

KEEI

MONTHLY

KOREA ENERGY

TRENDS



COAL 1.2%

PETROLEUM 12.4%

LNG 5.5%

NUCLEAR -0.0%

NEW & RENEWABLE -4.1%

OCTOBER. 2021

**This publication is derived from Energy Demand & Supply
Statistics and Energy Price Statistics issued until October 2021**



Table of Contents

1.	The Economy and the Industry.....	5
2.	Energy Prices	6
3.	Energy Supply	9
4.	Energy Consumption	10
5.	Coal	12
6.	Petroleum	13
7.	Gas	14
8.	Electricity	15
9.	Nuclear	16
10.	Heat and Renewable energy	17
11.	Industry	18
12.	Transport	19
13.	Building.....	20
14.	Transformation	21
App.	Major Indicators & Statistics of Energy Supply and Demand	22



1. The Economy and the Industry

- **The mining & manufacturing index in October posted a year-on-year growth of 4.5% as overall production activities picked up despite of poor production in the automobile sector.**
 - As the demand for contactless activities continuously rose and the mobile semiconductor demand also jumped up, the semiconductor production index skyrocketed by 37.6% year-on-year.
 - The basic chemical material production index went up by 4.1% year-on-year as the production of synthetic fiber and synthetic resin increased with rising demand of winter clothes and heater/home appliances amidst early cold snaps.
 - The steel production index stepped up by 2.4% year-on-year with a business recovery in major steel-demand industries such as construction and shipbuilding.
 - Automotive production was sluggish as the mix-up between the supply and demand of semiconductors for vehicles continued. As a result, the automobile production index fell by 13.3% year-on-year.
- **The service production index stepped up by 5.1% year-on-year as production went up with Social Distancing regulation being eased.**
 - As Social Distancing phase got eased in preparation for Gradual Return to New Normal, the production index in the food & accommodation sector rose by 7.4% year-on-year.
 - With the production rising in the warehouse & logistic-related service industry and air / marine / inland transport industries, the overall transport sector witnessed a year-on-year increase of 10.5% in production index. Similarly, the index for the wholesale & retail sector climbed up by 3.8% year-on-year.

► Major economic and industrial indicators

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
GDP (trillion won)	1 836.9 (-0.9)	1 352.8 (-0.8)	- -	1 406.4 (4.0)	- -	477.6 (4.0)	- -
Total export (\$billion, customs clearance basis)	512.5 (-5.5)	415.4 (-8.2)	44.8 (-3.9)	523.4 (26.0)	53.2 (34.7)	55.9 (16.9)	55.7 (24.2)
Industrial production index (2015=100)	106.3 (-0.3)	104.6 (-0.7)	109.0 (-2.8)	112.0 (7.0)	109.5 (9.9)	110.0 (-1.9)	113.9 (4.5)
Semi-conductors	230.6 (22.6)	224.7 (25.2)	239.7 (12.3)	289.8 (29.0)	325.0 (36.8)	330.5 (30.6)	329.8 (37.6)
Basic chemical products	102.3 (-6.0)	103.4 (-4.9)	102.2 (-4.2)	109.5 (5.9)	117.8 (12.0)	112.6 (8.0)	106.4 (4.1)
Iron&Steel	92.1 (-6.3)	91.1 (-7.5)	94.9 (-3.5)	97.4 (6.9)	98.9 (14.7)	95.5 (2.7)	97.2 (2.4)
Cars	84.1 (-9.9)	82.4 (-11.4)	95.4 (-4.0)	86.7 (5.2)	73.1 (6.1)	73.7 (-24.2)	82.7 (-13.3)
Service production index (2015=100)	106.2 (-2.0)	104.9 (-2.1)	106.4 (-2.5)	109.2 (4.1)	108.5 (4.2)	110.5 (3.4)	111.8 (5.1)
Wholesale & Retail	101.9 (-2.6)	100.9 (-2.7)	104.0 (-1.7)	104.9 (4.0)	102.0 (5.4)	106.2 (0.3)	108.0 (3.8)
Restaurant & Accommodation	79.5 (-18.5)	80.7 (-16.2)	83.4 (-15.2)	78.3 (-3.0)	80.1 (-5.3)	80.5 (11.3)	89.6 (7.4)

Note: Figures are based on the real price of 2015, P means provisional, () is year-on-year growth rates (%)
Source: Korea International Trade Association, Korea Statistical Information Service

2. Energy Prices¹

Global Energy Prices

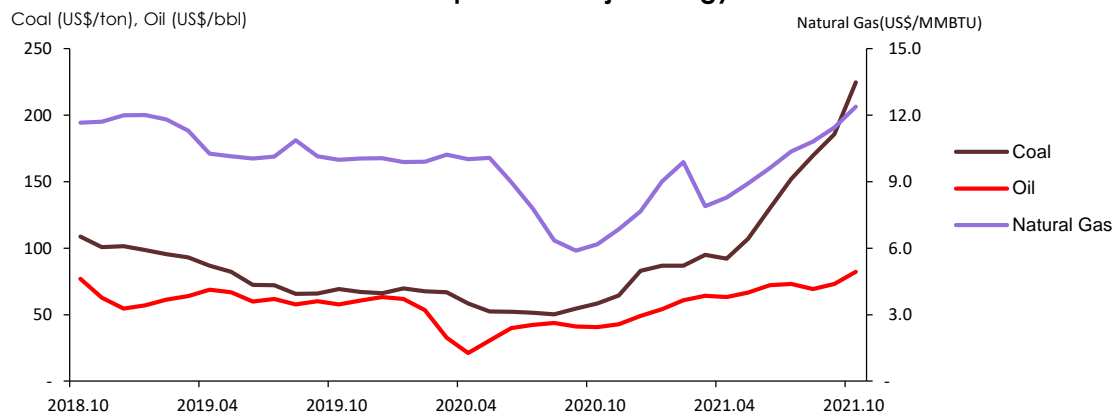
- In October, the average global oil price continued to grow rapidly, posting a 12.6% increase on the year-on-year basis. Similarly, LNG soared by 8.2% and coal rose by 27.6% year-on-year.
 - The global oil price for October soared by more than 10% as many factors such as OPEC+ decision to keep increased oil production at the previous level and the oil demand replacing natural gas contributed to the rise concurrently.
 - The demand for natural gas witnessed a surge in response to cold snaps in winter, and the efforts for achieving the goals to reduce carbon dioxide emissions in Europe also played a role in the rise. Consequently, the global natural gas price continued to grow.
 - On the demand side, the electricity demand in major countries kept increasing while on the supply side, the global coal supply declined in an effort to reduce GHG emissions and the coal production suffered a setback due to torrential rains in Shanxi, China. With this mix-up between the supply and demand of coal dragging, the Australian coal price skyrocketed by more than 20% month-on-month.

► Global energy prices

	2019	2020				2021			
			M8	M9	M10	M8	M9	M10	
Crude oil (US\$/bbl)	61.6	41.6	43.8	41.0	40.6	69.2	73.0	82.2	
	(-10.2)	(-32.4)	(-24.2)	(-31.8)	(-29.6)	(58.1)	(78.1)	(102.5)	
Natural gas (US\$/MMBTU)	10.6	8.3	6.3	5.9	6.2	10.8	11.4	12.4	
	(-1.1)	(-21.3)	(-41.6)	(-42.0)	(-38.1)	(70.3)	(94.4)	(100.3)	
Coal (US\$/ton)	77.8	60.8	50.1	54.6	58.4	169.6	185.7	224.5	
	(-27.3)	(-21.9)	(-23.5)	(-17.2)	(-15.6)	(238.2)	(240.1)	(284.4)	

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

► Global prices of major energy sources



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

Domestic energy prices

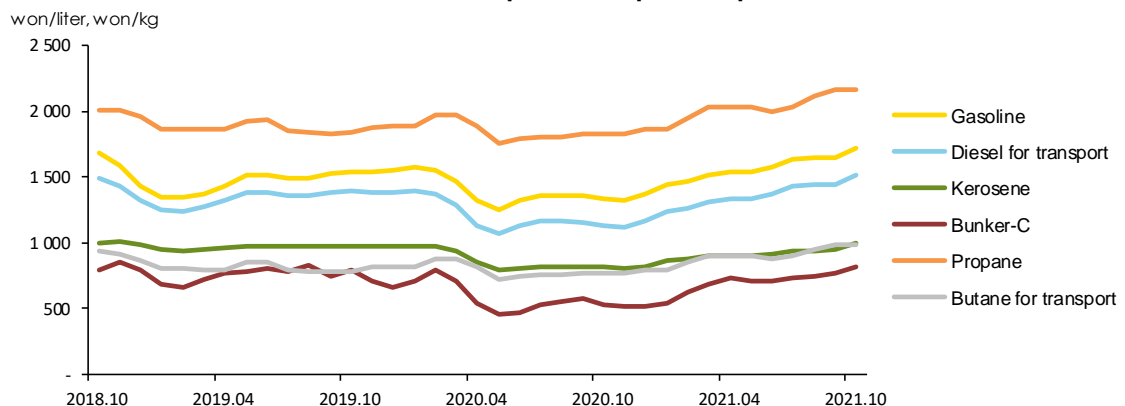
- **In October, the prices for gasoline and diesel grew by 4.2% and 5.0% respectively on the month-on-month basis due to increased global prices.**
 - The average prices of gasoline and diesel at gas stations jumped up by 4.2% and 5.0% month-on-month, driven by a rapid growth in global oil prices. In terms of the year-on-year basis, the prices soared by 28.4% and 33.1%, respectively, indicating that the growth in the gas station prices became larger.
 - The price of heavy oil (Bunker-C oil) grew by 5.9% month-on-month, increasing for four consecutive months to reach a price point higher than pre-COVID level. When it comes to the year-on-year basis, the Bunker-C oil price skyrocketed by 52.6%.
- **The prices for propane and butane in October stayed at the same as last month as the supply prices were frozen.**
 - Although Saudi Aramco slightly marked up the global prices of propane and butane in September and a recent rise in global prices could contributed to a possible increase in the domestic prices, LPG importers decided to freeze the supply prices.

► Domestic petroleum product prices

	2019	2020				2021		
			M8	M9	M10	M8	M9	M10
Gasoline (won/liter)	1 472.6 (-6.9)	1 381.2 (-6.2)	1 361.1 (-8.9)	1 352.5 (-11.6)	1 333.3 (-13.5)	1 645.8 (20.9)	1 642.7 (21.5)	1 712.3 (28.4)
Diesel for transport (won/liter)	1 340.6 (-3.7)	1 189.5 (-11.3)	1 163.6 (-13.9)	1 154.5 (-16.3)	1 134.0 (-18.3)	1 440.5 (23.8)	1 437.2 (24.5)	1 509.3 (33.1)
Bunker-C (won/liter)	744.5 (1.3)	572.9 (-23.0)	553.7 (-33.1)	575.2 (-23.0)	533.0 (-32.7)	750.1 (35.5)	768.2 (33.6)	813.4 (52.6)
Propane (won/kg)	1 869.6 (-2.6)	1 850.3 (-1.0)	1 806.0 (-1.9)	1 821.0 (-0.6)	1 822.1 (-0.6)	2 114.5 (17.1)	2 160.1 (18.6)	2 163.4 (18.7)
Butane for transport (won/liter)	806.3 (-7.8)	790.8 (-1.9)	760.4 (-3.2)	771.5 (-1.7)	771.4 (-1.6)	952.3 (25.2)	980.5 (27.1)	981.2 (27.2)

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

► Domestic petroleum product prices



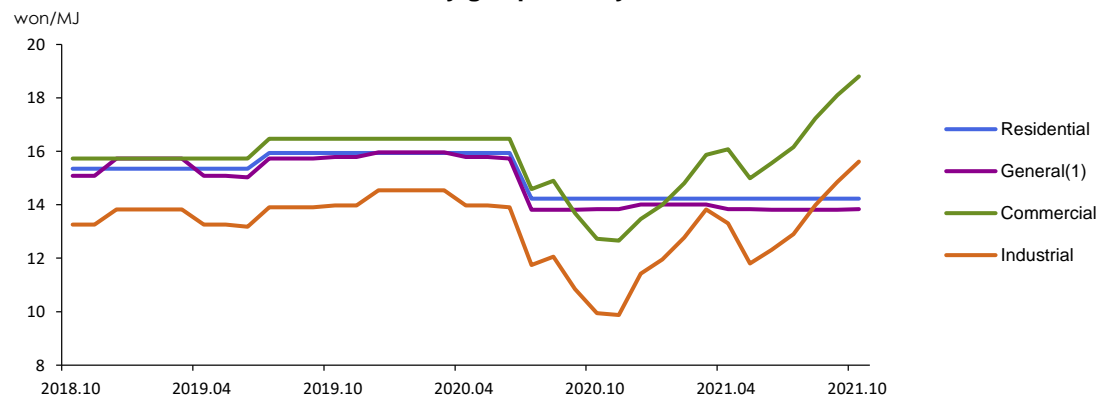
□ **As for city gas rates in October, the rates for commercial and industrial uses were raised up by 3.9% and 5.2%, respectively, on the month-on-month basis.**

- The rates for commercial and industrial city gas uses, adjusted every month under Fuel Adjustment Mechanism (FAM), showed a month-on-month rise due to an increase in global LNG price and a resulting mark-up of city gas wholesale price. In contrast, the rates for residential and general uses, which respond to civilian demands, were frozen for 16 months.

□ **In October, the electricity rate was raised for the first time in ten months after the FAM scheme took effect by 3KRW/kWh.**

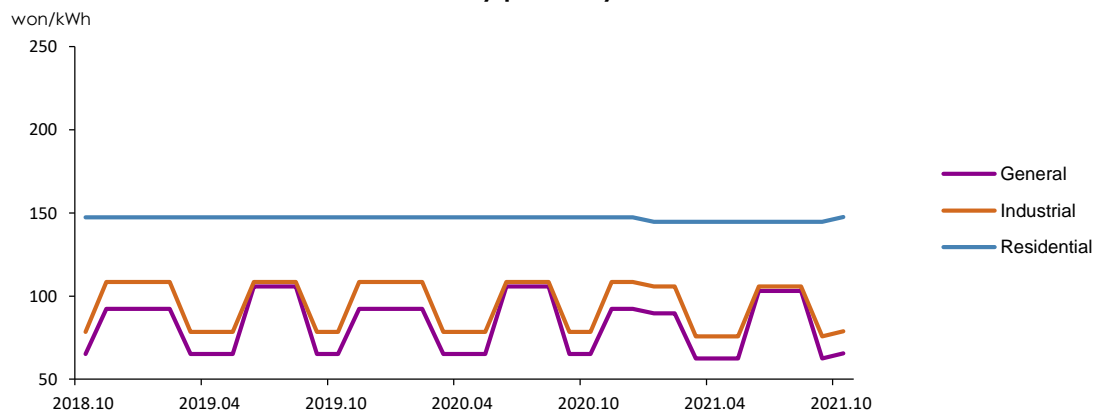
- As Fuel Expenses Adjustment Fee was marked up for the first time since the FAM began, the sub-rates for each use were also raised by 3KRW/kWh month-on-month.

► City gas prices by end-use sectors



Source: Seoulgas

► Electricity prices by end-use sectors



Note: The electricity prices 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 in October rose by 7.7% year-on-year with a growth in crude oil, petroleum product and LNG imports, although bituminous coal imports dropped.**
- As the amount of crude oil feedstock for refineries jumped up by 6.8% thanks to a growth in refining margin of petroleum products and a demand recovery in the domestic petroleum product market, the import volume of crude oil posted a year-on-year increase of 3.6%. The end-of-month stock of crude oil went down by 18.5% year-on-year.
 - The import volume of petroleum products skyrocketed by 67.2% year-on-year driven by a surge in Bunker-C oil and naphtha imports, although LPG imports showed a decline of 6.2%.
 - With both coking coal and steam coal import decreasing, the import volume of bituminous coal plunged by 17.7% year-on-year. Meanwhile, LNG imports inched up by a mere 1.3% due to a base effect from a surge (20.5%) a year earlier, although LNG consumption continued to rise.

► Import and domestic production of energy

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Import volume							
Crude oil (Mbbbl)	980.3	826.3	82.1	792.9	82.8	78.6	85.1
	(-8.6)	(-7.1)	(-0.2)	(-4.0)	(4.9)	(-1.5)	(3.6)
Petroleum product (Mbbbl)	347.4	295.3	20.3	323.0	34.7	34.9	34.0
	(-1.4)	(2.7)	(-27.6)	(9.4)	(34.9)	(17.6)	(67.2)
Bituminous coal (Mton)	115.5	95.9	9.5	90.1	10.4	10.2	7.8
	(-13.0)	(-12.8)	(-23.7)	(-6.1)	(12.4)	(-7.1)	(-17.7)
Anthracite (Mton)	6.3	5.1	0.4	5.3	0.7	0.5	0.5
	(-8.3)	(-12.9)	(-28.8)	(4.0)	(18.5)	(-15.4)	(22.0)
LNG (Mton)	40.0	32.1	3.8	38.2	3.5	3.7	3.9
	(-1.9)	(-0.1)	(20.5)	(18.9)	(77.8)	(26.2)	(1.3)
Import volume (Mtoe)							
	325.4	270.3	26.0	277.9	29.5	28.7	28.0
	(-6.8)	(-6.0)	(-8.5)	(2.8)	(18.3)	(7.9)	(7.7)
Import value (billion US\$, CIF)							
	86.6	73.0	6.3	106.6	12.0	12.3	13.3
	(-31.7)	(-30.4)	(-35.7)	(46.0)	(100.6)	(88.7)	(111.7)
Energy share of total import value (%)							
	18.4	18.9	16.1	21.4	23.3	23.8	24.8
Foreign energy dependence (%)*							
	92.7	92.7	92.3	92.6	92.5	92.6	93.0
Domestic production							
Hydropower (TWh)	7.1	6.2	0.5	5.8	0.6	0.6	0.5
	(14.4)	(17.6)	(-13.2)	(-7.1)	(-43.6)	(-34.7)	(6.9)
Anthracite (Mton)	1.0	0.9	0.1	0.7	0.1	0.1	0.1
	(-6.0)	(-5.2)	(-10.3)	(-13.0)	(-10.3)	(-26.7)	(-3.8)
Natural gas (Mton)	0.1	0.1	-	0.0	0.0	0.0	0.0
	(-28.6)	(-28.5)	(-100.0)	(-68.8)	(-88.2)	(241.7)	-
Renewable energy (Mtoe)	19.0	15.8	1.6	16.9	1.8	1.6	1.6
	(7.3)	(6.2)	(12.6)	(7.1)	(6.1)	(-1.6)	(-4.1)

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

4. Energy Consumption

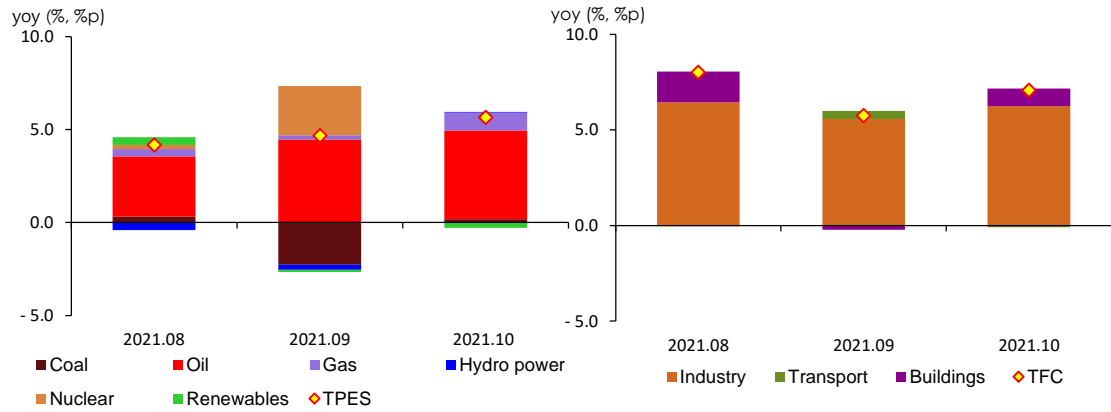
- **In October, Total Primary Energy Supply (“TPES”) posted a year-on-year growth of 5.6%, driven by petroleum and gas.**
 - Coal use in the power generation sector stepped up by 3.1% as a base effect from a plunge (-31.9%) a year earlier played a part and Goseong Unit 2 recently came online. However, the total coal consumption inched down by 1.2% year-on-year as industrial coal use showed a fall due to decreased production of electrosteel.
 - In the petrochemical sector, the export volume increased with global economic recovery and production from front demand industries expanded. Also, new petrochemical facilities were introduced while existing ones getting additions. These favorable factors contributed to a rapid increase in petroleum consumption, posting a year-on-year growth of 12.2%, mainly driven by naphtha.
 - In the building sector, gas consumption declined due to a temperature effect. On the other side, the power generation sector witnessed an increase of more than 10% in its gas use driven by increased electricity consumption (7.1%), and industrial gas use also showed a growth thanks to strong production in the sector. Against this backdrop, the total gas consumption posted a year-on-year increase of 5.5%.
- **On the back of increased energy consumption in the industrial and building sectors, Total Final Consumption (“TFC”) rose by 7.1% year-on-year, although the transport sector experienced a slight decrease.**
 - Industrial energy use rose by 9.6% year-on-year as production and exports in major industries were picking up except for automobile makers, hit by a downturn due to a supply disruption of semiconductor for vehicles.
 - Energy use in the transport sector inched down by 0.5% as the demand for storage decline on the news that the government decided to lower fuel taxes in November.
 - Energy used by the commercial buildings grew rapidly by more than 11% with the service production index rising, while the residential building sector also posted a small increase in energy use as power consumption went up, dwarfing the effect of a decline in city gas use. Consequently, the total energy used in the building sector jumped up by 5.4% year-on-year.

► Energy consumption

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
TPES (Mtoe)	292.1	239.9	23.1	250.1	25.5	24.2	24.4
	(-3.6)	(-4.0)	(-4.2)	(4.3)	(4.2)	(4.7)	(5.7)
- Non-energy oil&coal excluded	212.5	173.2	16.6	177.8	17.9	16.6	17.0
	(-3.2)	(-4.1)	(-4.5)	(2.6)	(1.0)	(0.5)	(2.1)
TFC (Mtoe)	222.6	183.1	17.4	192.6	19.2	18.8	18.6
	(-3.8)	(-3.8)	(-4.5)	(5.2)	(8.0)	(5.8)	(7.1)

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

□ The total coal use in October increased by 1.2% year-on-year driven by the power generation sector, although the industrial sector witnessed a slight decline.

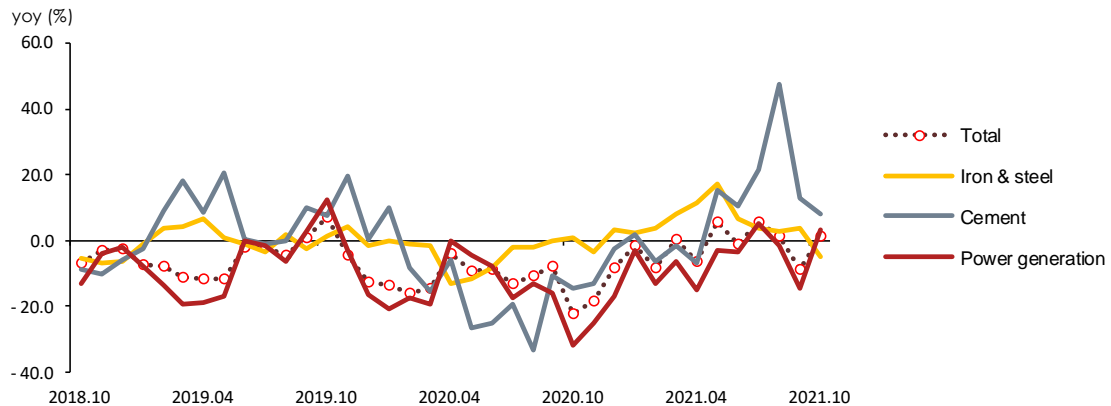
- Despite of a growth in coal used in cement-making and other industries, industrial coal use went down a bit due to a decline in the steel industry.
- Even with the voluntary coal-fired generation cap scheme in place, coal consumption in the power generation sector stepped up by 3.1% year-on-year as the generation facility factor went up due to a base effect and a new bituminous coal-fired power plant came online.

► Coal consumption

	2020	2021p					
		M1~10	M10	M1~10	M8	M9	M10
Coal (Mton)	116.6	97.6	9.0	96.5	11.5	9.7	9.1
	(-12.4)	(-12.2)	(-22.3)	(-1.2)	(1.2)	(-8.6)	(1.2)
Industry	45.3	37.3	3.9	39.3	4.2	4.0	3.8
	(-4.7)	(-5.8)	(-5.1)	(5.1)	(6.4)	(1.1)	(-0.8)
-Coking-coal	33.8	27.9	3.0	29.4	3.0	3.0	2.8
	(-3.3)	(-4.0)	(0.6)	(5.2)	(2.6)	(3.7)	(-4.9)
Buildings	0.5	0.3	0.1	0.3	0.0	0.0	0.1
	(-20.8)	(-20.8)	(-11.2)	(-16.1)	(50.0)	(-11.1)	(-18.9)
Power generation	70.7	59.9	5.0	57.0	7.3	5.7	5.2
	(-16.6)	(-15.7)	(-31.9)	(-5.0)	(-1.7)	(-14.3)	(3.1)

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 in October soared by 12.4% year-on-year driven by the industrial sector, which showed a massive increase in naphtha consumption.**

- Petroleum use in the industrial sector experienced a surge of 18.3% year-on-year as the rising trend in naphtha consumption continued with new facilities and existing ones getting expanded.
- In the transport sector, the demand for storage declined even in the face of a rise in the travel demand, putting a limit on the growth in petroleum consumption. As a result, the amount of petroleum used in the transport sector inched up by 0.1% year-on-year.
- In 2021, cold snaps arrived earlier than usual with a nationwide cold wave alert being issued except some areas in mid-October. This gave a boost to diesel consumption for heating devices, and the diesel use in the commercial and residential sectors skyrocketed by 38.6% and 34.0%, respectively. As a result, the petroleum use in the building sector soared by 13.9% on the year-on-year basis.

► Petroleum product consumption by end-use sectors

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Petroleum (Mbbl)	872.4	726.0	69.6	766.8	77.9	79.3	78.2
	(-5.9)	(-4.8)	(-8.1)	(5.6)	(8.8)	(11.2)	(12.4)
Industry	543.9	458.6	43.4	493.6	51.8	52.1	51.3
	(-4.0)	(-1.5)	(-5.2)	(7.6)	(13.6)	(16.0)	(18.3)
-Naphtha	405.3	344.3	31.0	372.2	39.8	39.6	38.7
	(-7.6)	(-5.4)	(-9.6)	(8.1)	(16.9)	(18.5)	(25.0)
Transport	277.2	228.2	22.5	230.3	23.2	23.5	22.5
	(-8.6)	(-9.1)	(-12.8)	(0.9)	(-0.5)	(2.7)	(0.1)
Buildings	44.7	34.5	3.3	36.4	2.5	3.1	3.8
	(-8.9)	(-11.3)	(-12.6)	(5.6)	(13.4)	(8.6)	(13.9)
Power generation	6.6	4.7	0.4	6.6	0.4	0.6	0.7
	(-23.2)	(-32.5)	(10.0)	(38.8)	(-21.2)	(-12.4)	(47.1)

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

□ **Despite of a decrease in the building sector, the total gas use in October climbed up by 5.5% year-on-year driven by gas consumed for power generation and industrial uses.**

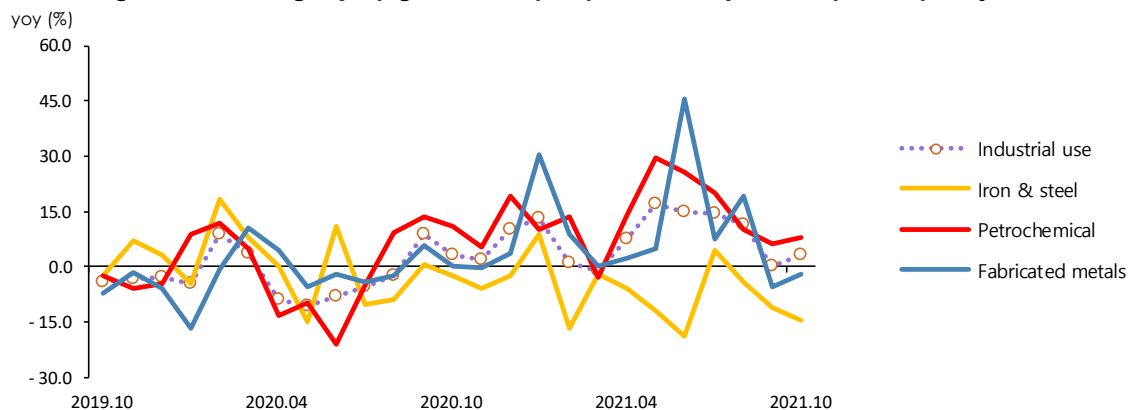
- The base load (nuclear + coal) generation grew up as coal-fired generation increased. However, gas consumption for power generation rose by nearly 10% with a rise in electricity consumption (7.1%).
- The gas use in the iron & steel sector declined due to a poor production of automobile industry, while the petrochemical sector witnessed a rise in its gas consumption thanks to an upturn in front industries and facility expansion. Consequently, the total gas use in the industrial sector grew up by more than 3%.
- Although the gas consumption in the commercial building sector grew rapidly, the total gas use in the building sector decreased by nearly 3% as gas used in the residential building sector declined.

► Natural gas and city gas consumption

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
LNG (Mton)	42.1	32.8	3.1	36.7	3.1	2.9	3.3
	(2.7)	(1.7)	(12.9)	(12.0)	(2.5)	(1.4)	(5.5)
Power generation	18.6	14.9	1.5	18.1	1.8	1.6	1.6
	(3.7)	(3.9)	(16.7)	(21.1)	(4.0)	(1.8)	(9.8)
City gas production	18.2	13.8	1.2	14.8	0.9	0.9	1.3
	(-3.1)	(-5.6)	(6.0)	(7.3)	(4.9)	(2.4)	(4.2)
Industry(Direct private importer)	2.8	2.3	0.2	2.2	0.2	0.2	0.2
	(23.8)	(25.3)	(26.3)	(-3.0)	(-1.4)	(-8.5)	(-16.1)
City gas (Bm³)	25.9	20.3	1.7	21.3	1.4	1.4	1.7
	(-0.6)	(-2.2)	(6.7)	(5.1)	(2.9)	(-1.3)	(0.5)
Industry(including directly imported)	11.1	8.9	0.9	9.6	0.9	0.9	0.9
	(-0.3)	(-1.7)	(3.4)	(7.8)	(11.5)	(0.2)	(3.1)
Buildings	13.8	10.4	0.7	10.8	0.4	0.4	0.7
	(0.0)	(-2.0)	(14.6)	(3.6)	(-9.6)	(-3.8)	(-2.7)
Transport.	1.1	0.9	0.1	0.9	0.1	0.1	0.1
	(-9.6)	(-9.3)	(-12.7)	(-4.1)	(-5.8)	(-4.2)	(-1.6)

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

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



8. Electricity

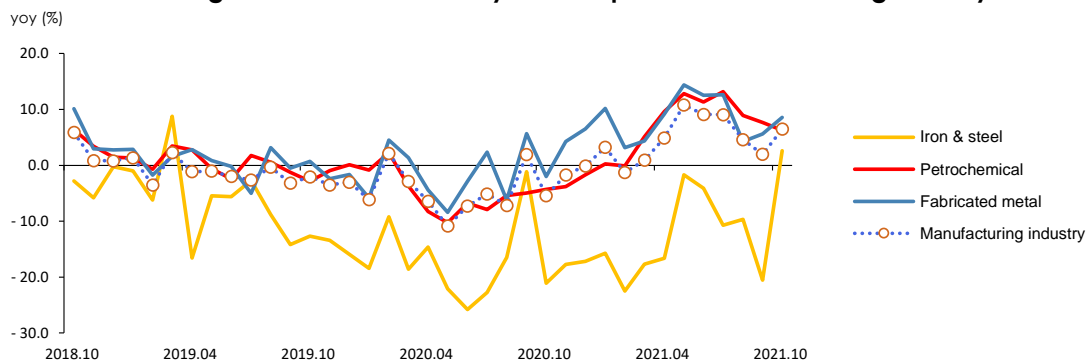
- In October, electricity use rose by 7.1% year-on-year as all sectors experienced a growth thanks to increased production activities in the industrial and service sectors.
 - Industrial power use soared by 6.9% year-on-year as three major energy-intensive industries consumed more electricity driven by increased production activities.
 - Electricity use in the building sector stepped up by 7.4% year-on-year as all sector witnessed a growth in power consumption due to increased production activities, early cold snaps and other contributing factors.

► Electricity consumption by end-use sectors

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Electricity (TWh)	509.3	423.1	39.1	443.4	48.9	44.8	41.8
	(-2.2)	(-2.7)	(-3.8)	(4.8)	(9.7)	(-0.6)	(7.1)
Industry	268.7	222.6	21.5	234.2	23.9	23.7	23.0
	(-4.0)	(-4.6)	(-5.1)	(5.2)	(6.0)	(2.3)	(6.9)
Transport	3.2	2.6	0.2	2.6	0.3	0.3	0.2
	(8.4)	(5.4)	(11.9)	(0.3)	(4.9)	(-2.7)	(0.3)
Buildings	237.4	197.9	17.3	206.6	24.7	20.8	18.6
	(-0.2)	(-0.4)	(-2.4)	(4.4)	(13.7)	(-3.8)	(7.4)
Residential	74.1	62.1	5.6	65.4	9.0	6.9	5.9
	(5.1)	(5.0)	(3.4)	(5.3)	(25.8)	(-9.3)	(5.5)
Commercial	132.1	110.1	9.4	114.0	12.9	11.2	10.2
	(-2.3)	(-2.6)	(-5.4)	(3.5)	(9.1)	(-0.4)	(9.1)

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

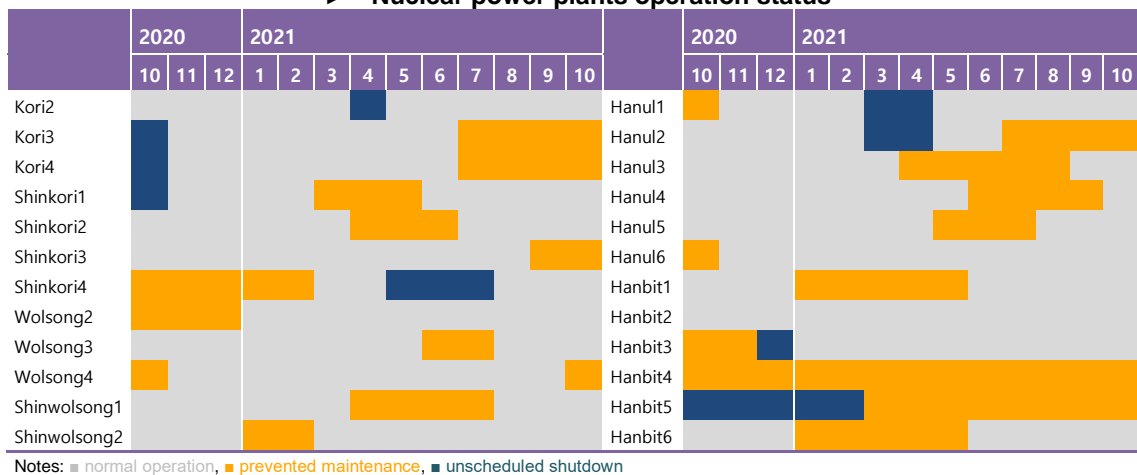
► The growth rate of electricity consumption in manufacturing industry



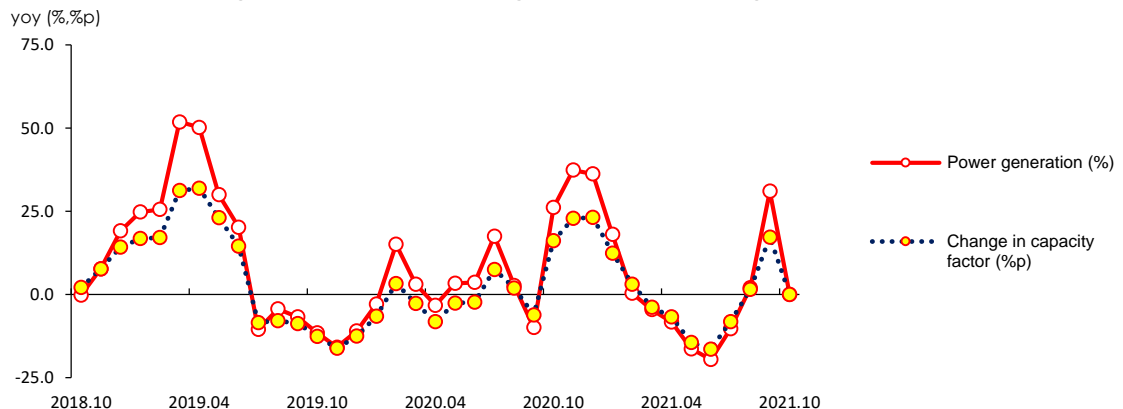
9. Nuclear

- In October, the amount of nuclear power generation remained the same as in October of last year because the number of units in planned preventive maintenance project remained the same as well.
 - In October, seven units were under planned preventive maintenance, the same as it was a year earlier. After months of being force-stopped due to last year's typhoons, several units quickly resumed operation. As a result, the operation rate of nuclear generation was maintained at the same level as a year ago.
 - The share of nuclear in the total generation mix went down to early 20% in July 2021, however, it since recovered fast to reach 30% in October.

► Nuclear power plants operation status



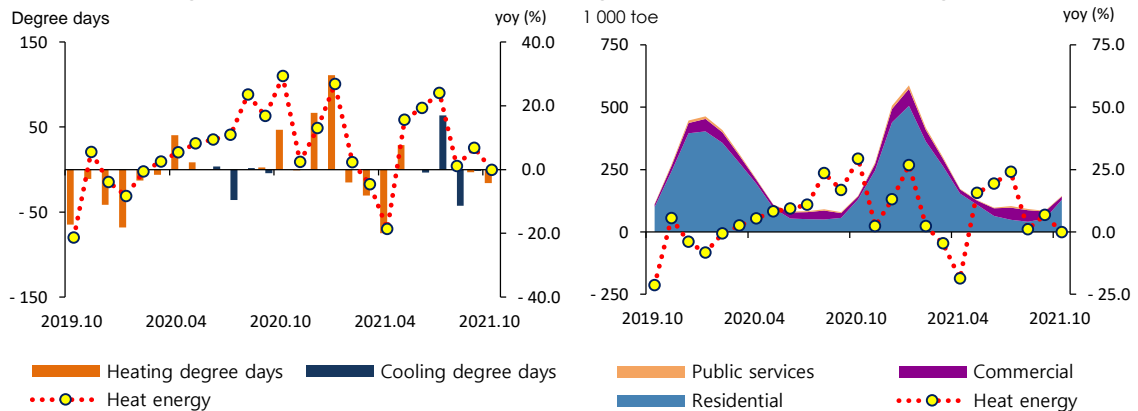
► The growth rate of nuclear generation & average capacity factor



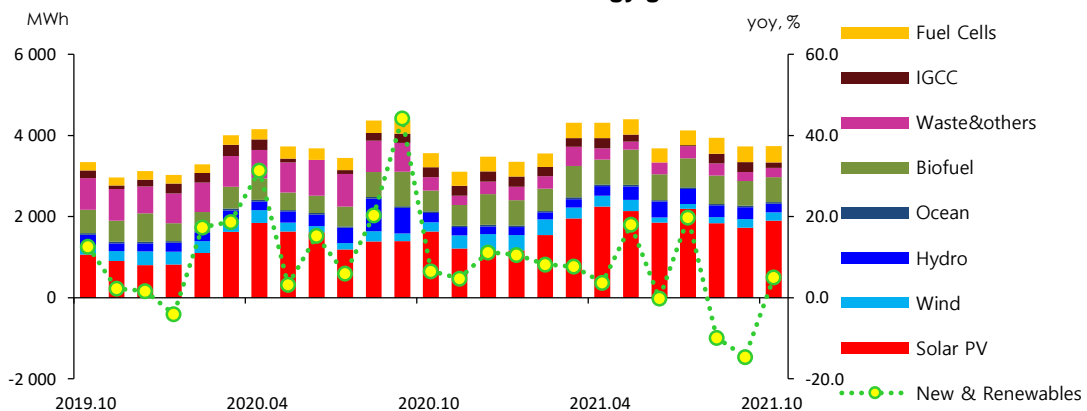
10. Heat and Renewable energy

- **The total heat energy use in October inched down by 0.1% year-on-year driven by a slight decrease in the residential sector, which has the largest share in the heat energy consumption mix.**
 - The commercial sector showed a year-on-year rise of 7.3% based on increased production in the service sector. On the other side, heat energy used in the residential sector inched down by 0.8% due to a decline in heating degree days and a base effect from a surge (31.5%) a year earlier.
- **Renewable & other energy power generation² posted a year-on-year increase of 5.1% driven by solar PV, fuel cell and bio energy.**
 - Although IGCC, wind, waste & others showed a decline in their power generation, the total electricity generated from renewable & others jumped up by 5.1% year-on-year driven by increased generation from solar PV, fuel cell and bio energy.

► 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



² Installed capacity and power generation data for renewable energy sources is from Renewable & Other energy section of KEPCO's Monthly Electricity Statistics. As of March 2021, Waste Energy was integrated into Other Energy section; renaming the section to Waste & Other Energy. In Energy Balance, hydropower was excluded from renewable and other energy generation data

11. Industry

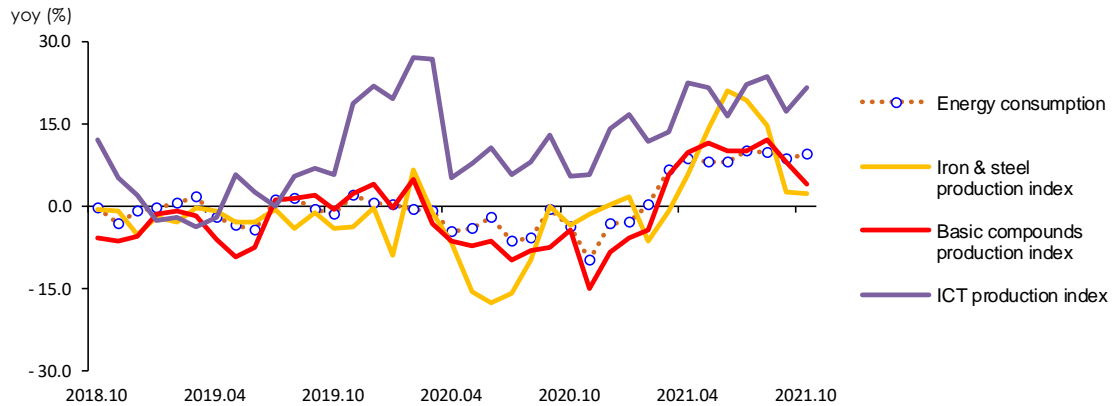
- The energy use in the industrial sector in October rose by 9.6% year-on-year as all major industries except automobile posted an increase in production.
 - Although the steel industry showed a decline in its energy use, the industrial energy consumption grew fast with energy use in the petrochemical and fabricated metal industries rising.

► Industrial energy consumption

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Industry (Mtoe)	138.0	114.8	11.2	122.3	12.6	12.5	12.3
	(-3.5)	(-2.9)	(-3.6)	(6.6)	(9.9)	(8.6)	(9.6)
Petrochemical	69.2	58.3	5.5	63.2	6.7	6.6	6.5
	(-4.0)	(-2.0)	(-4.5)	(8.4)	(13.7)	(15.5)	(17.6)
- Naphtha	49.7	42.2	3.8	45.6	4.9	4.9	4.7
	(-7.6)	(-5.4)	(-9.6)	(8.1)	(16.9)	(18.5)	(25.0)
Iron & Steel	28.2	23.4	2.4	24.0	2.5	2.4	2.3
	(-4.5)	(-5.0)	(-1.5)	(2.6)	(1.0)	(0.3)	(-5.2)
-Coking coal	23.6	19.5	2.1	20.5	2.1	2.1	2.0
	(-3.3)	(-4.0)	(0.6)	(5.2)	(2.6)	(3.7)	(-4.9)
Fabricated metal	11.4	9.3	0.9	10.1	1.0	1.0	1.0
	(-0.5)	(-1.6)	(-1.9)	(9.1)	(5.7)	(3.8)	(7.0)
Share of feedstock (%)	57.5	58.0	57.3	59.0	59.8	60.3	60.0

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

► Industrial energy consumption & production index



12. Transport

□ **Despite of an increase in air and marine transport sectors, the energy use in the transport sector in October inched down by 0.5% year-on-year due to a fall in the road transport sector.**

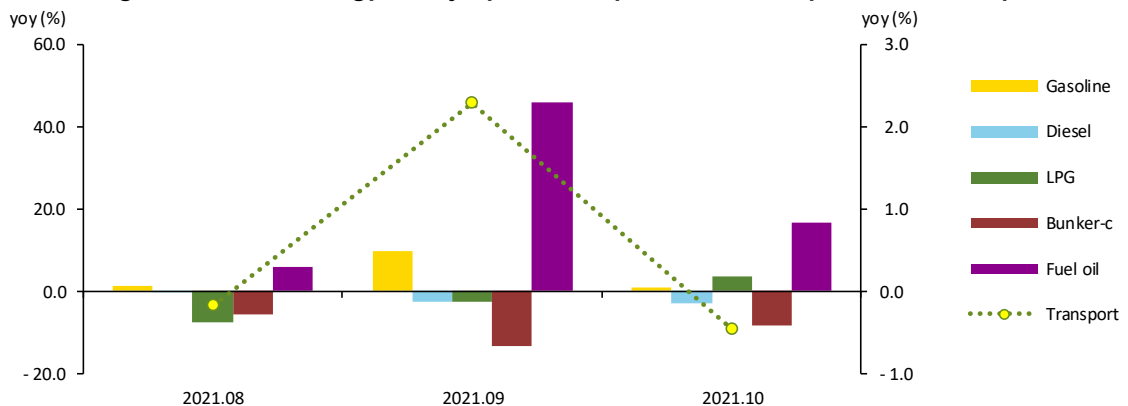
- Energy use in the road transport sector dropped by 2.8% year-on-year as the storage demand declined on the news that the government was considering a temporary reduction of fuel tax in response to a possible inflation resulting from the increase in global oil prices.
- Energy use in the air transport sector soared by 16.8% year-on-year as the demand for domestic and overseas travel grew up with pandemic control measures getting eased.
- Energy use in the marine transport sector rose by 10.9% year-on-year with diesel consumption increasing by more than 65%.

► The growth rate of petroleum consumption in the transport sector

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Transport (Mtoe)	39.44 (-8.2)	32.51 (-8.7)	3.19 (-11.9)	32.73 (0.7)	3.31 (-0.2)	3.34 (2.3)	3.18 (-0.5)
Road	33.45 (-4.6)	27.51 (-5.4)	2.72 (-9.7)	27.91 (1.5)	2.87 (-0.2)	2.86 (1.7)	2.65 (-2.8)
Navigation	3.11 (17.5)	2.60 (18.1)	0.24 (43.1)	2.53 (-2.9)	0.24 (-4.6)	0.24 (-14.0)	0.26 (10.9)
Aviation	2.56 (-48.1)	2.13 (-47.4)	0.21 (-50.2)	2.03 (-4.5)	0.18 (6.0)	0.21 (45.9)	0.24 (16.8)
Rail	0.32 (-7.5)	0.26 (-9.3)	0.02 (-8.4)	0.25 (-3.5)	0.03 (5.2)	0.03 (-7.1)	0.02 (3.1)

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 the building sector in October went up by 5.4% year-on-year as the commercial & public sector witnessed a massive increase in its energy consumption.**

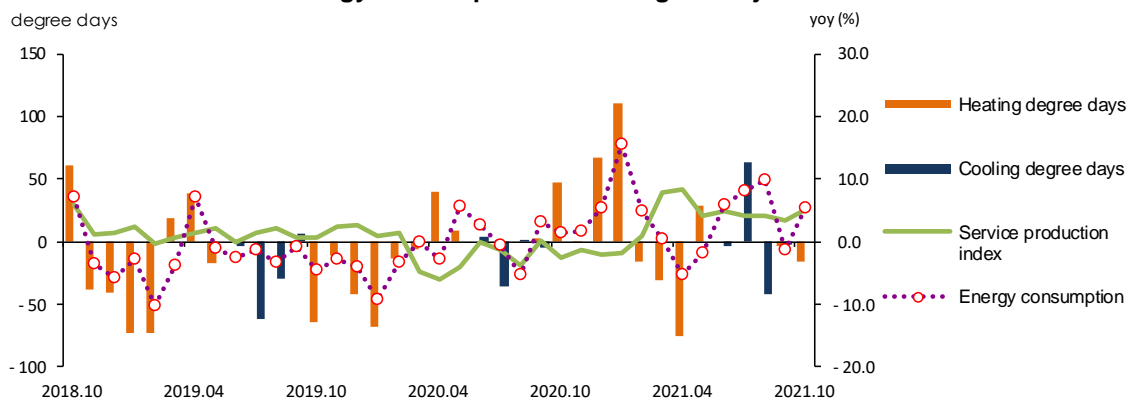
- Despite of a decrease in heating degree days (-11.6%), the energy use in the building sector stepped up by 5.4% year-on-year mainly driven by the commercial & public sector with production activities increasing in the service industry.
- Even with a decline in heating degree days, the energy use in the residential sector stayed the same as a year earlier due to early cold snaps in mid-October.
- The food & accommodation / wholesale & retail sectors enjoyed a business recovery (showing 7.4% and 3.8% production index increases, respectively) as National Relief Funds were distributed by the government and some Social Distancing regulations got relaxed compared to previous months. Against this backdrop, the energy use in the commercial & public sector increased by 10.2% year-on-year.

► Energy consumption in buildings

	2020	2021p					
		M1~10	M10	M1~10	M8	M9	M10
Buildings (Mtoe)	45.2	35.8	3.0	37.5	3.2	2.9	3.1
	(-0.7)	(-1.8)	(1.4)	(4.7)	(9.8)	(-1.4)	(5.4)
Residential	23.2	17.8	1.4	18.4	1.2	1.1	1.4
	(2.6)	(1.1)	(10.7)	(3.5)	(13.1)	(-5.6)	(0.4)
Commercial	16.7	13.7	1.1	14.5	1.5	1.3	1.3
	(-4.3)	(-4.9)	(-6.9)	(6.3)	(8.3)	(3.3)	(11.7)
Public-others	5.3	4.3	0.4	4.5	0.5	0.4	0.4
	(-2.6)	(-3.1)	(-2.7)	(4.6)	(6.1)	(-3.5)	(5.8)
Heating degree days	2 448.0	1 614.1	137.4	1 613.7	-	-	121.4
	(3.3)	(0.7)	(51.7)	(-0.0)	-	(-100.0)	(-11.6)
Cooling degree days	85.2	85.2	-	101.3	34.0	-	-
	(- 29.2)	(- 29.2)	-	(18.9)	(- 55.6)	(-100.0)	-

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 in October rose by 6.1% year-on-year with electricity consumption increasing. On the same note, energy input for power generation climbed up by 3.4%.
 - Although the total power generation showed an increase of more than 6%, the energy input for generation ended up in jumping by 3.4% as the overall generation efficiency improved with changes in the generation mix.

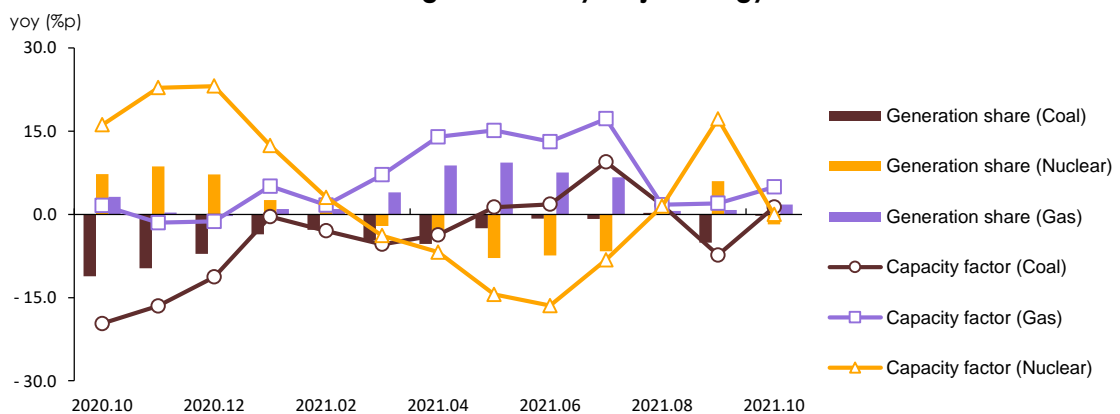
► Electricity Generation in the power generation sector

	2020			2021p			
		M1~10	M10	M1~10	M8	M9	M10
Electricity Generation (TWh)	552.2	455.6	43.2	475.9	51.8	45.4	45.8
	(-1.9)	(-2.6)	(-3.3)	(4.4)	(1.5)	(1.8)	(6.1)
Coal	196.3	166.1	14.3	161.8	20.9	16.4	15.0
	(-13.7)	(-12.4)	(-27.7)	(-2.6)	(2.1)	(-10.7)	(5.2)
Oil	2.3	1.6	0.1	3.1	0.1	0.3	0.2
	(-31.5)	(-41.8)	(-34.2)	(98.6)	(-42.5)	(-22.2)	(117.8)
Gas	145.9	116.5	11.5	140.8	13.8	12.6	13.0
	(1.1)	(1.0)	(9.9)	(20.8)	(4.0)	(4.9)	(13.1)
Nuclear	160.2	131.1	13.5	127.9	12.8	12.2	13.5
	(9.8)	(5.2)	(27.1)	(-2.4)	(2.0)	(31.0)	(-0.0)
Hydro/other renewables	40.4	34.0	3.5	39.1	3.9	3.8	3.7
	(3.1)	(0.1)	(17.8)	(15.2)	(-10.9)	(-11.4)	(7.5)
Baseload	356.5	297.2	27.8	289.7	33.6	28.5	28.5
	(-4.5)	(-5.4)	(-8.6)	(-2.5)	(2.1)	(3.3)	(2.7)

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

	2019	2020					2021			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
GDP (trillion won)	1 852.7 (2.2)	1 836.9 (-0.9)	1 352.8 (-0.8)	- -	459.3 (-1.0)	- -	1 406.4 (4.0)	- -	477.6 (4.0)	- -
Private consumption	894.1 (2.1)	849.1 (-5.0)	634.7 (-4.5)	- -	213.6 (-4.5)	- -	651.9 (2.7)	- -	220.5 (3.3)	- -
Facilities investment	155.3 (-6.6)	166.3 (7.1)	122.5 (7.4)	- -	40.7 (10.7)	- -	134.5 (9.8)	- -	42.4 (4.2)	- -
Construction investment	265.2 (-1.7)	264.1 (-0.4)	192.7 (0.5)	- -	65.4 (-1.5)	- -	190.0 (-1.4)	- -	64.6 (-1.2)	- -
Consumer price index (2015=100)	104.9	105.4	105.4	105.5	106.2	105.6	107.7	108.3	108.8	109.0
USD to KRW exchange rate (won)	1 165.4	1 180.3	1 195.1	1 186.9	1 178.8	1 144.7	1 136.1	1 160.3	1 169.5	1 182.8
Benchmark rate (%)	1.6	0.7	0.7	0.5	0.5	0.5	0.6	0.8	0.8	0.8
Coincident composite index (2015=100)	112.0	112.3	111.9	111.8	112.3	113.0	116.1	117.1	117.2	117.1
Mining & manufacturing production index (2015=100)	106.7	106.3	104.6	99.6	112.1	109.0	112.0	109.5	110.0	113.9
Manufacturing operation ratio index (2015=100)	98.4	95.6	94.4	89.1	101.2	98.8	98.7	96.2	96.8	100.2
Average temperature	13.4	13.0	14.7	26.4	20.1	13.7	15.0	24.8	21.3	15.1
- year-on-year difference	0.4	-0.4	-0.3	0.3	-1.6	-1.9	0.3	-1.7	1.2	1.5
Heating degree days	2 370.9 (-8.7)	2 448.0 (3.3)	1 614.1 (0.7)	- -	3.3 (266.7)	137.4 (51.7)	1 613.7 (-0.0)	- -	- (-100.0)	121.4 (-11.6)
Cooling degree days	120.4 (-42.4)	85.2 (-29.2)	85.2 (-29.2)	76.5 (2.3)	1.7 (-72.1)	- -	101.3 (18.9)	34.0 (-55.6)	- (-100.0)	- -
Energy intensity	0.16 (-3.6)	0.16 (-2.9)	0.16 (-3.3)	- -	0.16 (-3.4)	- -	0.16 (0.2)	- -	0.16 (2.0)	- -
Per capita consumption										
oil (bbl)	17.9 (-0.7)	16.8 (-6.0)	14.0 (-4.9)	1.4 (-12.1)	1.4 (-1.5)	1.3 (-8.2)	14.8 (5.5)	1.5 (8.7)	1.5 (11.1)	1.5 (12.3)
Electricity (MWh)	10.1 (-1.3)	9.8 (-2.3)	8.2 (-2.8)	0.9 (-6.4)	0.9 (3.2)	0.8 (-4.0)	8.6 (4.7)	0.9 (9.6)	0.9 (-0.7)	0.8 (7.0)
City gas (1 000 m ³)	0.5 (-4.3)	0.4 (-3.7)	0.3 (-5.7)	0.0 (-4.0)	0.0 (-0.9)	0.0 (3.0)	0.4 (6.4)	0.0 (4.1)	0.0 (0.5)	0.0 (4.1)
Total energy (toe)	5.9 (-1.6)	5.6 (-3.8)	4.6 (-4.1)	0.5 (-6.4)	0.4 (-0.0)	0.4 (-4.4)	4.8 (4.2)	0.5 (4.1)	0.5 (4.6)	0.5 (5.6)

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)

2015=100

	2019	2020					2021			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Industrial production index										
All industry	108.6 (1.0)	107.3 (-1.2)	105.6 (-1.3)	102.3 (-3.9)	109.5 (3.0)	107.0 (-3.1)	110.5 (4.6)	108.3 (5.9)	111.0 (1.4)	112.1 (4.8)
Mining & manufacturing	106.7 (0.3)	106.3 (-0.3)	104.6 (-0.7)	99.6 (-3.7)	112.1 (7.3)	109.0 (-2.8)	112.0 (7.0)	109.5 (9.9)	110.0 (-1.9)	113.9 (4.5)
Semiconductor	188.0 (11.7)	230.6 (22.6)	224.7 (25.2)	237.6 (20.4)	253.1 (24.6)	239.7 (12.3)	289.8 (29.0)	325.0 (36.8)	330.5 (30.6)	329.8 (37.6)
Iron & steel	98.3 (-2.2)	92.1 (-6.3)	91.1 (-7.5)	86.2 (-9.9)	93.0 (-0.1)	94.9 (-3.5)	97.4 (6.9)	98.9 (14.7)	95.5 (2.7)	97.2 (2.4)
Cement	94.3 (-5.7)	86.6 (-8.2)	84.7 (-9.1)	72.6 (-20.9)	89.1 (14.8)	94.5 (-6.3)	89.4 (5.5)	83.6 (15.2)	82.5 (-7.4)	95.5 (1.1)
Basic compound	108.9 (-1.4)	102.3 (-6.0)	103.4 (-4.9)	105.2 (-8.1)	104.3 (-7.6)	102.2 (-4.2)	109.5 (5.9)	117.8 (12.0)	112.6 (8.0)	106.4 (4.1)
Transport equipment	93.4 (-0.6)	84.1 (-9.9)	82.4 (-11.4)	68.9 (-10.6)	97.2 (16.7)	95.4 (-4.0)	86.7 (5.2)	73.1 (6.1)	73.7 (-24.2)	82.7 (-13.3)
Electric & electronic	109.6 (2.9)	108.7 (-0.8)	105.9 (-1.8)	100.0 (-4.0)	119.9 (11.8)	112.4 (-5.3)	112.9 (6.6)	110.2 (10.2)	109.2 (-8.9)	116.7 (3.8)
Service	108.4 (1.4)	106.2 (-2.0)	104.9 (-2.1)	104.1 (-3.8)	106.9 (0.1)	106.4 (-2.5)	109.2 (4.1)	108.5 (4.2)	110.5 (3.4)	111.8 (5.1)
Wholesale and retail	104.6 (-0.4)	101.9 (-2.6)	100.9 (-2.7)	96.8 (-5.7)	105.9 (3.0)	104.0 (-1.7)	104.9 (4.0)	102.0 (5.4)	106.2 (0.3)	108.0 (3.8)
Food & Accommodation	97.5 (-1.0)	79.5 (-18.5)	80.7 (-16.2)	84.6 (-16.9)	72.3 (-21.0)	83.4 (-15.2)	78.3 (-3.0)	80.1 (-5.3)	80.5 (11.3)	89.6 (7.4)
Production output										
Iron & steel - Pig iron	47 520.7 (0.8)	45 359.6 (-4.5)	37 376.5 (-5.7)	4 090.6 (-0.3)	3 966.9 (1.6)	3 943.9 (-2.3)	38 585.2 (3.2)	4 022.7 (-1.7)	3 818.2 (-3.7)	3 754.5 (-4.8)
Iron & steel - Crude steel	71 411.9 (-1.5)	67 078.8 (-6.1)	55 403.7 (-7.1)	5 773.4 (-2.2)	5 747.9 (0.7)	5 859.9 (-1.7)	58 648.8 (5.9)	6 103.8 (5.7)	5 440.8 (-5.3)	5 781.8 (-1.3)
Petrochemical - Basic oil	31 804.1 (2.1)	30 323.6 (-4.7)	25 774.7 (-1.8)	2 571.4 (-8.3)	2 511.6 (-8.6)	2 426.7 (-6.2)	27 857.0 (8.1)	2 974.0 (15.7)	2 862.9 (14.0)	2 777.5 (14.5)
Petrochemical - Intermediate raw material	16 014.0 (-5.7)	15 355.4 (-4.1)	12 974.4 (-2.1)	1 261.9 (-13.9)	1 257.8 (-8.9)	1 211.5 (-1.9)	13 196.0 (1.7)	1 445.4 (14.5)	1 395.8 (11.0)	1 250.4 (3.2)
Petrochemical - 3 major products	21 584.6 (-1.0)	21 252.7 (-1.5)	17 813.9 (-1.6)	1 806.3 (-5.4)	1 730.5 (-5.3)	1 769.1 (3.8)	19 152.3 (7.5)	2 060.4 (14.1)	1 984.6 (14.7)	1 882.8 (6.4)
The number of cars	3 948.1 (-2.1)	3 506.8 (-11.2)	2 885.4 (-11.6)	233.4 (-6.4)	342.5 (23.2)	336.3 (-4.3)	2 840.3 (-1.6)	234.9 (0.7)	229.4 (-33.0)	263.7 (-21.6)

Note: p means provisional

Source: Monthly Energy Statistics, Korea Petrochemical Industry Association, Automobile Manufacturers Association

International Energy Prices

	2019	2020					2021			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Crude oil (USD/bbl)										
WTI	57.0 (-11.9)	39.4 (-30.9)	38.4 (-32.3)	42.4 (-22.7)	39.6 (-30.4)	39.6 (-26.8)	66.5 (72.9)	67.7 (59.7)	71.5 (80.5)	81.2 (105.4)
Dubai	63.5 (-8.5)	42.2 (-33.6)	41.3 (-35.0)	44.0 (-25.6)	41.5 (-32.1)	40.7 (-31.5)	67.8 (63.9)	69.5 (58.0)	72.6 (75.0)	81.6 (100.7)
Brent	64.2 (-10.3)	43.2 (-32.7)	42.4 (-33.9)	45.0 (-24.3)	41.9 (-32.8)	41.5 (-30.4)	69.4 (63.5)	70.5 (56.6)	74.9 (78.8)	83.8 (101.7)
Unit value of import (C&F)	65.5 (-8.2)	44.8 (-31.7)	44.8 (-31.7)	44.7 (-30.6)	44.5 (-29.4)	43.4 (-32.4)	67.6 (50.8)	73.8 (65.3)	73.7 (65.6)	78.1 (80.3)
LNG										
From Indonesia (USD/MMBTU)	10.6 (-1.0)	8.3 (-21.3)	8.5 (-20.1)	6.3 (-41.6)	5.9 (-42.0)	6.2 (-38.1)	9.9 (15.6)	10.8 (70.3)	11.4 (94.4)	12.4 (100.3)
Unit value of import (USD/ton, CIF)	505.4 (-4.0)	390.2 (-22.8)	401.1 (-22.2)	317.4 (-33.8)	263.4 (-48.3)	275.7 (-42.4)	491.1 (22.4)	535.0 (68.5)	571.3 (116.9)	668.7 (142.6)
Bituminous coal (USD/ton)										
From Australia	77.9 (-27.2)	60.8 (-22.0)	58.2 (-27.4)	50.1 (-23.5)	54.6 (-17.2)	58.4 (-15.6)	132.9 (128.4)	169.6 (238.2)	185.7 (240.1)	224.5 (284.4)
Unit value of import (CIF)	100.7 (-11.3)	77.7 (-22.9)	78.9 (-23.8)	70.7 (-31.8)	68.4 (-19.5)	70.4 (-23.5)	101.6 (28.7)	114.7 (62.3)	126.2 (84.5)	142.3 (102.1)
Petroleum product (USD/bbl)										
Gasoline	72.5 (-9.3)	46.7 (-35.7)	46.0 (-36.1)	48.2 (-31.2)	47.2 (-36.8)	46.0 (-37.9)	78.1 (70.0)	81.0 (67.9)	84.1 (78.0)	98.7 (114.6)
Kerosene	77.3 (-8.9)	44.7 (-42.1)	43.7 (-43.5)	43.3 (-42.0)	39.3 (-49.4)	41.6 (-44.8)	72.9 (66.6)	74.1 (71.0)	79.9 (103.1)	93.1 (123.5)
Diesel	78.2 (-7.9)	49.4 (-36.8)	49.0 (-37.5)	49.5 (-34.4)	44.2 (-43.4)	43.9 (-43.0)	75.4 (54.0)	76.5 (54.8)	83.0 (87.7)	95.5 (117.5)
Bunker-C	57.5 (-11.8)	39.2 (-31.9)	37.9 (-37.6)	42.2 (-22.5)	39.6 (-35.4)	41.2 (-13.0)	63.6 (67.6)	65.2 (54.3)	73.5 (85.4)	77.6 (88.2)
Propane	434.6 (-19.8)	397.1 (-8.6)	388.5 (-10.6)	365.0 (-1.4)	365.0 (4.3)	375.0 (-10.7)	611.0 (57.3)	660.0 (80.8)	665.0 (82.2)	800.0 (113.3)
Butane	441.7 (-18.1)	403.8 (-8.6)	394.5 (-10.3)	345.0 (-4.2)	355.0 (-1.4)	380.0 (-12.6)	597.5 (51.5)	655.0 (89.9)	665.0 (87.3)	795.0 (109.2)
Naphtha	56.9 (-15.1)	40.5 (-28.9)	39.7 (-29.1)	42.9 (-15.1)	43.0 (-20.4)	41.7 (-26.6)	68.6 (72.7)	70.7 (64.8)	75.0 (74.5)	84.3 (101.9)

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

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

Source: www.petronet.co.kr, IMF (primary commodity price), Monthly energy statistics

Domestic Energy Prices

	2019	2020					2021			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Petroleum product										
Gasoline (won/liter)	1 471.9 (-6.9)	1 381.6 (-6.1)	1 389.2 (-4.7)	1 361.1 (-8.9)	1 352.5 (-11.6)	1 333.3 (-13.5)	1 570.2 (13.0)	1 645.8 (20.9)	1 642.7 (21.5)	1 712.3 (28.4)
Diesel (won/liter)	1 340.1 (-3.7)	1 189.8 (-11.2)	1 199.0 (-10.0)	1 163.6 (-13.9)	1 154.5 (-16.3)	1 134.0 (-18.3)	1 367.7 (14.1)	1 440.5 (23.8)	1 437.2 (24.5)	1 509.3 (33.1)
Bunker-C (won/liter)	743.9 (1.2)	573.6 (-22.9)	584.5 (-22.7)	553.7 (-33.1)	575.2 (-23.0)	533.0 (-32.7)	705.4 (20.7)	750.1 (35.5)	768.2 (33.6)	813.4 (52.6)
Propane (won/kg)	1 869.7 (-2.6)	1 850.7 (-1.0)	1 852.1 (-0.8)	1 806.0 (-1.9)	1 821.0 (-0.6)	1 822.1 (-0.6)	2 038.8 (10.1)	2 114.5 (17.1)	2 160.1 (18.6)	2 163.4 (18.7)
Butane (won/liter)	806.2 (-7.8)	791.1 (-1.9)	792.6 (-1.5)	760.4 (-3.2)	771.5 (-1.7)	771.4 (-1.6)	904.1 (14.1)	952.3 (25.2)	980.5 (27.1)	981.2 (27.2)
City gas(won/MJ)										
Residential	15.6 (3.9)	15.1 (-3.6)	15.3 (-2.1)	14.2 (-10.7)	14.2 (-10.7)	14.2 (-10.7)	14.2 (-6.7)	14.2 -	14.2 -	14.2 -
General(1)	15.6 (4.9)	14.9 (-4.7)	15.0 (-3.1)	13.8 (-12.2)	13.8 (-12.2)	13.8 (-12.3)	13.9 (-7.8)	13.8 (-0.0)	13.8 (-0.0)	13.8 -
Commercial	16.1 (4.4)	15.1 (-6.4)	15.5 (-3.5)	14.9 (-9.5)	13.7 (-16.9)	12.7 (-22.7)	16.2 (4.5)	17.2 (15.7)	18.1 (32.2)	18.8 (47.8)
Industry	13.8 (6.0)	12.6 (-8.4)	13.0 (-4.9)	12.1 (-13.3)	10.8 (-22.0)	9.9 (-28.8)	13.3 (2.5)	14.0 (16.0)	14.8 (36.9)	15.6 (57.0)
Heat(won/Mcal)										
Residential	65.7 (1.8)	66.2 (0.7)	66.4 (1.5)	65.2 (-2.8)	65.2 (-2.8)	65.2 (-2.8)	65.2 (-1.7)	65.2 -	65.2 -	65.2 -
Commercial	85.3 (1.8)	85.9 (0.7)	86.2 (1.5)	84.7 (-2.8)	84.7 (-2.8)	84.7 (-2.8)	84.7 (-1.7)	84.7 -	84.7 -	84.7 -
Public	74.5 (1.9)	75.1 (0.7)	75.3 (1.5)	74.0 (-2.9)	74.0 (-2.9)	74.0 (-2.9)	74.0 (-1.7)	74.0 -	74.0 -	74.0 -
Electricity(won/kWh)										
Residential	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	147.3 -	142.3 (-3.4)	142.3 (-3.4)	142.3 (-3.4)	142.3 (-3.4)
General	84.4 -	84.4 -	82.8 -	105.7 -	65.2 -	65.2 -	77.8 (-6.0)	100.7 (-4.7)	60.2 (-7.7)	60.2 (-7.7)
Industry	96.0 -	96.0 -	93.5 -	108.5 -	78.5 -	78.5 -	88.5 (-5.3)	103.5 (-4.6)	73.5 (-6.4)	73.5 (-6.4)

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

Total Primary Energy Supply (TPES)

	2019	2020p					2021p			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Coal (Mton)	133.0 (-5.7)	116.6 (-12.4)	97.6 (-12.2)	11.3 (-10.7)	10.6 (-7.8)	9.0 (-22.3)	96.5 (-1.2)	11.5 (1.2)	9.7 (-8.6)	9.1 (1.2)
- Coking coal excluded	98.0 (-7.9)	82.8 (-15.6)	69.7 (-15.1)	8.4 (-13.3)	7.8 (-10.2)	6.0 (-30.1)	67.1 (-3.7)	8.5 (0.6)	6.8 (-13.1)	6.3 (4.2)
Oil (Mbbl)	927.1 (-0.5)	872.4 (-5.9)	726.0 (-4.8)	71.6 (-12.0)	71.3 (-1.4)	69.6 (-8.1)	766.8 (5.6)	77.9 (8.8)	79.3 (11.2)	78.2 (12.4)
- Non-energy oil excluded	451.8 (1.4)	423.6 (-6.2)	347.0 (-6.1)	34.0 (-16.2)	34.4 (7.5)	34.7 (-10.0)	352.2 (1.5)	34.0 (0.2)	35.1 (2.1)	34.9 (0.4)
LNG (Mton)	41.0 (-3.1)	42.1 (2.7)	32.8 (1.7)	3.0 (6.6)	2.8 (17.1)	3.1 (12.9)	36.7 (12.0)	3.1 (2.5)	2.9 (1.4)	3.3 (5.5)
Hydro (TWh)	6.2 (-14.1)	7.1 (14.4)	6.2 (17.6)	1.1 (78.8)	0.9 (55.6)	0.5 (-13.2)	5.8 (-7.1)	0.6 (-43.6)	0.6 (-34.7)	0.5 (6.9)
Nuclear (TWh)	145.9 (9.3)	160.2 (9.8)	131.1 (5.2)	12.5 (2.7)	9.3 (-10.0)	13.5 (27.1)	127.9 (-2.4)	12.8 (2.0)	12.2 (31.0)	13.5 (-0.0)
Others (Mtoe)	17.7 (3.3)	19.0 (7.3)	15.8 (6.2)	1.6 (1.4)	1.7 (18.2)	1.6 (12.6)	16.9 (7.1)	1.8 (6.1)	1.6 (-1.6)	1.6 (-4.1)
TPES (Mtoe)	303.1 (-1.5)	292.1 (-3.6)	239.9 (-4.0)	24.5 (-6.3)	23.1 (0.1)	23.1 (-4.2)	250.1 (4.3)	25.5 (4.2)	24.2 (4.7)	24.4 (5.6)
- Non-energy oil excluded	244.0 (-1.3)	236.1 (-3.2)	192.7 (-4.1)	19.8 (-6.0)	18.5 (2.5)	18.7 (-4.0)	198.3 (2.9)	20.0 (1.2)	18.7 (0.8)	19.0 (1.3)
- Non-energy oil&coal excluded	219.6 (-1.5)	212.5 (-3.2)	173.2 (-4.1)	17.7 (-6.4)	16.5 (2.8)	16.6 (-4.5)	177.8 (2.6)	17.9 (1.0)	16.6 (0.5)	17.0 (2.1)

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

Share of TPES by Sources

(unit: %)

	2019	2020p					2021p			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Coal	27.1	24.7	25.2	28.6	28.4	24.4	24.0	27.7	25.0	23.2
- Coking coal excluded	19.1	16.7	17.1	20.2	19.8	15.4	15.8	19.5	16.4	15.1
Oil	38.7	37.7	38.2	36.8	38.9	38.1	38.7	38.4	41.5	40.6
- non-energy oil excluded	19.2	18.6	18.5	17.6	19.0	19.2	18.0	16.9	18.6	18.3
LNG	17.7	18.8	17.9	16.1	16.1	17.6	19.2	15.8	15.6	17.6
Hydro	0.4	0.5	0.6	0.9	0.8	0.4	0.5	0.5	0.5	0.4
Nuclear	10.3	11.7	11.6	10.9	8.6	12.4	10.9	10.7	10.7	11.8
Others	5.8	6.5	6.6	6.7	7.2	7.1	6.7	6.9	6.8	6.4
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)

	2019	2020p					2021p			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Industry	142.9 (-0.4)	138.0 (-3.5)	114.8 (-2.9)	11.5 (-5.7)	11.6 (-0.7)	11.2 (-3.6)	122.3 (6.6)	12.6 (9.9)	12.5 (8.6)	12.3 (9.6)
Transport	43.0 (0.0)	39.4 (-8.2)	32.5 (-8.7)	3.3 (-18.8)	3.3 (12.4)	3.2 (-11.9)	32.7 (0.7)	3.3 (-0.2)	3.3 (2.3)	3.2 (-0.5)
Residential	22.6 (-3.6)	23.2 (2.6)	17.8 (1.1)	1.1 (-3.0)	1.2 (8.7)	1.4 (10.7)	18.4 (3.5)	1.2 (13.1)	1.1 (-5.6)	1.4 (0.4)
commercial	17.5 (-2.3)	16.7 (-4.3)	13.7 (-4.9)	1.4 (-7.0)	1.3 (-2.7)	1.1 (-6.9)	14.5 (6.3)	1.5 (8.3)	1.3 (3.3)	1.3 (11.7)
Public	5.4 (-3.2)	5.3 (-2.6)	4.3 (-3.1)	0.4 (-5.4)	0.4 (6.8)	0.4 (-2.7)	4.5 (4.6)	0.5 (6.1)	0.4 (-3.5)	0.4 (5.8)
TFC	231.4 (-0.9)	222.6 (-3.8)	183.1 (-3.8)	17.7 (-8.4)	17.8 (2.1)	17.4 (-4.5)	192.6 (5.2)	19.2 (8.0)	18.8 (5.8)	18.6 (7.1)
Coal (Mton)	48.2 (-2.2)	45.8 (-4.9)	37.7 (-5.9)	3.9 (-5.7)	4.0 (10.6)	4.0 (-5.3)	39.5 (4.9)	4.2 (6.5)	4.0 (1.0)	3.9 (-1.3)
Oil (Mbbbl)	918.5 (-0.2)	865.8 (-5.7)	721.3 (-4.5)	71.1 (-11.9)	70.6 (-1.9)	69.2 (-8.1)	760.3 (5.4)	77.5 (9.0)	78.7 (11.4)	77.6 (12.1)
Electricity (TWh)	520.5 (-1.1)	509.3 (-2.2)	423.1 (-2.7)	44.6 (-6.2)	45.1 (3.3)	39.1 (-3.8)	443.4 (4.8)	48.9 (9.7)	44.8 (-0.6)	41.8 (7.1)
City gas (Bm³)	23.3 (-4.1)	22.4 (-3.5)	17.4 (-5.6)	1.1 (-3.9)	1.1 (-0.7)	1.4 (3.2)	18.5 (6.4)	1.1 (4.2)	1.1 (0.6)	1.5 (4.1)
Heat-others (1 000 toe)	11.6 (-2.0)	12.3 (6.1)	9.9 (5.4)	0.9 (4.0)	0.9 (14.2)	0.9 (10.7)	10.2 (3.1)	1.0 (4.8)	0.9 (-2.7)	0.9 (-4.1)

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

Share of the Total Final Consumption by Sources

(unit: %)

	2019	2020p					2021p			
			M1~10	M8	M9	M10	M1~10	M8	M9	M10
Industry	61.8	62.0	62.7	64.8	65.0	64.7	63.5	66.0	66.7	66.2
Transport	18.6	17.7	17.8	18.7	18.4	18.4	17.0	17.3	17.8	17.1
Residential	9.8	10.4	9.7	6.1	6.8	8.2	9.6	6.4	6.0	7.7
Commercial	7.6	7.5	7.5	7.9	7.3	6.6	7.6	7.9	7.1	6.8
Public	2.3	2.4	2.4	2.4	2.5	2.2	2.3	2.4	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	13.9	13.7	13.7	14.7	14.8	15.2	13.7	14.4	14.2	13.9
Oil	50.2	49.1	49.6	50.4	50.1	50.3	49.9	50.9	53.0	52.7
Electricity	19.3	19.7	19.9	21.6	21.8	19.3	19.8	22.0	20.5	19.3
City gas	11.6	12.0	11.4	8.1	8.1	10.1	11.4	7.7	7.6	9.5
Heat-others	5.0	5.5	5.4	5.2	5.2	5.1	5.3	5.0	4.8	4.6

Note: p means provisional
Source: Monthly energy statistics

Statistics on Energy Production Facilities

	2018	2019	2020	2021			2021		
				M8	M9	M10	M8	M9	M10
Total capacity (GW)	119.1 (1.9)	125.3 (5.2)	129.2 (3.1)	128.1 (4.2)	128.6 (5.0)	128.2 (3.4)	131.6 (2.8)	132.1 (2.8)	133.5 (4.1)
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)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)	36.5 (0.1)	36.4 (-0.2)	36.4 (-0.2)	37.4 (2.7)
Gas	37.9 (-0.0)	39.6 (4.5)	41.2 (4.1)	41.2 (7.5)	41.2 (7.5)	41.2 (5.1)	41.2 -	41.2 -	41.2 -
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

Statistics on Energy Consumption

	2018	2019	2020	2021			2021		
				M8	M9	M10	M8	M9	M10
The number of household demanding city gas (mil)	19.1 (3.1)	19.7 (2.8)	20.1 (2.3)	19.8 (2.6)	19.9 (2.6)	19.9 (2.5)	20.1 (1.6)	20.2 (1.7)	20.3 (2.0)
Registered cars (mil)	23.2 (3.0)	23.7 (2.0)	24.4 (2.9)	24.1 (2.5)	24.2 (2.7)	24.3 (2.8)	24.7 (2.5)	24.8 (2.4)	24.8 (2.3)
- gasoline	10.6 (2.5)	11.0 (3.1)	11.4 (4.1)	11.3 (4.2)	11.3 (4.2)	11.3 (4.1)	11.7 (3.4)	11.7 (3.3)	11.7 (3.2)
- diesel	9.9 (3.7)	10.0 (0.3)	10.0 (0.3)	10.0 (-0.3)	10.0 (-0.1)	10.0 (0.2)	9.9 (-0.6)	9.9 (-0.8)	9.9 (-1.0)
- LPG	2.0 (-3.3)	2.0 (-1.5)	2.0 (-1.3)	2.0 (-0.7)	2.0 (-0.8)	2.0 (-0.9)	2.0 (-2.0)	2.0 (-1.9)	2.0 (-1.9)
- hybrid	0.4 (30.9)	0.5 (26.1)	0.6 (33.1)	0.6 (27.3)	0.6 (29.0)	0.6 (29.9)	0.8 (37.7)	0.8 (37.0)	0.8 (36.9)

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

Source: Monthly energy statistics