decreased total power generation (-1.2%), as coal power generation declined significantly due to the solid growth in nuclear and renewable and other power generation, combined by transmission line constraint in the metropolitan area.

► Coal consumption

	2022	2023p				2024p	
		M1	M2	M12	M1	M2	
Coal (Mton)	115.0	10.1	9.0	107.7	9.5	10.0	8.7
	(-4.1)	(-7.8)	(-3.2)	(-6.3)	(-8.3)	(-1.5)	(-4.1)
Industry	47.4	4.0	3.5	46.6	3.9	4.0	3.7
	(-6.2)	(-9.7)	(-7.0)	(-1.7)	(-2.0)	(0.9)	(5.1)
Iron and Steel	32.5	2.8	2.4	32.7	2.8	2.8	2.5
	(-8.1)	(-8.3)	(-5.6)	(0.7)	(1.0)	(2.0)	(6.7)
- Coking coal	23.6	2.0	1.7	23.8	2.0	2.0	1.9
	(-7.5)	(-8.8)	(-5.5)	(0.8)	(1.2)	(1.3)	(7.2)
Buildings	0.4	0.0	0.0	0.4	0.1	0.0	0.0
	(-5.3)	(-6.0)	(17.1)	(-8.2)	(-17.3)	(0.1)	(-22.0)
Power generation	67.1	6.1	5.5	60.7	5.6	5.9	4.9
	(-2.6)	(-6.5)	(-0.7)	(-9.6)	(-12.1)	(-3.0)	(-9.8)

Note: p means provisional, () is year-on-year growth rates (%).
Source: Korea Energy Economics Institute

► The growth rate of coal consumption by use



6. Petroleum

- **Final consumption of oil increased by 1.4% y/y in February, driven by higher consumption in the industrial sector despite declines in the transportation and buildings sectors.**
 - Industrial sector consumption increased by 6.8% y/y, due to higher demand for raw materials supported by the weak recovery in the petrochemical industry.
 - Transportation sector consumption decreased by 6.3% y/y due to lower diesel consumption despite higher gasoline consumption in the road sector.

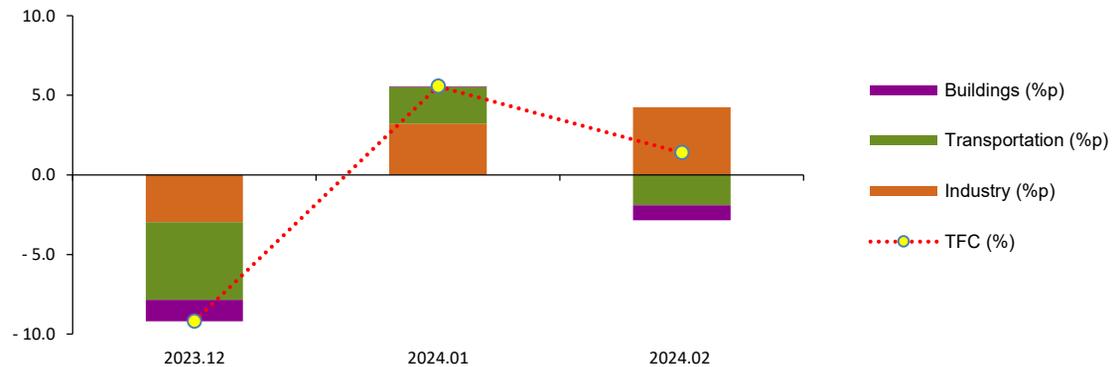
► Petroleum product consumption by end-use sectors

	2022	2023p			2024p		
		M1	M2	M12	M1	M2	
TFC (Mbbbl)	798.9	66.9	60.6	761.0	66.9	70.6	61.4
	(-1.3)	(-11.8)	(-6.1)	(-4.7)	(-9.2)	(5.6)	(1.4)
Industry	496.9	41.5	37.6	469.0	40.4	43.7	40.1
- Naphtha	(-1.8)	(-11.7)	(-5.8)	(-5.6)	(-5.2)	(5.2)	(6.8)
	356.0	30.7	27.8	337.9	30.1	32.5	29.8
	(-3.8)	(-9.1)	(-0.6)	(-5.1)	(-2.0)	(5.6)	(7.3)
Transport	258.0	20.0	18.4	250.2	21.5	21.5	17.2
	(-0.4)	(-11.9)	(-4.3)	(-3.0)	(-14.3)	(7.7)	(-6.3)
Buildings	44.0	5.4	4.6	41.8	5.0	5.5	4.0
	(-0.6)	(-12.0)	(-14.2)	(-4.8)	(-16.5)	(0.5)	(-12.3)
Power generation (Mbbbl)	5.02	0.34	0.26	3.00	0.21	0.20	0.20
	(20.0)	(-63.6)	(-54.0)	(-40.2)	(-35.6)	(-41.1)	(-23.0)

Note: p means provisional, () is year-on-year growth rates (%).
Source: Korea Energy Economics Institute

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

yoy(%), %p



7. Gas

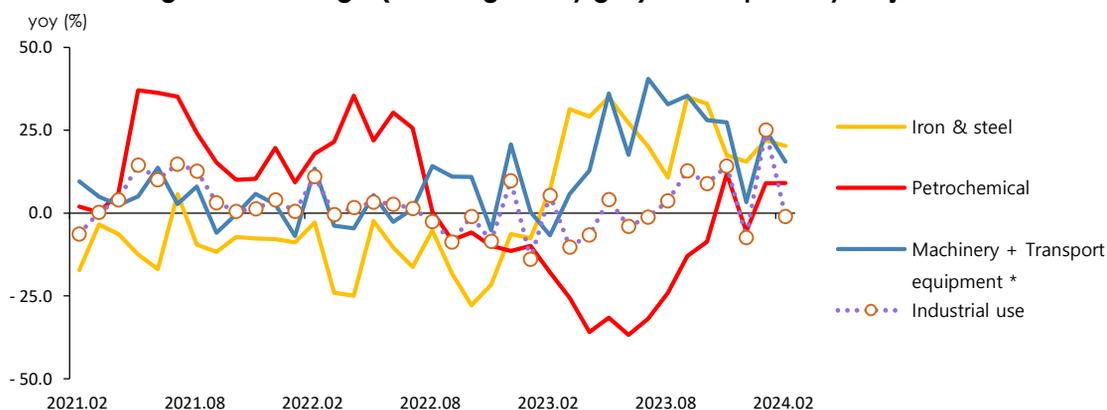
- **Gas consumption in February slightly decreased by 0.1% y/y despite declines in major sectors, due to increased consumption in “not-specified transformation” and “transformation own use”.**
 - Gas consumption for power generation decreased by 6.2% y/y as total power generation fell by 1.2% YoY, with a slight increase in base (nuclear + coal) and renewable & others of 0.7%, resulting in less gas-fired generation to serve peak load.
 - Gas consumption in the industrial sector increased in energy-intensive sectors, but decreased slightly (-0.9%) overall.
 - Gas consumption in the building sector decreased by 3.2% y/y due to temperature and price effects.
 - In the trend of higher self-consumption in oil refineries, the “transformation own use” continued strong growth (over 50%) for five consecutive months.

► Natural gas and city gas consumption

	2022	2023p			2024p		
		M1	M2	M12	M1	M2	
Gas(TPED) (Mtoe)	59.5	6.8	6.0	57.5	6.3	7.0	6.0
(Natural gas + City gas)	(-1.0)	(-3.5)	(-5.9)	(-3.3)	(-9.6)	(3.2)	(-0.1)
Power generation	30.0	2.9	2.6	28.5	2.6	2.9	2.4
	(-2.3)	(1.3)	(-1.2)	(-5.0)	(-18.3)	(0.6)	(-6.2)
Industry	10.0	0.9	1.0	10.0	1.0	1.1	1.0
	(0.3)	(-14.0)	(5.5)	(-0.3)	(-7.3)	(25.4)	(-0.9)
Buildings	15.0	2.6	2.2	13.9	2.1	2.4	2.1
	(3.9)	(-0.4)	(-11.9)	(-7.4)	(-7.5)	(-8.0)	(-3.2)
Natural gas(TPED) (Mton)	45.6	5.2	4.5	43.9	5.0	5.4	4.5
	(-0.5)	(-4.0)	(-7.6)	(-3.7)	(-12.4)	(3.6)	(0.1)
City gas(TFC) (Bm³)	23.4	3.4	2.9	21.7	2.8	3.2	2.7
	(2.9)	(-2.0)	(-10.3)	(-7.4)	(-8.1)	(-6.1)	(-4.1)

Note: p means provisional, () is year-on-year growth rates (%).
Source: Korea Energy Economics Institute

► The growth rate of gas(natural gas+city gas)consumption by major industries



Note: The transport equipment sector includes only city gas consumption. Natural gas consumption in the transport equipment sector is highly variable, including the amount of LNG loaded (+) and unloaded (-) during the test operation of the LNG carrier.

8. Electricity

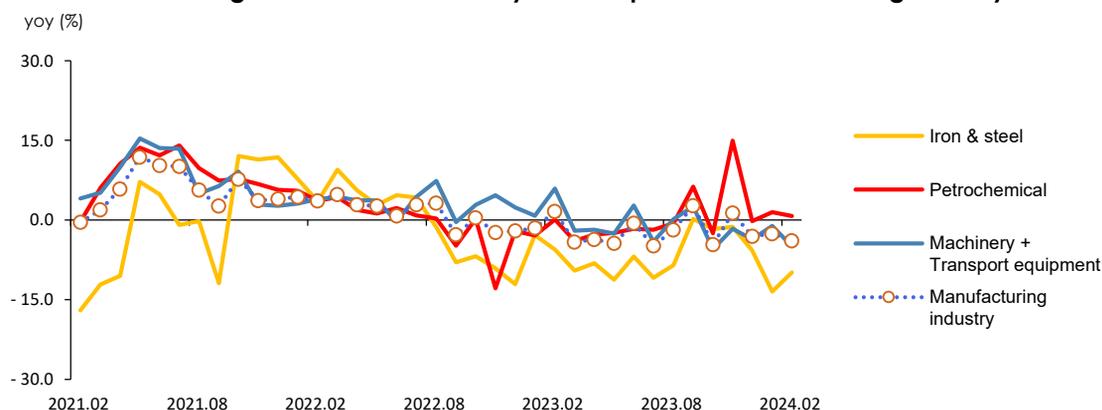
- **Electricity consumption decreased by 2.3% y/y in February, with reduced consumption in the industrial and building sectors due to economic slowdown and higher electricity tariffs.**
 - Electricity consumption in the industrial sector declined in all major industries except petrochemicals.
 - Electricity consumption in the building sector decreased due to fewer heating degree days (-7.1%), higher electricity tariffs for civilian use, and slower private consumption.

► Electricity consumption by end-use sectors

	2022	2023p				2024p	
		M1	M2		M12	M1	M2
Electricity (TWh)	535.4	50.2	46.9	534.7	45.3	48.8	45.9
	(2.9)	(3.0)	(1.0)	(-0.1)	(-1.2)	(-2.7)	(-2.3)
Industry	274.1	24.2	22.6	268.5	22.4	23.5	21.7
	(1.7)	(-1.3)	(1.4)	(-2.0)	(-3.1)	(-3.0)	(-4.1)
Transport	4.1	0.4	0.4	4.7	0.4	0.4	0.4
	(9.5)	(14.1)	(16.1)	(16.5)	(14.5)	(11.3)	(12.6)
Buildings	257.2	25.6	24.0	261.5	22.4	24.9	23.8
	(4.1)	(7.1)	(0.4)	(1.7)	(0.6)	(-2.8)	(-0.8)
Residential	78.6	7.0	6.8	79.9	6.4	7.0	6.9
	(1.3)	(1.9)	(-0.5)	(1.7)	(1.6)	(-0.1)	(1.0)
Commercial	147.0	15.3	14.3	149.2	13.0	14.7	14.0
	(5.9)	(10.3)	(0.6)	(1.5)	(0.3)	(-3.7)	(-1.8)

Notes: p means provisional, () is year-on-year growth rates (%).
Source: Korea Energy Economics Institute

► The growth rate of electricity consumption in manufacturing industry

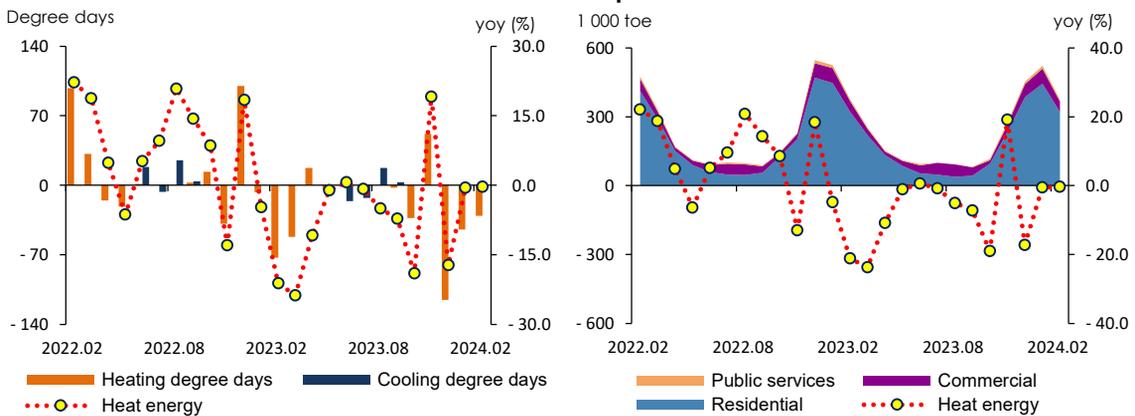


10. Heat and Renewable energy

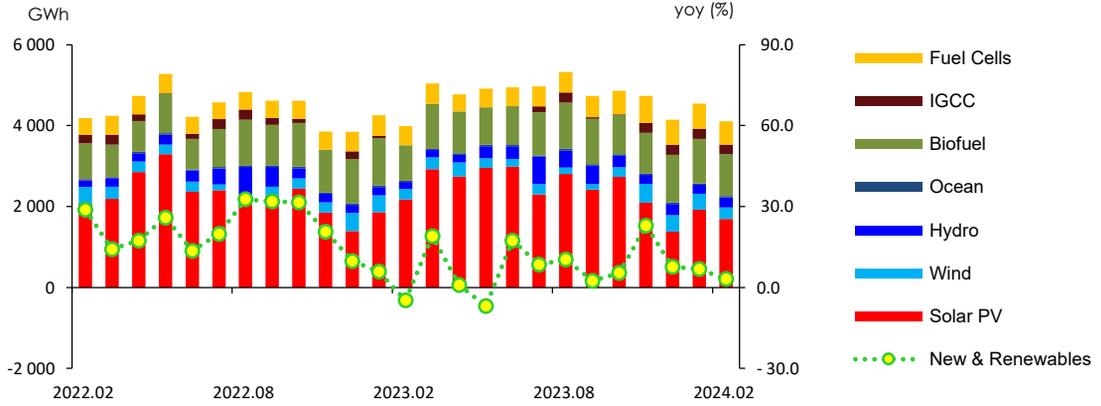
- **Heat energy consumption in February decreased by 0.3% y/y due to temperature and price effects.**
 - Heat energy consumption decreased due to mild winter weather (heating degree days -7.1%) and price increase effects (13.0%).

- **Renewable power generation increased by 3.1% y/y, led by IGCC, biomass, and fuel cells, despite a sharp decline in solar power generation.**
 - Solar power generation, the largest share of renewable power generation, decreased 22.1% y/y due to weather factors.
 - IGCC power generation surged due to the base effect of no operation during the planned shutdown period ('23.1.10. ~ 7.10.) in the same month of the previous year.
 - Biomass and fuel cell power generation increased by 18.5% and 22.1% y/y, respectively, due to more co-fired power generation and higher installed capacity.
 - Hydropower generation increased by 46.7% year-on-year due to a sharp increase in precipitation (88.2 mm) and an increased number of rainy days (8.7 days).
 - Wind power generation increased 9.9% y/y due to higher installed capacity (0.3 GW) and the base effect from a sharp decline in the same month last year.

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



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



Note: The power generation from and installed capacity of renewable energy sources are based on the data from KEPCO's 'The Monthly Report on Electric Power Statistics'.

11. Industry

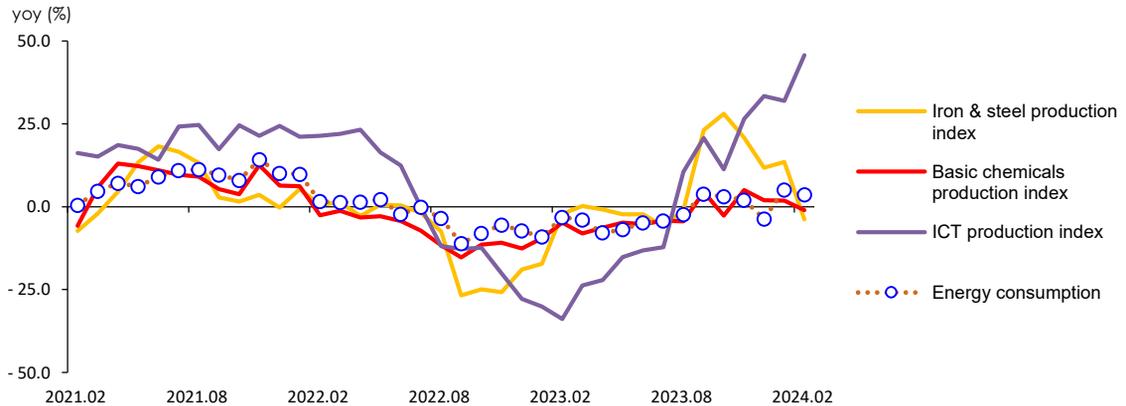
- **Industrial sector consumption increased 3.6% y/y in February as production activity increased despite fewer business days (1.5 days).**
 - Consumption in the industrial sector increased by 3.6% y/y, with increased production in most sectors, including energy-intensive industries such as petrochemicals, steel, semiconductors, and electronics (The industrial production index increased by 4.6%).

► Industrial energy consumption

	2022	2023p			2024p		
		M1	M2	M12	M1	M2	
Industry (Mtoe)	130.5	11.1	10.2	126.2	10.9	11.6	10.6
	(-1.9)	(-9.1)	(-3.2)	(-3.3)	(-3.7)	(5.1)	(3.6)
Petrochemical	66.2	5.6	5.0	62.2	5.4	5.8	5.4
	(-1.3)	(-10.6)	(-6.5)	(-6.0)	(-4.6)	(4.8)	(8.0)
- Naphtha	43.6	3.8	3.4	41.4	3.7	4.0	3.6
	(-3.9)	(-9.1)	(-0.6)	(-5.1)	(-2.0)	(5.6)	(7.3)
Iron & Steel	25.9	2.2	1.9	26.3	2.3	2.3	2.1
	(-7.3)	(-7.9)	(-4.6)	(1.4)	(1.7)	(2.3)	(6.6)
- Coking coal	16.6	1.4	1.2	16.7	1.4	1.4	1.3
	(-6.7)	(-8.8)	(-5.5)	(0.8)	(1.2)	(1.3)	(7.2)
Machinery + Transport Equipment	13.2	1.1	1.2	13.2	1.2	1.3	1.2
	(6.2)	(-6.5)	(11.5)	(0.4)	(-9.6)	(15.2)	(-6.7)
Share of feedstock (%)	55.3	54.4	53.1	55.1	54.4	54.0	54.9

Note: p means provisional, () is year-on-year growth rates (%).
Source: Korea Energy Economics Institute

► Industrial energy consumption & production index



12. Transport

- **Transportation sector consumption decreased by 5.9% y/y in February due to lower diesel consumption despite higher gasoline consumption in the road sector.**
 - Consumption in the road sector decreased by 4.1% y/y due to lower consumption of diesel fuel led by fewer business days and sluggish economy.
 - Consumption in the aviation sector decreased 50.2% y/y under the continued impact of the change in statistical compilation criteria since June 2023.

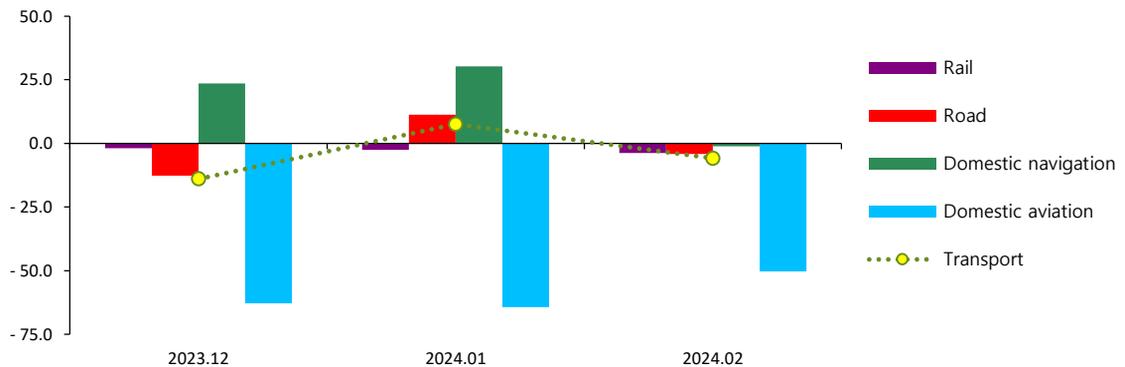
▶ The growth rate of petroleum consumption in the transport sector

	2022	2023p				2024p	
		M1	M2		M12	M1	M2
Transport (Mtoe)	36.3	2.8	2.6	35.2	3.0	3.0	2.4
	(-0.9)	(-11.6)	(-4.5)	(-2.9)	(-13.9)	(7.5)	(-5.9)
Road	33.9	2.6	2.4	33.6	2.9	2.9	2.3
	(-1.0)	(-10.9)	(-3.6)	(-0.8)	(-12.6)	(11.2)	(-4.1)
Gasoline	10.7	0.8	0.8	11.0	1.0	1.0	0.8
	(3.5)	(-9.5)	(-1.0)	(2.3)	(-15.4)	(20.1)	(6.2)
Diesel	18.3	1.4	1.3	17.9	1.6	1.6	1.2
	(-3.5)	(-12.7)	(-5.6)	(-2.1)	(-11.9)	(8.5)	(-10.1)
Electricity	0.1	0.0	0.0	0.2	0.0	0.0	0.0
	(84.8)	(56.5)	(55.4)	(50.1)	(39.5)	(39.8)	(36.5)
Sales of gas station (Mtoe)							
Gasoline	10.6	0.9	0.8	11.1	0.9	0.9	0.9
	(3.1)	(-0.0)	(8.5)	(4.5)	(1.5)	(3.0)	(7.8)
Diesel	19.6	1.5	1.4	19.3	1.6	1.5	1.3
	(-3.2)	(-10.5)	(3.2)	(-1.6)	(-1.1)	(0.7)	(-7.6)

Note: p means provisional, () is year-on-year growth rates (%). Road sector consumption is the figure that gas stations and refiners supply.
Source: Korea Energy Economics Institute, Korea National Oil Corporation

▶ The growth rates of energy consumption in the transport sector

전년 동월 대비, %



13. Buildings

- **Consumption in the building sector declined 2.8% y/y in February due to temperature effects and decreased production activity in the service industry.**
 - Household sector consumption decreased mainly for heating energy such as city gas and kerosene due to unseasonably high temperatures in the winter season.
 - Commercial sector consumption decreased 3.5% y/y due to temperature effects and slower production growth in the service sector.
 - Electricity, city gas, and heat energy tariffs increased by 4.4%, 5.3%, and 13.0% year-on-year on a residential use basis, respectively.

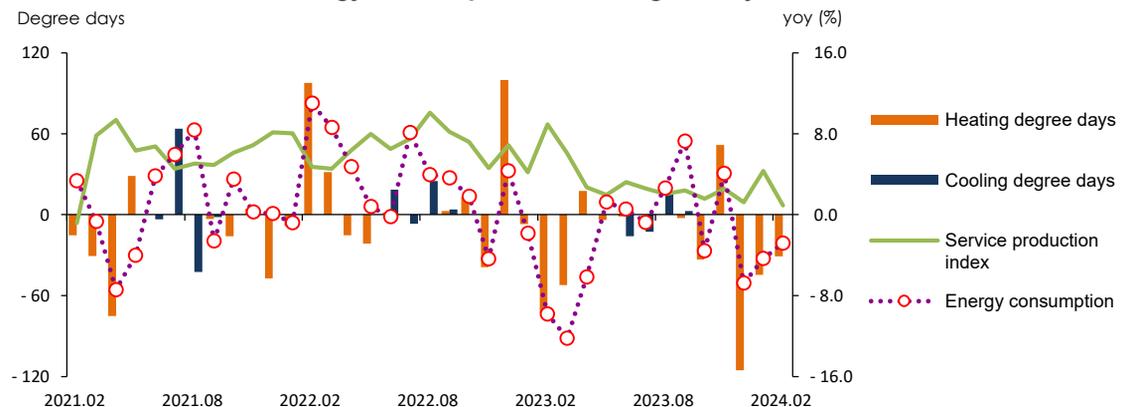
► Energy consumption in buildings

	2022	2023p				2024p	
		M1	M2		M12	M1	M2
Buildings (Mtoe)	47.7	6.2	5.3	46.2	5.3	6.0	5.2
	(3.6)	(-1.8)	(-9.8)	(-3.2)	(-6.8)	(-4.3)	(-2.8)
Residential	23.6	3.6	3.0	21.8	3.0	3.4	2.9
	(2.7)	(-4.4)	(-13.7)	(-7.3)	(-8.7)	(-5.4)	(-2.6)
Commercial	18.9	2.1	1.9	19.0	1.8	2.0	1.8
	(5.4)	(4.6)	(-3.2)	(0.5)	(-4.7)	(-2.7)	(-3.5)
Public services	5.2	0.5	0.5	5.3	0.5	0.5	0.5
	(1.2)	(-7.6)	(-9.6)	(2.0)	(-2.1)	(-3.7)	(-1.8)
Heating degree days	2 567.1	576.1	433.9	2 347.8	484.9	531.4	403.0
	(6.8)	(-1.2)	(-14.4)	(-8.5)	(-19.2)	(-7.8)	(-7.1)
Cooling degree days	141.9	-	-	133.6	-	-	-
	(40.1)	-	-	(-5.8)	-	-	-
Service production index (2020=100)	112.3	109.1	108.5	115.9	130.9	113.8	109.5
	(6.9)	(4.2)	(8.9)	(3.2)	(1.2)	(4.3)	(0.9)

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

Source: Korea Energy Economics Institute, Korea Meteorological Administration, Korean Statistical Information Service

► Energy consumption in buildings & major indicators



14. Power Generation

- **Power generation decreased by 1.2% year-on-year in February with increases in nuclear and renewable & others, but decreases in coal and gas power generation.**
 - Nuclear power generation increased by more than 8% y/y due to the test operation of Shin-Hanul Unit 2 and decreased preventive maintenance at nuclear power plants.
 - Renewable & other power generation increased by 5.5% contributed by the increase in IGCC (coal gasification) and biomass, despite the sharp decrease in solar power generation.
 - Coal power generation fell sharply more than 7%, with the increase in nuclear and renewable & other generation under the constraints of transmission lines in the metropolitan area.
 - Gas power generation decreased by more than 5% y/y due to the decline in total power generation and the increase in base + renewable & other power generation.

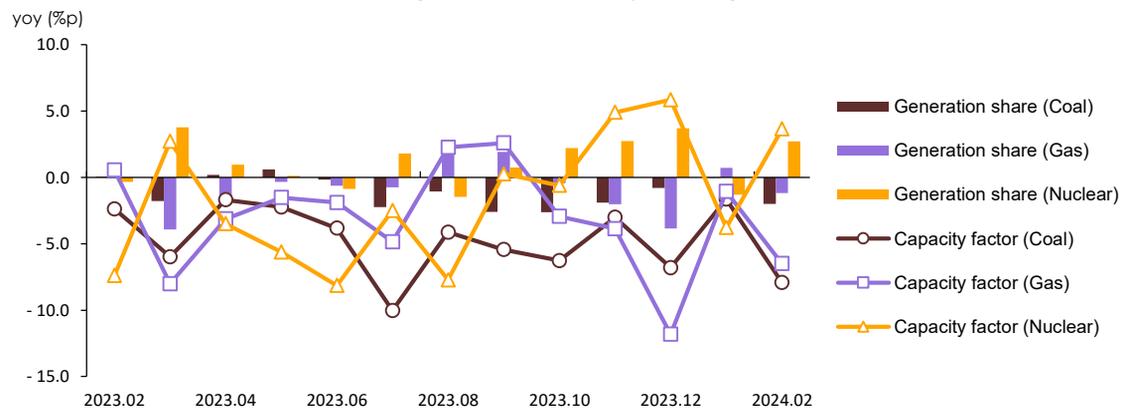
► Power generation by energy sources

	2022	2023p			2024p		
		M1	M2	M12	M1	M2	
Power Generation (TWh)	594.4	54.2	47.7	588.0	52.4	54.2	47.2
	(3.1)	(-1.1)	(-1.5)	(-1.1)	(-5.7)	(0.1)	(-1.2)
Coal	193.2	18.0	15.7	184.9	17.4	18.0	14.6
	(-2.4)	(-2.2)	(-1.4)	(-4.3)	(-7.9)	(0.1)	(-7.2)
Oil	2.0	0.2	0.2	1.5	0.1	0.1	0.1
	(-16.5)	(-58.0)	(-14.8)	(-24.3)	(-38.2)	(-39.7)	(-43.9)
Gas	163.6	15.5	13.8	157.7	13.9	15.9	13.0
	(-2.8)	(1.9)	(1.1)	(-3.6)	(-17.7)	(2.6)	(-5.3)
Nuclear	176.1	15.7	13.6	180.5	16.3	15.0	14.7
	(11.4)	(-2.8)	(-2.7)	(2.5)	(7.0)	(-4.4)	(8.2)
Renewables	59.6	4.8	4.5	63.4	4.7	5.2	4.8
	(18.9)	(4.9)	(-5.5)	(6.4)	(7.1)	(8.3)	(5.5)
Coal + Nuclear + Renewables	428.9	38.4	33.8	428.8	38.4	38.1	34.0
	(20.5)	(-1.6)	(-2.5)	(-0.0)	(-0.3)	(-0.7)	(0.7)

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

Source: Korea Electric Power Corporation

► Power generation by major energy sources



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

Major Statistics & Indicators of the Economy

	2021	2022	2023p			2024p			
			M12	M1	M2	M12	M1	M2	
GDP (trillion won)	1 918.7 (4.3)	1 968.8 (2.6)	513.8 (1.4)	- -	- -	1 995.6 (1.4)	525.1 (2.2)	- -	- -
Private consumption	881.4 (3.6)	917.8 (4.1)	235.7 (3.3)	- -	- -	934.3 (1.8)	237.9 (0.9)	- -	- -
Facilities investment	182.1 (9.3)	180.5 (-0.9)	49.0 (6.5)	- -	- -	181.4 (0.5)	47.3 (-3.6)	- -	- -
Construction investment	265.0 (-1.6)	257.6 (-2.8)	70.5 (-1.8)	- -	- -	261.0 (1.3)	69.2 (-1.9)	- -	- -
Consumer price index (2020=100)	102.5	107.7	109.3	110.1	110.3	111.6	112.7	113.2	113.8
USD to KRW exchange rate (won)	1 144.0	1 291.4	1 296.2	1 247.3	1 270.7	1 305.7	1 304.0	1 323.6	1 331.7
Benchmark rate (%)	0.6	2.1	3.3	3.5	3.5	3.5	3.5	3.5	3.5
Coincident composite index (2020=100)	103.7	108.2	108.8	108.5	109.0	110.2	111.1	111.5	112.0
Mining & manufacturing production index (2020=100)	108.5	109.6	109.2	96.9	96.4	106.8	116.1	109.4	100.8
Manufacturing operation ratio index (2020=100)	105.0	104.8	103.3	92.3	91.4	100.8	104.5	100.9	92.9
Average temperature	13.3	12.9	-1.4	-0.6	2.5	13.7	2.4	0.9	4.1
- year-on-year difference	0.3	-0.4	-3.2	0.2	2.6	0.7	3.7	1.4	1.6
Heating degree days	2 404.7 (-1.8)	2 567.1 (6.8)	600.3 (20.0)	576.1 (-1.2)	433.9 (-14.4)	2 347.8 (-8.5)	484.9 (-19.2)	531.4 (-7.8)	403.0 (-7.1)
Cooling degree days	101.3 (18.9)	141.9 (40.1)	- -	- -	- -	133.6 (-5.8)	- -	- -	- -
Energy intensity	0.16 (0.8)	0.16 (-1.9)	0.15 (-4.2)	- -	- -	0.15 (-3.8)	0.15 (-2.2)	- -	- -
Per capita consumption									
Oil (bbl)	15.6 (7.7)	15.5 (-1.1)	1.4 (-5.6)	1.3 (-11.8)	1.2 (-6.2)	14.7 (-4.8)	1.3 (-9.3)	1.4 (5.5)	1.2 (1.3)
Electricity (MWh)	10.1 (4.9)	10.4 (3.1)	0.9 (-0.2)	1.0 (2.9)	0.9 (0.9)	10.3 (-0.2)	0.9 (-1.2)	0.9 (-2.8)	0.9 (-2.3)
City gas (1 000 Nm3)	0.4 (3.4)	0.5 (3.1)	0.1 (5.7)	0.1 (-2.1)	0.1 (-10.4)	0.4 (-7.5)	0.1 (-8.2)	0.1 (-6.2)	0.1 (-4.2)
Total energy (toe)	5.9 (5.3)	5.9 (0.8)	0.6 (-0.9)	0.5 (-6.7)	0.5 (-4.2)	5.8 (-2.5)	0.5 (-5.3)	0.6 (2.6)	0.5 (0.3)

Note: Figures are based on the real price of 2020 and each quarterly figures are indicated in March, June, September and December, p means provisional, () is year-on-year growth rates (%).

Source: Bank of Korea, Korea Statistical Information Service, Korea Meteorological Administration, Korea Energy Economics Institute

The Index of Production & Operating Ratio by Sectors

	2021	2022		2023p			2024p		
				M12	M1	M2		M12	M1
Industrial production index									
All industry	105.5 (5.5)	110.6 (4.9)	126.0 (1.9)	103.1 (-1.6)	103.4 (4.1)	111.7 (1.0)	126.5 (0.4)	110.5 (7.2)	105.2 (1.7)
Mining & manufacturing	108.5 (8.5)	109.6 (1.0)	109.2 (-10.7)	96.9 (-12.5)	96.4 (-6.4)	106.8 (-2.6)	116.1 (6.3)	109.4 (12.9)	100.8 (4.6)
Semiconductor	128.7 (28.7)	135.7 (5.4)	117.1 (-26.0)	95.4 (-33.5)	85.6 (-38.0)	133.0 (-2.0)	172.2 (47.1)	138.0 (44.7)	141.6 (65.4)
Iron & steel	105.1 (5.1)	96.3 (-8.4)	86.1 (-18.9)	91.0 (-17.2)	94.7 (-2.2)	98.9 (2.8)	96.2 (11.7)	103.3 (13.5)	91.1 (-3.8)
Cement	102.8 (2.8)	100.0 (-2.8)	94.2 (-16.1)	75.4 (-13.1)	84.4 (11.5)	90.9 (-9.1)	86.8 (-7.9)	77.6 (2.9)	65.5 (-22.4)
Basic compound	105.8 (5.8)	98.9 (-6.5)	96.7 (-12.6)	100.4 (-9.5)	93.3 (-4.8)	95.5 (-3.5)	98.6 (2.0)	102.2 (1.8)	92.3 (-1.1)
Transport equipment	106.1 (6.1)	115.8 (9.1)	131.0 (10.9)	112.4 (10.5)	124.5 (27.0)	127.6 (10.2)	130.5 (-0.4)	128.0 (13.9)	109.9 (-11.7)
Electric & electronic	108.7 (8.7)	112.6 (3.6)	119.8 (-2.8)	106.5 (1.5)	110.7 (9.4)	111.0 (-1.4)	110.8 (-7.5)	98.4 (-7.6)	89.7 (-19.0)
Service	105.0 (5.0)	112.3 (6.9)	129.3 (6.9)	109.1 (4.2)	108.5 (8.9)	115.9 (3.2)	130.9 (1.2)	113.8 (4.3)	109.5 (0.9)
Wholesale and retail	104.3 (4.3)	107.1 (2.7)	112.3 (1.2)	104.7 (-0.2)	102.6 (7.8)	106.4 (-0.6)	111.3 (-0.9)	104.5 (-0.2)	97.3 (-5.2)
Food & Accommodation	101.9 (1.8)	119.1 (16.9)	129.9 (12.8)	114.0 (8.3)	112.9 (23.0)	120.0 (0.7)	126.9 (-2.3)	114.2 (0.2)	108.0 (-4.3)
Production output									
Iron & steel - Pig iron	46 440.5 (2.4)	42 658.2 (-8.1)	3 568.4 (-9.8)	3 737.1 (-3.5)	3 360.4 (0.7)	45 205.0 (6.0)	3 773.5 (5.7)	3 894.1 (4.2)	3 578.1 (6.5)
Iron & steel - Crude steel	70 418.0 (5.0)	65 846.2 (-6.5)	5 232.3 (-11.8)	5 626.2 (-7.3)	5 205.8 (1.2)	66 683.3 (1.3)	5 382.3 (2.9)	5 720.7 (1.7)	5 117.3 (-1.7)
Petrochemical - Basic petrochemicals	34 434.5 (12.7)	32 854.1 (-4.6)	2 618.8 (-16.0)	2 775.5 (-11.3)	2 436.6 (-11.4)	31 157.9 (-5.2)	2 827.8 (8.0)	2 821.9 (1.7)	2 671.1 (9.6)
Petrochemical - Intermediate raw material	15 764.6 (2.6)	13 852.5 (-12.1)	1 097.2 (-17.0)	1 217.5 (-4.3)	1 119.1 (-2.5)	12 973.5 (-6.3)	1 150.8 (4.9)	1 210.3 (-0.6)	1 099.3 (-1.8)
Petrochemical - 3 major products	23 224.7 (9.2)	22 129.4 (-4.7)	1 754.8 (-19.4)	1 852.4 (-14.4)	1 748.7 (-8.8)	21 472.1 (-3.0)	1 791.5 (2.1)	1 737.4 (-6.2)	1 749.9 (0.1)
The number of cars	3 462.4 (-1.3)	3 756.5 (8.5)	353.4 (10.8)	306.7 (13.2)	343.6 (30.2)	4 240.3 (12.9)	367.6 (4.0)	358.4 (16.8)	300.5 (-12.5)

Note: p means provisional. The three major petrochemical products are synthetic resin, synthetic fiber raw material, and synthetic rubber.
Source: Korea Statistical Information Service, Korea Iron & Steel Association, Korea Petrochemical Industry Association

International Energy Prices

	2021	2022		2023			2024		
				M12	M1	M2		M12	M1
Crude oil (USD/bbl)									
WTI	67.9 (72.4)	94.2 (38.7)	76.5 (6.7)	78.2 (-5.8)	76.9 (-16.1)	77.6 (-17.6)	72.1 (-5.7)	73.9 (-5.5)	76.6 (-0.3)
Dubai	69.3 (64.1)	96.4 (39.1)	77.2 (5.5)	80.4 (-3.7)	82.1 (-11.1)	82.1 (-14.8)	77.3 (0.1)	78.8 (-2.0)	80.9 (-1.5)
Brent	70.8 (63.8)	98.9 (39.7)	81.3 (8.7)	83.9 (-1.9)	83.5 (-11.2)	82.2 (-16.9)	77.3 (-4.9)	79.1 (-5.7)	81.7 (-2.2)
Unit value of import (C&F)	70.2 (56.9)	102.3 (45.6)	89.5 (12.7)	86.0 (4.7)	85.5 (-6.5)	85.9 (-16.0)	85.9 (-4.1)	82.5 (-4.1)	82.7 (-3.3)
LNG									
Henry Hub (USD/MMBTU)	3.7 (74.6)	6.5 (75.2)	5.8 (49.3)	3.4 (-19.6)	2.4 (-45.4)	2.7 (-59.1)	2.5 (-56.0)	2.7 (-20.7)	1.8 (-26.3)
TTF (USD/MMBTU)	16.0 (396.1)	40.1 (150.0)	36.7 (-2.6)	19.8 (-30.0)	16.5 (-38.7)	13.0 (-67.5)	11.6 (-68.5)	9.6 (-51.7)	8.1 (-50.8)
JKM (USD/MMBTU)	17.9 (324.7)	33.9 (89.5)	32.3 (-14.5)	24.3 (-14.7)	16.9 (-34.6)	14.4 (-57.3)	14.0 (-56.6)	10.3 (-57.6)	8.9 (-47.1)
Unit value of import (USD/ton, CIF)	550.8 (41.2)	1 053.5 (91.3)	1 255.2 (40.6)	1 295.6 (13.8)	1 102.9 (30.7)	781.8 (-25.8)	768.8 (-38.8)	711.9 (-45.1)	637.9 (-42.2)
Coal (USD/ton)									
Thermal coal (Newcastle)	136.0 (125.8)	356.3 (161.9)	400.9 (143.5)	362.3 (72.8)	222.1 (-6.0)	174.8 (-50.9)	144.3 (-64.0)	128.0 (-64.7)	121.2 (-45.4)
Unit value of import (CIF)	115.1 (48.1)	226.3 (96.7)	204.6 (9.1)	195.8 (5.8)	193.1 (-2.0)	169.7 (-25.0)	144.3 (-29.5)	166.1 (-15.1)	147.7 (-23.5)
Petroleum product (USD/bbl)									
Gasoline	80.3 (72.2)	115.2 (43.4)	89.4 (1.7)	99.0 (1.0)	99.4 (-10.3)	98.8 (-14.3)	91.3 (2.1)	96.0 (-3.1)	100.2 (0.7)
Kerosene	75.1 (67.9)	126.7 (68.6)	110.5 (32.3)	115.0 (20.2)	106.6 (0.4)	104.6 (-17.4)	101.5 (-8.2)	101.5 (-11.7)	103.3 (-3.1)
Diesel	77.6 (57.2)	135.3 (74.3)	114.0 (32.7)	116.2 (17.1)	107.7 (-2.8)	106.4 (-21.4)	99.8 (-12.5)	102.8 (-11.5)	106.5 (-1.1)
Bunker-C	64.4 (64.3)	82.3 (27.8)	59.6 (-9.5)	61.4 (-19.4)	63.7 (-22.8)	71.8 (-12.8)	68.8 (15.5)	69.6 (13.4)	70.3 (10.2)
Propane	647.9 (63.2)	737.1 (13.8)	650.0 (-18.2)	590.0 (-20.3)	790.0 (1.9)	575.0 (-22.0)	610.0 (-6.2)	620.0 (5.1)	630.0 (-20.3)
Butane	629.6 (55.9)	734.2 (16.6)	650.0 (-13.3)	605.0 (-14.8)	790.0 (1.9)	577.1 (-21.4)	620.0 (-4.6)	630.0 (4.1)	640.0 (-19.0)
Naphtha	70.6 (74.6)	83.1 (17.7)	65.7 (-15.4)	72.4 (-14.3)	76.5 (-19.9)	69.1 (-16.8)	72.3 (10.0)	72.5 (0.1)	71.9 (-6.0)

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: Korea National Oil Corporation, World Bank, Korea Energy Economics Institute, CME Group, Korea International Trade Association

Domestic Energy Prices

	2021	2022		2023			2024		
				M12	M1	M2		M12	M1
Petroleum product									
Gasoline (won/liter)	1 590.5 (15.1)	1 812.4 (14.0)	1 563.8 (-5.0)	1 562.9 (-4.4)	1 578.5 (-7.9)	1 643.0 (-9.3)	1 600.6 (2.4)	1 569.2 (0.4)	1 614.5 (2.3)
Diesel (won/liter)	1 391.3 (16.9)	1 841.8 (32.4)	1 783.3 (21.4)	1 675.4 (15.3)	1 606.4 (4.5)	1 558.7 (-15.4)	1 526.3 (-14.4)	1 480.1 (-11.7)	1 517.8 (-5.5)
Bunker-C (won/liter)	731.7 (27.6)	1 115.2 (52.4)	986.7 (14.9)	883.8 (5.2)	915.6 (-2.3)	931.5 (-16.5)	994.7 (0.8)	900.9 (1.9)	909.5 (-0.7)
Propane (won/kg)	2 092.6 (13.1)	2 479.6 (18.5)	2 449.7 (1.6)	2 440.0 (1.9)	2 405.4 (1.1)	2 372.2 (-4.3)	2 420.1 (-1.2)	2 418.8 (-0.9)	2 418.9 (0.6)
Butane (won/liter)	931.8 (17.8)	1 081.7 (16.1)	1 021.4 (-6.1)	1 019.7 (-4.9)	992.2 (-5.6)	957.6 (-11.5)	970.8 (-5.0)	970.5 (-4.8)	970.5 (-2.2)
City gas(won/MJ)									
Residential	14.2 (-5.7)	16.6 (16.7)	19.7 (38.4)	19.7 (38.4)	19.7 (38.4)	20.4 (22.9)	20.7 (5.3)	20.7 (5.3)	20.7 (5.3)
General(1)	13.9 (-6.5)	16.3 (17.3)	19.5 (38.6)	19.5 (38.6)	19.5 (38.6)	20.1 (23.3)	20.6 (5.2)	20.6 (5.2)	20.6 (5.2)
Commercial	17.2 (14.2)	28.7 (66.6)	36.2 (53.8)	34.3 (35.0)	33.8 (35.9)	26.0 (-9.3)	23.0 (-36.5)	25.0 (-27.1)	23.0 (-32.0)
Industry	14.4 (14.2)	25.9 (79.9)	34.1 (60.1)	32.1 (39.0)	31.7 (40.1)	23.3 (-9.9)	21.0 (-38.5)	22.9 (-28.6)	20.9 (-33.9)
Heat(won/Mcal)									
Residential	65.2 (-1.4)	74.1 (13.7)	89.9 (37.8)	89.9 (37.8)	89.9 (37.8)	96.1 (29.6)	101.6 (13.0)	101.6 (13.0)	101.6 (13.0)
Commercial	84.7 (-1.4)	96.3 (13.7)	116.7 (37.8)	116.7 (37.8)	116.7 (37.8)	124.7 (29.6)	131.9 (13.0)	131.9 (13.0)	131.9 (13.0)
Public	74.0 (-1.4)	84.1 (13.7)	101.9 (37.8)	101.9 (37.8)	101.9 (37.8)	108.9 (29.6)	115.2 (13.0)	115.2 (13.0)	115.2 (13.0)
Electricity(won/kWh)									
Residential	142.3 (-3.4)	147.8 (3.9)	154.6 (8.6)	166.0 (16.7)	166.0 (16.7)	171.3 (15.9)	174.0 (12.5)	174.0 (4.8)	174.0 (4.8)
General	79.4 (-5.9)	84.9 (7.0)	99.6 (14.1)	111.0 (27.1)	111.0 (27.1)	108.4 (27.7)	119.0 (19.5)	119.0 (7.2)	119.0 (7.2)
Industry	91.0 (-5.2)	98.8 (8.6)	125.0 (20.8)	136.4 (31.8)	136.4 (31.8)	131.5 (33.0)	157.9 (26.3)	157.9 (15.8)	157.9 (15.8)

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, optionII mid-load).
Source: Korea National Oil Corporation, Seoul City Gas, Korean District Heating Corporation, Korea Electric Power Corporation

Total Primary Energy Demand (TPED)

	2021	2022		2023p			2024p		
			M12	M1	M2		M12	M1	M2
Coal (Mton)	119.9 (-0.0)	115.0 (-4.1)	10.4 (-4.3)	10.1 (-7.8)	9.0 (-3.2)	107.7 (-6.3)	9.5 (-8.3)	10.0 (-1.5)	8.7 (-4.1)
- Coking coal excluded	94.4 (-0.8)	91.4 (-3.2)	8.4 (-3.3)	8.1 (-7.5)	7.3 (-2.6)	83.9 (-8.1)	7.5 (-10.6)	7.9 (-2.2)	6.8 (-6.8)
Oil (Mtbl)	830.7 (7.1)	814.5 (-1.9)	75.7 (-5.2)	69.8 (-10.6)	63.0 (-5.0)	779.9 (-4.3)	69.1 (-8.7)	72.4 (3.7)	62.0 (-1.6)
Natural Gas (Mton)	45.8 (10.4)	45.6 (-0.5)	5.7 (13.0)	5.2 (-4.0)	4.5 (-7.6)	43.9 (-3.7)	5.0 (-12.4)	5.4 (3.6)	4.5 (0.1)
Nuclear (TWh)	158.0 (-1.4)	176.1 (11.4)	15.2 (-7.9)	15.7 (-2.8)	13.6 (-2.7)	180.5 (2.5)	16.3 (6.9)	15.0 (-4.4)	14.7 (8.2)
Heat (Mtoe)	0.1 (-7.6)	0.1 (2.6)	0.0 (-13.1)	0.0 (12.4)	0.0 (-14.3)	0.1 (4.9)	0.0 (25.6)	0.0 (-0.2)	0.0 (0.4)
Others (Mtoe)	15.0 (11.7)	16.7 (10.9)	1.3 (-2.1)	1.4 (-1.4)	1.3 (-5.7)	17.6 (5.8)	1.4 (2.9)	1.5 (6.9)	1.3 (-0.6)
TPED (Mtoe)	303.2 (5.1)	305.1 (0.6)	29.0 (-1.1)	28.0 (-6.6)	25.0 (-4.1)	297.6 (-2.5)	27.5 (-5.2)	28.7 (2.7)	25.1 (0.4)

Note: p means provisional, () is year-on-year growth rates (%). Oil value is the sum of TPED of crude oil & refinery feedstocks and petroleum.
Source: Korea Energy Economics Institute

Share of TPED by Sources

(unit: %)

	2021	2022		2023p			2024p		
			M12	M1	M2		M12	M1	M2
Coal	24.0	22.8	21.7	21.9	21.8	22.0	21.0	21.0	20.9
- Coking coal excluded	18.1	17.4	16.8	16.8	16.9	16.4	15.8	16.0	15.7
Oil	40.1	39.9	38.5	37.1	37.6	39.8	38.4	38.5	37.8
Gas	19.8	19.5	24.0	24.2	23.9	19.3	22.9	24.3	23.8
Nuclear	11.1	12.3	11.2	11.9	11.6	12.9	12.6	11.1	12.5
Heat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	5.0	5.5	4.6	4.9	5.1	5.9	4.9	5.1	5.0
TPED	100.0								

Note: p means provisional. Gas value is the sum of TPED of natural gas and city gas.
Source: Korea Energy Economics Institute

Total Final Consumption (TFC)

(Unit: Mtoe)

	2021	2022	2023p			2024p			
			M12	M1	M2	M12	M1	M2	
Industry	133.0 (7.2)	130.5 (-1.9)	11.3 (-7.3)	11.1 (-9.1)	10.2 (-3.2)	126.2 (-3.3)	10.9 (-3.7)	11.6 (5.1)	10.6 (3.6)
Transport	36.6 (5.4)	36.3 (-0.9)	3.5 (0.4)	2.8 (-11.6)	2.6 (-4.5)	35.2 (-2.9)	3.0 (-13.9)	3.0 (7.5)	2.4 (-5.9)
Residential	22.9 (2.6)	23.6 (2.7)	3.3 (5.6)	3.6 (-4.4)	3.0 (-13.7)	21.8 (-7.3)	3.0 (-8.7)	3.4 (-5.4)	2.9 (-2.6)
commercial	17.9 (1.7)	18.9 (5.4)	1.9 (4.4)	2.1 (4.6)	1.9 (-3.2)	19.0 (0.5)	1.8 (-4.7)	2.0 (-2.7)	1.8 (-3.5)
Public	5.2 (4.0)	5.2 (1.2)	0.5 (-3.1)	0.5 (-7.6)	0.5 (-9.6)	5.3 (2.0)	0.5 (-2.1)	0.5 (-3.7)	0.5 (-1.8)
TFC	215.7 (5.8)	214.5 (-0.5)	20.6 (-3.0)	20.1 (-7.3)	18.1 (-5.4)	207.6 (-3.2)	19.3 (-6.3)	20.6 (2.5)	18.2 (0.4)
Coal (Mton)	51.0 (3.6)	47.8 (-6.2)	4.0 (-10.5)	4.0 (-9.7)	3.5 (-6.8)	47.0 (-1.7)	3.9 (-2.2)	4.1 (0.9)	3.7 (4.8)
Oil (Mbbl)	809.1 (7.6)	798.9 (-1.3)	73.7 (-5.8)	66.9 (-11.8)	60.6 (-6.1)	761.0 (-4.7)	66.9 (-9.2)	70.6 (5.6)	61.4 (1.4)
- Non-energy oil excluded	350.6 (4.3)	345.8 (-1.4)	35.8 (4.1)	29.4 (-11.9)	26.5 (-6.4)	333.4 (-3.6)	30.7 (-14.3)	31.5 (7.3)	24.8 (-6.4)
Electricity (TWh)	520.3 (4.7)	535.4 (2.9)	45.8 (-0.3)	50.2 (3.0)	46.9 (1.0)	534.7 (-0.1)	45.3 (-1.2)	48.8 (-2.7)	45.9 (-2.3)
City gas (Bm ³)	22.7 (3.3)	23.4 (2.9)	3.1 (5.5)	3.4 (-2.0)	2.9 (-10.3)	21.7 (-7.4)	2.8 (-8.1)	3.2 (-6.1)	2.7 (-4.1)
Heat (1 000 toe)	2.7 (4.2)	2.9 (9.1)	0.5 (18.4)	0.5 (-4.8)	0.4 (-21.1)	2.6 (-10.7)	0.5 (-17.2)	0.5 (-0.5)	0.4 (-0.3)
Others (1 000 toe)	7.1 (7.1)	7.3 (1.7)	0.6 (-11.5)	0.6 (-12.4)	0.6 (-9.9)	7.3 (0.5)	0.7 (5.1)	0.7 (14.1)	0.6 (7.6)

Note: p means provisional, () is year-on-year growth rates (%), Non-energy oil value includes TFC of propane and butane for petrochemical feedstock.
Source: Korea Energy Economics Institute

Share of the Total Final Consumption by Sources

(unit: %)

	2021	2022	2023p			2024p			
			M12	M1	M2	M12	M1	M2	
Industry	61.7	60.8	55.1	55.1	56.4	60.8	56.6	56.5	58.2
Transport	17.0	16.9	17.0	13.9	14.2	17.0	15.6	14.6	13.3
Residential	10.6	11.0	16.0	17.9	16.4	10.5	15.6	16.6	15.9
Commercial	8.3	8.8	9.4	10.4	10.4	9.2	9.5	9.9	10.0
Public	2.4	2.4	2.5	2.7	2.6	2.6	2.6	2.5	2.5
TFC	100.0								
Coal	15.0	14.3	12.5	12.9	12.5	14.5	13.1	12.7	13.1
Oil	47.9	47.4	45.7	42.2	42.3	46.6	44.2	43.6	42.6
- Non-energy oil excluded	- 17.6	55.1	110.7	100.9	70.7	74.3	64.0	18.0	3.0
Electricity	20.7	21.5	19.2	21.4	22.3	22.1	20.2	20.3	21.7
City gas	11.8	12.2	16.9	17.8	17.7	12.0	16.7	17.4	17.2
Heat	1.3	1.4	2.7	2.6	2.1	1.3	2.4	2.5	2.1
Others	3.3	3.4	3.0	3.1	3.1	3.5	3.4	3.4	3.3

Note: p means provisional, Non-energy oil value includes TFC of propane and butane for petrochemical feedstock.
Source: Korea Energy Economics Institute

Statistics on Energy Production Facilities

	2021	2022	2023			2024			
			M12	M1	M2	M12	M1	M2	
Total capacity (GW)	134.0 (3.7)	138.0 (3.0)	138.0 (3.0)	138.8 (7.8)	138.9 (7.6)	144.4 (7.8)	144.4 (7.8)	144.7 (8.8)	145.0 (8.6)
Nuclear	23.3 -	24.7 (6.0)							
Bituminous coal	36.9 (1.3)	37.3 (1.0)	37.3 (1.0)	37.2 (4.9)	37.2 (4.9)	38.2 (3.5)	38.2 (3.5)	38.2 (5.2)	38.2 (5.2)
Gas	41.2 (0.1)	41.2 -	41.2 -	41.2 (0.1)	41.2 (0.1)	43.2 (4.8)	43.2 (4.8)	43.2 (4.8)	43.4 (5.2)
Refinery capacity (mil BPSD)	3.2 -								

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

Source: Korea Electric Power Corporation, Korea National Oil Corporation

Statistics on Energy Consumption

	2021	2022	2023			2024			
			M12	M1	M2	M12	M1	M2	
The number of household demanding city gas (mil)	20.5 (2.0)	20.9 (1.7)	20.9 (1.7)	20.9 (1.6)	21.0 (1.9)	21.1 (1.3)	21.1 (1.3)	21.3 (1.9)	21.4 (1.8)
Registered cars (mil)	24.9 (2.2)	25.5 (2.4)	25.5 (2.4)	25.6 (2.3)	25.6 (2.3)	25.9 (1.7)	25.9 (1.7)	26.0 (1.7)	26.0 (1.7)
- gasoline	11.8 (3.1)	12.1 (2.6)	12.1 (2.6)	12.1 (2.6)	12.1 (2.7)	12.3 (2.0)	12.3 (2.0)	12.3 (1.9)	12.3 (1.7)
- diesel	9.9 (-1.2)	9.8 (-1.2)	9.8 (-1.2)	9.8 (-1.2)	9.7 (-1.4)	9.5 (-2.6)	9.5 (-2.6)	9.5 (-2.8)	9.5 (-2.9)
- LPG	1.9 (-1.7)	1.9 (-2.1)	1.9 (-2.1)	1.9 (-2.2)	1.9 (-2.4)	1.8 (-3.8)	1.8 (-3.8)	1.8 (-3.5)	1.8 (-3.0)
- hybrid	0.9 (34.0)	1.1 (28.5)	1.1 (28.5)	1.1 (28.6)	1.2 (28.6)	1.5 (32.1)	1.5 (32.1)	1.5 (33.4)	1.6 (33.6)

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

Source: Korea City Gas Association, Ministry of Land, Infrastructure and Transport