



2021 Energy Info. Korea





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Energy Info. Korea is published by **KEEI**.

[Korea Energy Economics Institute, Republic of Korea]

Publisher: Chun-Taek Lim

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01 This book is compiled by comprehensive compilation of statistics from governments and related organizations.

For more information, please see the source of each statistical table.

02 The figures in the tables can be revised by the governments and related organizations that collected the data.

03 From 2007, figures are based on revised calorific value every 5 years.

04 Abbreviations used in tables are as follows;

• TPES Total Primary Energy Supply

• TFEC Total Final Energy Consumption

• GDP Gross Domestic Product

• Pop. Population

• mil. million

• bil. billion

• tril. trillion

• Cons. Consumption

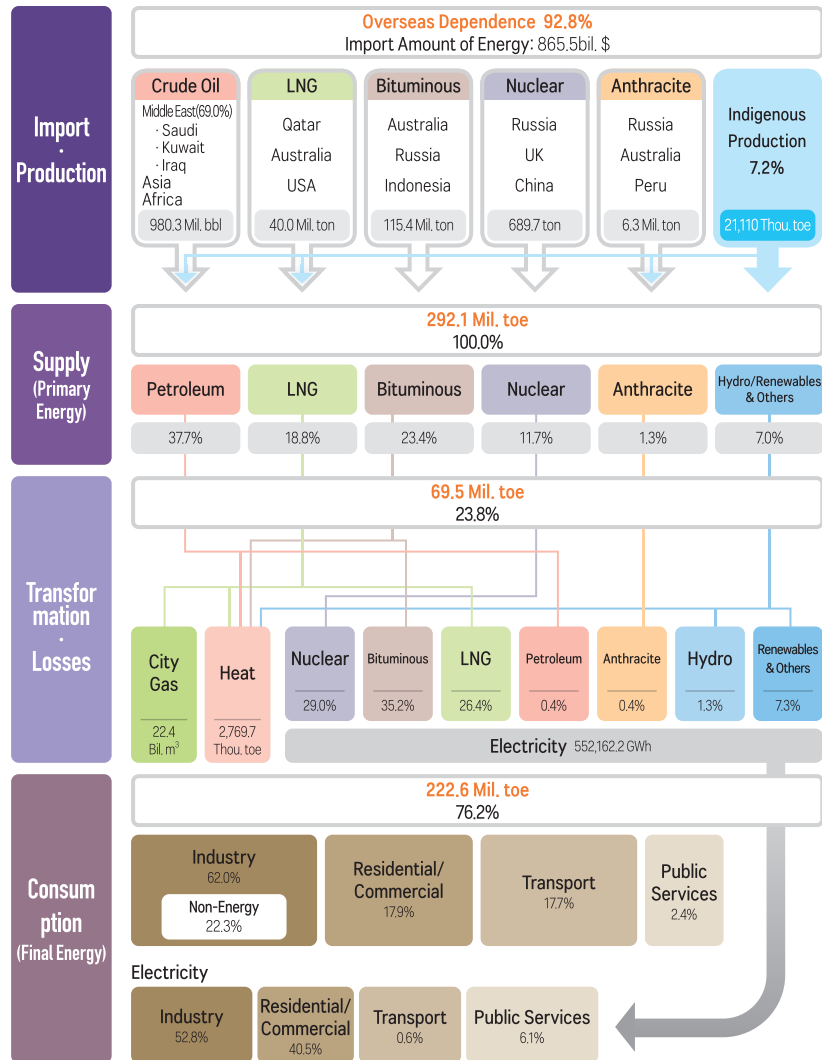
05 Symbols used in tables are as follows;

• - Not reported

• P Preliminary

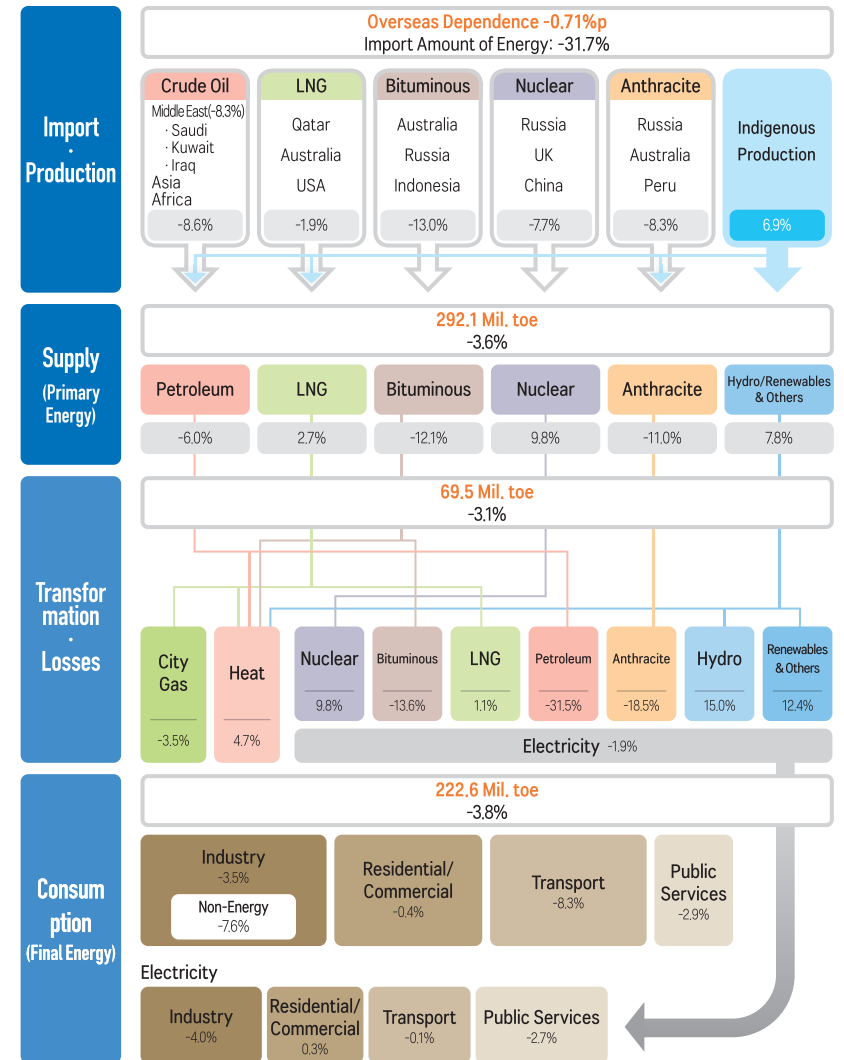
• E Estimate

2020 Energy Balance Flow



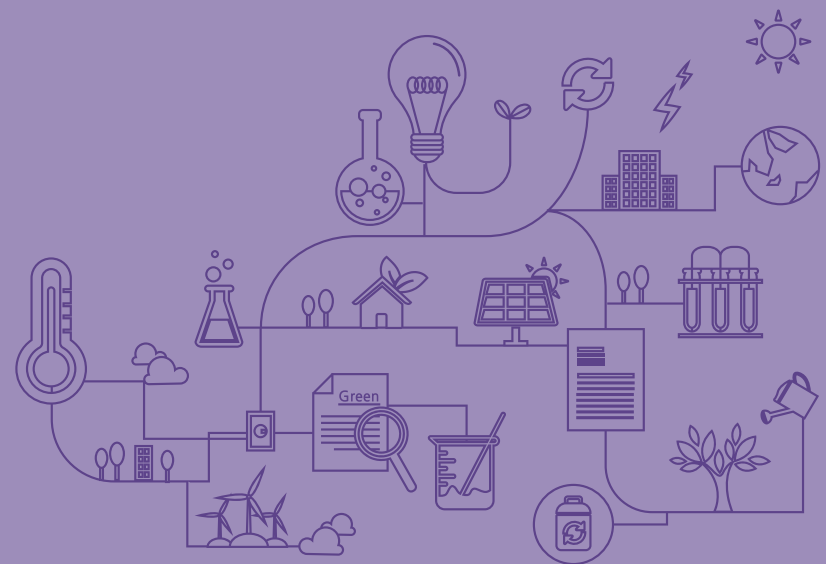
*Renewables & Others: including solar, wind, ocean, geothermal, bio, waste, fuel cell, IGCC

2020 Energy Balance Flow (Year-Over-Year)

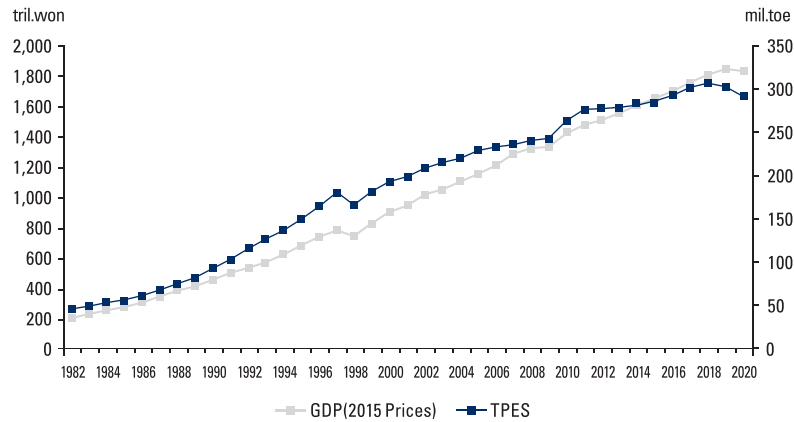


*Renewables & Others: including solar, wind, ocean, geothermal, bio, waste, fuel cell, IGCC

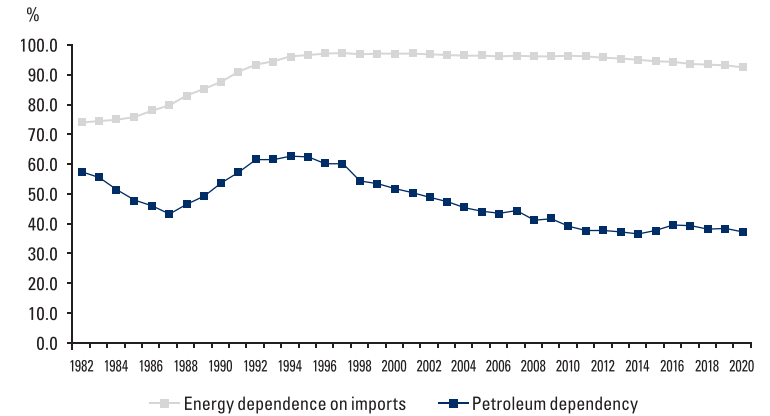
1. Major Energy Indicators
2. Transformation
3. Energy Production,
Imports & Exports
4. Primary Energy Supply
5. Final Energy Consumption



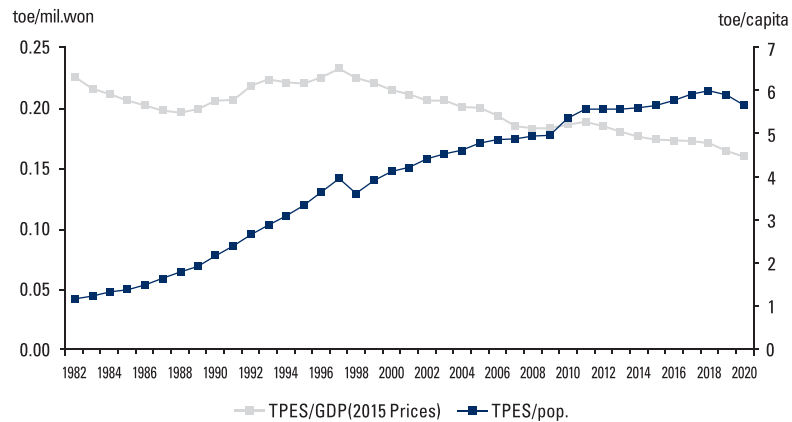
Trends in TPES and GDP



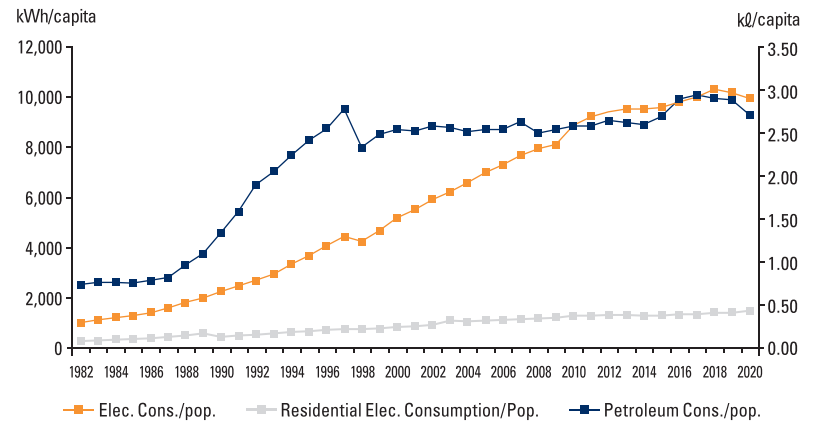
Energy Overseas Dependence and Petroleum Dependence



TPES per Capita and GDP



Electricity and Petroleum Consumption per Capita



1. Major Energy Indicators

| | Population ¹ (thou. person) | GDP (2015 prices) | | Total Primary Energy Supply (TPES) ² | | Total Final Energy Consumption (TFEC) ² | | CO ₂ Emissions | |
|------|--|-------------------|--------------------|--|--------------------|---|--------------------|---------------------------|--------------------|
| | | (bil. won) | Growth Rates(%) | (mil. toe) | Growth Rates(%) | (mil. toe) | Growth Rates(%) | (mil. tCO ₂) | Growth Rates(%) |
| 1981 | 38,723.2 | 187,576 | 7.2 | 45.7 | 4.1 | 39.0 | 3.6 | 131.4 | 4.6 |
| 1982 | 39,326.4 | 203,216 | 8.3 | 45.6 | -0.2 | 38.7 | -0.6 | 131.2 | -0.2 |
| 1983 | 39,910.4 | 230,398 | 13.4 | 49.4 | 8.3 | 41.3 | 6.8 | 139.2 | 6.1 |
| 1984 | 40,406.0 | 254,709 | 10.6 | 53.5 | 8.3 | 45.0 | 8.9 | 151.4 | 8.8 |
| 1985 | 40,805.7 | 274,675 | 7.8 | 56.3 | 5.2 | 47.0 | 4.4 | 155.7 | 2.8 |
| 1986 | 41,213.7 | 305,789 | 11.3 | 61.5 | 9.2 | 50.5 | 7.5 | 162.1 | 4.1 |
| 1987 | 41,621.7 | 344,696 | 12.7 | 67.9 | 10.4 | 55.2 | 9.2 | 168.4 | 3.9 |
| 1988 | 42,031.2 | 386,017 | 12.0 | 75.4 | 11.0 | 61.0 | 10.6 | 192.0 | 14.0 |
| 1989 | 42,449.0 | 413,320 | 7.1 | 81.7 | 8.4 | 65.9 | 7.9 | 203.2 | 5.8 |
| 1990 | 42,869.3 | 454,146 | 9.9 | 92.9 | 13.8 | 74.7 | 13.4 | 231.8 | 14.1 |
| 1991 | 43,295.7 | 503,094 | 10.8 | 103.3 | 11.2 | 83.3 | 11.6 | 255.8 | 10.4 |
| 1992 | 43,748.0 | 534,279 | 6.2 | 116.0 | 12.3 | 94.4 | 13.3 | 275.9 | 7.9 |
| 1993 | 44,194.6 | 571,024 | 6.9 | 126.8 | 9.4 | 103.9 | 10.0 | 302.9 | 9.8 |
| 1994 | 44,641.5 | 623,950 | 9.3 | 137.1 | 8.1 | 111.8 | 7.6 | 327.4 | 8.1 |
| 1995 | 45,093.0 | 683,940 | 9.6 | 149.9 | 9.3 | 121.4 | 8.6 | 357.3 | 9.1 |
| 1996 | 45,524.7 | 737,908 | 7.9 | 165.1 | 10.2 | 131.6 | 8.4 | 381.7 | 6.8 |
| 1997 | 45,953.6 | 783,441 | 6.2 | 181.1 | 9.6 | 144.5 | 9.9 | 402.3 | 5.4 |
| 1998 | 46,286.5 | 743,255 | -5.1 | 166.3 | -8.2 | 132.2 | -8.6 | 343.7 | -14.6 |
| 1999 | 46,616.7 | 828,483 | 11.5 | 181.7 | 9.3 | 143.0 | 8.2 | 378.2 | 10.0 |
| 2000 | 47,008.1 | 903,551 | 9.1 | 193.2 | 6.4 | 150.0 | 4.8 | 431.9 | 14.2 |
| 2001 | 47,370.2 | 947,395 | 4.9 | 198.9 | 2.9 | 153.1 | 2.1 | 445.9 | 3.2 |
| 2002 | 47,644.7 | 1,020,582 | 7.7 | 209.3 | 5.2 | 160.9 | 5.1 | 435.9 | -2.2 |
| 2003 | 47,892.3 | 1,052,703 | 3.1 | 215.8 | 3.1 | 164.6 | 2.3 | 437.8 | 0.4 |
| 2004 | 48,082.5 | 1,107,416 | 5.2 | 220.8 | 2.3 | 166.5 | 1.2 | 459.8 | 5.0 |
| 2005 | 48,184.6 | 1,155,130 | 4.3 | 229.7 | 4.0 | 171.5 | 3.1 | 457.7 | -0.5 |
| 2006 | 48,438.3 | 1,215,940 | 5.3 | 234.1 | 1.9 | 174.9 | 1.9 | 464.7 | 1.5 |
| 2007 | 48,683.6 | 1,286,459 | 5.8 | 236.5 | 1.0 | 182.0 | 4.1 | 477.4 | 2.7 |
| 2008 | 49,054.7 | 1,325,219 | 3.0 | 241.0 | 1.9 | 183.1 | 0.6 | 488.8 | 2.4 |
| 2009 | 49,307.8 | 1,335,724 | 0.8 | 243.5 | 1.0 | 182.1 | -0.5 | 502.1 | 2.7 |
| 2010 | 49,554.1 | 1,426,618 | 6.8 | 264.1 | 8.4 | 195.4 | 7.3 | 550.9 | 9.7 |
| 2011 | 49,936.6 | 1,479,198 | 3.7 | 277.0 | 4.9 | 205.2 | 5.0 | 573.8 | 4.2 |
| 2012 | 50,199.9 | 1,514,737 | 2.4 | 278.3 | 0.5 | 207.0 | 0.8 | 575.5 | 0.3 |
| 2013 | 50,428.9 | 1,562,674 | 3.2 | 279.6 | 0.5 | 208.4 | 0.7 | 574.6 | -0.2 |
| 2014 | 50,746.7 | 1,612,718 | 3.2 | 282.4 | 1.0 | 210.4 | 1.0 | 562.7 | -2.1 |
| 2015 | 51,014.9 | 1,658,020 | 2.8 | 286.9 | 1.6 | 215.4 | 2.3 | 582.0 | 3.4 |
| 2016 | 51,217.8 | 1,706,880 | 2.9 | 293.8 | 2.4 | 221.9 | 3.0 | 589.2 | 1.2 |
| 2017 | 51,361.9 | 1,760,812 | 3.2 | 302.5 | 3.0 | 231.0 | 4.1 | 600.0 | 1.8 |
| 2018 | 51,606.6 | 1,812,005 | 2.9 | 307.6 | 1.7 | 233.4 | 1.0 | 605.9 | 1.0 |
| 2019 | 51,709.1 | 1,852,666 | 2.2 | 303.1 | -1.5 | 231.4 | -0.9 | 585.7 | -3.3 |
| 2020 | 51,780.6 | 1,836,881 | -0.9 | 292.1 | -3.6 | 222.6 | -3.8 | 570.7 | -2.6 |

1. Mid-year estimates

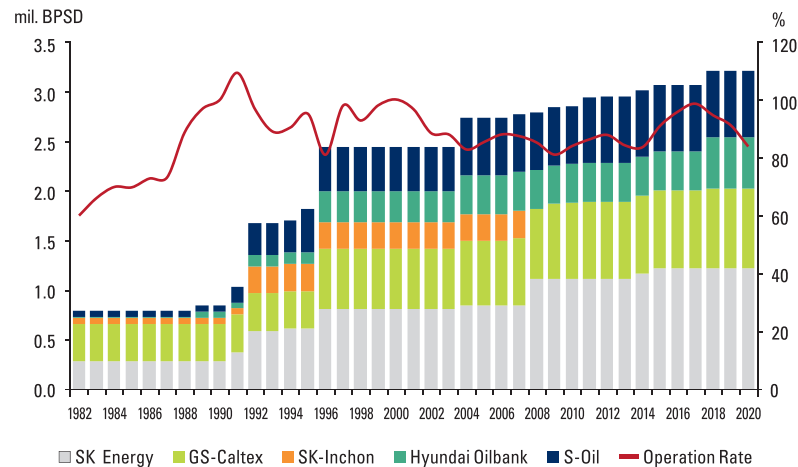
2. From 2007, figures are based on revised calorific value every 5 years.

| TPES /GDP | | CO ₂ Emissions/ GDP | TPES/ Population | CO ₂ Emissions/ Population | Oil Consumption/ Population | Elec. Consumption/ Population | Residential Elec. Consumption/ Population | |
|----------------|---------------|--------------------------------------|---------------------|---|-----------------------------------|-------------------------------------|---|------|
| (toe/mil. won) | (toe/1,000\$) | (tCO ₂ /mil. won) | (toe/capita) | (tCO ₂ /capita) | (kl/capita) | (kWh/capita) | (kWh/capita) | |
| 0.244 | 0.276 | 0.87 | 1.18 | 3.40 | 0.74 | 915 | 207 | 1981 |
| 0.225 | 0.254 | 0.80 | 1.16 | 3.30 | 0.72 | 963 | 230 | 1982 |
| 0.214 | 0.243 | 0.75 | 1.24 | 3.50 | 0.75 | 1,068 | 265 | 1983 |
| 0.210 | 0.238 | 0.74 | 1.32 | 3.70 | 0.75 | 1,164 | 299 | 1984 |
| 0.205 | 0.232 | 0.71 | 1.38 | 3.80 | 0.74 | 1,243 | 329 | 1985 |
| 0.201 | 0.227 | 0.66 | 1.49 | 3.90 | 0.77 | 1,366 | 353 | 1986 |
| 0.197 | 0.223 | 0.61 | 1.63 | 4.00 | 0.80 | 1,542 | 401 | 1987 |
| 0.195 | 0.221 | 0.62 | 1.79 | 4.60 | 0.95 | 1,768 | 473 | 1988 |
| 0.198 | 0.224 | 0.62 | 1.92 | 4.80 | 1.08 | 1,936 | 551 | 1989 |
| 0.205 | 0.232 | 0.64 | 2.17 | 5.40 | 1.32 | 2,200 | 414 | 1990 |
| 0.205 | 0.232 | 0.64 | 2.39 | 5.90 | 1.56 | 2,411 | 450 | 1991 |
| 0.217 | 0.246 | 0.65 | 2.65 | 6.30 | 1.87 | 2,634 | 498 | 1992 |
| 0.222 | 0.251 | 0.67 | 2.87 | 6.90 | 2.03 | 2,890 | 541 | 1993 |
| 0.220 | 0.249 | 0.66 | 3.07 | 7.30 | 2.21 | 3,283 | 595 | 1994 |
| 0.219 | 0.248 | 0.66 | 3.32 | 7.90 | 2.39 | 3,621 | 628 | 1995 |
| 0.224 | 0.253 | 0.65 | 3.63 | 8.40 | 2.52 | 4,008 | 673 | 1996 |
| 0.231 | 0.262 | 0.65 | 3.94 | 8.80 | 2.75 | 4,369 | 708 | 1997 |
| 0.224 | 0.253 | 0.59 | 3.59 | 7.40 | 2.30 | 4,180 | 711 | 1998 |
| 0.219 | 0.248 | 0.58 | 3.90 | 8.10 | 2.45 | 4,595 | 742 | 1999 |
| 0.214 | 0.242 | 0.61 | 4.11 | 9.20 | 2.51 | 5,096 | 789 | 2000 |
| 0.210 | 0.238 | 0.60 | 4.20 | 9.40 | 2.50 | 5,441 | 828 | 2001 |
| 0.205 | 0.232 | 0.55 | 4.39 | 9.10 | 2.55 | 5,844 | 887 | 2002 |
| 0.205 | 0.232 | 0.53 | 4.51 | 9.10 | 2.53 | 6,130 | 1,062 | 2003 |
| 0.199 | 0.226 | 0.53 | 4.59 | 9.60 | 2.48 | 6,491 | 1,011 | 2004 |
| 0.199 | 0.225 | 0.51 | 4.76 | 9.50 | 2.51 | 6,899 | 1,056 | 2005 |
| 0.192 | 0.218 | 0.49 | 4.83 | 9.60 | 2.51 | 7,199 | 1,084 | 2006 |
| 0.184 | 0.208 | 0.48 | 4.86 | 9.80 | 2.60 | 7,571 | 1,113 | 2007 |
| 0.182 | 0.206 | 0.48 | 4.91 | 10.00 | 2.46 | 7,850 | 1,146 | 2008 |
| 0.182 | 0.206 | 0.49 | 4.94 | 10.20 | 2.51 | 8,000 | 1,168 | 2009 |
| 0.185 | 0.209 | 0.50 | 5.33 | 11.10 | 2.55 | 8,761 | 1,235 | 2010 |
| 0.187 | 0.212 | 0.51 | 5.55 | 11.50 | 2.55 | 9,113 | 1,233 | 2011 |
| 0.184 | 0.208 | 0.50 | 5.54 | 11.50 | 2.61 | 9,295 | 1,266 | 2012 |
| 0.179 | 0.202 | 0.48 | 5.54 | 11.40 | 2.59 | 9,416 | 1,269 | 2013 |
| 0.175 | 0.198 | 0.46 | 5.57 | 11.10 | 2.56 | 9,411 | 1,235 | 2014 |
| 0.173 | 0.196 | 0.46 | 5.62 | 11.40 | 2.66 | 9,481 | 1,250 | 2015 |
| 0.172 | 0.195 | 0.45 | 5.74 | 11.50 | 2.86 | 9,704 | 1,292 | 2016 |
| 0.172 | 0.194 | 0.45 | 5.88 | 11.70 | 2.91 | 9,886 | 1,295 | 2017 |
| 0.170 | 0.192 | 0.45 | 5.96 | 12.10 | 2.87 | 10,195 | 1,370 | 2018 |
| 0.164 | 0.185 | 0.32 | 5.86 | 11.33 | 2.85 | 10,066 | 1,363 | 2019 |
| 0.159 | 0.180 | 0.31 | 5.64 | 11.02 | 2.68 | 9,835 | 1,431 | 2020 |

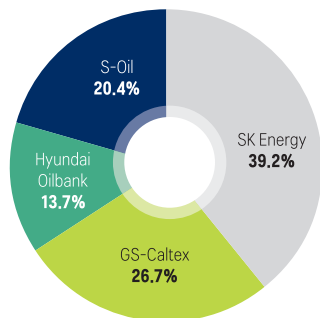
Source: IEA 'CO₂ Emissions from Fuel Combustion(2020)',

IEA 'World Energy Balance 2020', Statistics Korea, Bank of Korea

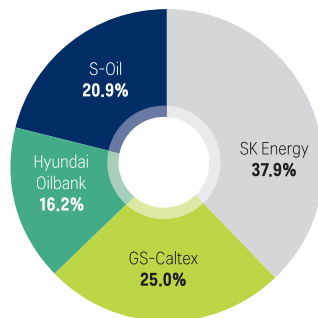
Refinery Capacities



— 2010 2,845 thou. BPSD



— 2020 3,204 thou. BPSD

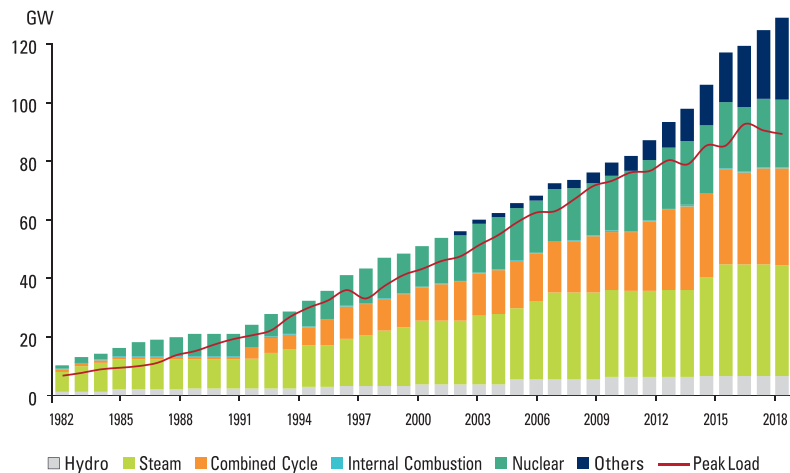


2-1. Refinery Capacities

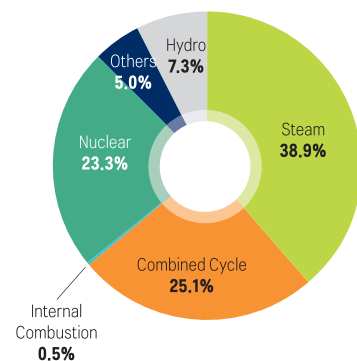
| | Crude Oil Refinery Inputs | Product Production | Operation Rate | Refining Capacity(1,000 BPSD) | | | | | |
|------|---------------------------|--------------------|----------------|-------------------------------|-----------|-----------|------------|-----------------|-------|
| | (1,000 Bbl) | (1,000 Bbl) | (%) | Total | SK Energy | GS-Caltex | SK-Incheon | Hyundai Oilbank | S-Oil |
| 1981 | 178,322 | 173,793 | 61.90 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1982 | 173,044 | 170,595 | 60.00 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1983 | 190,643 | 188,667 | 66.08 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1984 | 201,937 | 200,997 | 69.87 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1985 | 201,131 | 197,559 | 69.75 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1986 | 209,729 | 206,988 | 72.78 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1987 | 210,914 | 208,662 | 73.16 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1988 | 256,420 | 252,196 | 88.73 | 790 | 280 | 380 | 60 | 10 | 60 |
| 1989 | 296,722 | 292,062 | 96.79 | 840 | 280 | 380 | 60 | 60 | 60 |
| 1990 | 306,493 | 304,495 | 99.97 | 840 | 280 | 380 | 60 | 60 | 60 |
| 1991 | 413,055 | 408,215 | 109.23 | 1,035 | 375 | 380 | 60 | 60 | 160 |
| 1992 | 510,032 | 504,560 | 96.64 | 1,675 | 585 | 380 | 275 | 110 | 325 |
| 1993 | 544,504 | 539,986 | 88.97 | 1,675 | 585 | 380 | 275 | 110 | 325 |
| 1994 | 561,584 | 568,452 | 90.39 | 1,700 | 610 | 380 | 275 | 110 | 325 |
| 1995 | 631,078 | 643,102 | 95.10 | 1,818 | 610 | 380 | 275 | 110 | 443 |
| 1996 | 720,846 | 724,128 | 81.01 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 1997 | 871,974 | 911,462 | 97.99 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 1998 | 825,890 | 864,845 | 92.81 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 1999 | 872,742 | 911,086 | 98.08 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 2000 | 890,304 | 926,897 | 100.05 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 2001 | 860,115 | 907,345 | 96.66 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 2002 | 786,805 | 858,363 | 88.42 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 2003 | 782,951 | 841,038 | 87.98 | 2,438 | 810 | 600 | 275 | 310 | 443 |
| 2004 | 826,551 | 886,413 | 82.80 | 2,735 | 840 | 650 | 275 | 390 | 580 |
| 2005 | 852,439 | 922,897 | 85.39 | 2,735 | 840 | 650 | 275 | 390 | 580 |
| 2006 | 878,395 | 949,983 | 87.99 | 2,735 | 840 | 650 | 275 | 390 | 580 |
| 2007 | 882,117 | 955,898 | 87.41 | 2,765 | 840 | 680 | 275 | 390 | 580 |
| 2008 | 865,663 | 938,749 | 85.16 | 2,785 | 1,115 | 700 | - | 390 | 580 |
| 2009 | 838,475 | 912,654 | 81.03 | 2,835 | 1,115 | 750 | - | 390 | 580 |
| 2010 | 872,247 | 938,926 | 84.00 | 2,845 | 1,115 | 760 | - | 390 | 580 |
| 2011 | 924,441 | 1,002,257 | 86.32 | 2,934 | 1,115 | 775 | - | 390 | 654 |
| 2012 | 945,162 | 1,034,708 | 87.81 | 2,949 | 1,115 | 775 | - | 390 | 669 |
| 2013 | 906,674 | 1,001,980 | 84.23 | 2,949 | 1,115 | 775 | - | 390 | 669 |
| 2014 | 918,345 | 1,030,092 | 83.62 | 3,009 | 1,165 | 785 | - | 390 | 669 |
| 2015 | 1,016,157 | 1,116,986 | 91.01 | 3,059 | 1,215 | 785 | - | 390 | 669 |
| 2016 | 1,071,731 | 1,157,612 | 95.83 | 3,064 | 1,215 | 790 | - | 390 | 669 |
| 2017 | 1,117,376 | 1,229,652 | 98.59 | 3,105 | 1,215 | 790 | - | 431 | 669 |
| 2018 | 1,106,266 | 1,258,874 | 94.60 | 3,204 | 1,215 | 800 | - | 520 | 669 |
| 2019 | 1,064,210 | 1,250,710 | 91.19 | 3,204 | 1,215 | 800 | - | 520 | 669 |
| 2020 | 980,379 | 1,159,002 | 83.83 | 3,204 | 1,215 | 800 | - | 520 | 669 |

Source: Korea National Oil Corporation

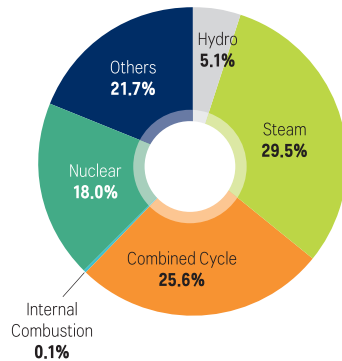
Generating Facilities



2010 76,078 MW



2020 125,338 MW



2-2. Generating Facilities

Unit: MW

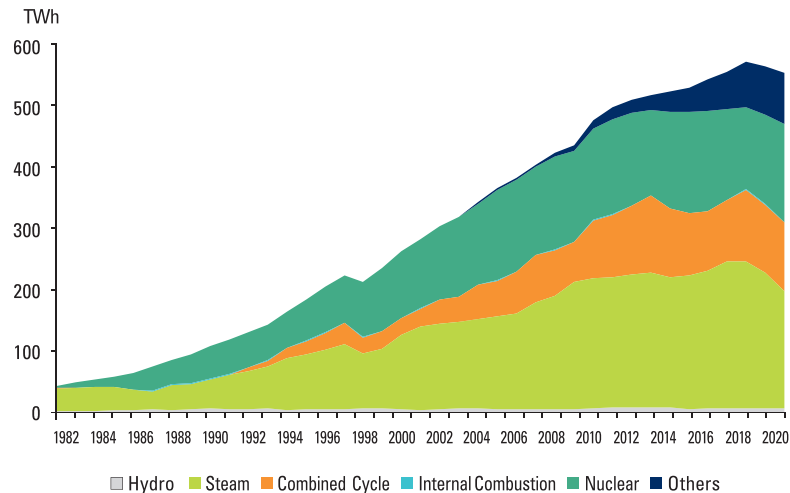
| | Total | Hydro | Steam | Combined Cycle | Internal Combustion | Nuclear | Others | Peak load |
|------|---------|-------|--------|----------------|---------------------|---------|--------|-----------|
| 1981 | 9,835 | 1,202 | 6,812 | 920 | 314 | 587 | - | 6,144 |
| 1982 | 10,304 | 1,202 | 6,722 | 920 | 194 | 1,266 | - | 6,661 |
| 1983 | 13,115 | 1,202 | 8,882 | 920 | 196 | 1,916 | - | 7,602 |
| 1984 | 14,190 | 1,202 | 9,942 | 920 | 211 | 1,916 | - | 8,811 |
| 1985 | 16,137 | 2,223 | 9,912 | 920 | 216 | 2,866 | - | 9,349 |
| 1986 | 18,060 | 2,225 | 9,912 | 920 | 238 | 4,766 | - | 9,915 |
| 1987 | 19,021 | 2,232 | 9,912 | 920 | 240 | 5,716 | - | 11,039 |
| 1988 | 19,944 | 2,236 | 9,912 | 895 | 235 | 6,666 | - | 13,658 |
| 1989 | 20,997 | 2,339 | 9,912 | 840 | 290 | 7,616 | - | 15,058 |
| 1990 | 21,021 | 2,340 | 9,912 | 840 | 313 | 7,616 | - | 17,252 |
| 1991 | 21,111 | 2,445 | 9,912 | 760 | 378 | 7,616 | - | 19,124 |
| 1992 | 24,120 | 2,498 | 9,912 | 3,706 | 388 | 7,616 | - | 20,438 |
| 1993 | 27,654 | 2,504 | 11,972 | 5,173 | 389 | 7,616 | - | 22,112 |
| 1994 | 28,750 | 2,493 | 13,032 | 5,334 | 275 | 7,616 | - | 26,696 |
| 1995 | 32,184 | 3,093 | 14,032 | 6,184 | 259 | 8,616 | - | 29,878 |
| 1996 | 35,715 | 3,094 | 14,022 | 8,719 | 264 | 9,616 | - | 32,282 |
| 1997 | 41,042 | 3,115 | 16,078 | 11,269 | 265 | 10,316 | - | 35,851 |
| 1998 | 43,406 | 3,131 | 17,209 | 10,785 | 265 | 12,016 | - | 32,996 |
| 1999 | 46,978 | 3,148 | 18,909 | 10,935 | 271 | 13,716 | - | 37,293 |
| 2000 | 48,451 | 3,149 | 20,059 | 11,257 | 271 | 13,716 | - | 41,007 |
| 2001 | 50,859 | 3,876 | 21,559 | 11,436 | 273 | 13,716 | - | 43,125 |
| 2002 | 53,801 | 3,876 | 21,749 | 12,186 | 275 | 15,716 | - | 45,773 |
| 2003 | 56,053 | 3,877 | 21,749 | 13,086 | 246 | 15,716 | 1,380 | 47,385 |
| 2004 | 59,961 | 3,879 | 23,311 | 14,313 | 252 | 16,716 | 1,489 | 51,264 |
| 2005 | 62,258 | 3,883 | 23,811 | 15,015 | 297 | 17,716 | 1,537 | 54,631 |
| 2006 | 65,514 | 5,485 | 24,391 | 16,004 | 297 | 17,716 | 1,622 | 58,994 |
| 2007 | 68,268 | 5,492 | 26,491 | 16,511 | 303 | 17,716 | 1,755 | 62,285 |
| 2008 | 72,491 | 5,505 | 29,731 | 17,044 | 307 | 17,716 | 2,188 | 62,794 |
| 2009 | 73,470 | 5,515 | 29,571 | 17,575 | 347 | 17,716 | 2,747 | 66,797 |
| 2010 | 76,078 | 5,525 | 29,571 | 19,100 | 351 | 17,716 | 3,816 | 71,308 |
| 2011 | 79,342 | 6,418 | 29,571 | 19,799 | 355 | 18,716 | 4,482 | 73,137 |
| 2012 | 81,806 | 6,446 | 29,371 | 19,799 | 367 | 20,716 | 5,106 | 75,987 |
| 2013 | 86,969 | 6,454 | 29,371 | 23,473 | 330 | 20,716 | 6,625 | 76,522 |
| 2014 | 93,216 | 6,467 | 29,611 | 27,296 | 330 | 20,716 | 8,796 | 80,154 |
| 2015 | 97,649 | 6,471 | 29,611 | 28,512 | 330 | 21,716 | 11,009 | 78,790 |
| 2016 | 105,866 | 6,485 | 33,746 | 28,512 | 329 | 23,116 | 13,677 | 85,183 |
| 2017 | 116,908 | 6,489 | 38,265 | 32,416 | 339 | 22,529 | 16,869 | 85,133 |
| 2018 | 119,092 | 6,490 | 38,358 | 31,224 | 339 | 21,850 | 20,830 | 92,478 |
| 2019 | 125,338 | 6,508 | 38,101 | 32,846 | 341 | 23,250 | 23,441 | 90,314 |
| 2020 | 125,338 | 6,508 | 37,951 | 33,013 | 176 | 23,250 | 27,930 | 89,091 |

Note 1) Excludes non-utility in common use.

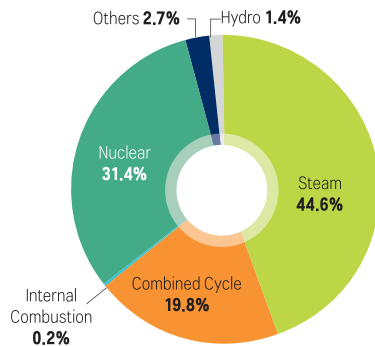
2) Others include Group & Alternative Energy

Source: Korea Electric Power Corporation

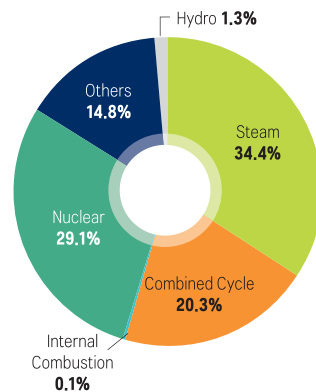
Electric Power Generation by Facility Type



2010 474,660 GWh



2020 552,162 GWh



2-3. Electric Power Generation by Facility Type

Unit: GWh

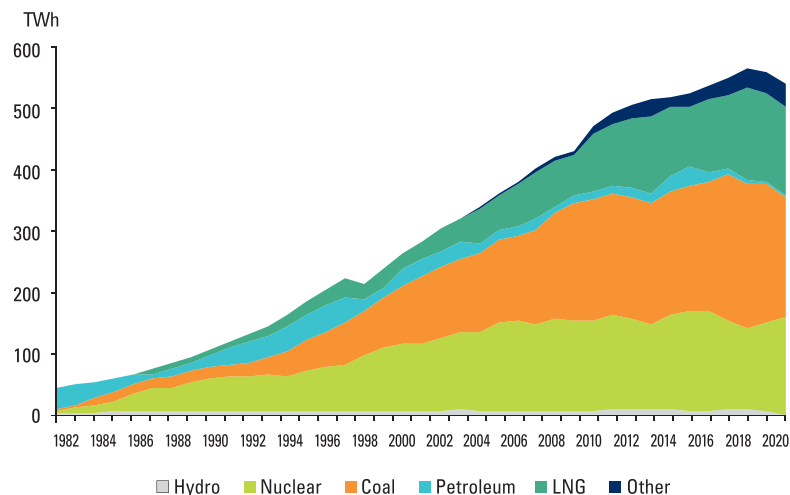
| | Total | Hydro | Steam | Combined Cycle | Internal Combustion | Nuclear | Others |
|------|---------|-------|---------|----------------|---------------------|---------|--------|
| 1981 | 40,207 | 2,709 | 34,305 | 258 | 38 | 2,897 | - |
| 1982 | 43,122 | 2,005 | 36,961 | 332 | 45 | 3,777 | - |
| 1983 | 48,850 | 2,723 | 36,897 | 214 | 42 | 8,965 | - |
| 1984 | 53,808 | 2,399 | 39,461 | 99 | 41 | 11,792 | - |
| 1985 | 58,007 | 3,659 | 37,411 | 58 | 61 | 16,745 | - |
| 1986 | 64,695 | 4,019 | 32,107 | 53 | 122 | 28,311 | - |
| 1987 | 73,992 | 5,344 | 28,927 | 66 | 171 | 39,314 | - |
| 1988 | 85,462 | 3,566 | 41,144 | 172 | 210 | 40,101 | - |
| 1989 | 94,472 | 4,558 | 41,754 | 221 | 253 | 47,365 | - |
| 1990 | 107,670 | 6,361 | 47,098 | 619 | 429 | 52,887 | - |
| 1991 | 118,619 | 5,051 | 55,389 | 785 | 472 | 56,311 | - |
| 1992 | 130,963 | 4,863 | 62,115 | 5,464 | 574 | 56,530 | - |
| 1993 | 144,437 | 6,006 | 68,916 | 9,188 | 640 | 58,138 | - |
| 1994 | 164,993 | 4,098 | 83,807 | 16,047 | 789 | 58,651 | - |
| 1995 | 184,661 | 5,478 | 89,252 | 20,521 | 825 | 67,029 | - |
| 1996 | 205,494 | 5,201 | 96,946 | 26,943 | 772 | 73,924 | - |
| 1997 | 224,445 | 5,404 | 104,798 | 34,424 | 718 | 77,086 | - |
| 1998 | 215,300 | 6,099 | 89,042 | 26,505 | 575 | 89,689 | - |
| 1999 | 239,325 | 6,066 | 96,473 | 28,675 | 382 | 103,064 | - |
| 2000 | 266,400 | 5,610 | 119,947 | 26,863 | 294 | 108,964 | - |
| 2001 | 285,224 | 4,151 | 135,437 | 29,033 | 325 | 112,133 | - |
| 2002 | 306,474 | 5,311 | 138,929 | 38,337 | 353 | 119,103 | - |
| 2003 | 322,452 | 6,887 | 140,269 | 40,375 | 370 | 129,672 | - |
| 2004 | 342,148 | 5,861 | 145,365 | 55,452 | 407 | 130,715 | 3,903 |
| 2005 | 364,639 | 5,189 | 151,207 | 57,457 | 575 | 146,779 | 3,163 |
| 2006 | 381,181 | 5,219 | 155,911 | 67,138 | 677 | 148,749 | 3,108 |
| 2007 | 403,125 | 5,042 | 173,415 | 76,405 | 578 | 142,937 | 3,916 |
| 2008 | 422,355 | 5,563 | 183,655 | 74,519 | 503 | 150,958 | 6,428 |
| 2009 | 433,604 | 5,641 | 206,535 | 64,486 | 697 | 147,771 | 7,618 |
| 2010 | 474,660 | 6,472 | 211,449 | 94,012 | 731 | 148,596 | 12,558 |
| 2011 | 496,893 | 7,831 | 211,205 | 101,479 | 821 | 154,723 | 20,021 |
| 2012 | 509,574 | 7,652 | 216,336 | 110,882 | 752 | 150,327 | 21,531 |
| 2013 | 517,148 | 8,394 | 218,585 | 124,400 | 741 | 138,784 | 24,563 |
| 2014 | 521,971 | 7,820 | 211,172 | 111,711 | 656 | 156,407 | 33,644 |
| 2015 | 528,091 | 5,796 | 216,378 | 100,598 | 643 | 164,762 | 39,337 |
| 2016 | 540,441 | 6,634 | 222,623 | 96,922 | 573 | 161,995 | 51,473 |
| 2017 | 553,530 | 6,995 | 237,332 | 99,619 | 513 | 148,427 | 60,340 |
| 2018 | 570,647 | 7,270 | 237,498 | 116,836 | 528 | 133,505 | 74,210 |
| 2019 | 563,040 | 6,247 | 220,918 | 110,289 | 579 | 145,910 | 77,951 |
| 2020 | 552,162 | 7,148 | 189,426 | 111,759 | 405 | 160,184 | 81,564 |

Note 1) Total includes the purchased power.

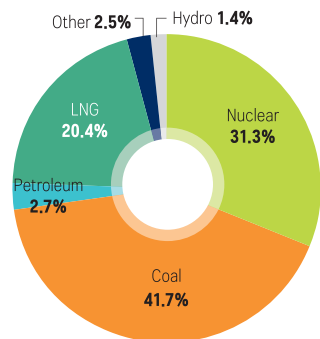
2) Others include Group & Renewables Energy

Source: Korea Electric Power Corporation

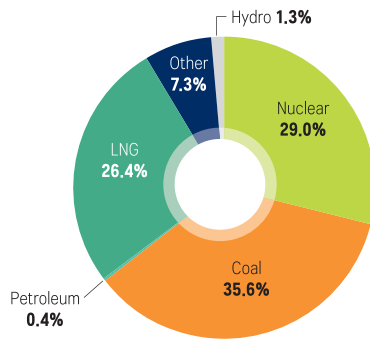
Electric Power Generation by Energy Source



2010 474,660 GWh



2020 552,162 GWh



2-4. Electric Power Generation by Energy Source

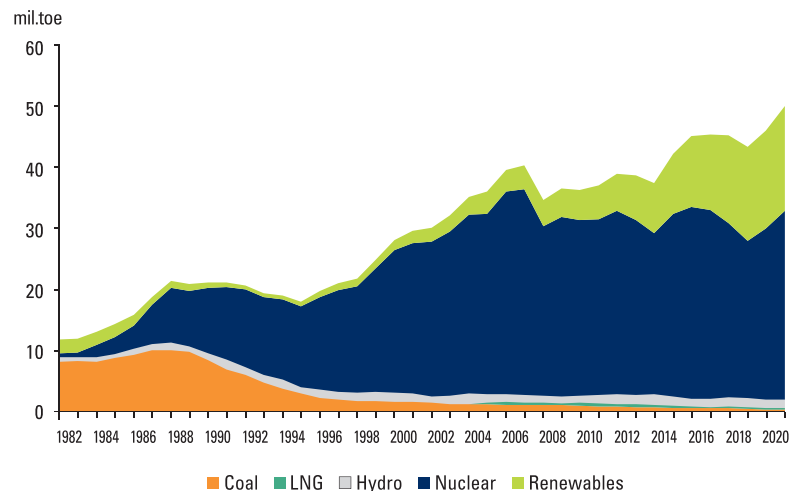
Unit: GWh

| | Total | Hydro | Nuclear | Thermal | | | Others |
|------|---------|-------|---------|---------|-----------|---------|--------|
| | | | | Coal | Petroleum | LNG | |
| 1981 | 40,207 | 2,709 | 2,897 | 2,530 | 32,071 | - | - |
| 1982 | 43,122 | 2,005 | 3,777 | 2,612 | 34,728 | - | - |
| 1983 | 48,850 | 2,723 | 8,965 | 4,289 | 32,873 | - | - |
| 1984 | 53,808 | 2,399 | 11,792 | 13,383 | 26,234 | - | - |
| 1985 | 58,007 | 3,659 | 16,745 | 17,639 | 19,964 | - | - |
| 1986 | 64,695 | 4,019 | 28,311 | 18,220 | 13,895 | 250 | - |
| 1987 | 73,992 | 5,344 | 39,314 | 15,856 | 5,087 | 8,391 | - |
| 1988 | 85,462 | 3,566 | 40,101 | 19,840 | 11,523 | 10,432 | - |
| 1989 | 94,472 | 4,558 | 47,365 | 18,777 | 14,640 | 9,132 | - |
| 1990 | 107,670 | 6,361 | 52,887 | 19,961 | 18,856 | 9,604 | - |
| 1991 | 118,619 | 5,051 | 56,311 | 20,140 | 27,182 | 9,935 | - |
| 1992 | 130,963 | 4,863 | 56,530 | 22,072 | 35,311 | 12,187 | - |
| 1993 | 144,437 | 6,006 | 58,138 | 30,917 | 34,888 | 14,488 | - |
| 1994 | 164,993 | 4,098 | 58,651 | 41,835 | 40,363 | 20,046 | - |
| 1995 | 184,661 | 5,478 | 67,029 | 48,813 | 42,045 | 21,296 | - |
| 1996 | 205,494 | 5,201 | 73,924 | 56,881 | 42,436 | 27,050 | - |
| 1997 | 224,445 | 5,404 | 77,086 | 67,190 | 42,943 | 31,823 | - |
| 1998 | 215,300 | 6,099 | 89,689 | 75,498 | 17,712 | 26,302 | - |
| 1999 | 239,325 | 6,066 | 103,064 | 81,544 | 18,527 | 30,124 | - |
| 2000 | 266,400 | 5,610 | 108,964 | 97,538 | 26,142 | 28,146 | - |
| 2001 | 285,224 | 4,151 | 112,133 | 110,333 | 28,156 | 30,451 | - |
| 2002 | 306,474 | 5,311 | 119,103 | 118,022 | 25,095 | 38,943 | - |
| 2003 | 322,452 | 6,887 | 129,672 | 120,276 | 26,526 | 39,090 | - |
| 2004 | 342,148 | 5,861 | 130,715 | 127,158 | 18,511 | 55,999 | 3,903 |
| 2005 | 364,638 | 5,189 | 146,779 | 133,658 | 17,733 | 58,118 | 3,163 |
| 2006 | 381,181 | 5,219 | 148,749 | 139,205 | 16,598 | 68,302 | 3,108 |
| 2007 | 403,124 | 5,042 | 142,937 | 154,674 | 18,132 | 78,427 | 3,916 |
| 2008 | 422,355 | 5,561 | 150,958 | 173,508 | 10,094 | 75,809 | 6,428 |
| 2009 | 433,604 | 5,641 | 147,771 | 193,216 | 14,083 | 65,274 | 7,618 |
| 2010 | 474,660 | 6,472 | 148,596 | 197,916 | 12,878 | 96,734 | 12,064 |
| 2011 | 496,893 | 7,831 | 154,723 | 200,124 | 12,492 | 101,702 | 20,021 |
| 2012 | 509,574 | 7,652 | 150,327 | 198,831 | 15,156 | 113,984 | 23,624 |
| 2013 | 517,148 | 8,543 | 138,784 | 200,444 | 15,751 | 127,724 | 25,900 |
| 2014 | 521,971 | 7,820 | 156,407 | 203,446 | 24,950 | 114,654 | 14,695 |
| 2015 | 528,091 | 5,796 | 164,762 | 204,230 | 31,616 | 100,783 | 20,904 |
| 2016 | 540,441 | 6,634 | 161,995 | 213,803 | 14,221 | 120,852 | 22,936 |
| 2017 | 553,530 | 6,995 | 148,427 | 238,799 | 8,663 | 122,773 | 27,874 |
| 2018 | 570,647 | 7,270 | 133,505 | 238,967 | 5,740 | 152,924 | 32,239 |
| 2019 | 563,040 | 6,247 | 145,910 | 227,384 | 3,292 | 144,355 | 35,852 |
| 2020 | 552,162 | 7,148 | 160,184 | 196,333 | 2,255 | 145,911 | 40,331 |

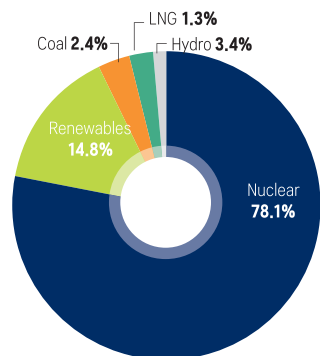
Note: Others include Group & Alternative Energy

Source: Korea Electric Power Corporation

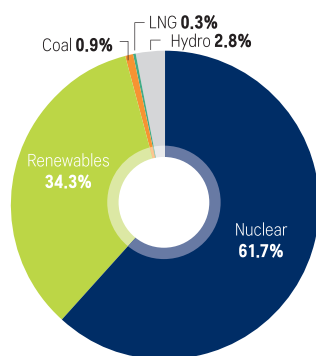
Energy Production



2010 40,912 Thou. toe



2020 55,292 Thou. toe



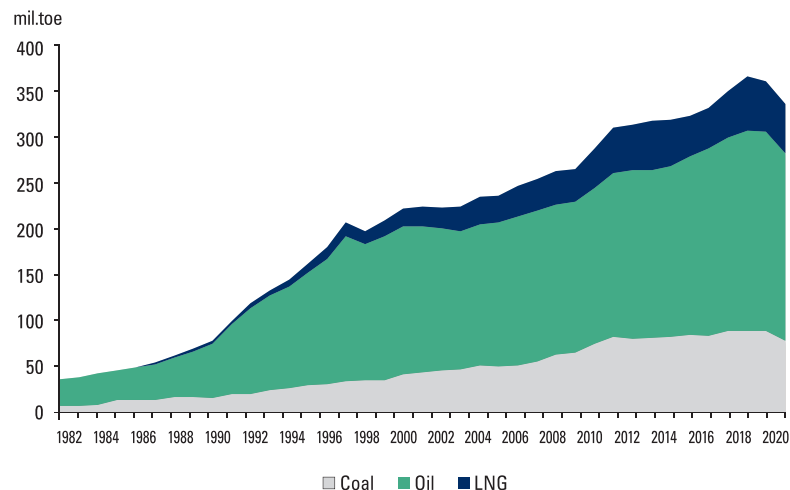
3-1. Energy Production

Unit: 1,000 toe

| | Total | Coal | LNG | Hydro | Nuclear | Renewables |
|------|--------|--------|-----|-------|---------|------------|
| 1981 | 13,031 | 9,138 | - | 677 | 724 | 2,492 |
| 1982 | 13,116 | 9,253 | - | 501 | 944 | 2,417 |
| 1983 | 14,436 | 9,136 | - | 681 | 2,241 | 2,378 |
| 1984 | 15,870 | 9,830 | - | 600 | 2,948 | 2,492 |
| 1985 | 17,502 | 10,370 | - | 915 | 4,186 | 2,031 |
| 1986 | 20,719 | 11,156 | - | 1,005 | 7,078 | 1,480 |
| 1987 | 23,649 | 11,166 | - | 1,336 | 9,829 | 1,319 |
| 1988 | 23,013 | 10,933 | - | 892 | 10,025 | 1,164 |
| 1989 | 23,367 | 9,353 | - | 1,140 | 11,841 | 1,033 |
| 1990 | 23,357 | 7,748 | - | 1,590 | 13,222 | 797 |
| 1991 | 22,734 | 6,776 | - | 1,263 | 14,078 | 618 |
| 1992 | 21,456 | 5,386 | - | 1,216 | 14,133 | 722 |
| 1993 | 21,011 | 4,233 | - | 1,502 | 14,535 | 742 |
| 1994 | 19,922 | 3,329 | - | 1,025 | 14,663 | 906 |
| 1995 | 21,751 | 2,574 | - | 1,369 | 16,757 | 1,050 |
| 1996 | 23,170 | 2,228 | - | 1,300 | 18,481 | 1,161 |
| 1997 | 23,997 | 2,030 | - | 1,351 | 19,271 | 1,344 |
| 1998 | 27,435 | 1,962 | - | 1,525 | 22,422 | 1,526 |
| 1999 | 30,977 | 1,889 | - | 1,517 | 25,766 | 1,806 |
| 2000 | 32,641 | 1,868 | - | 1,402 | 27,241 | 2,130 |
| 2001 | 33,244 | 1,718 | - | 1,038 | 28,033 | 2,456 |
| 2002 | 35,521 | 1,493 | - | 1,327 | 29,776 | 2,925 |
| 2003 | 38,864 | 1,484 | - | 1,722 | 32,418 | 3,241 |
| 2004 | 39,769 | 1,436 | 212 | 1,465 | 32,679 | 3,977 |
| 2005 | 43,745 | 1,274 | 518 | 1,297 | 36,695 | 3,961 |
| 2006 | 44,582 | 1,271 | 461 | 1,305 | 37,187 | 4,358 |
| 2007 | 38,338 | 1,342 | 353 | 1,084 | 30,731 | 4,828 |
| 2008 | 40,376 | 1,289 | 236 | 1,196 | 32,456 | 5,198 |
| 2009 | 40,133 | 1,171 | 498 | 1,213 | 31,771 | 5,480 |
| 2010 | 40,912 | 969 | 539 | 1,391 | 31,948 | 6,064 |
| 2011 | 42,987 | 969 | 451 | 1,684 | 33,265 | 6,617 |
| 2012 | 42,748 | 942 | 436 | 1,615 | 31,719 | 8,036 |
| 2013 | 41,321 | 817 | 463 | 1,771 | 29,283 | 8,987 |
| 2014 | 46,716 | 787 | 322 | 1,650 | 33,002 | 10,956 |
| 2015 | 49,809 | 794 | 188 | 1,223 | 34,765 | 12,839 |
| 2016 | 50,087 | 777 | 154 | 1,400 | 34,181 | 13,575 |
| 2017 | 49,996 | 702 | 341 | 1,490 | 31,615 | 15,848 |
| 2018 | 47,977 | 568 | 305 | 1,549 | 28,437 | 17,119 |
| 2019 | 50,869 | 513 | 259 | 1,331 | 31,079 | 17,688 |
| 2020 | 55,292 | 482 | 185 | 1,523 | 34,119 | 18,983 |

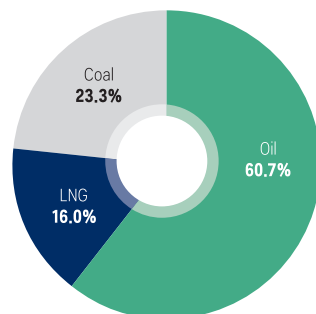
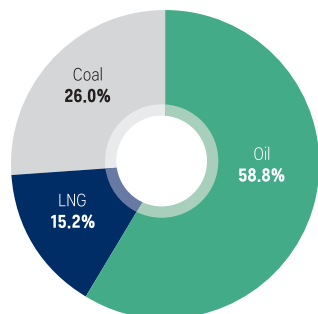
Note : From 2007, figures are based on revised calorific value every 5 years.

Energy Imports



2010 279,145 Thou. toe

2020 325,367 Thou. toe



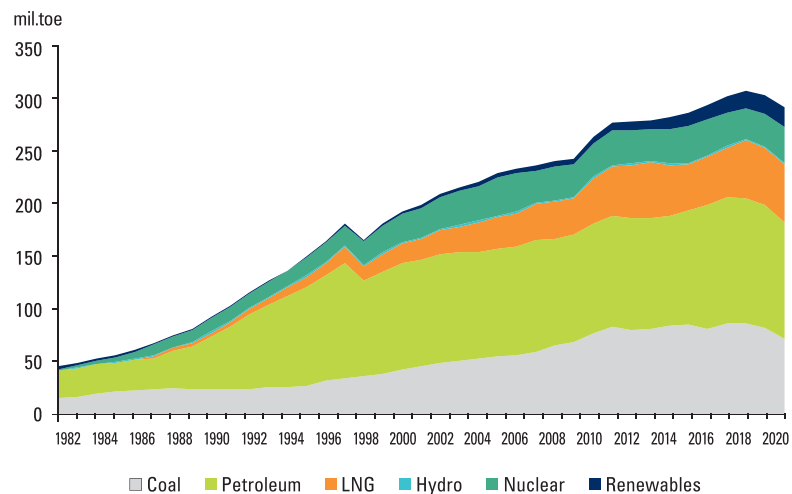
3-2. Energy Imports & Exports

Unit: 1,000 toe

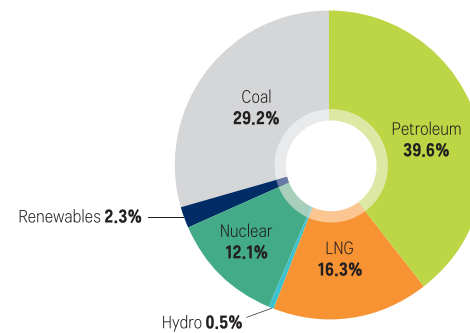
| | Imports | | | | Exports |
|------|---------|--------|---------|--------|--------------------|
| | Total | Coal | Oil | LNG | Petroleum Products |
| 1981 | 34,907 | 7,358 | 27,550 | - | 420 |
| 1982 | 35,302 | 7,341 | 27,961 | - | 946 |
| 1983 | 37,861 | 7,202 | 30,658 | - | 2,350 |
| 1984 | 41,226 | 8,593 | 32,633 | - | 3,480 |
| 1985 | 44,807 | 13,005 | 31,802 | - | 3,754 |
| 1986 | 47,749 | 13,593 | 34,003 | 153 | 3,894 |
| 1987 | 52,557 | 13,865 | 36,508 | 2,184 | 4,736 |
| 1988 | 60,501 | 16,087 | 41,736 | 2,678 | 4,460 |
| 1989 | 67,486 | 16,426 | 48,445 | 2,615 | 5,034 |
| 1990 | 76,040 | 15,721 | 57,345 | 2,974 | 3,997 |
| 1991 | 96,612 | 19,337 | 73,689 | 3,586 | 10,418 |
| 1992 | 114,946 | 19,762 | 90,732 | 4,453 | 13,769 |
| 1993 | 129,051 | 23,473 | 99,788 | 5,790 | 15,385 |
| 1994 | 140,427 | 25,863 | 106,857 | 7,707 | 13,791 |
| 1995 | 156,749 | 28,550 | 119,020 | 9,178 | 17,748 |
| 1996 | 174,277 | 30,314 | 131,489 | 12,473 | 22,690 |
| 1997 | 200,894 | 32,979 | 152,797 | 15,118 | 33,143 |
| 1998 | 191,456 | 33,847 | 143,829 | 13,780 | 42,232 |
| 1999 | 202,665 | 34,410 | 151,391 | 16,865 | 42,544 |
| 2000 | 215,687 | 40,559 | 156,177 | 18,951 | 43,758 |
| 2001 | 217,250 | 42,691 | 153,545 | 21,013 | 42,143 |
| 2002 | 216,801 | 44,990 | 149,101 | 22,711 | 33,914 |
| 2003 | 217,031 | 45,894 | 145,872 | 25,264 | 30,025 |
| 2004 | 227,497 | 50,139 | 148,558 | 28,799 | 33,841 |
| 2005 | 229,255 | 48,498 | 151,713 | 29,044 | 38,071 |
| 2006 | 239,683 | 49,854 | 157,041 | 32,788 | 41,810 |
| 2007 | 246,306 | 54,237 | 158,831 | 33,239 | 41,801 |
| 2008 | 254,887 | 61,665 | 157,786 | 35,436 | 47,586 |
| 2009 | 256,573 | 63,431 | 159,574 | 33,568 | 46,897 |
| 2010 | 279,145 | 72,576 | 164,184 | 42,384 | 48,365 |
| 2011 | 300,906 | 79,860 | 173,355 | 47,690 | 57,722 |
| 2012 | 303,396 | 77,546 | 178,667 | 47,184 | 61,687 |
| 2013 | 307,932 | 79,230 | 176,703 | 51,998 | 59,910 |
| 2014 | 308,559 | 80,460 | 179,712 | 48,388 | 62,593 |
| 2015 | 313,516 | 81,688 | 188,320 | 43,509 | 66,279 |
| 2016 | 321,918 | 81,311 | 196,984 | 43,623 | 67,840 |
| 2017 | 338,796 | 85,869 | 203,904 | 49,023 | 70,966 |
| 2018 | 354,524 | 86,393 | 210,647 | 57,484 | 74,066 |
| 2019 | 349,174 | 86,336 | 209,621 | 53,217 | 72,375 |
| 2020 | 325,367 | 75,687 | 197,463 | 52,217 | 65,208 |

Note : From 2007, figures are based on revised calorific value every 5 years.

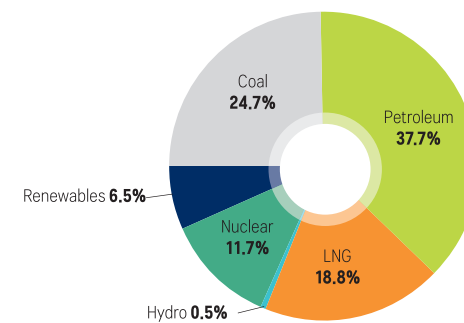
Primary Energy Supply



2010 264,053 Thou. toe



2020 292,076 Thou. toe



4. Primary Energy Supply

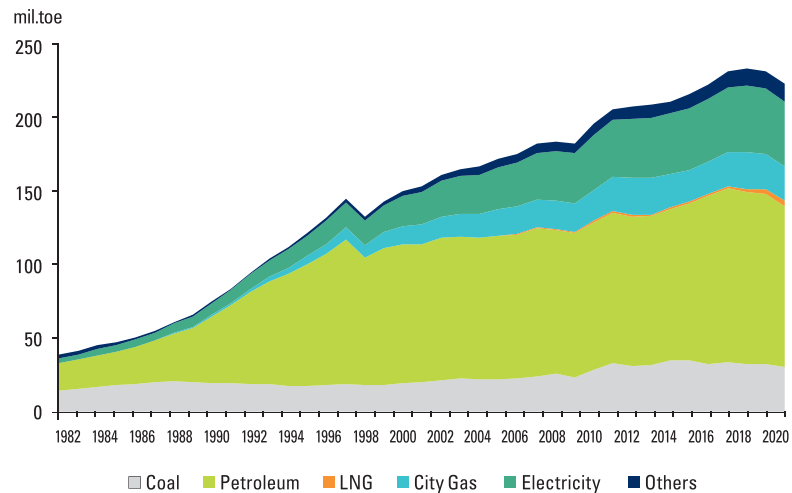
Unit: 1,000 toe

| | Total | Growth Rate(%) | Coal | | | Petroleum | |
|------|---------|----------------|-----------|------------|------------|-----------|------------|
| | | | Sub-Total | Anthracite | Bituminous | Sub-Total | Energy Use |
| 1981 | 45,718 | 4.1 | 15,244 | 10,338 | 4,906 | 26,580 | 23,110 |
| 1982 | 45,625 | -0.2 | 15,451 | 9,839 | 5,612 | 26,312 | 22,649 |
| 1983 | 49,420 | 8.3 | 16,491 | 10,133 | 6,358 | 27,629 | 23,250 |
| 1984 | 53,535 | 8.3 | 19,867 | 11,455 | 8,412 | 27,629 | 22,663 |
| 1985 | 56,296 | 5.2 | 22,022 | 12,322 | 9,700 | 27,142 | 21,836 |
| 1986 | 61,462 | 9.2 | 23,330 | 13,239 | 10,091 | 28,499 | 22,408 |
| 1987 | 67,878 | 10.4 | 23,639 | 12,935 | 10,704 | 29,653 | 22,958 |
| 1988 | 75,351 | 11.0 | 25,162 | 12,441 | 12,721 | 35,390 | 27,869 |
| 1989 | 81,660 | 8.4 | 24,493 | 10,984 | 13,509 | 40,524 | 32,506 |
| 1990 | 92,931 | 13.8 | 24,124 | 9,685 | 14,440 | 50,175 | 39,653 |
| 1991 | 103,294 | 11.2 | 24,206 | 8,065 | 16,141 | 59,627 | 45,773 |
| 1992 | 115,962 | 12.3 | 23,570 | 6,251 | 17,319 | 71,740 | 52,311 |
| 1993 | 126,836 | 9.4 | 25,840 | 5,016 | 20,824 | 78,495 | 57,139 |
| 1994 | 137,108 | 8.1 | 26,532 | 3,394 | 23,139 | 86,364 | 62,677 |
| 1995 | 149,927 | 9.3 | 27,495 | 2,794 | 24,701 | 94,042 | 68,946 |
| 1996 | 165,136 | 10.2 | 32,100 | 2,526 | 29,574 | 99,923 | 73,261 |
| 1997 | 181,058 | 9.6 | 34,927 | 2,118 | 32,810 | 109,372 | 74,141 |
| 1998 | 166,265 | -8.2 | 36,051 | 2,218 | 33,832 | 90,904 | 53,946 |
| 1999 | 181,651 | 9.3 | 38,157 | 2,426 | 35,731 | 97,556 | 59,007 |
| 2000 | 193,240 | 6.4 | 42,925 | 3,096 | 39,829 | 100,618 | 59,743 |
| 2001 | 198,865 | 2.9 | 45,724 | 3,680 | 42,044 | 100,827 | 59,049 |
| 2002 | 209,290 | 5.2 | 49,131 | 4,070 | 45,061 | 103,034 | 58,602 |
| 2003 | 215,772 | 3.1 | 51,124 | 4,562 | 46,563 | 103,073 | 57,605 |
| 2004 | 220,756 | 2.3 | 53,198 | 4,369 | 48,829 | 101,085 | 53,794 |
| 2005 | 229,667 | 4.0 | 54,795 | 4,770 | 50,025 | 102,197 | 53,415 |
| 2006 | 234,062 | 1.9 | 56,652 | 5,172 | 51,480 | 102,555 | 51,795 |
| 2007 | 236,486 | 1.0 | 59,653 | 5,580 | 54,073 | 105,718 | 50,728 |
| 2008 | 240,994 | 1.9 | 66,100 | 5,927 | 60,173 | 100,373 | 45,668 |
| 2009 | 243,500 | 1.0 | 68,595 | 5,687 | 62,908 | 102,534 | 45,569 |
| 2010 | 264,053 | 8.4 | 77,142 | 6,044 | 71,097 | 104,499 | 46,385 |
| 2011 | 276,997 | 4.9 | 83,687 | 6,827 | 76,860 | 105,459 | 44,263 |
| 2012 | 278,325 | 0.5 | 80,636 | 5,382 | 75,254 | 106,134 | 43,968 |
| 2013 | 279,623 | 0.5 | 81,544 | 5,500 | 76,044 | 105,515 | 43,171 |
| 2014 | 282,423 | 1.0 | 84,399 | 5,226 | 79,173 | 104,643 | 41,218 |
| 2015 | 286,921 | 1.6 | 85,401 | 5,593 | 79,808 | 109,090 | 44,501 |
| 2016 | 293,778 | 2.4 | 81,499 | 5,687 | 75,812 | 117,605 | 48,463 |
| 2017 | 302,490 | 3.0 | 86,177 | 4,524 | 81,653 | 119,824 | 47,684 |
| 2018 | 307,557 | 1.7 | 86,707 | 5,059 | 81,648 | 118,521 | 46,920 |
| 2019 | 303,092 | -1.5 | 82,147 | 4,426 | 77,720 | 117,314 | 45,789 |
| 2020 | 292,076 | -3.6 | 72,241 | 3,938 | 68,303 | 110,240 | 41,993 |

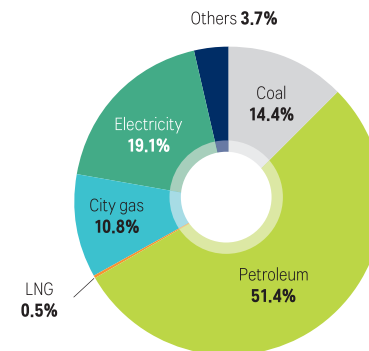
Note : From 2007, figures are based on revised calorific value every 5 years.

| Petroleum | | LNG | Hydro | Nuclear | Renewables | |
|-----------|----------------|--------|-------|---------|------------|------|
| LPG | Non-Energy Use | | | | | |
| 511 | 2,959 | - | 677 | 724 | 2,492 | 1981 |
| 750 | 2,913 | - | 501 | 944 | 2,417 | 1982 |
| 1,031 | 3,347 | - | 681 | 2,241 | 2,378 | 1983 |
| 1,262 | 3,703 | - | 600 | 2,948 | 2,492 | 1984 |
| 1,467 | 3,839 | - | 915 | 4,186 | 2,031 | 1985 |
| 1,799 | 4,292 | 71 | 1,005 | 7,078 | 1,480 | 1986 |
| 2,161 | 4,533 | 2,104 | 1,336 | 9,829 | 1,319 | 1987 |
| 2,629 | 4,892 | 2,718 | 892 | 10,025 | 1,164 | 1988 |
| 3,066 | 4,951 | 2,630 | 1,140 | 11,841 | 1,033 | 1989 |
| 3,601 | 6,921 | 3,023 | 1,590 | 13,222 | 797 | 1990 |
| 4,339 | 9,515 | 3,503 | 1,263 | 14,078 | 618 | 1991 |
| 5,441 | 13,988 | 4,581 | 1,216 | 14,133 | 722 | 1992 |
| 5,990 | 15,366 | 5,723 | 1,502 | 14,535 | 742 | 1993 |
| 6,398 | 17,289 | 7,618 | 1,025 | 14,663 | 906 | 1994 |
| 6,740 | 18,356 | 9,213 | 1,369 | 16,757 | 1,050 | 1995 |
| 6,874 | 19,787 | 12,172 | 1,300 | 18,481 | 1,161 | 1996 |
| 7,201 | 28,030 | 14,792 | 1,351 | 19,271 | 1,344 | 1997 |
| 6,877 | 30,081 | 13,838 | 1,525 | 22,422 | 1,526 | 1998 |
| 7,808 | 30,741 | 16,849 | 1,517 | 25,766 | 1,806 | 1999 |
| 8,644 | 32,231 | 18,924 | 1,402 | 27,241 | 2,130 | 2000 |
| 8,676 | 33,102 | 20,787 | 1,038 | 28,033 | 2,456 | 2001 |
| 9,398 | 35,035 | 23,096 | 1,327 | 29,776 | 2,925 | 2002 |
| 9,140 | 36,327 | 24,194 | 1,722 | 32,418 | 3,241 | 2003 |
| 9,186 | 38,105 | 28,351 | 1,465 | 32,679 | 3,977 | 2004 |
| 9,484 | 39,299 | 30,722 | 1,297 | 36,695 | 3,961 | 2005 |
| 9,689 | 41,071 | 32,004 | 1,305 | 37,187 | 4,358 | 2006 |
| 10,127 | 44,863 | 34,471 | 1,084 | 30,731 | 4,828 | 2007 |
| 10,647 | 44,059 | 35,671 | 1,196 | 32,456 | 5,198 | 2008 |
| 11,079 | 45,886 | 33,908 | 1,213 | 31,771 | 5,480 | 2009 |
| 10,924 | 47,190 | 43,008 | 1,391 | 31,948 | 6,064 | 2010 |
| 10,303 | 50,893 | 46,284 | 1,684 | 33,265 | 6,617 | 2011 |
| 9,912 | 52,254 | 50,185 | 1,615 | 31,719 | 8,036 | 2012 |
| 9,701 | 52,643 | 52,523 | 1,771 | 29,283 | 8,987 | 2013 |
| 9,343 | 54,083 | 47,773 | 1,650 | 33,002 | 10,956 | 2014 |
| 9,303 | 55,287 | 43,603 | 1,223 | 34,765 | 12,839 | 2015 |
| 11,166 | 57,977 | 45,518 | 1,400 | 34,181 | 13,575 | 2016 |
| 10,729 | 61,411 | 47,536 | 1,490 | 31,615 | 15,848 | 2017 |
| 11,160 | 60,442 | 55,224 | 1,549 | 28,437 | 17,119 | 2018 |
| 12,386 | 59,140 | 53,534 | 1,331 | 31,079 | 17,688 | 2019 |
| 12,251 | 55,997 | 54,970 | 1,523 | 34,119 | 18,983 | 2020 |

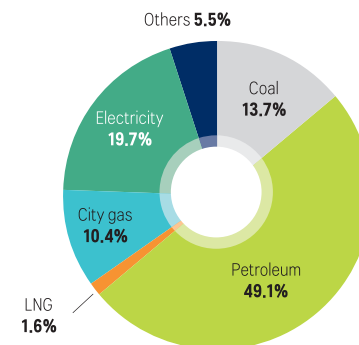
○ Final Energy Consumption



○ 2010 195,401 Thou. toe



○ 2020 222,563 Thou. toe



5. Final Energy Consumption

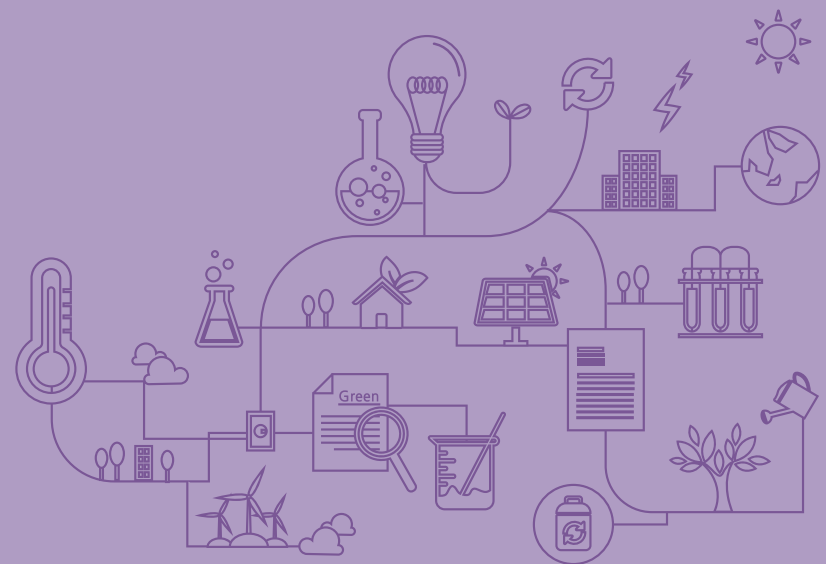
Unit: 1,000 toe

| | Total | Growth Rate(%) | Coal | | | Petroleum | |
|------|---------|----------------|-----------|------------|------------|-----------|------------|
| | | | Sub-Total | Anthracite | Bituminous | Sub-Total | Energy Use |
| 1981 | 38,952 | 3.6 | 14,478 | 9,571 | 4,906 | 18,912 | 15,471 |
| 1982 | 38,711 | -0.6 | 14,548 | 8,937 | 5,612 | 18,460 | 14,835 |
| 1983 | 41,337 | 6.8 | 15,336 | 9,338 | 5,997 | 19,921 | 15,589 |
| 1984 | 44,998 | 8.9 | 16,806 | 10,600 | 6,206 | 21,602 | 16,690 |
| 1985 | 46,998 | 4.4 | 17,940 | 11,632 | 6,308 | 22,580 | 17,360 |
| 1986 | 50,524 | 7.5 | 18,887 | 12,336 | 6,552 | 25,181 | 19,211 |
| 1987 | 55,197 | 9.2 | 19,778 | 12,006 | 7,772 | 28,372 | 21,767 |
| 1988 | 61,033 | 10.6 | 20,565 | 11,527 | 9,039 | 32,511 | 25,083 |
| 1989 | 65,875 | 7.9 | 20,116 | 10,057 | 10,059 | 36,967 | 29,106 |
| 1990 | 74,701 | 13.4 | 19,454 | 8,792 | 10,662 | 45,252 | 34,991 |
| 1991 | 83,336 | 11.6 | 19,447 | 7,119 | 12,328 | 52,675 | 39,266 |
| 1992 | 94,403 | 13.3 | 18,469 | 5,363 | 13,105 | 62,939 | 44,139 |
| 1993 | 103,850 | 10.0 | 18,860 | 3,981 | 14,879 | 69,876 | 49,369 |
| 1994 | 111,787 | 7.6 | 17,423 | 2,401 | 15,022 | 76,339 | 53,637 |
| 1995 | 121,400 | 8.6 | 17,327 | 1,702 | 15,625 | 82,747 | 58,898 |
| 1996 | 131,573 | 8.4 | 18,406 | 1,385 | 17,021 | 88,566 | 63,046 |
| 1997 | 144,541 | 9.9 | 18,891 | 1,072 | 17,819 | 98,036 | 63,564 |
| 1998 | 132,177 | -8.6 | 17,993 | 1,111 | 16,882 | 86,712 | 50,159 |
| 1999 | 143,027 | 8.2 | 18,325 | 1,271 | 17,055 | 92,928 | 54,817 |
| 2000 | 149,958 | 4.8 | 19,661 | 1,813 | 17,848 | 93,839 | 53,275 |
| 2001 | 153,103 | 2.1 | 20,357 | 2,470 | 17,887 | 93,617 | 52,021 |
| 2002 | 160,876 | 5.1 | 21,485 | 2,919 | 18,566 | 96,635 | 52,366 |
| 2003 | 164,550 | 2.3 | 22,428 | 3,342 | 19,086 | 96,669 | 51,292 |
| 2004 | 166,452 | 1.2 | 22,100 | 3,309 | 18,791 | 95,942 | 48,739 |
| 2005 | 171,543 | 3.1 | 22,154 | 3,711 | 18,443 | 97,076 | 48,430 |
| 2006 | 174,873 | 1.9 | 22,461 | 4,112 | 18,349 | 97,665 | 46,990 |
| 2007 | 182,015 | 4.1 | 24,056 | 4,385 | 19,671 | 100,720 | 45,816 |
| 2008 | 183,054 | 0.6 | 25,879 | 4,636 | 21,243 | 97,316 | 42,833 |
| 2009 | 182,080 | -0.5 | 23,015 | 4,183 | 18,832 | 98,516 | 41,812 |
| 2010 | 195,401 | 7.3 | 28,189 | 4,629 | 23,560 | 100,519 | 42,913 |
| 2011 | 205,239 | 5.0 | 32,860 | 5,844 | 27,017 | 102,294 | 41,766 |
| 2012 | 206,968 | 0.8 | 31,017 | 4,511 | 26,507 | 101,683 | 40,279 |
| 2013 | 208,362 | 0.7 | 31,603 | 4,649 | 26,954 | 101,522 | 39,424 |
| 2014 | 210,448 | 1.0 | 35,198 | 4,212 | 30,985 | 102,664 | 39,423 |
| 2015 | 215,389 | 2.3 | 34,849 | 4,539 | 30,310 | 106,854 | 42,488 |
| 2016 | 221,936 | 3.0 | 32,342 | 4,431 | 27,911 | 114,264 | 45,372 |
| 2017 | 231,023 | 4.1 | 33,360 | 3,986 | 29,374 | 118,289 | 46,364 |
| 2018 | 233,368 | 1.0 | 32,480 | 4,565 | 27,915 | 116,831 | 45,496 |
| 2019 | 231,353 | -0.9 | 32,057 | 3,850 | 28,207 | 116,125 | 44,847 |
| 2020 | 222,563 | -3.8 | 30,457 | 3,459 | 26,998 | 109,344 | 41,334 |

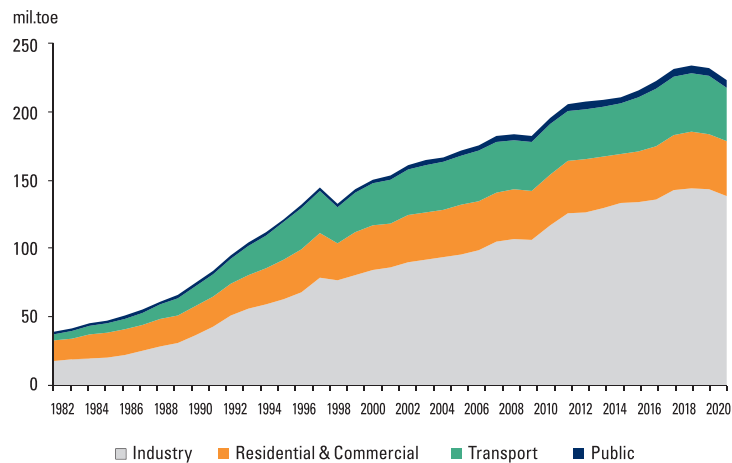
Note : From 2007, figures are based on revised calorific value every 5 years.

| Petroleum | | LNG | City Gas | Electricity | Others | |
|-----------|----------------|-------|----------|-------------|--------|------|
| LPG | Non-Energy Use | | | | | |
| 500 | 2,942 | - | 23 | 3,046 | 2,492 | 1981 |
| 735 | 2,890 | - | 28 | 3,258 | 2,417 | 1982 |
| 1,010 | 3,322 | - | 37 | 3,665 | 2,378 | 1983 |
| 1,242 | 3,670 | - | 52 | 4,046 | 2,492 | 1984 |
| 1,424 | 3,795 | - | 84 | 4,363 | 2,031 | 1985 |
| 1,736 | 4,235 | - | 132 | 4,843 | 1,480 | 1986 |
| 2,110 | 4,495 | - | 199 | 5,519 | 1,329 | 1987 |
| 2,561 | 4,866 | - | 339 | 6,391 | 1,226 | 1988 |
| 2,947 | 4,914 | - | 619 | 7,069 | 1,104 | 1989 |
| 3,368 | 6,893 | - | 1,011 | 8,111 | 872 | 1990 |
| 3,894 | 9,515 | - | 1,540 | 8,976 | 698 | 1991 |
| 4,812 | 13,988 | - | 2,219 | 9,911 | 865 | 1992 |
| 5,141 | 15,366 | - | 3,027 | 10,985 | 1,102 | 1993 |
| 5,414 | 17,289 | - | 4,057 | 12,602 | 1,366 | 1994 |
| 5,493 | 18,356 | - | 5,593 | 14,041 | 1,691 | 1995 |
| 5,733 | 19,787 | - | 6,937 | 15,692 | 1,971 | 1996 |
| 6,442 | 28,030 | - | 8,093 | 17,267 | 2,253 | 1997 |
| 6,472 | 30,081 | - | 8,425 | 16,638 | 2,408 | 1998 |
| 7,371 | 30,741 | - | 10,513 | 18,422 | 2,839 | 1999 |
| 8,333 | 32,231 | 0 | 12,561 | 20,600 | 3,297 | 2000 |
| 8,493 | 33,102 | - | 13,290 | 22,165 | 3,674 | 2001 |
| 9,235 | 35,034 | - | 14,567 | 23,947 | 4,242 | 2002 |
| 9,050 | 36,327 | - | 15,470 | 25,250 | 4,733 | 2003 |
| 9,099 | 38,104 | - | 16,193 | 26,840 | 5,377 | 2004 |
| 9,348 | 39,298 | 366 | 17,811 | 28,588 | 5,548 | 2005 |
| 9,608 | 41,067 | 738 | 18,379 | 29,990 | 5,641 | 2006 |
| 10,052 | 44,851 | 518 | 18,955 | 31,700 | 6,067 | 2007 |
| 10,432 | 44,050 | 564 | 19,765 | 33,116 | 6,415 | 2008 |
| 10,840 | 45,864 | 589 | 19,459 | 33,925 | 6,576 | 2009 |
| 10,448 | 47,158 | 989 | 21,081 | 37,338 | 7,285 | 2010 |
| 9,670 | 50,858 | 1,252 | 22,871 | 39,136 | 6,826 | 2011 |
| 9,194 | 52,209 | 1,156 | 24,728 | 40,127 | 8,258 | 2012 |
| 9,536 | 52,563 | 813 | 24,878 | 40,837 | 8,709 | 2013 |
| 9,271 | 53,971 | 769 | 23,041 | 41,073 | 7,703 | 2014 |
| 9,214 | 55,151 | 851 | 21,678 | 41,594 | 9,562 | 2015 |
| 11,059 | 57,833 | 1,044 | 22,186 | 42,745 | 9,356 | 2016 |
| 10,579 | 61,346 | 1,370 | 23,258 | 43,666 | 11,079 | 2017 |
| 10,945 | 60,389 | 2,038 | 24,979 | 45,249 | 11,792 | 2018 |
| 12,188 | 59,091 | 2,909 | 23,943 | 44,763 | 11,556 | 2019 |
| 12,069 | 55,941 | 3,602 | 23,100 | 43,797 | 12,263 | 2020 |

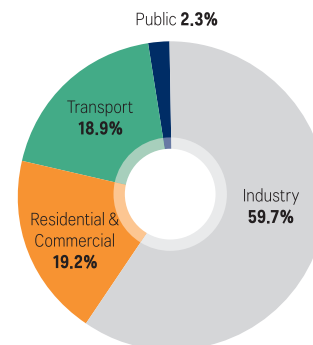
6. Final Energy Consumption by Sector
7. Final Energy Consumption by Source
8. Energy Balance
9. Energy Imports



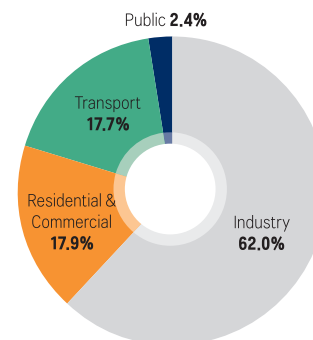
Final Energy Consumption by Sector



2010 195,401 Thou. toe



2020 222,563 Thou. toe



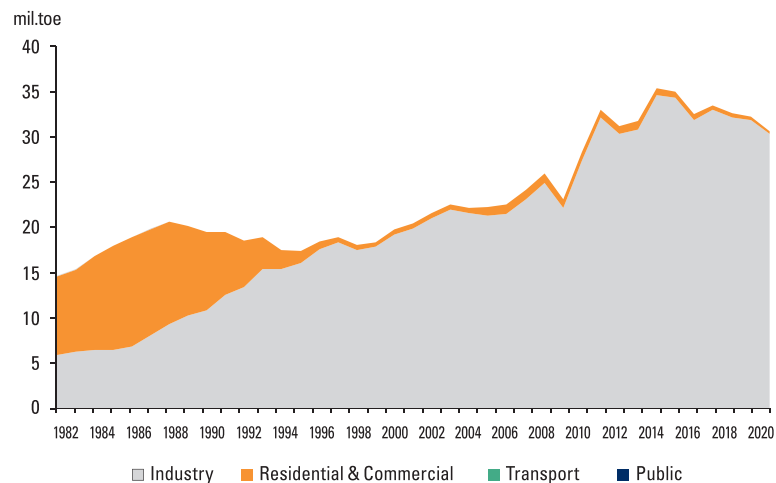
6. Final Energy Consumption by Sector

| | Final Energy Consumption(1,000 toe) | | | | |
|------|-------------------------------------|----------|--------------------------|-----------|--------|
| | Total | Industry | Residential & Commercial | Transport | Public |
| 1981 | 38,952 | 17,506 | 15,836 | 3,721 | 1,888 |
| 1982 | 38,711 | 17,354 | 15,197 | 4,216 | 1,945 |
| 1983 | 41,337 | 18,346 | 15,438 | 5,434 | 2,118 |
| 1984 | 44,998 | 19,508 | 17,342 | 6,007 | 2,141 |
| 1985 | 46,998 | 20,015 | 18,180 | 6,707 | 2,096 |
| 1986 | 50,524 | 21,865 | 18,605 | 7,699 | 2,355 |
| 1987 | 55,197 | 24,648 | 18,893 | 9,275 | 2,381 |
| 1988 | 61,033 | 28,200 | 19,700 | 10,747 | 2,385 |
| 1989 | 65,875 | 30,871 | 20,080 | 12,269 | 2,655 |
| 1990 | 74,701 | 36,144 | 21,572 | 14,173 | 2,812 |
| 1991 | 83,336 | 42,701 | 21,666 | 16,156 | 2,813 |
| 1992 | 94,403 | 50,818 | 22,807 | 18,531 | 2,247 |
| 1993 | 103,850 | 55,563 | 24,872 | 21,119 | 2,296 |
| 1994 | 111,787 | 58,741 | 26,728 | 23,857 | 2,462 |
| 1995 | 121,400 | 62,707 | 29,131 | 27,146 | 2,415 |
| 1996 | 131,573 | 67,751 | 31,374 | 29,789 | 2,659 |
| 1997 | 144,541 | 78,322 | 32,768 | 30,736 | 2,715 |
| 1998 | 132,177 | 76,353 | 27,156 | 26,178 | 2,489 |
| 1999 | 143,027 | 80,114 | 31,640 | 28,625 | 2,649 |
| 2000 | 149,958 | 84,237 | 32,153 | 30,945 | 2,623 |
| 2001 | 153,103 | 85,562 | 32,639 | 31,910 | 2,991 |
| 2002 | 160,876 | 89,755 | 34,160 | 33,765 | 3,196 |
| 2003 | 164,550 | 91,400 | 34,786 | 34,634 | 3,730 |
| 2004 | 166,452 | 93,650 | 34,566 | 34,635 | 3,600 |
| 2005 | 171,543 | 95,578 | 36,336 | 35,534 | 4,095 |
| 2006 | 174,873 | 98,577 | 35,921 | 36,522 | 3,853 |
| 2007 | 182,015 | 104,866 | 35,941 | 37,059 | 4,150 |
| 2008 | 183,054 | 106,902 | 36,286 | 35,756 | 4,110 |
| 2009 | 182,080 | 106,053 | 35,829 | 35,892 | 4,305 |
| 2010 | 195,401 | 116,590 | 37,425 | 36,903 | 4,482 |
| 2011 | 205,239 | 125,332 | 38,265 | 36,842 | 4,800 |
| 2012 | 206,968 | 126,368 | 38,603 | 36,783 | 5,214 |
| 2013 | 208,362 | 128,920 | 37,765 | 36,961 | 4,716 |
| 2014 | 210,448 | 132,897 | 35,627 | 37,241 | 4,683 |
| 2015 | 215,389 | 133,416 | 37,021 | 39,851 | 5,101 |
| 2016 | 221,936 | 135,698 | 38,721 | 42,271 | 5,246 |
| 2017 | 231,023 | 142,519 | 39,860 | 43,183 | 5,461 |
| 2018 | 233,368 | 143,498 | 41,334 | 42,969 | 5,567 |
| 2019 | 231,353 | 142,903 | 40,056 | 42,996 | 5,399 |
| 2020 | 222,563 | 137,964 | 39,912 | 39,436 | 5,251 |

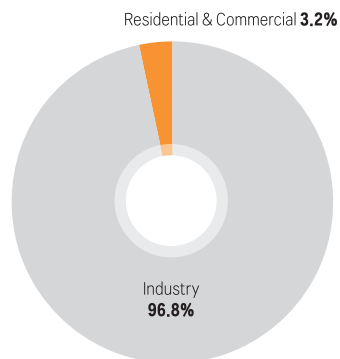
Note : From 2007, figures are based on revised calorific value every 5 years.

| Final Energy Consumption(%) | | | | | |
|-----------------------------|----------|--------------------------|-----------|--------|------|
| Total | Industry | Residential & Commercial | Transport | Public | |
| 100.0 | 44.9 | 40.7 | 9.6 | 4.8 | 1981 |
| 100.0 | 44.8 | 39.3 | 10.9 | 5.0 | 1982 |
| 100.0 | 44.4 | 37.3 | 13.1 | 5.1 | 1983 |
| 100.0 | 43.4 | 38.5 | 13.3 | 4.8 | 1984 |
| 100.0 | 42.6 | 38.7 | 14.3 | 4.5 | 1985 |
| 100.0 | 43.3 | 36.8 | 15.2 | 4.7 | 1986 |
| 100.0 | 44.7 | 34.2 | 16.8 | 4.3 | 1987 |
| 100.0 | 46.2 | 32.3 | 17.6 | 3.9 | 1988 |
| 100.0 | 46.9 | 30.5 | 18.6 | 4.0 | 1989 |
| 100.0 | 48.1 | 29.3 | 18.9 | 3.7 | 1990 |
| 100.0 | 51.2 | 26.2 | 19.3 | 3.4 | 1991 |
| 100.0 | 53.7 | 24.3 | 19.6 | 2.4 | 1992 |
| 100.0 | 53.4 | 24.1 | 20.3 | 2.2 | 1993 |
| 100.0 | 53.4 | 23.1 | 21.3 | 2.2 | 1994 |
| 100.0 | 51.7 | 24.0 | 22.4 | 2.0 | 1995 |
| 100.0 | 51.4 | 24.0 | 22.6 | 2.0 | 1996 |
| 100.0 | 53.9 | 22.9 | 21.3 | 1.9 | 1997 |
| 100.0 | 57.5 | 20.8 | 19.8 | 1.9 | 1998 |
| 100.0 | 55.8 | 22.3 | 20.0 | 1.9 | 1999 |
| 100.0 | 56.0 | 21.6 | 20.6 | 1.8 | 2000 |
| 100.0 | 55.7 | 21.5 | 20.9 | 2.0 | 2001 |
| 100.0 | 55.6 | 21.4 | 21.0 | 2.0 | 2002 |
| 100.0 | 55.4 | 21.3 | 21.1 | 2.2 | 2003 |
| 100.0 | 56.0 | 21.0 | 20.9 | 2.2 | 2004 |
| 100.0 | 55.7 | 21.2 | 20.7 | 2.4 | 2005 |
| 100.0 | 56.4 | 20.5 | 20.9 | 2.2 | 2006 |
| 100.0 | 57.6 | 19.7 | 20.4 | 2.3 | 2007 |
| 100.0 | 58.4 | 19.8 | 19.5 | 2.2 | 2008 |
| 100.0 | 58.2 | 19.7 | 19.7 | 2.4 | 2009 |
| 100.0 | 59.7 | 19.2 | 18.9 | 2.3 | 2010 |
| 100.0 | 61.1 | 18.6 | 18.0 | 2.3 | 2011 |
| 100.0 | 61.1 | 18.7 | 17.8 | 2.5 | 2012 |
| 100.0 | 61.9 | 18.1 | 17.7 | 2.3 | 2013 |
| 100.0 | 63.1 | 16.9 | 17.7 | 2.2 | 2014 |
| 100.0 | 61.9 | 17.2 | 18.5 | 2.4 | 2015 |
| 100.0 | 61.1 | 17.4 | 19.0 | 2.4 | 2016 |
| 100.0 | 61.7 | 17.3 | 18.7 | 2.4 | 2017 |
| 100.0 | 61.5 | 17.7 | 18.4 | 2.4 | 2018 |
| 100.0 | 61.8 | 17.3 | 18.6 | 2.3 | 2019 |
| 100.0 | 62.0 | 17.9 | 17.7 | 2.4 | 2020 |

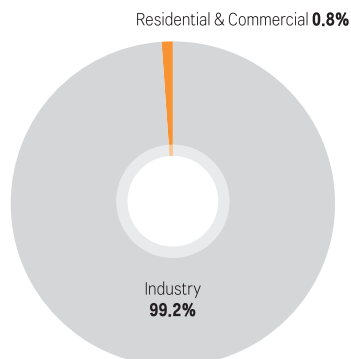
Coal



2010 28,189 Thou. toe



2020 30,457 Thou. toe



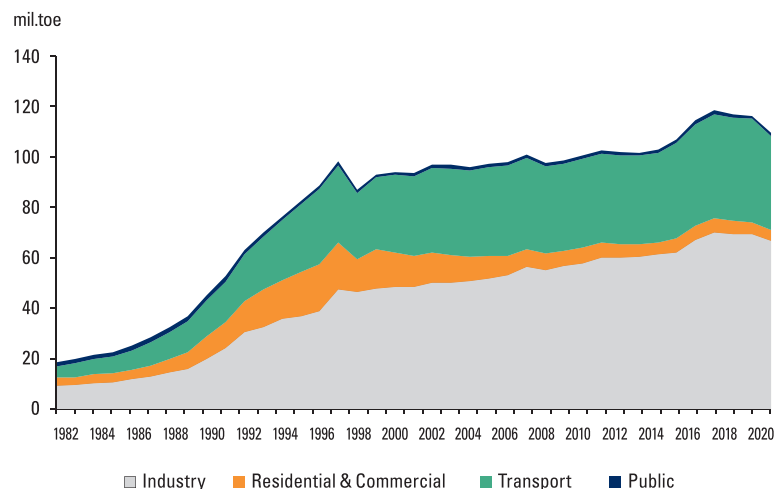
7-1. Coal

Unit : 1,000 toe

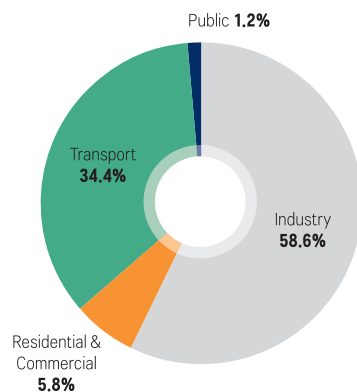
| | Final Energy Consumption | % | Coal | | | | |
|------|--------------------------|------|----------|--------------------------|-----------|--------|----|
| | | | Industry | Residential & Commercial | Transport | Public | |
| 1981 | 38,952 | 37.2 | 14,478 | 5,276 | 9,105 | 2 | 95 |
| 1982 | 38,711 | 37.6 | 14,548 | 5,844 | 8,629 | 2 | 74 |
| 1983 | 41,337 | 37.1 | 15,336 | 6,240 | 9,040 | - | 55 |
| 1984 | 44,998 | 37.3 | 16,806 | 6,412 | 10,323 | - | 71 |
| 1985 | 46,998 | 38.2 | 17,940 | 6,490 | 11,399 | - | 50 |
| 1986 | 50,524 | 37.4 | 18,887 | 6,800 | 12,033 | - | 54 |
| 1987 | 55,197 | 35.8 | 19,778 | 8,015 | 11,721 | - | 42 |
| 1988 | 61,033 | 33.7 | 20,565 | 9,315 | 11,205 | - | 45 |
| 1989 | 65,875 | 30.5 | 20,116 | 10,263 | 9,811 | - | 42 |
| 1990 | 74,701 | 26.0 | 19,454 | 10,806 | 8,627 | - | 21 |
| 1991 | 83,336 | 23.3 | 19,447 | 12,532 | 6,916 | - | - |
| 1992 | 94,403 | 19.6 | 18,469 | 13,381 | 5,087 | - | - |
| 1993 | 103,850 | 18.2 | 18,860 | 15,299 | 3,561 | - | - |
| 1994 | 111,787 | 15.6 | 17,423 | 15,305 | 2,118 | - | - |
| 1995 | 121,400 | 14.3 | 17,327 | 15,972 | 1,355 | - | - |
| 1996 | 131,573 | 14.0 | 18,406 | 17,523 | 883 | - | - |
| 1997 | 144,541 | 13.1 | 18,891 | 18,266 | 625 | - | - |
| 1998 | 132,177 | 13.6 | 17,993 | 17,440 | 553 | - | - |
| 1999 | 143,027 | 12.8 | 18,325 | 17,822 | 503 | - | - |
| 2000 | 149,958 | 13.1 | 19,661 | 19,125 | 536 | - | - |
| 2001 | 153,103 | 13.3 | 20,357 | 19,804 | 553 | - | - |
| 2002 | 160,876 | 13.4 | 21,485 | 20,956 | 529 | - | - |
| 2003 | 164,550 | 13.6 | 22,428 | 21,890 | 539 | - | - |
| 2004 | 166,452 | 13.3 | 22,100 | 21,475 | 626 | - | - |
| 2005 | 171,543 | 12.9 | 22,154 | 21,242 | 912 | - | - |
| 2006 | 174,873 | 12.8 | 22,461 | 21,398 | 1,063 | - | - |
| 2007 | 182,015 | 13.2 | 24,056 | 23,043 | 1,014 | - | - |
| 2008 | 183,054 | 14.1 | 25,879 | 24,791 | 1,088 | - | - |
| 2009 | 182,080 | 12.6 | 23,015 | 22,075 | 940 | - | - |
| 2010 | 195,401 | 14.4 | 28,189 | 27,288 | 901 | - | - |
| 2011 | 205,239 | 16.0 | 32,860 | 31,989 | 871 | - | - |
| 2012 | 206,968 | 15.0 | 31,017 | 30,185 | 832 | - | - |
| 2013 | 208,362 | 15.2 | 31,603 | 30,730 | 872 | - | - |
| 2014 | 210,448 | 16.7 | 35,198 | 34,452 | 745 | - | - |
| 2015 | 215,389 | 16.2 | 34,849 | 34,177 | 672 | - | - |
| 2016 | 221,936 | 14.6 | 32,342 | 31,770 | 571 | - | - |
| 2017 | 231,023 | 14.4 | 33,360 | 32,847 | 513 | - | - |
| 2018 | 233,368 | 13.9 | 32,480 | 32,048 | 432 | - | - |
| 2019 | 231,353 | 13.9 | 32,057 | 31,752 | 306 | - | - |
| 2020 | 222,563 | 13.7 | 30,457 | 30,216 | 242 | - | - |

Note : From 2007, figures are based on revised calorific value every 5 years.

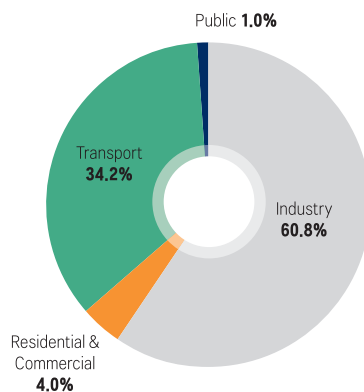
Petroleum



2010 100,519 Thou. toe



2020 109,344 Thou. toe



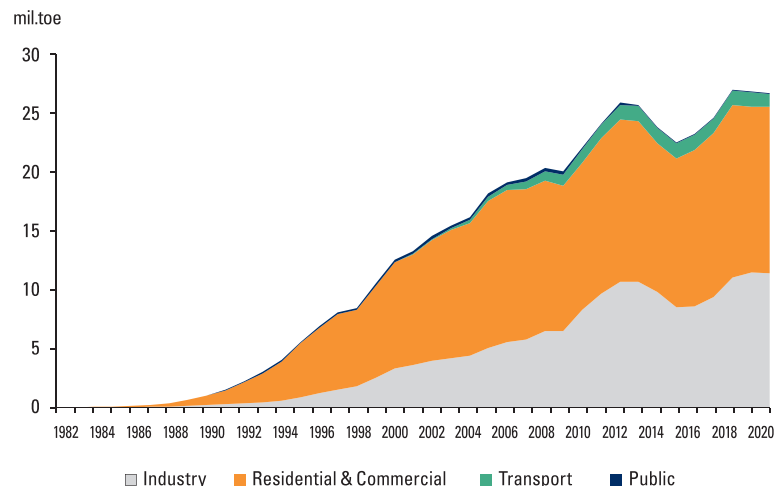
7-2. Petroleum

Unit : 1,000 toe

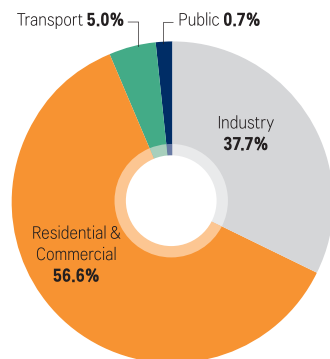
| | Final Energy Consumption | % | Petroleum | Industry | Residential & Commercial | Transport | Public |
|------|--------------------------|------|-----------|----------|--------------------------|-----------|--------|
| 1981 | 38,952 | 48.6 | 18,912 | 10,141 | 3,525 | 3,680 | 1,567 |
| 1982 | 38,711 | 47.7 | 18,460 | 9,322 | 3,344 | 4,173 | 1,620 |
| 1983 | 41,337 | 48.2 | 19,921 | 9,671 | 3,073 | 5,390 | 1,787 |
| 1984 | 44,998 | 48.0 | 21,602 | 10,444 | 3,438 | 5,955 | 1,765 |
| 1985 | 46,998 | 48.0 | 22,580 | 10,697 | 3,525 | 6,645 | 1,712 |
| 1986 | 50,524 | 49.8 | 25,181 | 11,857 | 3,747 | 7,624 | 1,954 |
| 1987 | 55,197 | 51.4 | 28,372 | 12,915 | 4,284 | 9,201 | 1,972 |
| 1988 | 61,033 | 53.3 | 32,511 | 14,600 | 5,331 | 10,667 | 1,913 |
| 1989 | 65,875 | 56.1 | 36,967 | 15,936 | 6,694 | 12,187 | 2,151 |
| 1990 | 74,701 | 60.6 | 45,252 | 20,014 | 8,876 | 14,086 | 2,276 |
| 1991 | 83,336 | 63.2 | 52,675 | 24,251 | 10,161 | 16,062 | 2,201 |
| 1992 | 94,403 | 66.7 | 62,939 | 30,514 | 12,405 | 18,430 | 1,590 |
| 1993 | 103,850 | 67.3 | 69,876 | 32,654 | 14,669 | 21,011 | 1,541 |
| 1994 | 111,787 | 68.3 | 76,339 | 35,906 | 15,183 | 23,732 | 1,518 |
| 1995 | 121,400 | 68.1 | 82,747 | 36,843 | 17,472 | 27,008 | 1,424 |
| 1996 | 131,573 | 67.3 | 88,566 | 38,940 | 18,452 | 29,644 | 1,530 |
| 1997 | 144,541 | 67.8 | 98,036 | 47,429 | 18,570 | 30,584 | 1,453 |
| 1998 | 132,177 | 65.6 | 86,712 | 46,456 | 12,999 | 26,042 | 1,215 |
| 1999 | 143,027 | 65.0 | 92,928 | 47,800 | 15,382 | 28,476 | 1,270 |
| 2000 | 149,958 | 62.6 | 93,839 | 48,522 | 13,407 | 30,770 | 1,140 |
| 2001 | 153,103 | 61.1 | 93,617 | 48,254 | 12,327 | 31,708 | 1,328 |
| 2002 | 160,876 | 60.1 | 96,635 | 50,032 | 11,893 | 33,490 | 1,220 |
| 2003 | 164,550 | 58.7 | 96,669 | 49,898 | 11,073 | 34,288 | 1,411 |
| 2004 | 166,452 | 57.6 | 95,942 | 50,839 | 9,578 | 34,178 | 1,347 |
| 2005 | 171,543 | 56.6 | 97,076 | 51,746 | 8,955 | 34,958 | 1,417 |
| 2006 | 174,873 | 55.8 | 97,665 | 53,114 | 7,496 | 35,776 | 1,279 |
| 2007 | 182,015 | 55.3 | 100,720 | 56,364 | 6,942 | 36,139 | 1,274 |
| 2008 | 183,054 | 53.2 | 97,316 | 54,964 | 6,569 | 34,606 | 1,176 |
| 2009 | 182,080 | 54.1 | 98,516 | 56,616 | 6,145 | 34,491 | 1,264 |
| 2010 | 195,401 | 51.4 | 100,519 | 57,576 | 6,397 | 35,246 | 1,299 |
| 2011 | 205,239 | 49.8 | 102,294 | 59,977 | 5,937 | 35,139 | 1,241 |
| 2012 | 206,968 | 49.1 | 101,683 | 60,073 | 5,371 | 34,982 | 1,258 |
| 2013 | 208,362 | 48.7 | 101,522 | 60,369 | 4,999 | 34,928 | 1,227 |
| 2014 | 210,448 | 48.8 | 102,664 | 61,343 | 4,707 | 35,308 | 1,306 |
| 2015 | 215,389 | 49.6 | 106,854 | 62,156 | 5,320 | 37,928 | 1,450 |
| 2016 | 221,936 | 51.5 | 114,264 | 66,820 | 5,684 | 40,328 | 1,432 |
| 2017 | 231,023 | 51.1 | 118,289 | 69,871 | 5,693 | 41,255 | 1,470 |
| 2018 | 233,368 | 50.1 | 116,831 | 69,294 | 5,325 | 40,782 | 1,429 |
| 2019 | 231,353 | 50.2 | 116,125 | 69,216 | 4,824 | 40,809 | 1,276 |
| 2020 | 222,563 | 50.2 | 109,344 | 66,483 | 4,354 | 37,376 | 1,130 |

Note : From 2007, figures are based on revised calorific value every 5 years.

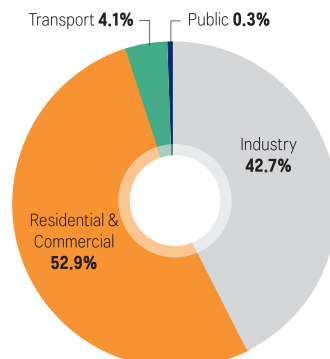
LNG & City Gas



2010 22,070 Thou. toe



2020 26,702 Thou. toe



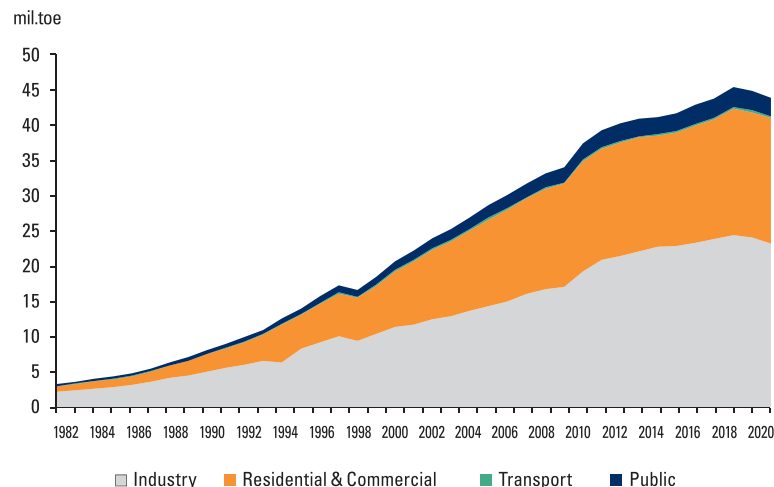
7-3. LNG & City Gas

Unit : 1,000 toe

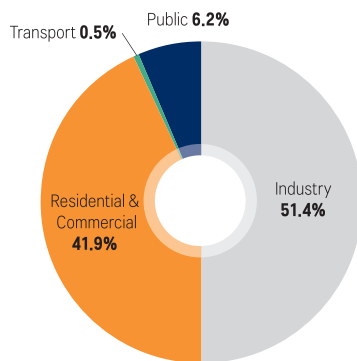
| | Final Energy Consumption | % | LNG & City Gas | Industry | Residential & Commercial | Transport | Public |
|------|--------------------------|------|----------------|----------|--------------------------|-----------|--------|
| 1981 | 38,952 | 0.1 | 23 | - | 23 | - | - |
| 1982 | 38,711 | 0.1 | 28 | - | 28 | - | - |
| 1983 | 41,337 | 0.1 | 37 | - | 37 | - | - |
| 1984 | 44,998 | 0.1 | 52 | 1 | 51 | - | - |
| 1985 | 46,998 | 0.2 | 84 | 15 | 69 | - | - |
| 1986 | 50,524 | 0.3 | 132 | 40 | 92 | - | - |
| 1987 | 55,197 | 0.4 | 199 | 75 | 124 | - | - |
| 1988 | 61,033 | 0.6 | 339 | 110 | 229 | - | - |
| 1989 | 65,875 | 0.9 | 619 | 158 | 461 | - | - |
| 1990 | 74,701 | 1.4 | 1,011 | 235 | 777 | - | - |
| 1991 | 83,336 | 1.8 | 1,540 | 313 | 1,160 | - | 68 |
| 1992 | 94,403 | 2.4 | 2,219 | 377 | 1,760 | - | 82 |
| 1993 | 103,850 | 2.9 | 3,027 | 460 | 2,450 | - | 117 |
| 1994 | 111,787 | 3.6 | 4,057 | 600 | 3,313 | - | 143 |
| 1995 | 121,400 | 4.6 | 5,593 | 863 | 4,606 | - | 125 |
| 1996 | 131,573 | 5.3 | 6,937 | 1,196 | 5,588 | - | 153 |
| 1997 | 144,541 | 5.6 | 8,093 | 1,496 | 6,436 | - | 161 |
| 1998 | 132,177 | 6.4 | 8,425 | 1,812 | 6,454 | - | 160 |
| 1999 | 143,027 | 7.4 | 10,513 | 2,530 | 7,784 | - | 199 |
| 2000 | 149,958 | 8.4 | 12,561 | 3,308 | 9,024 | - | 229 |
| 2001 | 153,103 | 8.7 | 13,290 | 3,612 | 9,412 | 7 | 259 |
| 2002 | 160,876 | 9.1 | 14,567 | 3,984 | 10,241 | 80 | 262 |
| 2003 | 164,550 | 9.4 | 15,470 | 4,177 | 10,889 | 146 | 259 |
| 2004 | 166,452 | 9.7 | 16,193 | 4,382 | 11,293 | 239 | 279 |
| 2005 | 171,543 | 10.6 | 18,177 | 5,022 | 12,503 | 339 | 313 |
| 2006 | 174,873 | 10.9 | 19,117 | 5,585 | 12,858 | 475 | 199 |
| 2007 | 182,015 | 10.7 | 19,472 | 5,742 | 12,831 | 615 | 285 |
| 2008 | 183,054 | 11.1 | 20,329 | 6,497 | 12,763 | 777 | 292 |
| 2009 | 182,080 | 11.0 | 20,048 | 6,480 | 12,332 | 960 | 277 |
| 2010 | 195,401 | 11.3 | 22,070 | 8,318 | 12,489 | 1,112 | 152 |
| 2011 | 205,239 | 11.8 | 24,123 | 9,635 | 13,201 | 1,174 | 112 |
| 2012 | 206,968 | 12.5 | 25,883 | 10,656 | 13,797 | 1,248 | 181 |
| 2013 | 208,362 | 12.3 | 25,691 | 10,716 | 13,578 | 1,299 | 98 |
| 2014 | 210,448 | 11.3 | 23,810 | 9,819 | 12,599 | 1,307 | 85 |
| 2015 | 215,389 | 10.5 | 22,530 | 8,496 | 12,661 | 1,288 | 85 |
| 2016 | 221,936 | 10.5 | 23,230 | 8,581 | 13,292 | 1,270 | 88 |
| 2017 | 231,023 | 10.7 | 24,628 | 9,380 | 13,918 | 1,253 | 77 |
| 2018 | 233,368 | 11.6 | 27,016 | 11,065 | 14,614 | 1,238 | 99 |
| 2019 | 231,353 | 11.6 | 26,852 | 11,449 | 14,109 | 1,216 | 78 |
| 2020 | 222,563 | 12.0 | 26,702 | 11,415 | 14,119 | 1,099 | 70 |

Note : From 2007, figures are based on revised calorific value every 5 years.

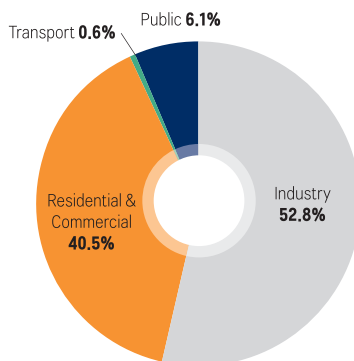
Electricity



2010 37,338 Thou. toe



2020 43,797 Thou. toe



7-4. Electricity

Unit : 1,000 toe

| | Final Energy Consumption | % | Electricity | Industry | Residential & Commercial | Transport | Public |
|------|--------------------------|------|-------------|----------|--------------------------|-----------|--------|
| 1981 | 38,952 | 7.8 | 3,046 | 2,089 | 691 | 40 | 226 |
| 1982 | 38,711 | 8.4 | 3,258 | 2,188 | 779 | 40 | 251 |
| 1983 | 41,337 | 8.9 | 3,665 | 2,435 | 910 | 44 | 276 |
| 1984 | 44,998 | 9.0 | 4,046 | 2,651 | 1,038 | 52 | 305 |
| 1985 | 46,998 | 9.3 | 4,363 | 2,812 | 1,155 | 62 | 333 |
| 1986 | 50,524 | 9.6 | 4,843 | 3,168 | 1,253 | 76 | 347 |
| 1987 | 55,197 | 10.0 | 5,519 | 3,643 | 1,435 | 74 | 367 |
| 1988 | 61,033 | 10.5 | 6,391 | 4,175 | 1,710 | 80 | 426 |
| 1989 | 65,875 | 10.7 | 7,069 | 4,514 | 2,011 | 83 | 461 |
| 1990 | 74,701 | 10.9 | 8,111 | 5,089 | 2,421 | 87 | 514 |
| 1991 | 83,336 | 10.8 | 8,976 | 5,606 | 2,732 | 94 | 544 |
| 1992 | 94,403 | 10.5 | 9,911 | 6,063 | 3,174 | 101 | 572 |
| 1993 | 103,850 | 10.6 | 10,985 | 6,581 | 3,663 | 108 | 633 |
| 1994 | 111,787 | 11.3 | 12,602 | 6,304 | 5,422 | 124 | 752 |
| 1995 | 121,400 | 11.6 | 14,041 | 8,293 | 4,801 | 138 | 808 |
| 1996 | 131,573 | 11.9 | 15,692 | 9,179 | 5,464 | 145 | 904 |
| 1997 | 144,541 | 11.9 | 17,267 | 10,009 | 6,090 | 151 | 1,017 |
| 1998 | 132,177 | 12.6 | 16,638 | 9,359 | 6,122 | 136 | 1,022 |
| 1999 | 143,027 | 12.9 | 18,422 | 10,394 | 6,793 | 149 | 1,086 |
| 2000 | 149,958 | 13.7 | 20,600 | 11,374 | 7,891 | 175 | 1,160 |
| 2001 | 153,103 | 14.5 | 22,165 | 11,678 | 9,005 | 194 | 1,288 |
| 2002 | 160,876 | 14.9 | 23,947 | 12,423 | 9,859 | 195 | 1,470 |
| 2003 | 164,550 | 15.3 | 25,250 | 12,933 | 10,585 | 200 | 1,531 |
| 2004 | 166,452 | 16.1 | 26,840 | 13,617 | 11,352 | 213 | 1,658 |
| 2005 | 171,543 | 16.7 | 28,588 | 14,346 | 12,233 | 224 | 1,785 |
| 2006 | 174,873 | 17.1 | 29,990 | 15,021 | 12,883 | 218 | 1,868 |
| 2007 | 182,015 | 17.4 | 31,700 | 16,018 | 13,513 | 209 | 1,960 |
| 2008 | 183,054 | 18.1 | 33,116 | 16,738 | 14,143 | 196 | 2,039 |
| 2009 | 182,080 | 18.6 | 33,925 | 17,006 | 14,594 | 187 | 2,138 |
| 2010 | 195,401 | 19.1 | 37,338 | 19,193 | 15,636 | 188 | 2,321 |
| 2011 | 205,239 | 19.1 | 39,136 | 20,830 | 15,758 | 193 | 2,355 |
| 2012 | 206,968 | 19.4 | 40,127 | 21,426 | 16,049 | 194 | 2,459 |
| 2013 | 208,362 | 19.6 | 40,837 | 22,088 | 16,077 | 186 | 2,485 |
| 2014 | 210,448 | 19.5 | 41,073 | 22,757 | 15,706 | 172 | 2,438 |
| 2015 | 215,389 | 19.3 | 41,594 | 22,844 | 16,020 | 191 | 2,540 |
| 2016 | 221,936 | 19.3 | 42,745 | 23,218 | 16,650 | 231 | 2,646 |
| 2017 | 231,023 | 18.9 | 43,666 | 23,794 | 16,932 | 246 | 2,694 |
| 2018 | 233,368 | 19.4 | 45,249 | 24,399 | 17,801 | 265 | 2,784 |
| 2019 | 231,353 | 19.3 | 44,763 | 24,060 | 17,666 | 271 | 2,766 |
| 2020 | 222,563 | 19.7 | 43,797 | 23,108 | 17,727 | 271 | 2,692 |

Note : From 2007, figures are based on revised calorific value every 5 years.

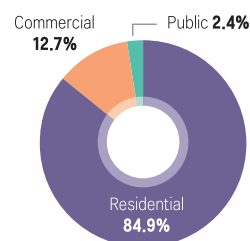
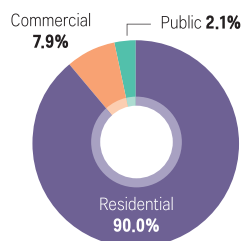
7-5. Heat Energy

Unit : 1,000 toe

| | Production | Sales | | | |
|------|------------|-------|-------------|------------|--------|
| | | | Residential | Commercial | Public |
| 1987 | 10 | 10 | 10 | 0 | - |
| 1988 | 63 | 55 | 51 | 3 | 1 |
| 1989 | 71 | 71 | 65 | 5 | 1 |
| 1990 | 79 | 75 | 68 | 6 | 1 |
| 1991 | 84 | 80 | 72 | 7 | 1 |
| 1992 | 163 | 143 | 134 | 7 | 1 |
| 1993 | 391 | 360 | 354 | 2 | 4 |
| 1994 | 495 | 460 | 440 | 14 | 6 |
| 1995 | 689 | 641 | 610 | 22 | 10 |
| 1996 | 847 | 811 | 762 | 33 | 15 |
| 1997 | 941 | 909 | 850 | 42 | 17 |
| 1998 | 933 | 882 | 825 | 41 | 16 |
| 1999 | 1,082 | 1,033 | 959 | 56 | 18 |
| 2000 | 1,221 | 1,167 | 1,084 | 63 | 20 |
| 2001 | 1,287 | 1,218 | 1,111 | 80 | 27 |
| 2002 | 1,405 | 1,316 | 1,203 | 84 | 30 |
| 2003 | 1,628 | 1,523 | 1,252 | 105 | 166 |
| 2004 | 1,532 | 1,449 | 1,299 | 116 | 34 |
| 2005 | 1,889 | 1,652 | 1,466 | 143 | 42 |
| 2006 | 1,804 | 1,549 | 1,367 | 140 | 42 |
| 2007 | 1,848 | 1,576 | 1,391 | 142 | 43 |
| 2008 | 2,262 | 1,668 | 1,472 | 150 | 45 |
| 2009 | 2,298 | 1,709 | 1,519 | 137 | 52 |
| 2010 | 2,038 | 1,939 | 1,744 | 154 | 41 |
| 2011 | 2,055 | 1,976 | 1,774 | 158 | 44 |
| 2012 | 2,175 | 2,102 | 1,878 | 177 | 47 |
| 2013 | 2,212 | 2,070 | 1,841 | 182 | 46 |
| 2014 | 2,074 | 1,528 | 1,376 | 126 | 27 |
| 2015 | 2,028 | 1,967 | 1,758 | 173 | 36 |
| 2016 | 2,197 | 2,183 | 1,895 | 238 | 50 |
| 2017 | 2,446 | 2,441 | 2,105 | 280 | 55 |
| 2018 | 2,647 | 2,682 | 2,289 | 332 | 61 |
| 2019 | 2,647 | 2,647 | 2,224 | 348 | 74 |
| 2020 | 2,773 | 2,770 | 2,352 | 352 | 66 |

— 2010 1,939 Thou. toe

— 2020 2,770 Thou. toe



7-6. Renewables

Unit : 1,000 toe

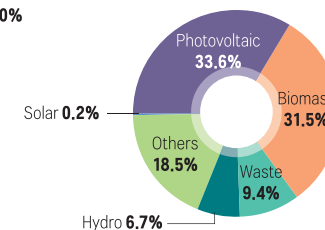
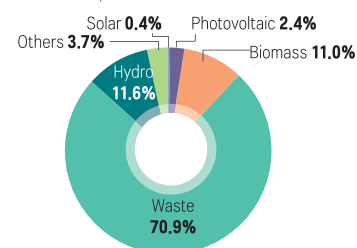
| | Total | Solar | Photovoltaic | Biomass | Waste | Hydro | Others ¹ |
|------|--------|-------|--------------|---------|-------|-------|---------------------|
| 1991 | 412 | - | - | - | - | - | - |
| 1992 | 552 | 13 | 2 | 57 | 461 | 19 | 0 |
| 1993 | 648 | 14 | 1 | 59 | 546 | 29 | 0 |
| 1994 | 776 | 17 | 1 | 57 | 679 | 23 | 0 |
| 1995 | 907 | 22 | 1 | 59 | 805 | 20 | 0 |
| 1996 | 1,160 | 32 | 1 | 50 | 1,056 | 20 | 0 |
| 1997 | 1,419 | 46 | 1 | 68 | 1,282 | 22 | 0 |
| 1998 | 1,713 | 44 | 1 | 63 | 1,577 | 27 | 0 |
| 1999 | 1,897 | 42 | 1 | 65 | 1,761 | 27 | 1 |
| 2000 | 2,127 | 42 | 1 | 82 | 1,978 | 20 | 4 |
| 2001 | 2,453 | 37 | 2 | 82 | 2,308 | 21 | 3 |
| 2002 | 2,917 | 35 | 2 | 117 | 2,733 | 28 | 4 |
| 2003 | 4,437 | 33 | 2 | 131 | 3,039 | 1,226 | 7 |
| 2004 | 4,582 | 36 | 2 | 135 | 3,313 | 1,082 | 13 |
| 2005 | 4,879 | 35 | 4 | 181 | 3,706 | 919 | 36 |
| 2006 | 5,225 | 33 | 8 | 274 | 3,975 | 867 | 68 |
| 2007 | 5,609 | 29 | 15 | 370 | 4,319 | 781 | 94 |
| 2008 | 5,858 | 28 | 61 | 427 | 4,569 | 660 | 114 |
| 2009 | 6,086 | 31 | 122 | 580 | 4,558 | 607 | 189 |
| 2010 | 6,856 | 29 | 166 | 755 | 4,862 | 792 | 252 |
| 2011 | 7,584 | 27 | 198 | 963 | 5,122 | 965 | 308 |
| 2012 | 8,856 | 26 | 243 | 1,335 | 5,999 | 815 | 439 |
| 2013 | 9,893 | 28 | 359 | 1,558 | 6,502 | 892 | 554 |
| 2014 | 11,569 | 28 | 579 | 2,822 | 6,905 | 581 | 654 |
| 2015 | 13,351 | 28 | 907 | 2,766 | 8,436 | 454 | 759 |
| 2016 | 14,269 | 28 | 1,183 | 2,765 | 8,743 | 603 | 946 |
| 2017 | 16,604 | 28 | 1,672 | 3,599 | 9,359 | 601 | 1,345 |
| 2018 | 18,054 | 27 | 2,194 | 4,442 | 9,084 | 719 | 1,588 |
| 2019 | 16,513 | 27 | 3,055 | 4,162 | 7,049 | 595 | 1,625 |
| 2020 | 12,362 | 26 | 4,156 | 3,899 | 1,166 | 826 | 2,288 |

1. Includes wind, fuel cells, geothermal and tidal

2. For the fourth quarter 2019, non-renewable waste data is excluded.

— 2010 6,856 Thou. toe

— 2020 12,362 Thou. toe



2010

| | Coal (1,000 ton) | Petroleum (1,000 Bbl) | LNG (1,000 ton) | City Gas (10 ³ m ³) |
|------------------------|---------------------|--------------------------|--------------------|---|
| Domestic Production | 2,084 | - | 415 | - |
| Imports | 113,502 | 1,215,774 | 32,603 | - |
| Exports | - | -341,784 | - | - |
| Intl' Bunkers | - | -49,341 | - | - |
| Stock Changes(+/-) | 385 | -3,830 | -919 | - |
| Statistical Difference | 5,147 | -26,789 | 984 | - |
| Primary Energy Supply | 121,118 | 794,030 | 33,083 | - |
| Transformation | -79,078 | -27,274 | -32,323 | 19,982 |
| Electric Generation | -79,078 | -19,967 | -13,937 | -874 |
| District Heating | - | -2,403 | -651 | -1,097 |
| Gas Manufacturing | - | -4,904 | -17,522 | 21,118 |
| Own Use & Loss | - | - | -213 | 835 |
| Final Consumption | 42,040 | 766,756 | 761 | 19,982 |
| Industry | 40,181 | 442,511 | 761 | 6,947 |
| Agri. Fishery | - | 16,348 | - | 4 |
| Mining | - | 662 | - | 0 |
| Manufacturing | 34,488 | 408,260 | 761 | 6,942 |
| Food. Tobacco | 50 | 2,281 | - | 567 |
| Textile & Apparel | - | 2,569 | - | 512 |
| Wood & Wood Prod. | - | 244 | - | 50 |
| Pulp & Publications | - | 2,551 | - | 288 |
| Petro. Chemical | 364 | 371,440 | 189 | 1,563 |
| Non-Metallic | 4,564 | 6,045 | - | 432 |
| Iron & Steel | 27,210 | 2,011 | 572 | 1,384 |
| Non-Ferrous | 374 | 648 | - | 195 |
| Fabricated Metal | - | 3,939 | - | 1,293 |
| Other Manufact. | 1,926 | 10,122 | - | 658 |
| Other Energy | - | 6,410 | - | - |
| Construction | - | 17,241 | - | 0 |
| Transportation | - | 263,697 | - | 1,054 |
| Rail | - | 1,355 | - | - |
| Land | - | 216,354 | - | 1,054 |
| Water | - | 21,174 | - | - |
| Air | - | 24,815 | - | - |
| Residential | 1,859 | 31,248 | - | 8,878 |
| Commercial | - | 20,021 | - | 2,960 |
| Public | - | 9,279 | - | 144 |

Note : Domestic anthracite consumption for the commercial sector is included in the residential sector.

| Hydro (GWh) | Nuclear (GWh) | Electricity (GWh) | Heat (1,000 toe) | Renewables (1,000 toe) | Total (1,000 toe) |
|----------------|------------------|----------------------|---------------------|---------------------------|----------------------|
| 6,472 | 148,596 | - | - | 6,064 | 40,912 |
| - | - | - | - | - | 279,145 |
| - | - | - | - | - | -48,365 |
| - | - | - | - | - | -7,569 |
| - | - | - | - | - | -1,536 |
| - | - | - | - | - | 1,479 |
| 6,472 | 148,596 | - | - | 6,064 | 264,053 |
| -6,472 | -148,596 | 434,163 | 1,939 | -718 | -68,653 |
| -6,472 | -148,596 | 474,660 | 975 | -718 | -63,381 |
| - | - | - | 1,064 | - | -1,318 |
| - | - | - | - | - | -976 |
| - | - | -40,497 | -100 | - | -2,977 |
| - | - | 434,163 | 1,939 | 5,346 | 195,401 |
| - | - | 223,171 | - | 4,215 | 116,590 |
| - | - | 10,042 | - | - | 3,201 |
| - | - | 1,683 | - | - | 240 |
| - | - | 211,447 | - | - | 102,553 |
| - | - | 8,737 | - | - | 1,726 |
| - | - | 12,362 | - | - | 1,998 |
| - | - | 1,754 | - | - | 240 |
| - | - | 10,019 | - | - | 1,561 |
| - | - | 43,213 | - | - | 53,160 |
| - | - | 11,620 | - | - | 5,213 |
| - | - | 34,494 | - | - | 24,495 |
| - | - | 7,340 | - | - | 1,158 |
| - | - | 79,490 | - | - | 8,752 |
| - | - | 2,418 | - | - | 3,292 |
| - | - | - | - | - | 958 |
| - | - | - | - | - | 2,652 |
| - | - | 2,191 | - | 357 | 36,903 |
| - | - | 2,191 | - | - | 383 |
| - | - | - | - | 357 | 29,785 |
| - | - | - | - | - | 3,282 |
| - | - | - | - | - | 3,453 |
| - | - | 61,194 | 1,744 | 72 | 21,334 |
| - | - | 120,619 | 154 | 33 | 16,092 |
| - | - | 26,988 | 41 | 669 | 4,482 |

2010

| | Coal | Petroleum | LNG | City Gas |
|------------------------|---------|-----------|---------|----------|
| Domestic Production | 969 | - | 539 | - |
| Imports | 72,576 | 164,184 | 42,384 | - |
| Exports | - | -48,365 | - | - |
| Intl' Bunkers | - | -7,569 | - | - |
| Stock Changes(+/-) | 187 | -529 | -1,194 | - |
| Statistical Difference | 3,409 | -3,209 | 1,279 | - |
| Primary Energy Supply | 77,142 | 104,499 | 43,008 | - |
| Transformation | -48,953 | -3,980 | -42,019 | 21,081 |
| Electric Generation | -48,953 | -3,125 | -18,118 | -922 |
| District Heating | - | -378 | -847 | -1,157 |
| Gas Manufacturing | - | -478 | -22,778 | 22,280 |
| Own Use & Loss | - | - | -276 | 881 |
| Final Consumption | 28,189 | 100,519 | 989 | 21,081 |
| Industry | 27,288 | 57,576 | 989 | 7,329 |
| Agri. Fishery | - | 2,333 | - | 5 |
| Mining | - | 95 | - | 0 |
| Manufacturing | 23,560 | 52,496 | 989 | 7,324 |
| Food. Tobacco | 31 | 345 | - | 598 |
| Textile & Apparel | - | 395 | - | 540 |
| Wood & Wood Prod. | - | 36 | - | 53 |
| Pulp & Publications | - | 395 | - | 304 |
| Petro. Chemical | 226 | 47,323 | 246 | 1,648 |
| Non-Metallic | 2,830 | 928 | - | 456 |
| Iron & Steel | 19,047 | 279 | 743 | 1,460 |
| Non-Ferrous | 232 | 89 | - | 206 |
| Fabricated Metal | - | 551 | - | 1,364 |
| Other Manufact. | 1,194 | 1,196 | - | 694 |
| Other Energy | - | 958 | - | - |
| Construction | - | 2,652 | - | 0 |
| Transportation | - | 35,246 | - | 1,112 |
| Rail | - | 195 | - | - |
| Land | - | 28,316 | - | 1,112 |
| Water | - | 3,282 | - | - |
| Air | - | 3,453 | - | - |
| Residential | 901 | 3,988 | - | 9,366 |
| Commercial | - | 2,409 | - | 3,122 |
| Public | - | 1,299 | - | 152 |

Note : Domestic anthracite consumption for the commercial sector is included in the residential sector.

Unit : 1,000 toe

| Hydro | Nuclear | Electricity | Heat | Renewables | Total |
|--------|---------|-------------|-------|------------|---------|
| 1,391 | 31,948 | - | - | 6,064 | 40,912 |
| - | - | - | - | - | 279,145 |
| - | - | - | - | - | -48,365 |
| - | - | - | - | - | -7,569 |
| - | - | - | - | - | -1,536 |
| - | - | - | - | - | 1,479 |
| 1,391 | 31,948 | - | - | 6,064 | 264,053 |
| -1,391 | -31,948 | 37,338 | 1,939 | -718 | -68,653 |
| -1,391 | -31,948 | 40,821 | 975 | -718 | -63,381 |
| - | - | - | 1,064 | - | -1,318 |
| - | - | - | - | - | -976 |
| - | - | -3,483 | -100 | - | -2,977 |
| - | - | 37,338 | 1,939 | 5,346 | 195,401 |
| - | - | 19,193 | - | 4,215 | 116,590 |
| - | - | 864 | - | - | 3,201 |
| - | - | 145 | - | - | 240 |
| - | - | 18,184 | - | - | 102,553 |
| - | - | 751 | - | - | 1,726 |
| - | - | 1,063 | - | - | 1,998 |
| - | - | 151 | - | - | 240 |
| - | - | 862 | - | - | 1,561 |
| - | - | 3,716 | - | - | 53,160 |
| - | - | 999 | - | - | 5,213 |
| - | - | 2,966 | - | - | 24,495 |
| - | - | 631 | - | - | 1,158 |
| - | - | 6,836 | - | - | 8,752 |
| - | - | 208 | - | - | 3,292 |
| - | - | - | - | - | 958 |
| - | - | - | - | - | 2,652 |
| - | - | 188 | - | 357 | 36,903 |
| - | - | 188 | - | - | 383 |
| - | - | - | - | 357 | 29,785 |
| - | - | - | - | - | 3,282 |
| - | - | - | - | - | 3,453 |
| - | - | 5,263 | 1,744 | 72 | 21,334 |
| - | - | 10,373 | 154 | 33 | 16,092 |
| - | - | 2,321 | 41 | 669 | 4,482 |

2020

| | Coal (1,000 ton) | Petroleum (1,000 Bbl) | LNG (1,000 ton) | City Gas (10 ³ m) |
|------------------------|---------------------|--------------------------|--------------------|---------------------------------|
| Domestic Production | 1,019 | - | 142 | - |
| Imports | 121,772 | 1,506,378 | 39,982 | - |
| Exports | - | -468,529 | - | - |
| Intl' Bunkers | - | -59,082 | - | - |
| Stock Changes(+/-) | -122 | 1,198 | 1,103 | - |
| Statistical Difference | -6,097 | -107,605 | 864 | - |
| Primary Energy Supply | 116,572 | 872,362 | 42,091 | - |
| Transformation | -70,743 | -6,594 | -39,333 | 22,449 |
| Electric Generation | -70,743 | -3,826 | -18,612 | -396 |
| District Heating | - | -1,594 | -1,778 | -464 |
| Gas Manufacturing | - | -1,174 | -18,247 | 23,191 |
| Own Use & Loss | - | - | -696 | 119 |
| Final Consumption | 45,829 | 865,768 | 2,758 | 22,449 |
| Industry | 45,319 | 543,857 | 2,758 | 7,593 |
| Agri. Fishery | - | 10,971 | - | 1 |
| Mining | - | 486 | - | - |
| Manufacturing | 39,611 | 517,158 | 2,758 | 7,592 |
| Food. Tobacco | - | 561 | - | 823 |
| Textile & Apparel | - | 202 | - | 222 |
| Wood & Wood Prod. | - | 47 | - | 24 |
| Pulp & Publications | - | 261 | - | 296 |
| Petro. Chemical | 343 | 492,002 | 1,788 | 2,181 |
| Non-Metallic | 3,404 | 3,634 | - | 516 |
| Iron & Steel | 33,797 | 694 | 970 | 1,001 |
| Non-Ferrous | 539 | 313 | - | 462 |
| Fabricated Metal | - | 2,246 | - | 1,871 |
| Other Manufact. | 1,527 | 10,656 | - | 196 |
| Other Energy | - | 6,541 | - | - |
| Construction | - | 15,242 | - | 0 |
| Transportation | - | 277,191 | - | 1,068 |
| Rail | - | 586 | - | - |
| Land | - | 238,039 | - | 1,068 |
| Water | - | 20,125 | - | - |
| Air | - | 18,442 | - | - |
| Residential | 510 | 21,668 | - | 10,593 |
| Commercial | - | 14,957 | - | 3,128 |
| Public | - | 8,095 | - | 68 |

Note : Domestic anthracite consumption for the commercial sector is included in the residential sector.

| Hydro (GWh) | Nuclear (GWh) | Electricity (GWh) | Heat (1,000 toe) | Renewables (1,000 toe) | Total (1,000 toe) |
|----------------|------------------|----------------------|---------------------|---------------------------|----------------------|
| 7,148 | 160,184 | - | - | 18,983 | 55,292 |
| - | - | - | - | - | 325,367 |
| - | - | - | - | - | -65,208 |
| - | - | - | - | - | -9,034 |
| - | - | - | - | - | 1,680 |
| - | - | - | - | - | -16,021 |
| 7,148 | 160,184 | - | - | 18,983 | 292,076 |
| -7,148 | -160,184 | 509,270 | 2,770 | -9,490 | -69,513 |
| -7,148 | -160,184 | 552,162 | 2,208 | -9,490 | -62,502 |
| - | - | - | 564 | - | -2,449 |
| - | - | - | - | - | -83 |
| - | - | -42,892 | -3 | - | -4,479 |
| - | - | 509,270 | 2,770 | 9,493 | 222,563 |
| - | - | 268,692 | - | 6,743 | 137,964 |
| - | - | 17,037 | - | - | 3,017 |
| - | - | 1,552 | - | - | 201 |
| - | - | 250,104 | - | - | 122,445 |
| - | - | 12,529 | - | - | 1,996 |
| - | - | 8,784 | - | - | 1,012 |
| - | - | 1,696 | - | - | 177 |
| - | - | 9,185 | - | - | 1,129 |
| - | - | 59,459 | - | - | 69,154 |
| - | - | 11,131 | - | - | 4,069 |
| - | - | 26,528 | - | - | 28,204 |
| - | - | 9,891 | - | - | 1,686 |
| - | - | 106,141 | - | - | 11,354 |
| - | - | 4,760 | - | - | 2,708 |
| - | - | - | - | - | 956 |
| - | - | - | - | - | 2,341 |
| - | - | 3,154 | - | 690 | 39,436 |
| - | - | 2,738 | - | - | 320 |
| - | - | 416 | - | 690 | 33,449 |
| - | - | - | - | - | 3,111 |
| - | - | - | - | - | 2,557 |
| - | - | 74,074 | 2,352 | 604 | 23,201 |
| - | - | 132,052 | 352 | 163 | 16,711 |
| - | - | 31,298 | 66 | 1,292 | 5,251 |

2020

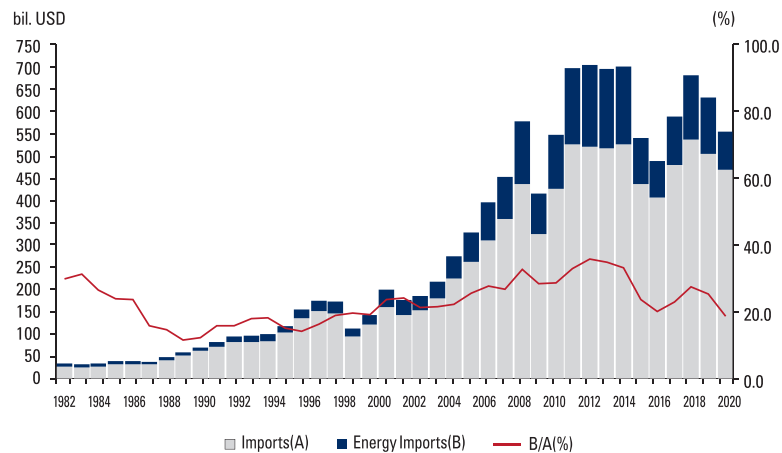
| | Coal | Petroleum | LNG | City Gas |
|------------------------|---------|-----------|---------|----------|
| Domestic Production | 482 | - | 185 | - |
| Imports | 75,687 | 197,463 | 52,217 | - |
| Exports | - | -65,208 | - | - |
| Intl' Bunkers | - | -9,034 | - | - |
| Stock Changes(+/-) | -56 | 296 | 1,440 | - |
| Statistical Difference | -3,873 | -13,276 | 1,128 | - |
| Primary Energy Supply | 72,241 | 110,240 | 54,970 | - |
| Transformation | -41,783 | -897 | -51,369 | 23,100 |
| Electric Generation | -41,783 | -567 | -24,307 | -408 |
| District Heating | - | -215 | -2,322 | -477 |
| Gas Manufacturing | - | -115 | -23,831 | 23,863 |
| Own Use & Loss | - | - | -909 | 122 |
| Final Consumption | 30,457 | 109,344 | 3,602 | 23,100 |
| Industry | 30,216 | 66,483 | 3,602 | 7,813 |
| Agri. Fishery | - | 1,550 | - | 1 |
| Mining | - | 68 | - | - |
| Manufacturing | 26,998 | 62,525 | 3,602 | 7,812 |
| Food. Tobacco | - | 72 | - | 847 |
| Textile & Apparel | - | 28 | - | 229 |
| Wood & Wood Prod. | - | 7 | - | 24 |
| Pulp & Publications | - | 35 | - | 304 |
| Petro. Chemical | 203 | 59,258 | 2,335 | 2,244 |
| Non-Metallic | 2,015 | 566 | - | 531 |
| Iron & Steel | 23,556 | 70 | 1,266 | 1,030 |
| Non-Ferrous | 319 | 41 | - | 475 |
| Fabricated Metal | - | 300 | - | 1,925 |
| Other Manufact. | 904 | 1,193 | - | 202 |
| Other Energy | - | 956 | - | - |
| Construction | - | 2,341 | - | 0 |
| Transportation | - | 37,376 | - | 1,099 |
| Rail | - | 84 | - | - |
| Land | - | 31,624 | - | 1,099 |
| Water | - | 3,111 | - | - |
| Air | - | 2,557 | - | - |
| Residential | 242 | 2,732 | - | 10,900 |
| Commercial | - | 1,621 | - | 3,219 |
| Public | - | 1,130 | - | 70 |

Note : Domestic anthracite consumption for the commercial sector is included in the residential sector.

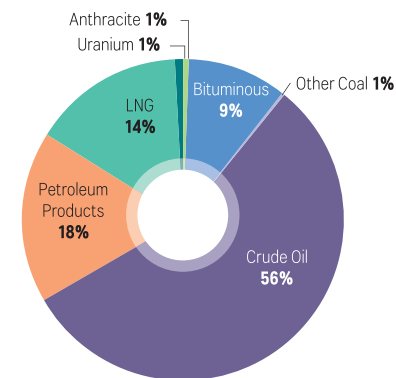
Unit : 1,000 toe

| Hydro | Nuclear | Electricity | Heat | Renewables | Total |
|--------|---------|-------------|-------|------------|---------|
| 1,523 | 34,119 | - | - | 18,983 | 55,292 |
| - | - | - | - | - | 325,367 |
| - | - | - | - | - | -65,208 |
| - | - | - | - | - | -9,034 |
| - | - | - | - | - | 1,680 |
| - | - | - | - | - | -16,021 |
| 1,523 | 34,119 | - | - | 18,983 | 292,076 |
| -1,523 | -34,119 | 43,797 | 2,770 | -9,490 | -69,513 |
| -1,523 | -34,119 | 47,486 | 2,208 | -9,490 | -62,502 |
| - | - | - | 564 | - | -2,449 |
| - | - | - | - | - | -83 |
| - | - | -3,689 | -3 | - | -4,479 |
| - | - | 43,797 | 2,770 | 9,493 | 222,563 |
| - | - | 23,108 | - | 6,743 | 137,964 |
| - | - | 1,465 | - | - | 3,017 |
| - | - | 133 | - | - | 201 |
| - | - | 21,509 | - | - | 122,445 |
| - | - | 1,077 | - | - | 1,996 |
| - | - | 755 | - | - | 1,012 |
| - | - | 146 | - | - | 177 |
| - | - | 790 | - | - | 1,129 |
| - | - | 5,113 | - | - | 69,154 |
| - | - | 957 | - | - | 4,069 |
| - | - | 2,281 | - | - | 28,204 |
| - | - | 851 | - | - | 1,686 |
| - | - | 9,128 | - | - | 11,354 |
| - | - | 409 | - | - | 2,708 |
| - | - | - | - | - | 956 |
| - | - | - | - | - | 2,341 |
| - | - | 271 | - | 690 | 39,436 |
| - | - | 235 | - | - | 320 |
| - | - | 36 | - | 690 | 33,449 |
| - | - | - | - | - | 3,111 |
| - | - | - | - | - | 2,557 |
| - | - | 6,370 | 2,352 | 604 | 23,201 |
| - | - | 11,356 | 352 | 163 | 16,711 |
| - | - | 2,692 | 66 | 1,292 | 5,251 |

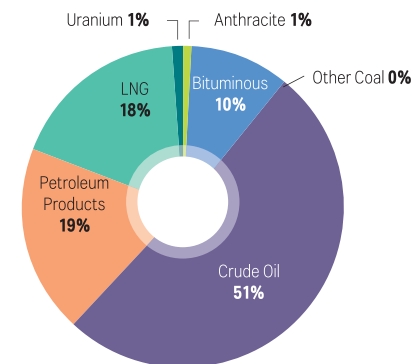
Energy Imports



2010 121,654 Mil. USD



2020 86,554 Mil. USD



9-1. Energy Imports

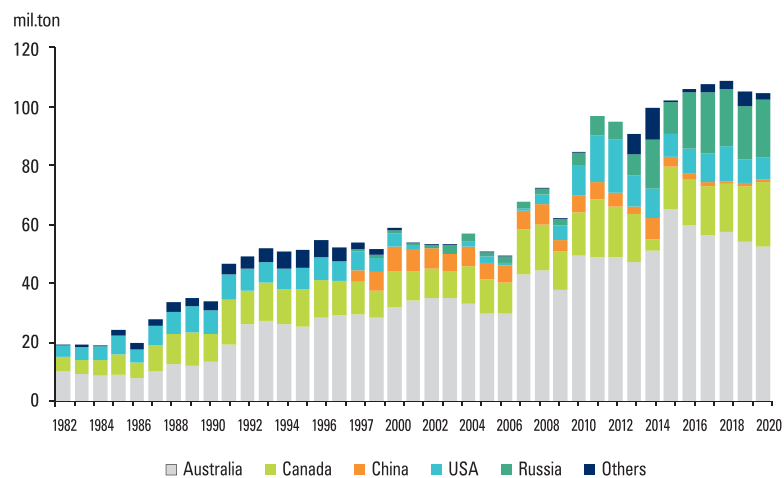
| | Total Imports (CIF) (A) | Total (B) | Energy Imports | | |
|------|-------------------------------|--------------|----------------|------------|--------|
| | | | Coal | | |
| | | | Anthracite | Bituminous | Others |
| 1981 | 26,131 | 7,763 | 302 | 484 | 31 |
| 1982 | 24,251 | 7,580 | 165 | 601 | 19 |
| 1983 | 26,192 | 6,936 | 49 | 588 | 17 |
| 1984 | 30,631 | 7,263 | 46 | 663 | 17 |
| 1985 | 31,136 | 7,322 | 138 | 890 | 15 |
| 1986 | 31,584 | 4,995 | 214 | 798 | 16 |
| 1987 | 41,020 | 5,926 | 149 | 828 | 15 |
| 1988 | 51,811 | 5,920 | 129 | 1,021 | 16 |
| 1989 | 61,465 | 7,516 | 75 | 1,212 | 19 |
| 1990 | 69,844 | 10,908 | 52 | 1,217 | 19 |
| 1991 | 81,525 | 12,754 | 66 | 1,514 | 20 |
| 1992 | 81,775 | 14,654 | 42 | 1,535 | 39 |
| 1993 | 83,800 | 15,088 | 40 | 1,643 | 50 |
| 1994 | 102,348 | 15,471 | 33 | 1,695 | 48 |
| 1995 | 135,119 | 19,053 | 35 | 1,992 | 54 |
| 1996 | 150,339 | 24,243 | 46 | 2,251 | 40 |
| 1997 | 144,616 | 27,308 | 38 | 2,301 | 60 |
| 1998 | 93,282 | 18,276 | 36 | 2,147 | 46 |
| 1999 | 119,752 | 22,745 | 46 | 1,866 | 53 |
| 2000 | 160,481 | 37,888 | 72 | 2,033 | 80 |
| 2001 | 141,098 | 33,894 | 118 | 2,157 | 72 |
| 2002 | 152,126 | 32,290 | 148 | 2,254 | 72 |
| 2003 | 178,827 | 38,306 | 177 | 2,266 | 109 |
| 2004 | 224,463 | 49,600 | 233 | 3,891 | 314 |
| 2005 | 261,238 | 66,697 | 429 | 4,803 | 211 |
| 2006 | 309,383 | 85,566 | 407 | 4,700 | 211 |
| 2007 | 356,846 | 94,978 | 447 | 5,675 | 323 |
| 2008 | 435,275 | 141,475 | 991 | 11,156 | 663 |
| 2009 | 323,085 | 91,160 | 672 | 8,997 | 326 |
| 2010 | 425,212 | 121,654 | 1,016 | 11,425 | 690 |
| 2011 | 524,413 | 172,490 | 1,774 | 16,052 | 651 |
| 2012 | 519,584 | 184,800 | 1,361 | 14,221 | 488 |
| 2013 | 515,586 | 178,698 | 1,143 | 11,624 | 307 |
| 2014 | 525,515 | 174,137 | 921 | 10,723 | 471 |
| 2015 | 436,499 | 102,715 | 813 | 8,675 | 474 |
| 2016 | 406,193 | 80,942 | 759 | 8,168 | 383 |
| 2017 | 478,478 | 109,466 | 933 | 13,481 | 765 |
| 2018 | 535,202 | 145,970 | 1,199 | 14,668 | 835 |
| 2019 | 503,343 | 126,701 | 927 | 13,062 | 219 |
| 2020 | 467,633 | 86,554 | 611 | 8,805 | 181 |

Source : Korea International Trade Association

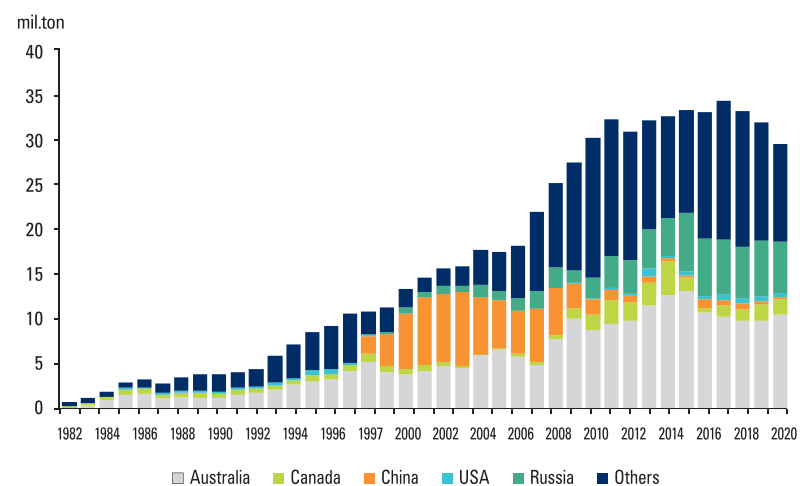
Unit : Million USD

| Energy Imports | | | | Energy/Imports B/A(%) | Energy Imports Growth Rate (%) | |
|----------------|--------------------|--------|---------|--------------------------|--------------------------------------|------|
| Petroleum | | LNG | Uranium | | | |
| Crude Oil | Petroleum Products | | | | | |
| 6,371 | 551 | 0 | 23 | 29.7 | 17.3 | 1981 |
| 6,097 | 684 | 0 | 14 | 31.3 | -2.4 | 1982 |
| 5,572 | 701 | 0 | 8 | 26.5 | -8.5 | 1983 |
| 5,771 | 747 | 0 | 19 | 23.7 | 4.7 | 1984 |
| 5,572 | 685 | 0 | 22 | 23.5 | 0.8 | 1985 |
| 3,346 | 585 | 13 | 24 | 15.8 | -31.8 | 1986 |
| 3,702 | 949 | 284 | 0 | 14.4 | 18.6 | 1987 |
| 3,688 | 743 | 323 | 0 | 11.4 | -0.1 | 1988 |
| 4,933 | 928 | 347 | 1 | 12.2 | 27.0 | 1989 |
| 6,386 | 2,774 | 460 | 1 | 15.6 | 45.1 | 1990 |
| 8,134 | 2,451 | 485 | 84 | 15.6 | 16.9 | 1991 |
| 9,548 | 2,829 | 562 | 98 | 17.9 | 14.9 | 1992 |
| 9,151 | 3,288 | 781 | 135 | 18.0 | 3.0 | 1993 |
| 8,878 | 3,664 | 961 | 191 | 15.1 | 2.5 | 1994 |
| 10,809 | 4,673 | 1,275 | 215 | 14.1 | 23.2 | 1995 |
| 14,432 | 5,395 | 1,878 | 201 | 16.1 | 27.2 | 1996 |
| 17,772 | 4,606 | 2,296 | 236 | 18.9 | 12.6 | 1997 |
| 11,241 | 3,043 | 1,549 | 214 | 19.6 | -33.1 | 1998 |
| 14,783 | 3,802 | 1,973 | 222 | 19.0 | 24.5 | 1999 |
| 25,216 | 6,379 | 3,882 | 225 | 23.6 | 66.6 | 2000 |
| 21,368 | 5,956 | 3,990 | 233 | 24.0 | -10.5 | 2001 |
| 19,200 | 6,214 | 4,120 | 280 | 21.2 | -4.7 | 2002 |
| 23,082 | 7,325 | 5,082 | 265 | 21.4 | 18.6 | 2003 |
| 29,917 | 8,357 | 6,552 | 336 | 22.1 | 29.5 | 2004 |
| 42,606 | 9,716 | 8,646 | 286 | 25.5 | 34.5 | 2005 |
| 55,865 | 12,119 | 11,925 | 339 | 27.7 | 28.3 | 2006 |
| 60,324 | 15,066 | 12,653 | 489 | 26.6 | 11.0 | 2007 |
| 85,855 | 22,275 | 19,806 | 729 | 32.5 | 49.0 | 2008 |
| 50,757 | 15,811 | 13,875 | 722 | 28.2 | -35.6 | 2009 |
| 68,662 | 22,241 | 17,006 | 615 | 28.6 | 33.5 | 2010 |
| 100,806 | 28,541 | 23,859 | 807 | 32.9 | 41.8 | 2011 |
| 108,298 | 32,373 | 27,364 | 695 | 35.6 | 7.1 | 2012 |
| 99,333 | 34,628 | 30,645 | 1,018 | 34.7 | -3.3 | 2013 |
| 94,907 | 34,983 | 31,403 | 731 | 33.1 | -2.6 | 2014 |
| 55,120 | 17,986 | 18,779 | 869 | 23.5 | -41.0 | 2015 |
| 44,295 | 14,579 | 12,170 | 589 | 19.9 | -21.2 | 2016 |
| 59,603 | 18,077 | 15,616 | 991 | 22.9 | 35.2 | 2017 |
| 80,393 | 25,109 | 23,189 | 576 | 27.3 | 33.3 | 2018 |
| 70,252 | 20,938 | 20,567 | 736 | 25.2 | -13.2 | 2019 |
| 44,456 | 16,038 | 15,716 | 748 | 18.5 | -31.7 | 2020 |

Imports of Coking Coal by Country



Imports of Steaming Coal by Country



9-2. Imports of Coking and Steaming Coal by Country

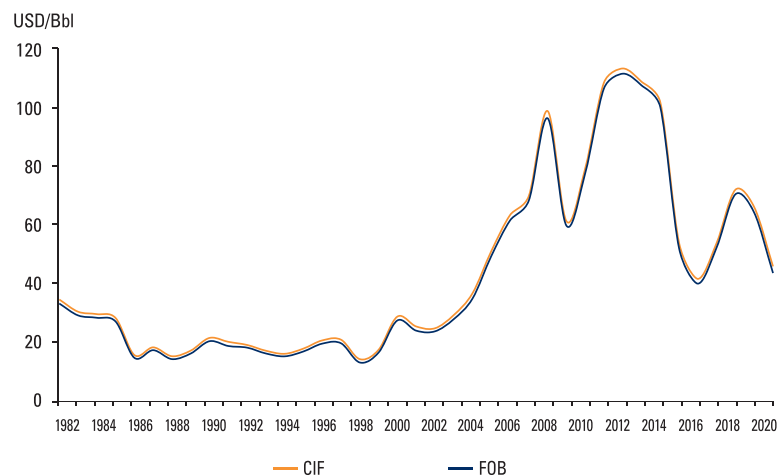
Unit : 1,000 ton

| | Coking Coal | | | | | | |
|------|-------------|-----------|--------|-------|-------|--------|--------|
| | Total | Australia | Canada | China | USA | Russia | Others |
| 1983 | 6,394 | 3,102 | 1,582 | - | 1,486 | - | 224 |
| 1984 | 6,321 | 2,930 | 1,727 | - | 1,617 | - | 47 |
| 1985 | 8,125 | 3,016 | 2,348 | - | 2,089 | - | 672 |
| 1986 | 6,575 | 2,704 | 1,707 | - | 1,486 | - | 678 |
| 1987 | 9,248 | 3,426 | 2,920 | - | 2,164 | - | 738 |
| 1988 | 11,236 | 4,216 | 3,384 | - | 2,479 | - | 1,157 |
| 1989 | 11,651 | 4,034 | 3,765 | - | 3,000 | - | 852 |
| 1990 | 11,287 | 4,543 | 3,130 | - | 2,603 | - | 1,011 |
| 1991 | 15,572 | 6,391 | 5,126 | - | 2,841 | - | 1,214 |
| 1992 | 16,381 | 8,758 | 3,718 | - | 2,558 | - | 1,347 |
| 1993 | 17,320 | 9,121 | 4,348 | - | 2,294 | - | 1,557 |
| 1994 | 16,901 | 8,735 | 3,961 | - | 2,281 | - | 1,924 |
| 1995 | 17,151 | 8,451 | 4,272 | - | 2,335 | - | 2,093 |
| 1996 | 18,226 | 9,520 | 4,147 | - | 2,652 | - | 1,907 |
| 1997 | 17,395 | 9,709 | 3,907 | - | 2,256 | - | 1,523 |
| 1998 | 17,976 | 9,829 | 3,663 | 1,313 | 2,164 | 256 | 751 |
| 1999 | 17,227 | 9,437 | 3,057 | 2,134 | 1,586 | 308 | 706 |
| 2000 | 19,575 | 10,641 | 4,097 | 2,781 | 1,419 | 394 | 242 |
| 2001 | 17,899 | 11,396 | 3,337 | 2,341 | 571 | 187 | 66 |
| 2002 | 17,714 | 11,676 | 3,298 | 2,360 | - | 327 | 52 |
| 2003 | 17,676 | 11,714 | 3,026 | 1,919 | - | 976 | 42 |
| 2004 | 18,954 | 11,059 | 4,206 | 2,232 | 500 | 956 | - |
| 2005 | 16,975 | 9,929 | 3,842 | 1,858 | 795 | 461 | 89 |
| 2006 | 16,466 | 9,963 | 3,505 | 1,905 | 304 | 741 | 48 |
| 2007 | 22,532 | 14,362 | 5,034 | 2,172 | 252 | 712 | - |
| 2008 | 24,083 | 14,856 | 5,072 | 2,341 | 1,132 | 633 | 49 |
| 2009 | 20,660 | 12,577 | 4,371 | 1,313 | 1,642 | 726 | 31 |
| 2010 | 28,160 | 16,445 | 4,944 | 1,936 | 3,238 | 1,553 | 44 |
| 2011 | 32,234 | 16,281 | 6,560 | 1,922 | 5,213 | 2,258 | - |
| 2012 | 31,544 | 16,320 | 5,669 | 1,583 | 5,954 | 2,018 | - |
| 2013 | 30,194 | 15,697 | 5,450 | 825 | 3,536 | 2,378 | 2,308 |
| 2014 | 33,175 | 17,052 | 1,309 | 2,390 | 3,291 | 5,482 | 3,651 |
| 2015 | 33,933 | 21,706 | 4,813 | 1,061 | 2,639 | 3,532 | 182 |
| 2016 | 35,255 | 19,889 | 5,168 | 725 | 2,742 | 6,342 | 389 |
| 2017 | 35,851 | 18,799 | 5,482 | 484 | 3,264 | 6,885 | 938 |
| 2018 | 36,202 | 19,117 | 5,432 | 322 | 3,901 | 6,489 | 942 |
| 2019 | 34,947 | 18,072 | 6,247 | 378 | 2,687 | 5,937 | 1,626 |
| 2020 | 34,820 | 17,525 | 7,235 | 245 | 2,501 | 6,574 | 740 |

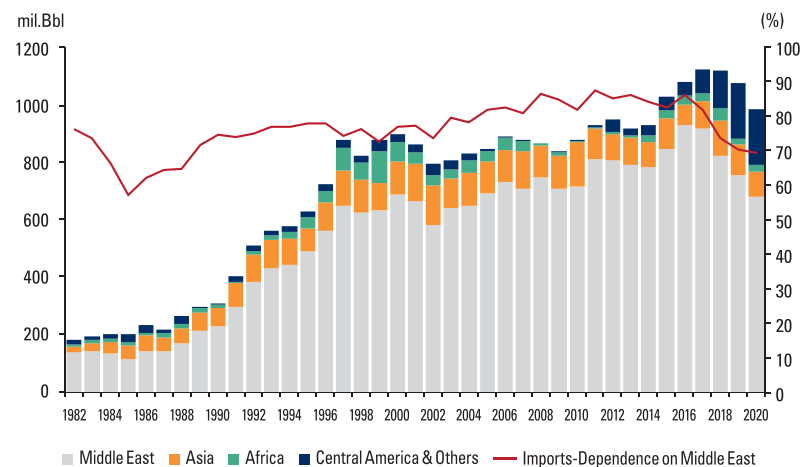
| | Steaming Coal | | | | | | |
|------|---------------|-----------|--------|--------|-------|--------|--------|
| | Total | Australia | Canada | China | USA | Russia | Others |
| 1983 | 3,757 | 1,523 | 440 | - | 40 | - | 1,754 |
| 1984 | 5,873 | 3,067 | 1,157 | - | 55 | - | 1,594 |
| 1985 | 9,006 | 4,800 | 1,664 | - | 634 | - | 1,908 |
| 1986 | 9,862 | 5,281 | 1,453 | - | 627 | - | 2,501 |
| 1987 | 8,587 | 3,916 | 1,071 | - | 495 | - | 3,105 |
| 1988 | 10,677 | 4,135 | 1,387 | - | 718 | - | 4,437 |
| 1989 | 11,849 | 3,820 | 1,608 | - | 617 | - | 5,804 |
| 1990 | 11,560 | 3,870 | 1,348 | - | 741 | - | 5,601 |
| 1991 | 12,333 | 4,779 | 1,616 | - | 703 | - | 5,235 |
| 1992 | 13,274 | 5,683 | 1,171 | - | 671 | - | 5,749 |
| 1993 | 17,837 | 6,502 | 1,443 | - | 851 | - | 9,041 |
| 1994 | 21,798 | 8,123 | 1,527 | - | 823 | - | 11,325 |
| 1995 | 25,655 | 9,159 | 2,157 | - | 1,658 | - | 12,681 |
| 1996 | 27,698 | 9,935 | 1,859 | - | 1,518 | - | 14,386 |
| 1997 | 31,919 | 12,769 | 1,992 | - | 856 | - | 16,302 |
| 1998 | 32,589 | 15,724 | 2,696 | 6,023 | 148 | 393 | 7,605 |
| 1999 | 33,874 | 12,233 | 2,364 | 10,639 | - | 531 | 8,107 |
| 2000 | 40,026 | 11,597 | 2,647 | 18,660 | - | 2,171 | 5,950 |
| 2001 | 43,958 | 12,765 | 1,114 | 22,426 | 71 | 1,699 | 4,884 |
| 2002 | 46,926 | 14,398 | 1,244 | 22,931 | - | 2,566 | 5,785 |
| 2003 | 47,642 | 13,619 | 741 | 24,611 | 86 | 2,058 | 6,527 |
| 2004 | 53,150 | 18,072 | 280 | 19,065 | 149 | 4,087 | 11,497 |
| 2005 | 52,355 | 19,850 | 276 | 16,253 | - | 3,030 | 12,946 |
| 2006 | 54,422 | 17,637 | 943 | 14,307 | 63 | 4,058 | 17,415 |
| 2007 | 65,753 | 14,799 | 1,059 | 17,748 | 71 | 5,643 | 26,433 |
| 2008 | 75,502 | 23,347 | 1,450 | 15,536 | 44 | 6,864 | 28,261 |
| 2009 | 82,324 | 30,353 | 3,306 | 8,353 | 200 | 3,994 | 36,118 |
| 2010 | 90,431 | 26,512 | 4,980 | 5,356 | 66 | 7,004 | 46,513 |
| 2011 | 96,916 | 28,470 | 7,944 | 3,254 | 854 | 10,474 | 45,920 |
| 2012 | 92,725 | 29,444 | 6,180 | 2,363 | 771 | 10,944 | 43,023 |
| 2013 | 96,313 | 34,754 | 7,434 | 2,203 | 2,524 | 13,001 | 36,397 |
| 2014 | 97,857 | 37,945 | 11,437 | 1,040 | 603 | 12,679 | 34,153 |
| 2015 | 99,971 | 39,446 | 4,520 | 641 | 1,328 | 19,536 | 34,500 |
| 2016 | 99,208 | 32,424 | 1,376 | 2,967 | 1,024 | 19,107 | 42,310 |
| 2017 | 103,031 | 30,763 | 3,786 | 1,997 | 1,827 | 18,112 | 46,545 |
| 2018 | 99,376 | 29,650 | 3,677 | 2,036 | 1,805 | 16,994 | 45,214 |
| 2019 | 95,836 | 29,656 | 5,355 | 1,033 | 1,596 | 18,732 | 39,463 |
| 2020 | 88,673 | 31,673 | 4,932 | 793 | 1,385 | 17,294 | 32,595 |

Source: IEA, 『Coal Information(2019)』

Crude Oil Price



Crude Oil Imports by Region



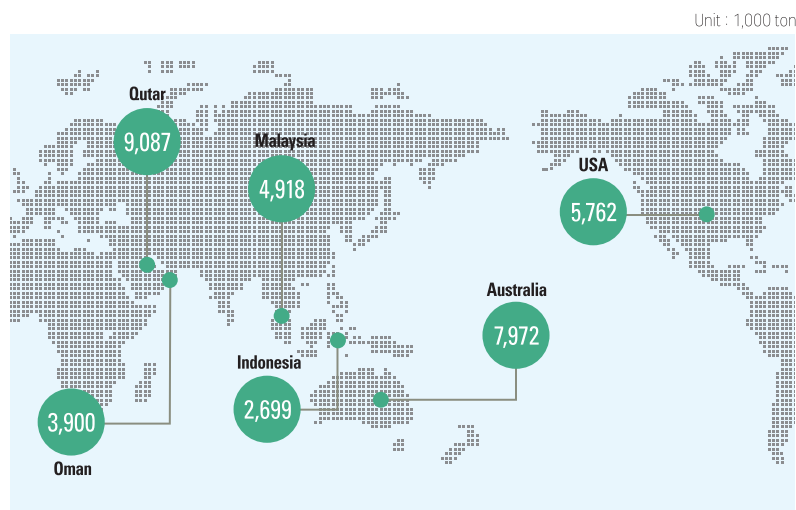
9-3. Crude Oil Imports by Region and Prices

| | By Region(1,000 bbl) | | | |
|------|----------------------|-------------|---------|---------|
| | Total | Middle East | Asia | Africa |
| 1981 | 182,814 | 165,858 | 5,141 | 1,467 |
| 1982 | 178,369 | 135,527 | 21,942 | 6,415 |
| 1983 | 192,969 | 141,816 | 27,367 | 12,053 |
| 1984 | 199,681 | 132,467 | 39,329 | 11,705 |
| 1985 | 198,313 | 113,013 | 47,996 | 11,912 |
| 1986 | 230,063 | 142,423 | 52,128 | 9,912 |
| 1987 | 216,163 | 138,659 | 51,265 | 15,141 |
| 1988 | 261,079 | 168,479 | 50,980 | 17,775 |
| 1989 | 296,411 | 211,819 | 63,585 | 17,180 |
| 1990 | 308,368 | 229,017 | 62,530 | 9,689 |
| 1991 | 399,303 | 294,357 | 82,695 | 5,551 |
| 1992 | 509,378 | 380,452 | 95,033 | 12,822 |
| 1993 | 560,563 | 430,839 | 96,233 | 15,790 |
| 1994 | 573,714 | 439,330 | 91,083 | 23,225 |
| 1995 | 624,945 | 486,528 | 82,050 | 37,911 |
| 1996 | 721,927 | 561,098 | 98,631 | 37,024 |
| 1997 | 873,415 | 645,678 | 121,372 | 82,126 |
| 1998 | 819,094 | 622,005 | 113,494 | 61,907 |
| 1999 | 874,090 | 632,067 | 93,517 | 109,560 |
| 2000 | 893,943 | 686,916 | 112,669 | 67,749 |
| 2001 | 859,367 | 661,649 | 130,033 | 39,155 |
| 2002 | 790,992 | 579,865 | 136,756 | 35,877 |
| 2003 | 804,809 | 639,453 | 100,721 | 34,156 |
| 2004 | 825,790 | 645,183 | 116,287 | 42,874 |
| 2005 | 843,203 | 689,356 | 111,937 | 34,424 |
| 2006 | 888,794 | 730,843 | 110,306 | 42,814 |
| 2007 | 872,541 | 704,020 | 131,273 | 35,557 |
| 2008 | 864,872 | 746,458 | 108,482 | 9,932 |
| 2009 | 835,085 | 705,363 | 116,379 | 11,608 |
| 2010 | 872,415 | 713,647 | 152,354 | 4,592 |
| 2011 | 927,044 | 807,908 | 108,402 | 2,772 |
| 2012 | 947,292 | 805,971 | 88,190 | 9,233 |
| 2013 | 915,075 | 786,813 | 97,047 | 8,096 |
| 2014 | 927,524 | 778,923 | 88,623 | 25,301 |
| 2015 | 1,026,107 | 844,637 | 106,263 | 26,691 |
| 2016 | 1,078,119 | 926,201 | 72,756 | 30,496 |
| 2017 | 1,118,167 | 913,446 | 97,233 | 28,189 |
| 2018 | 1,116,281 | 820,994 | 122,832 | 40,901 |
| 2019 | 1,071,923 | 752,564 | 107,943 | 19,928 |
| 2020 | 980,259 | 676,409 | 88,493 | 24,549 |

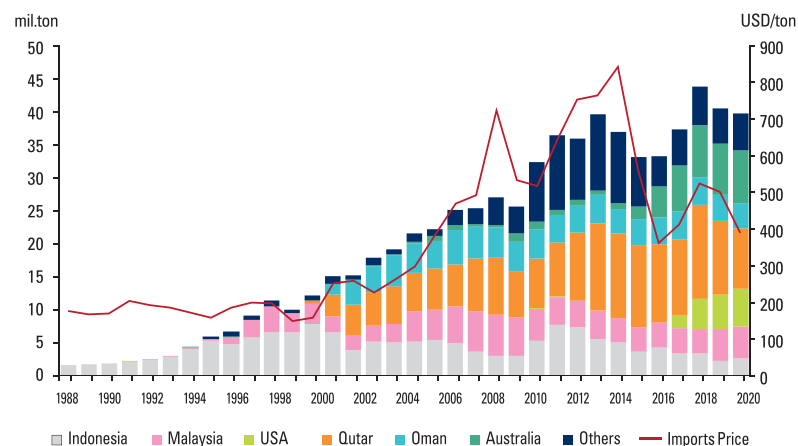
Source: Korea National Oil Corporation

| Central America & Others | Imports-Dependence on Middle East (%) | Imports Price(CIF) (USD/bbl) | Imports Price(FOB) (USD/bbl) | |
|--------------------------|---------------------------------------|------------------------------|------------------------------|------|
| | | | | |
| 10,348 | 90.72 | 35.57 | 34.05 | 1981 |
| 14,486 | 75.98 | 34.05 | 32.81 | 1982 |
| 11,734 | 73.49 | 29.89 | 28.76 | 1983 |
| 16,180 | 66.34 | 29.06 | 27.96 | 1984 |
| 25,392 | 56.99 | 27.73 | 26.67 | 1985 |
| 25,601 | 61.91 | 15.11 | 14.32 | 1986 |
| 11,098 | 64.15 | 17.74 | 16.93 | 1987 |
| 23,845 | 64.53 | 14.71 | 13.89 | 1988 |
| 3,826 | 71.46 | 16.63 | 15.80 | 1989 |
| 7,132 | 74.27 | 20.95 | 19.99 | 1990 |
| 16,701 | 73.72 | 19.62 | 18.35 | 1991 |
| 21,071 | 74.69 | 18.55 | 17.80 | 1992 |
| 17,702 | 76.86 | 16.59 | 15.81 | 1993 |
| 20,075 | 76.58 | 15.55 | 14.84 | 1994 |
| 18,456 | 77.85 | 17.32 | 16.50 | 1995 |
| 25,174 | 77.72 | 20.11 | 19.16 | 1996 |
| 24,240 | 73.93 | 20.34 | 19.28 | 1997 |
| 21,689 | 75.94 | 13.72 | 12.74 | 1998 |
| 38,946 | 72.31 | 16.91 | 16.13 | 1999 |
| 26,610 | 76.84 | 28.22 | 27.04 | 2000 |
| 28,530 | 76.99 | 24.86 | 23.58 | 2001 |
| 38,494 | 73.31 | 24.24 | 23.34 | 2002 |
| 30,479 | 79.45 | 28.73 | 27.48 | 2003 |
| 21,447 | 78.13 | 36.18 | 34.49 | 2004 |
| 7,487 | 81.75 | 50.53 | 48.94 | 2005 |
| 4,831 | 82.23 | 62.83 | 61.08 | 2006 |
| 1,690 | 80.69 | 69.36 | 67.86 | 2007 |
| - | 86.31 | 98.28 | 95.82 | 2008 |
| 1,734 | 84.47 | 60.75 | 59.30 | 2009 |
| 1,823 | 81.80 | 78.73 | 77.12 | 2010 |
| 7,962 | 87.15 | 108.00 | 106.00 | 2011 |
| 43,899 | 85.08 | 112.79 | 111.00 | 2012 |
| 23,119 | 85.98 | 108.27 | 107.00 | 2013 |
| 34,678 | 83.98 | 101.24 | 99.59 | 2014 |
| 48,516 | 82.31 | 53.29 | 51.54 | 2015 |
| 48,667 | 85.91 | 41.08 | 39.57 | 2016 |
| 79,300 | 81.69 | 53.36 | 51.91 | 2017 |
| 131,554 | 73.55 | 71.48 | 69.98 | 2018 |
| 191,489 | 70.21 | 65.51 | 63.68 | 2019 |
| 190,808 | 69.00 | 45.32 | 43.16 | 2020 |

LNG Imports by Region 2020



LNG Imports & Prices



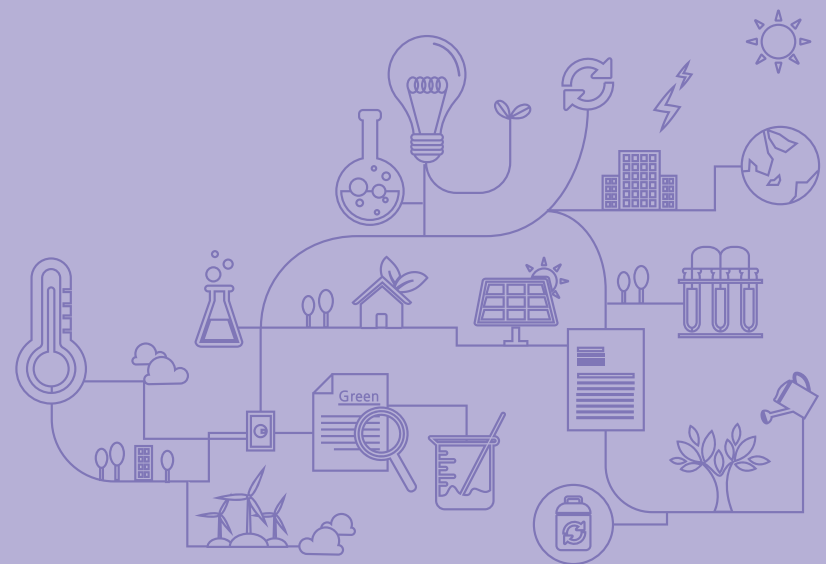
9-4. LNG Imports by Country and Prices

| | Import Price | By Country(1,000 ton) | | | |
|------|--------------|-----------------------|-----------|----------|-------|
| | | Total | Indonesia | Malaysia | USA |
| 1986 | 143 | 117 | 117 | - | - |
| 1987 | 179 | 1,682 | 1,682 | - | - |
| 1988 | 170 | 1,898 | 1,898 | - | - |
| 1989 | 172 | 2,015 | 2,015 | - | - |
| 1990 | 205 | 2,237 | 2,237 | - | 0 |
| 1991 | 195 | 2,494 | 2,436 | 58 | - |
| 1992 | 188 | 2,994 | 2,935 | 58 | - |
| 1993 | 175 | 4,459 | 4,112 | 290 | - |
| 1994 | 160 | 5,996 | 5,433 | 292 | - |
| 1995 | 189 | 6,756 | 4,892 | 1,040 | - |
| 1996 | 203 | 9,258 | 5,975 | 2,573 | 0 |
| 1997 | 200 | 11,471 | 6,730 | 3,928 | - |
| 1998 | 152 | 10,189 | 6,736 | 2,851 | - |
| 1999 | 161 | 12,284 | 7,943 | 3,046 | 0 |
| 2000 | 255 | 15,239 | 6,633 | 2,529 | 0 |
| 2001 | 260 | 15,318 | 4,055 | 2,175 | 0 |
| 2002 | 229 | 17,993 | 5,256 | 2,400 | 0 |
| 2003 | 263 | 19,308 | 5,200 | 2,798 | - |
| 2004 | 301 | 21,781 | 5,290 | 4,638 | 0 |
| 2005 | 387 | 22,317 | 5,502 | 4,688 | - |
| 2006 | 472 | 25,256 | 5,060 | 5,546 | - |
| 2007 | 495 | 25,569 | 3,755 | 6,161 | 0 |
| 2008 | 727 | 27,259 | 3,053 | 6,247 | - |
| 2009 | 537 | 25,822 | 3,084 | 5,874 | - |
| 2010 | 522 | 32,603 | 5,451 | 4,745 | 232 |
| 2011 | 650 | 36,685 | 7,894 | 4,144 | 113 |
| 2012 | 756 | 36,184 | 7,445 | 4,082 | 57 |
| 2013 | 769 | 39,876 | 5,627 | 4,314 | - |
| 2014 | 846 | 37,107 | 5,176 | 3,673 | - |
| 2015 | 563 | 33,366 | 3,776 | 3,698 | - |
| 2016 | 364 | 33,453 | 4,362 | 3,813 | 28 |
| 2017 | 416 | 37,537 | 3,542 | 3,749 | 1,959 |
| 2018 | 527 | 44,015 | 3,447 | 3,702 | 4,658 |
| 2019 | 505 | 40,748 | 2,336 | 4,802 | 5,226 |
| 2020 | 393 | 39,982 | 2,699 | 4,918 | 5,762 |

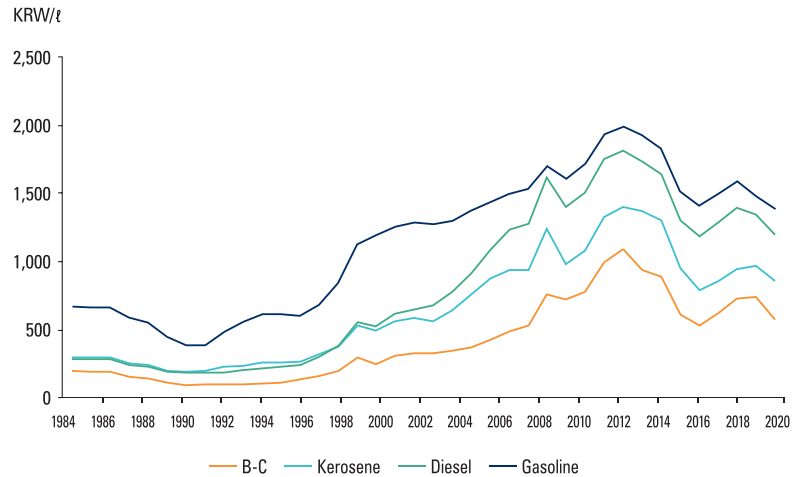
| By Country(1,000 ton) | | | | |
|-----------------------|-------|-----------|--------|------|
| Qutar | Oman | Australia | Others | |
| - | - | - | - | 1986 |
| - | - | - | - | 1987 |
| - | - | - | - | 1988 |
| - | - | - | - | 1989 |
| - | - | - | - | 1990 |
| - | - | - | - | 1991 |
| - | - | - | - | 1992 |
| - | - | 57 | - | 1993 |
| - | - | - | 271 | 1994 |
| - | - | 114 | 710 | 1995 |
| - | - | 56 | 654 | 1996 |
| - | - | - | 813 | 1997 |
| - | - | - | 602 | 1998 |
| 480 | - | - | 815 | 1999 |
| 3,251 | 1,619 | 54 | 1,153 | 2000 |
| 4,655 | 3,784 | 57 | 591 | 2001 |
| 5,123 | 3,970 | 176 | 1,068 | 2002 |
| 5,694 | 4,714 | 123 | 779 | 2003 |
| 5,818 | 4,411 | 285 | 1,339 | 2004 |
| 6,211 | 4,244 | 748 | 925 | 2005 |
| 6,458 | 5,221 | 701 | 2,270 | 2006 |
| 8,031 | 4,792 | 422 | 2,407 | 2007 |
| 8,744 | 4,544 | 398 | 4,273 | 2008 |
| 6,973 | 4,551 | 1,314 | 4,026 | 2009 |
| 7,449 | 4,557 | 1,030 | 9,140 | 2010 |
| 8,153 | 4,195 | 787 | 11,398 | 2011 |
| 10,278 | 4,127 | 832 | 9,362 | 2012 |
| 13,354 | 4,331 | 620 | 11,629 | 2013 |
| 12,853 | 3,726 | 836 | 10,842 | 2014 |
| 12,442 | 3,990 | 1,952 | 7,507 | 2015 |
| 11,880 | 4,081 | 4,695 | 4,595 | 2016 |
| 11,554 | 4,231 | 6,997 | 5,505 | 2017 |
| 14,245 | 4,282 | 7,871 | 5,811 | 2018 |
| 11,311 | 3,946 | 7,775 | 5,353 | 2019 |
| 9,087 | 3,900 | 7,972 | 5,646 | 2020 |

Source: Korea International Trade Association

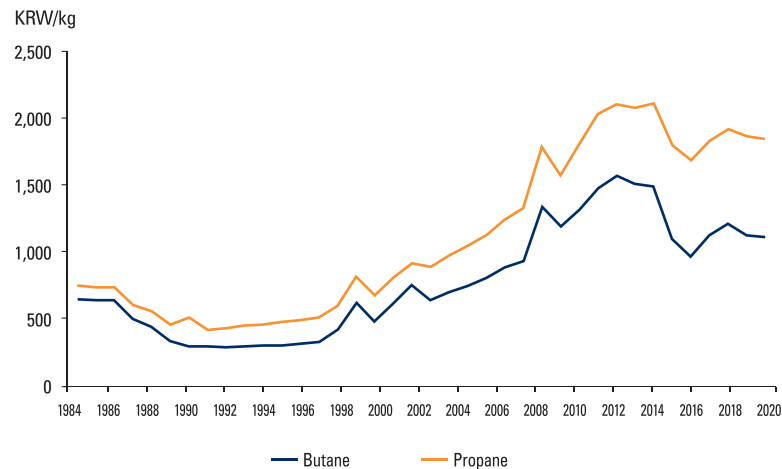
- 10. Prices
- 11. Reserves & Distribution Map
- 12. Energy Consumption in the Korean Peninsula
- 13. World Energy Statistics



Petroleum Products



LPG

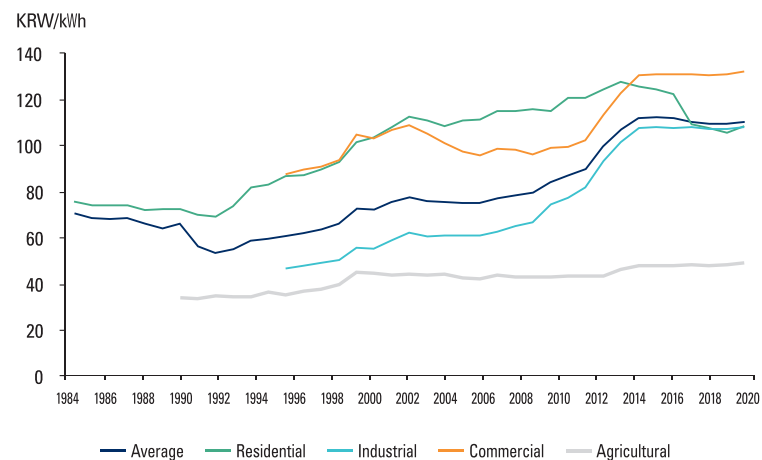


10-1. Prices of Major Petroleum Products

| | Gasoline | Kerosene | Diesel | B-C | Propane | Butane |
|------|----------|----------|---------|---------|----------|---------|
| | (KRW/ℓ) | | | | (KRW/kg) | |
| 1981 | 697.7 | 257.7 | 245.9 | 193.1 | 848.0 | 740.2 |
| 1982 | 740.0 | 292.0 | 278.0 | 208.1 | 836.3 | 736.2 |
| 1983 | 667.9 | 292.3 | 278.3 | 194.9 | 747.7 | 647.9 |
| 1984 | 660.0 | 291.0 | 277.0 | 186.6 | 740.0 | 640.0 |
| 1985 | 660.0 | 291.0 | 277.0 | 185.8 | 740.0 | 640.0 |
| 1986 | 587.5 | 249.2 | 238.3 | 147.9 | 605.9 | 502.3 |
| 1987 | 547.0 | 234.7 | 225.1 | 136.7 | 556.4 | 443.4 |
| 1988 | 445.6 | 194.7 | 187.3 | 105.0 | 458.6 | 336.6 |
| 1989 | 379.8 | 186.0 | 179.0 | 89.1 | 514.0 | 293.0 |
| 1990 | 383.5 | 191.3 | 182.0 | 95.3 | 415.0 | 293.0 |
| 1991 | 480.7 | 226.9 | 182.0 | 94.7 | 430.4 | 286.3 |
| 1992 | 555.8 | 231.1 | 198.7 | 97.5 | 449.4 | 293.9 |
| 1993 | 610.0 | 254.0 | 214.0 | 102.5 | 460.0 | 304.0 |
| 1994 | 611.0 | 252.3 | 227.1 | 106.5 | 475.0 | 304.0 |
| 1995 | 598.0 | 261.6 | 239.4 | 129.5 | 489.7 | 314.9 |
| 1996 | 675.8 | 314.3 | 300.8 | 156.7 | 510.0 | 330.0 |
| 1997 | 838.7 | 373.5 | 376.2 | 195.9 | 599.0 | 417.8 |
| 1998 | 1,122.6 | 524.2 | 553.5 | 292.1 | 815.0 | 620.0 |
| 1999 | 1,191.9 | 491.2 | 521.8 | 242.3 | 678.3 | 483.3 |
| 2000 | 1,248.4 | 559.6 | 612.8 | 304.1 | 809.3 | 614.3 |
| 2001 | 1,280.0 | 580.2 | 644.6 | 320.5 | 919.0 | 755.1 |
| 2002 | 1,269.1 | 554.4 | 677.6 | 322.8 | 887.3 | 639.3 |
| 2003 | 1,294.8 | 638.8 | 772.0 | 339.2 | 980.0 | 698.5 |
| 2004 | 1,365.3 | 752.2 | 907.9 | 367.1 | 1,050.2 | 750.6 |
| 2005 | 1,432.3 | 871.0 | 1,079.7 | 420.1 | 1,131.5 | 807.1 |
| 2006 | 1,492.4 | 931.9 | 1,228.2 | 483.0 | 1,242.7 | 889.3 |
| 2007 | 1,525.9 | 932.2 | 1,272.7 | 526.6 | 1,330.6 | 931.3 |
| 2008 | 1,692.1 | 1,238.7 | 1,614.4 | 757.1 | 1,789.9 | 1,343.0 |
| 2009 | 1,600.7 | 976.2 | 1,397.5 | 718.7 | 1,577.2 | 1,191.0 |
| 2010 | 1,710.4 | 1,076.0 | 1,502.8 | 772.3 | 1,812.7 | 1,320.3 |
| 2011 | 1,929.3 | 1,321.2 | 1,745.7 | 987.2 | 2,034.0 | 1,480.4 |
| 2012 | 1,985.8 | 1,394.1 | 1,806.3 | 1,088.7 | 2,105.9 | 1,572.5 |
| 2013 | 1,924.5 | 1,366.7 | 1,729.6 | 935.1 | 2,085.3 | 1,515.6 |
| 2014 | 1,827.3 | 1,296.7 | 1,636.7 | 885.5 | 2,112.9 | 1,492.3 |
| 2015 | 1,510.4 | 947.4 | 1,299.6 | 604.2 | 1,801.3 | 1,097.7 |
| 2016 | 1,402.6 | 784.5 | 1,182.5 | 523.8 | 1,689.1 | 966.2 |
| 2017 | 1,491.3 | 853.1 | 1,282.5 | 619.8 | 1,833.8 | 1,127.3 |
| 2018 | 1,581.4 | 942.3 | 1,391.9 | 724.3 | 1,920.4 | 1,213.4 |
| 2019 | 1,472.4 | 961.7 | 1,340.5 | 733.6 | 1,869.9 | 1,130.0 |
| 2020 | 1,381.4 | 853.8 | 1,189.7 | 570.1 | 1,851.2 | 1,112.2 |

Note: Butane is for residential and commercial

Average Revenues per kWh Sold



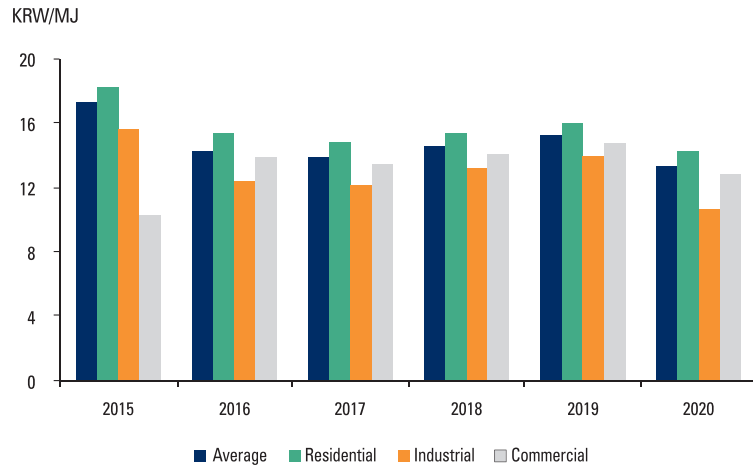
10-2. Average Revenues per KWh Sold

Unit: KRW/kWh

| | Average | Residential | Industrial | Commercial | Agricultural |
|------|---------|-------------|------------|------------|--------------|
| 1981 | 64.31 | 74.61 | - | - | - |
| 1982 | 69.87 | 75.19 | - | - | - |
| 1983 | 67.71 | 73.26 | - | - | - |
| 1984 | 67.42 | 73.33 | - | - | - |
| 1985 | 67.92 | 73.42 | - | - | - |
| 1986 | 65.51 | 71.33 | - | - | - |
| 1987 | 63.48 | 71.75 | - | - | - |
| 1988 | 65.49 | 71.94 | - | - | 33.48 |
| 1989 | 55.43 | 69.13 | - | - | 32.70 |
| 1990 | 52.94 | 68.66 | - | - | 34.06 |
| 1991 | 54.23 | 73.03 | - | - | 33.80 |
| 1992 | 58.09 | 81.22 | - | - | 33.56 |
| 1993 | 58.90 | 82.29 | - | - | 35.82 |
| 1994 | 60.22 | 85.95 | 46.14 | 86.92 | 34.59 |
| 1995 | 61.28 | 86.47 | 47.14 | 89.00 | 36.17 |
| 1996 | 62.99 | 88.95 | 48.37 | 90.32 | 37.11 |
| 1997 | 65.26 | 92.05 | 49.86 | 93.19 | 38.96 |
| 1998 | 72.08 | 100.62 | 55.01 | 104.16 | 44.31 |
| 1999 | 71.59 | 103.07 | 54.78 | 102.45 | 44.04 |
| 2000 | 74.65 | 107.30 | 58.30 | 106.04 | 43.04 |
| 2001 | 77.06 | 111.71 | 61.56 | 107.99 | 43.51 |
| 2002 | 75.21 | 110.31 | 60.08 | 104.42 | 43.16 |
| 2003 | 74.68 | 107.96 | 60.30 | 100.59 | 43.45 |
| 2004 | 74.58 | 110.41 | 60.23 | 96.85 | 41.95 |
| 2005 | 74.46 | 110.82 | 60.25 | 95.24 | 41.67 |
| 2006 | 76.43 | 114.33 | 61.92 | 97.91 | 42.96 |
| 2007 | 77.85 | 114.31 | 64.56 | 97.68 | 42.45 |
| 2008 | 78.76 | 114.97 | 66.24 | 95.30 | 42.38 |
| 2009 | 83.59 | 114.45 | 73.69 | 98.50 | 42.13 |
| 2010 | 86.12 | 119.85 | 76.63 | 98.93 | 42.54 |
| 2011 | 89.32 | 119.99 | 81.23 | 101.69 | 42.72 |
| 2012 | 99.10 | 123.69 | 92.83 | 112.50 | 42.90 |
| 2013 | 106.33 | 127.02 | 100.70 | 121.98 | 45.51 |
| 2014 | 111.28 | 125.14 | 106.83 | 129.75 | 47.31 |
| 2015 | 111.57 | 123.69 | 107.41 | 130.46 | 47.31 |
| 2016 | 111.23 | 121.52 | 107.11 | 130.41 | 47.41 |
| 2017 | 109.53 | 108.50 | 107.41 | 130.42 | 47.57 |
| 2018 | 108.75 | 106.87 | 106.46 | 129.97 | 47.43 |
| 2019 | 108.66 | 104.95 | 106.56 | 130.33 | 47.74 |
| 2020 | 109.80 | 107.89 | 107.35 | 131.60 | 48.45 |



City Gas Consumer Prices per MJ



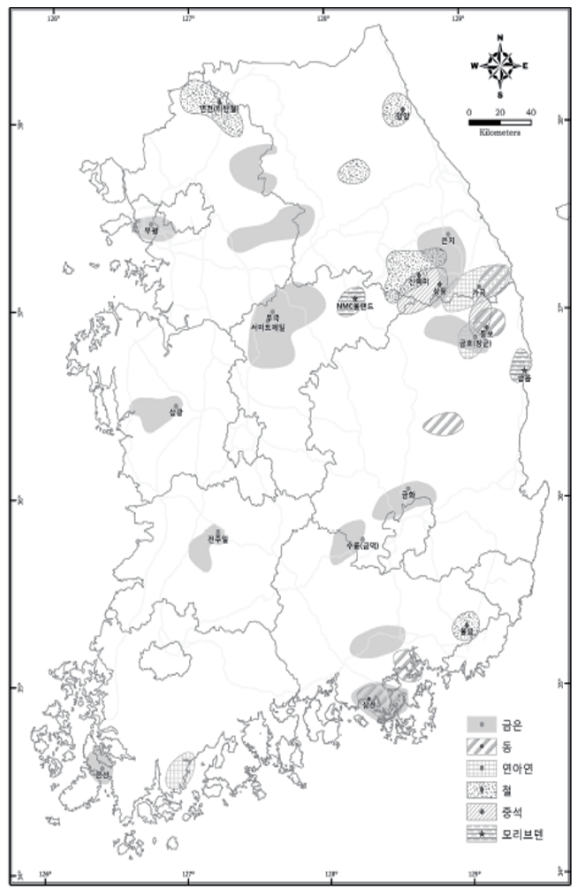
10-3. City Gas Consumer Prices

Unit: KRW/m³, KRW/MJ

| | Average | Residential | Industrial | Commercial |
|------|---------|-------------|------------|------------|
| 1987 | 378.40 | 351.60 | 332.80 | 332.80 |
| 1988 | 271.00 | 326.30 | 292.70 | 292.70 |
| 1989 | 234.40 | 287.90 | 227.00 | 232.10 |
| 1990 | 220.20 | 284.85 | 206.80 | 214.46 |
| 1991 | 217.53 | 284.85 | 199.11 | 211.34 |
| 1992 | 232.71 | 290.16 | 193.99 | 220.85 |
| 1993 | 232.71 | 295.47 | 193.99 | 230.36 |
| 1994 | 235.97 | 296.16 | 196.70 | 230.90 |
| 1995 | 245.73 | 300.56 | 196.70 | 237.25 |
| 1996 | 245.73 | 301.90 | 196.70 | 242.39 |
| 1997 | 334.70 | 325.74 | 206.63 | 266.23 |
| 1998 | 353.20 | 432.39 | 283.47 | 377.93 |
| 1999 | 348.00 | 404.11 | 248.21 | 356.72 |
| 2000 | 418.36 | 463.96 | 294.45 | 416.57 |
| 2001 | 464.99 | 497.99 | 369.43 | 495.54 |
| 2002 | 415.58 | 422.51 | 323.03 | 439.52 |
| 2003 | 417.15 | 451.86 | 357.11 | 468.87 |
| 2004 | 493.47 | 473.95 | 379.94 | 490.96 |
| 2005 | 487.44 | 485.65 | 396.20 | 502.66 |
| 2006 | 570.35 | 568.77 | 485.57 | 585.78 |
| 2007 | 631.37 | 598.97 | 509.44 | 615.98 |
| 2008 | 657.00 | 643.26 | 549.71 | 662.11 |
| 2009 | 707.72 | 690.28 | 629.12 | 744.49 |
| 2010 | 704.94 | 716.55 | 661.83 | 785.14 |
| 2011 | 815.78 | 783.68 | 724.16 | 837.55 |
| 2012 | 19.66 | 20.08 | 18.52 | 20.87 |
| 2013 | 20.63 | 21.15 | 19.37 | 21.77 |
| 2014 | 21.75 | 22.21 | 20.57 | 21.82 |
| 2015 | 17.24 | 18.21 | 15.60 | 10.21 |
| 2016 | 14.25 | 15.36 | 12.39 | 13.83 |
| 2017 | 13.82 | 14.76 | 12.14 | 13.44 |
| 2018 | 14.58 | 15.34 | 13.18 | 14.02 |
| 2019 | 15.21 | 15.93 | 13.90 | 14.73 |
| 2020 | 13.30 | 14.22 | 10.63 | 12.81 |

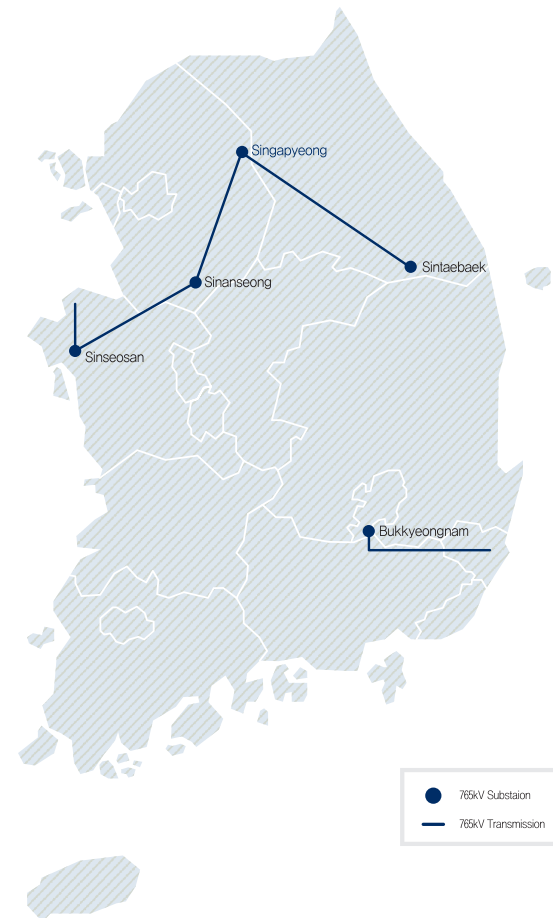
Note 1) The Price is based on MJ since July 2012. 2) The Price is retail prices in Seoul.
Source: Korea City Gas Association

11-1. Major Coal Fields



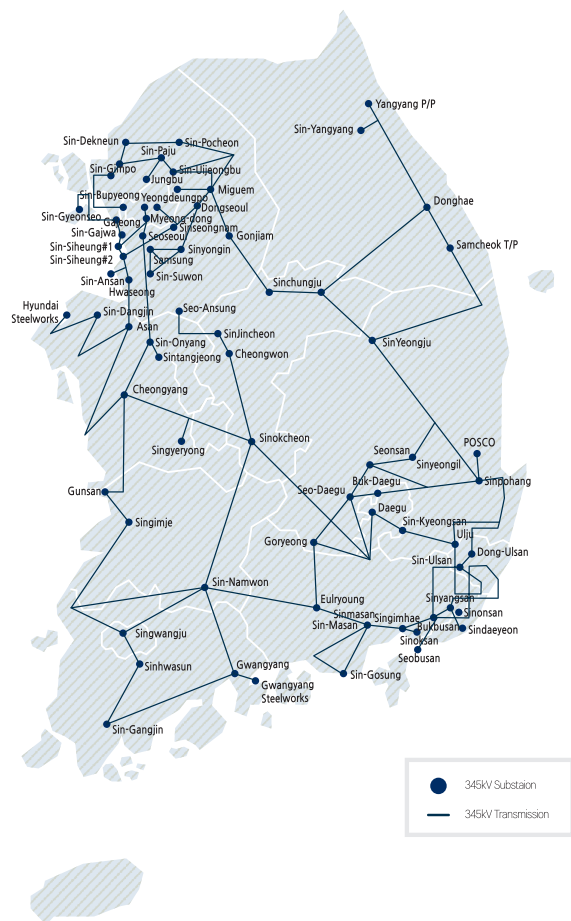
Source : Korea Resources Corporation

11-2. Electric Power Transmission Map



Note: Based on May 2015
Source: Korea Power Exchange

11-3. Electric Power Transmission Map

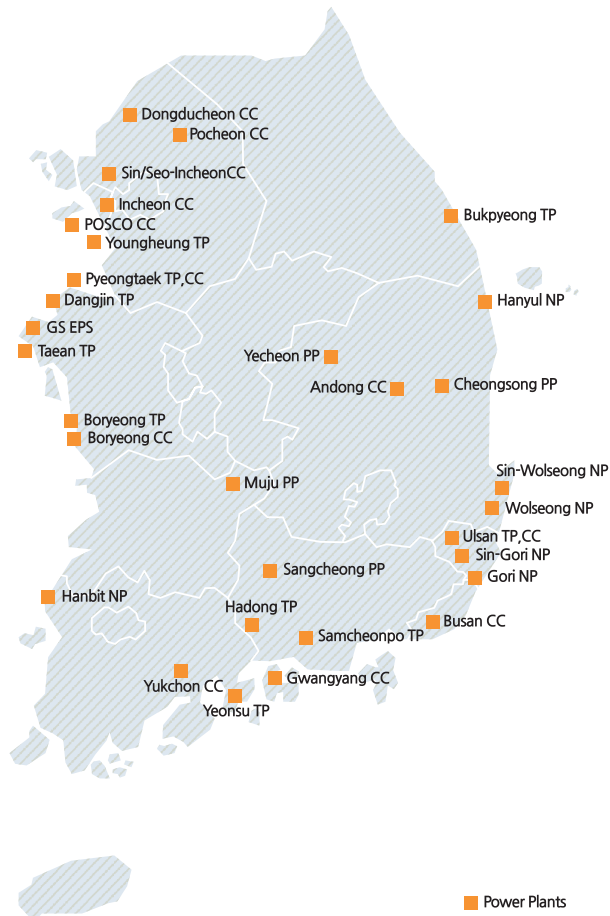


Note: Based on May 2015
Source: Korea Power Exchange

11-3. Electric Power Transmission Map

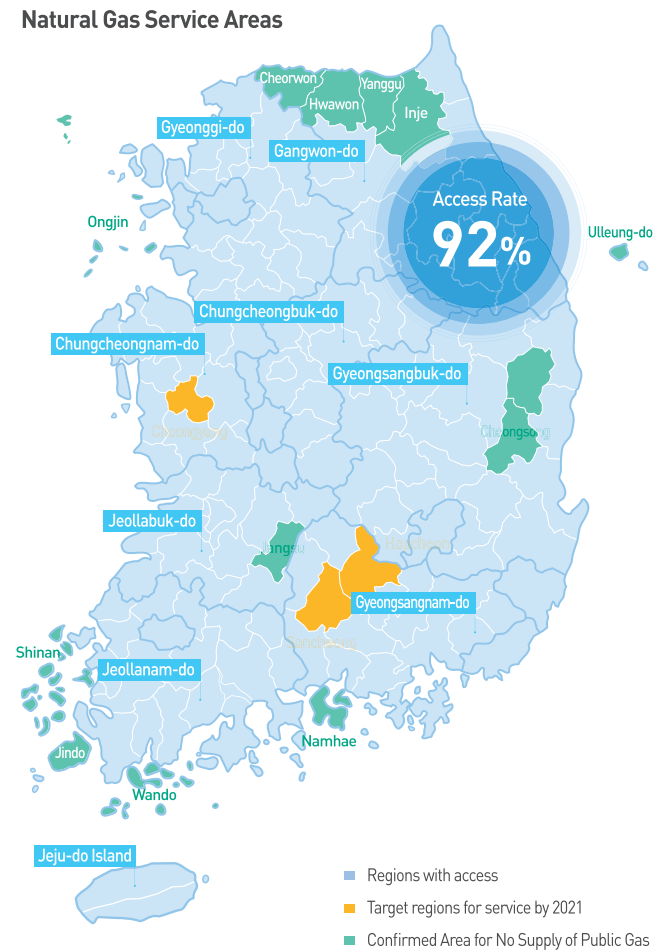
Note : Based on May 2015
Source : Korea Power Exchange

11-3. Electric Power Transmission Map



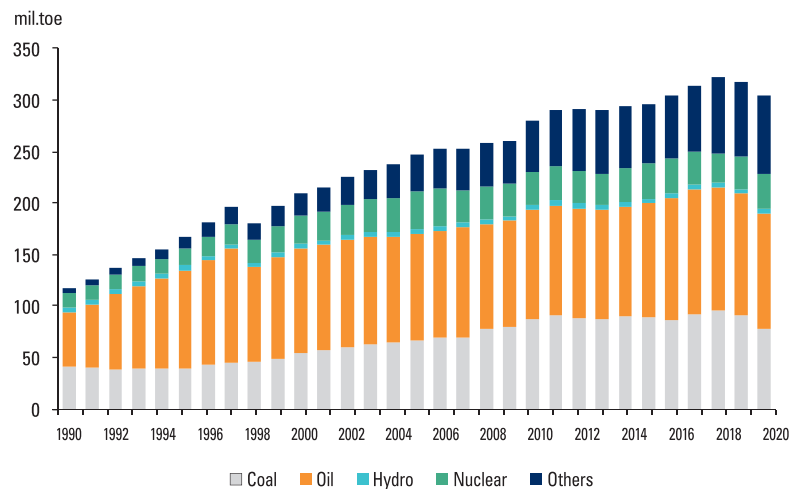
Note : Based on May 2015
Source : Korea Power Exchange

11-4. Areas of Gas Supply Expansion

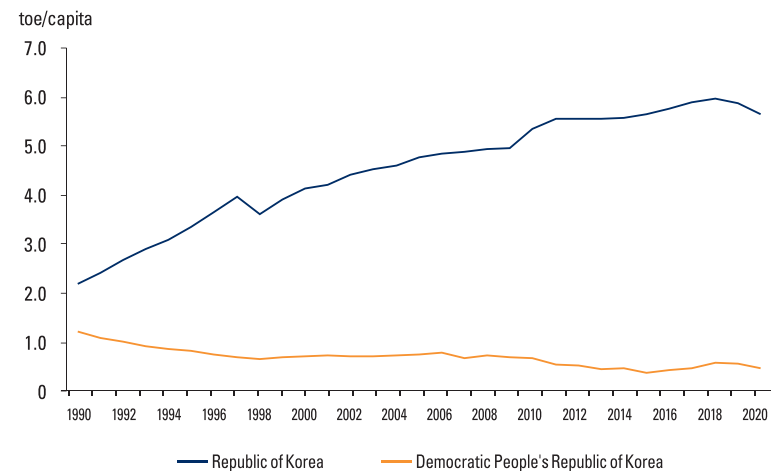


Source : Korea Gas Corporation

Primary Energy Supply of Korean Peninsula

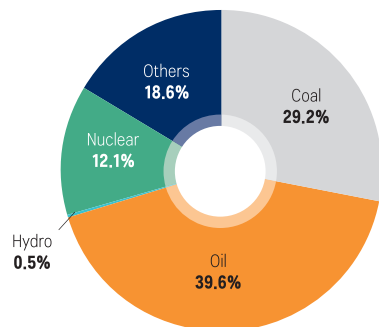


TPES/Population

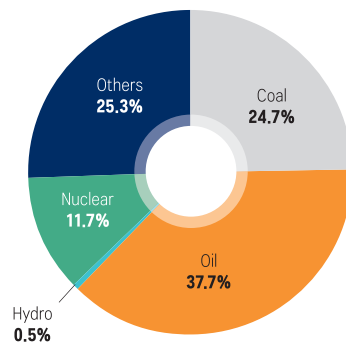


Republic of Korea

2010 264,053 Thou. toe

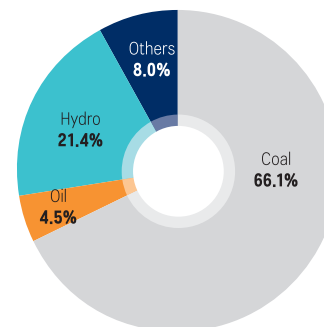


2020 292,076 Thou. toe

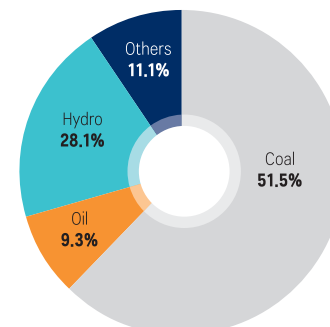


Democratic People's Republic of Korea

2010 15,662 Thou. toe



2020 11,380 Thou. toe



12-1. Primary Energy Supply

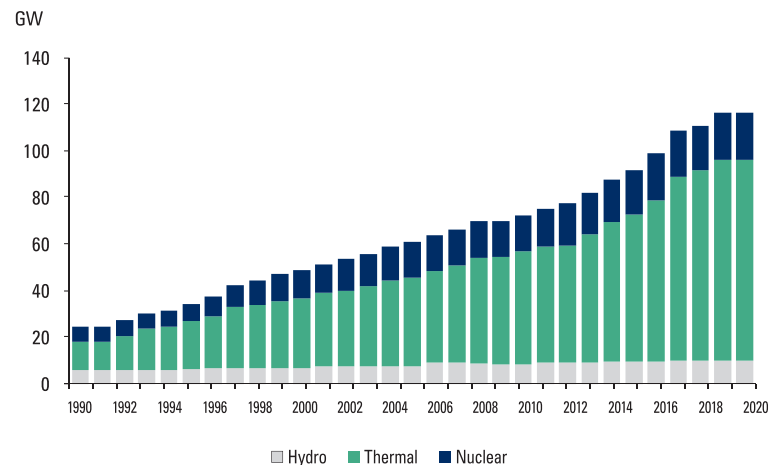
Unit: 1,000 toe

| | Republic of Korea | | | | | |
|------|-------------------|--------|---------|-------|---------|--------|
| | Total | Coal | Oil | Hydro | Nuclear | Others |
| 1980 | 43,911 | 13,199 | 26,830 | 496 | 869 | 2,517 |
| 1985 | 56,296 | 22,022 | 27,142 | 915 | 4,186 | 2,031 |
| 1990 | 92,931 | 24,124 | 50,175 | 1,590 | 13,222 | 3,820 |
| 1991 | 103,294 | 24,206 | 59,627 | 1,263 | 14,078 | 4,121 |
| 1992 | 115,962 | 23,570 | 71,740 | 1,216 | 14,133 | 5,303 |
| 1993 | 126,836 | 25,840 | 78,495 | 1,502 | 14,535 | 6,465 |
| 1994 | 137,108 | 26,532 | 86,364 | 1,025 | 14,663 | 8,524 |
| 1995 | 149,927 | 27,495 | 94,042 | 1,369 | 16,757 | 10,263 |
| 1996 | 165,136 | 32,100 | 99,923 | 1,300 | 18,481 | 13,332 |
| 1997 | 181,058 | 34,927 | 109,372 | 1,351 | 19,271 | 16,136 |
| 1998 | 166,265 | 36,051 | 90,904 | 1,525 | 22,422 | 15,364 |
| 1999 | 181,651 | 38,157 | 97,556 | 1,517 | 25,766 | 18,656 |
| 2000 | 193,240 | 42,925 | 100,618 | 1,402 | 27,241 | 21,053 |
| 2001 | 198,865 | 45,724 | 100,827 | 1,038 | 28,033 | 23,243 |
| 2002 | 209,290 | 49,131 | 103,034 | 1,327 | 29,776 | 26,022 |
| 2003 | 215,772 | 51,124 | 103,073 | 1,722 | 32,418 | 27,434 |
| 2004 | 220,756 | 53,198 | 101,085 | 1,465 | 32,679 | 32,328 |
| 2005 | 229,667 | 54,795 | 102,197 | 1,297 | 36,695 | 34,682 |
| 2006 | 234,062 | 56,652 | 102,555 | 1,305 | 37,187 | 36,363 |
| 2007 | 236,486 | 59,653 | 105,718 | 1,084 | 30,731 | 39,299 |
| 2008 | 240,994 | 66,100 | 100,373 | 1,196 | 32,456 | 40,870 |
| 2009 | 243,500 | 68,595 | 102,534 | 1,213 | 31,771 | 39,387 |
| 2010 | 264,053 | 77,142 | 104,499 | 1,391 | 31,948 | 49,073 |
| 2011 | 276,997 | 83,687 | 105,459 | 1,684 | 33,265 | 52,901 |
| 2012 | 278,325 | 80,636 | 106,134 | 1,615 | 31,719 | 58,221 |
| 2013 | 279,623 | 81,544 | 105,515 | 1,771 | 29,283 | 61,510 |
| 2014 | 282,423 | 84,399 | 104,643 | 1,650 | 33,002 | 58,729 |
| 2015 | 286,921 | 85,401 | 109,090 | 1,223 | 34,765 | 56,442 |
| 2016 | 293,778 | 81,499 | 117,605 | 1,400 | 34,181 | 59,093 |
| 2017 | 302,490 | 86,177 | 119,824 | 1,490 | 31,615 | 63,384 |
| 2018 | 307,557 | 86,707 | 118,521 | 1,549 | 28,437 | 72,343 |
| 2019 | 303,092 | 82,147 | 117,314 | 1,331 | 31,079 | 71,221 |
| 2020 | 292,076 | 72,241 | 110,240 | 1,523 | 34,119 | 73,953 |

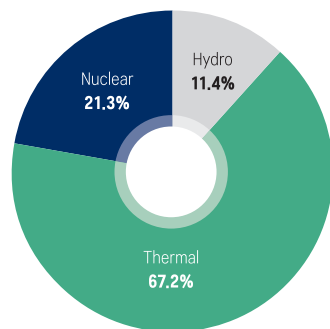
| Democratic People's Republic of Korea | | | | | | toe per capita | | |
|---------------------------------------|--------|-------|-------|---------|--------|----------------|---------|------|
| Total | Coal | Oil | Hydro | Nuclear | Others | R.O.K | D.P.R.K | |
| 21,013 | 15,135 | 2,100 | 2,658 | - | 1,120 | 1.15 | 1.19 | 1980 |
| 24,940 | 18,750 | 1,960 | 3,110 | - | 1,120 | 1.38 | 1.31 | 1985 |
| 23,963 | 16,575 | 2,520 | 3,748 | - | 1,120 | 2.17 | 1.19 | 1990 |
| 21,920 | 15,500 | 1,890 | 3,750 | - | 780 | 2.39 | 1.07 | 1991 |
| 20,450 | 14,600 | 1,520 | 3,550 | - | 780 | 2.65 | 0.98 | 1992 |
| 19,013 | 13,550 | 1,360 | 3,304 | - | 799 | 2.87 | 0.90 | 1993 |
| 17,870 | 12,700 | 910 | 3,475 | - | 785 | 3.07 | 0.84 | 1994 |
| 17,280 | 11,850 | 1,100 | 3,535 | - | 795 | 3.32 | 0.80 | 1995 |
| 15,836 | 10,500 | 1,436 | 3,109 | - | 791 | 3.63 | 0.73 | 1996 |
| 14,746 | 10,300 | 1,006 | 2,656 | - | 784 | 3.94 | 0.66 | 1997 |
| 14,030 | 9,300 | 1,400 | 2,554 | - | 776 | 3.59 | 0.63 | 1998 |
| 14,955 | 10,500 | 881 | 2,794 | - | 780 | 3.90 | 0.66 | 1999 |
| 15,687 | 11,250 | 1,117 | 2,540 | - | 780 | 4.11 | 0.69 | 2000 |
| 16,230 | 11,550 | 1,250 | 2,650 | - | 780 | 4.20 | 0.71 | 2001 |
| 15,638 | 10,950 | 1,253 | 2,655 | - | 780 | 4.39 | 0.68 | 2002 |
| 16,079 | 11,150 | 1,219 | 2,930 | - | 780 | 4.51 | 0.69 | 2003 |
| 16,535 | 11,400 | 1,230 | 3,125 | - | 780 | 4.59 | 0.71 | 2004 |
| 17,127 | 12,030 | 1,034 | 3,283 | - | 780 | 4.76 | 0.73 | 2005 |
| 17,955 | 12,340 | 790 | 3,155 | - | 1,670 | 4.83 | 0.76 | 2006 |
| 15,594 | 10,060 | 944 | 3,320 | - | 1,270 | 4.86 | 0.65 | 2007 |
| 16,980 | 11,236 | 967 | 3,517 | - | 1,260 | 4.91 | 0.71 | 2008 |
| 15,914 | 10,800 | 738 | 3,116 | - | 1,260 | 4.94 | 0.66 | 2009 |
| 15,662 | 10,347 | 704 | 3,352 | - | 1,260 | 5.33 | 0.65 | 2010 |
| 12,598 | 7,275 | 763 | 3,300 | - | 1,260 | 5.55 | 0.52 | 2011 |
| 12,284 | 6,970 | 684 | 3,370 | - | 1,260 | 5.54 | 0.50 | 2012 |
| 10,630 | 5,190 | 710 | 3,470 | - | 1,260 | 5.54 | 0.43 | 2013 |
| 11,050 | 5,810 | 730 | 3,250 | - | 1,260 | 5.57 | 0.45 | 2014 |
| 8,700 | 3,930 | 1,010 | 2,500 | - | 1,260 | 5.62 | 0.35 | 2015 |
| 9,910 | 4,280 | 1,170 | 3,200 | - | 1,260 | 5.74 | 0.40 | 2016 |
| 11,240 | 6,030 | 970 | 2,980 | - | 1,260 | 5.88 | 0.45 | 2017 |
| 13,850 | 8,440 | 950 | 3,200 | - | 1,260 | 5.96 | 0.55 | 2018 |
| 13,770 | 8,610 | 1,150 | 2,750 | - | 1,260 | 5.86 | 0.55 | 2019 |
| 11,380 | 5,860 | 1,060 | 3,200 | - | 1,260 | 5.64 | 0.45 | 2020 |

Note: Others includes LNG and renewables. Source : Statistics Korea

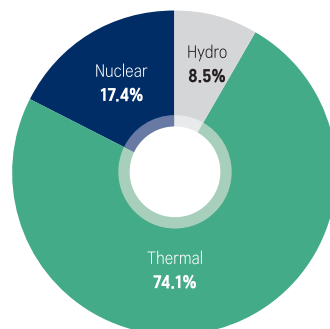
Electric Power Generating Facilities



2010 83,046 MW



2020 133,563 MW



12-2. Generating Facilities

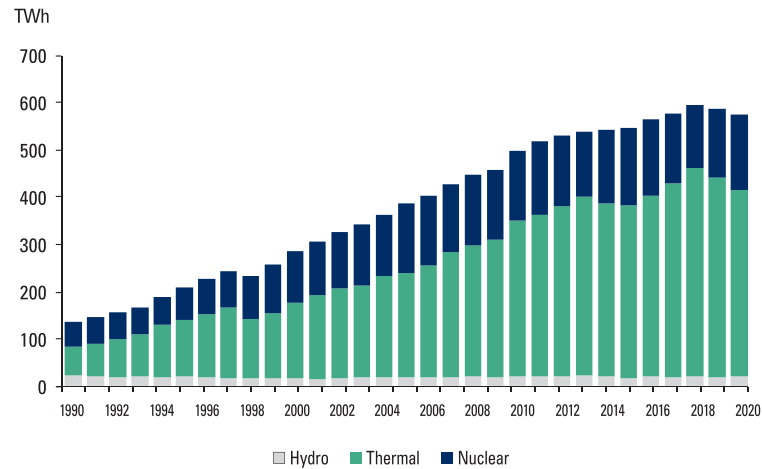
Unit : MW

| | Republic of Korea | | | | Democratic People's Republic of Korea | | | |
|------|-------------------|-------|---------|---------|---------------------------------------|-------|---------|---------|
| | Total | Hydro | Thermal | Nuclear | Total | Hydro | Thermal | Nuclear |
| 1980 | 9,391 | 1,157 | 7,647 | 587 | 5,010 | 2,910 | 2,100 | - |
| 1985 | 16,137 | 2,223 | 11,048 | 2,866 | 5,960 | 3,360 | 2,600 | - |
| 1990 | 21,021 | 2,340 | 11,065 | 7,616 | 7,142 | 4,292 | 2,850 | - |
| 1991 | 21,111 | 2,445 | 11,050 | 7,616 | 7,142 | 4,292 | 2,850 | - |
| 1992 | 24,120 | 2,498 | 14,007 | 7,616 | 7,142 | 4,292 | 2,850 | - |
| 1993 | 27,654 | 2,504 | 17,534 | 7,616 | 7,142 | 4,292 | 2,850 | - |
| 1994 | 28,750 | 2,493 | 18,641 | 7,616 | 7,237 | 4,337 | 2,900 | - |
| 1995 | 32,184 | 3,093 | 20,475 | 8,616 | 7,237 | 4,337 | 2,900 | - |
| 1996 | 35,715 | 3,094 | 23,005 | 9,616 | 7,387 | 4,437 | 2,950 | - |
| 1997 | 41,042 | 3,115 | 27,612 | 10,316 | 7,387 | 4,437 | 2,950 | - |
| 1998 | 43,406 | 3,131 | 28,259 | 12,016 | 7,387 | 4,437 | 2,950 | - |
| 1999 | 46,978 | 3,148 | 30,114 | 13,716 | 7,387 | 4,437 | 2,950 | - |
| 2000 | 48,451 | 3,149 | 31,586 | 13,716 | 7,552 | 4,592 | 2,960 | - |
| 2001 | 50,859 | 3,876 | 33,267 | 13,716 | 7,752 | 4,792 | 2,960 | - |
| 2002 | 53,801 | 3,876 | 34,209 | 15,716 | 7,772 | 4,812 | 2,960 | - |
| 2003 | 56,053 | 3,877 | 36,460 | 15,716 | 7,772 | 4,812 | 2,960 | - |
| 2004 | 59,961 | 3,879 | 39,366 | 16,716 | 7,772 | 4,812 | 2,960 | - |
| 2005 | 62,258 | 3,883 | 40,660 | 17,716 | 7,822 | 4,812 | 3,010 | - |
| 2006 | 65,514 | 5,485 | 42,314 | 17,716 | 7,822 | 4,812 | 3,010 | - |
| 2007 | 68,268 | 5,492 | 45,060 | 17,716 | 7,952 | 4,942 | 3,010 | - |
| 2008 | 72,491 | 5,505 | 49,270 | 17,716 | 7,497 | 4,487 | 3,010 | - |
| 2009 | 73,470 | 5,515 | 50,240 | 17,716 | 6,928 | 3,918 | 3,010 | - |
| 2010 | 76,078 | 5,525 | 52,838 | 17,716 | 6,968 | 3,958 | 3,010 | - |
| 2011 | 79,342 | 6,418 | 54,208 | 18,716 | 6,920 | 3,960 | 2,960 | - |
| 2012 | 81,806 | 6,446 | 54,644 | 20,716 | 7,220 | 4,260 | 2,960 | - |
| 2013 | 86,969 | 6,454 | 59,799 | 20,716 | 7,243 | 4,283 | 2,960 | - |
| 2014 | 93,216 | 6,467 | 66,033 | 20,716 | 7,253 | 4,293 | 2,960 | - |
| 2015 | 97,649 | 6,471 | 69,462 | 21,716 | 7,427 | 4,467 | 2,960 | - |
| 2016 | 105,866 | 6,485 | 76,265 | 23,116 | 7,661 | 4,701 | 2,960 | - |
| 2017 | 116,908 | 6,489 | 87,890 | 22,529 | 7,721 | 4,761 | 2,960 | - |
| 2018 | 119,092 | 6,490 | 90,751 | 21,850 | 8,150 | 4,790 | 3,360 | - |
| 2019 | 125,338 | 6,508 | 95,580 | 23,250 | 8,150 | 4,790 | 3,360 | - |
| 2020 | 125,338 | 6,508 | 95,580 | 23,250 | 8,225 | 4,865 | 3,360 | - |

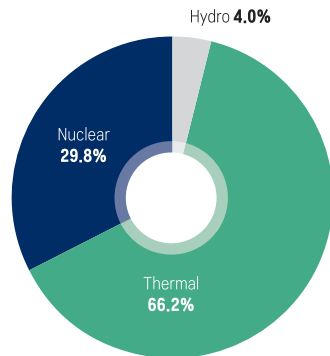
Note : Thermal includes alternative & group energy.

Source: Korea Electric Power Corporation, Statistics Korea(KOSIS)

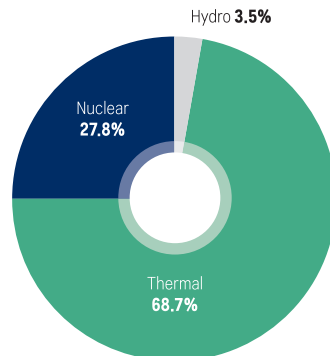
Electric Power Generation by Facility Type



2010 498,360 GWh



2020 576,062 GWh



12-3. Electric Power Generation by Facility Type

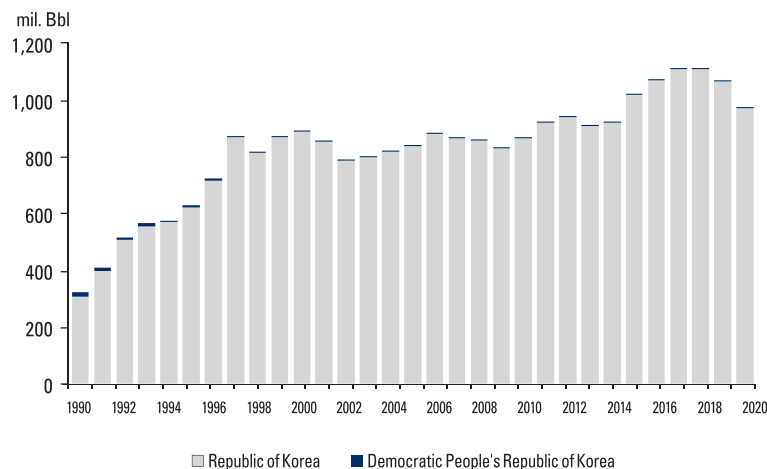
Unit: GWh

| | Republic of Korea | | | | Democratic People's Republic of Korea | | | |
|------|-------------------|-------|---------|---------|---------------------------------------|--------|---------|---------|
| | Total | Hydro | Thermal | Nuclear | Total | Hydro | Thermal | Nuclear |
| 1980 | 37,239 | 1,984 | 31,778 | 3,577 | 21,200 | 10,600 | 10,600 | - |
| 1985 | 58,007 | 3,659 | 37,603 | 16,745 | 25,100 | 12,300 | 12,800 | - |
| 1990 | 107,670 | 6,361 | 48,422 | 52,887 | 27,700 | 15,600 | 12,100 | - |
| 1991 | 118,619 | 5,051 | 57,257 | 56,311 | 26,300 | 15,000 | 11,300 | - |
| 1992 | 130,963 | 4,863 | 69,570 | 56,530 | 24,700 | 14,200 | 10,500 | - |
| 1993 | 144,437 | 6,006 | 80,293 | 58,138 | 22,100 | 13,300 | 8,800 | - |
| 1994 | 164,993 | 4,098 | 102,244 | 58,651 | 23,100 | 13,800 | 9,300 | - |
| 1995 | 184,661 | 5,478 | 112,154 | 67,029 | 23,000 | 14,200 | 8,800 | - |
| 1996 | 205,494 | 5,201 | 126,369 | 73,924 | 21,300 | 12,500 | 8,800 | - |
| 1997 | 224,445 | 5,404 | 141,955 | 77,086 | 19,300 | 10,700 | 8,600 | - |
| 1998 | 215,300 | 6,099 | 119,512 | 89,689 | 17,000 | 10,200 | 6,800 | - |
| 1999 | 239,325 | 6,066 | 130,195 | 103,064 | 18,600 | 10,300 | 8,300 | - |
| 2000 | 266,400 | 5,610 | 151,826 | 108,964 | 19,400 | 10,200 | 9,200 | - |
| 2001 | 285,224 | 4,151 | 168,940 | 112,133 | 20,200 | 10,600 | 9,600 | - |
| 2002 | 306,474 | 5,311 | 182,060 | 119,103 | 19,000 | 10,600 | 8,400 | - |
| 2003 | 322,452 | 6,887 | 185,893 | 129,672 | 19,600 | 11,700 | 7,900 | - |
| 2004 | 342,148 | 5,861 | 205,572 | 130,715 | 20,600 | 12,500 | 8,100 | - |
| 2005 | 364,639 | 5,189 | 212,671 | 146,779 | 21,500 | 13,100 | 8,400 | - |
| 2006 | 381,181 | 5,219 | 227,213 | 148,749 | 22,500 | 12,600 | 9,900 | - |
| 2007 | 403,125 | 5,042 | 255,145 | 142,937 | 23,600 | 13,300 | 10,300 | - |
| 2008 | 422,355 | 5,563 | 265,835 | 150,958 | 25,500 | 14,100 | 11,400 | - |
| 2009 | 433,604 | 5,641 | 280,192 | 147,771 | 23,500 | 12,500 | 11,000 | - |
| 2010 | 474,660 | 6,472 | 319,593 | 148,596 | 23,700 | 13,400 | 10,300 | - |
| 2011 | 496,893 | 7,831 | 334,340 | 154,723 | 21,100 | 13,200 | 7,900 | - |
| 2012 | 509,574 | 7,652 | 351,595 | 150,327 | 21,500 | 13,500 | 8,000 | - |
| 2013 | 517,148 | 8,394 | 369,970 | 138,784 | 22,100 | 13,900 | 8,200 | - |
| 2014 | 521,971 | 7,820 | 357,745 | 156,407 | 21,600 | 13,000 | 8,600 | - |
| 2015 | 528,091 | 5,796 | 357,533 | 164,762 | 19,000 | 10,000 | 9,000 | - |
| 2016 | 540,441 | 6,634 | 371,812 | 161,995 | 23,900 | 12,800 | 11,100 | - |
| 2017 | 553,530 | 6,995 | 398,108 | 148,427 | 23,500 | 11,900 | 11,600 | - |
| 2018 | 570,647 | 7,270 | 429,871 | 133,505 | 24,900 | 12,800 | 12,100 | - |
| 2019 | 563,040 | 6,247 | 410,884 | 145,910 | 23,800 | 11,000 | 12,800 | - |
| 2020 | 552,162 | 7,148 | 384,830 | 160,184 | 23,900 | 12,800 | 11,200 | - |

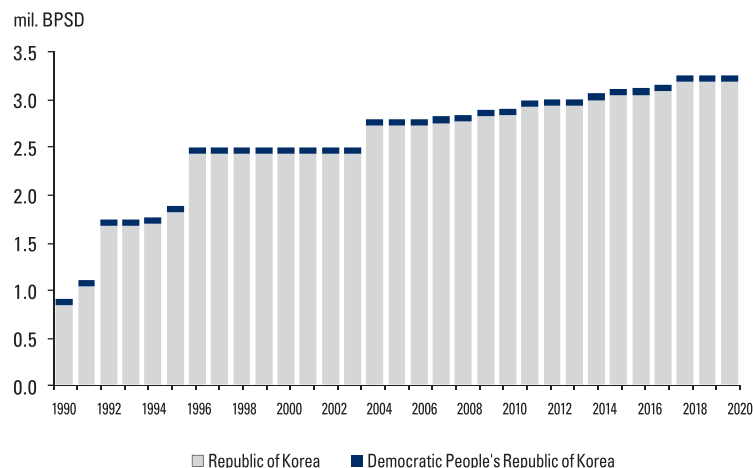
Note : Thermal includes alternative & group energy.

Source: Korea Electric Power Corporation, Statistics Korea(KOSIS)

Crude Oil Imports



Refinery Capacity



12-4. Refinery Capacity

| | Republic of Korea | | | Democratic People's Republic of Korea | | |
|------|-------------------|------------|-------------------|---------------------------------------|------------|-------------------|
| | Crude Oil Imports | | Refining Capacity | Crude Oil Imports | | Refining Capacity |
| | (1,000 Bbl) | (1,000 kℓ) | (1,000 BPSD) | (1,000 Bbl) | (1,000 kℓ) | (1,000 BPSD) |
| 1980 | 182,861 | 29,073 | 640 | 15,393 | 2,447 | 70 |
| 1985 | 198,313 | 31,529 | 790 | 14,369 | 2,284 | 70 |
| 1990 | 308,368 | 49,027 | 840 | 18,472 | 2,937 | 70 |
| 1991 | 399,303 | 63,484 | 1,035 | 13,854 | 2,203 | 70 |
| 1992 | 509,378 | 80,985 | 1,675 | 11,142 | 1,771 | 70 |
| 1993 | 560,563 | 89,123 | 1,675 | 9,969 | 1,585 | 70 |
| 1994 | 573,714 | 91,213 | 1,700 | 6,670 | 1,060 | 70 |
| 1995 | 624,945 | 99,358 | 1,818 | 8,063 | 1,282 | 70 |
| 1996 | 721,927 | 114,777 | 2,438 | 6,861 | 1,091 | 70 |
| 1997 | 873,415 | 138,862 | 2,438 | 3,709 | 590 | 70 |
| 1998 | 819,094 | 130,226 | 2,438 | 3,694 | 587 | 70 |
| 1999 | 874,090 | 138,969 | 2,438 | 2,325 | 370 | 70 |
| 2000 | 893,943 | 142,126 | 2,438 | 2,851 | 453 | 70 |
| 2001 | 859,367 | 136,629 | 2,438 | 4,244 | 675 | 70 |
| 2002 | 790,992 | 125,758 | 2,438 | 4,376 | 696 | 70 |
| 2003 | 804,809 | 127,955 | 2,438 | 4,207 | 669 | 70 |
| 2004 | 825,790 | 131,290 | 2,735 | 3,900 | 620 | 70 |
| 2005 | 843,203 | 134,059 | 2,735 | 3,834 | 610 | 70 |
| 2006 | 888,794 | 141,307 | 2,735 | 3,841 | 611 | 70 |
| 2007 | 872,541 | 138,723 | 2,765 | 3,834 | 610 | 70 |
| 2008 | 864,872 | 137,504 | 2,785 | 3,878 | 617 | 70 |
| 2009 | 835,085 | 132,768 | 2,835 | 3,812 | 606 | 70 |
| 2010 | 872,415 | 138,703 | 2,845 | 3,870 | 615 | 70 |
| 2011 | 927,044 | 147,389 | 2,934 | 3,856 | 613 | 70 |
| 2012 | 947,292 | 150,608 | 2,949 | 3,834 | 610 | 70 |
| 2013 | 915,075 | 145,485 | 2,949 | 4,237 | 674 | 70 |
| 2014 | 927,524 | 147,465 | 3,009 | 3,885 | 618 | 70 |
| 2015 | 1,026,107 | 163,138 | 3,059 | 3,885 | 618 | 70 |
| 2016 | 1,078,119 | 171,408 | 3,064 | 3,885 | 618 | 70 |
| 2017 | 1,118,167 | 177,775 | 3,105 | 3,885 | 618 | 70 |
| 2018 | 1,116,281 | 177,475 | 3,204 | 3,885 | 618 | 70 |
| 2019 | 1,071,923 | 170,422 | 3,204 | 3,885 | 618 | 70 |
| 2020 | 980,259 | 155,849 | 3,204 | 3,885 | 618 | 70 |

Source: Korea National Oil Corporation, Statistics Korea(KOSIS)

13-1. Energy Indicators(2019)

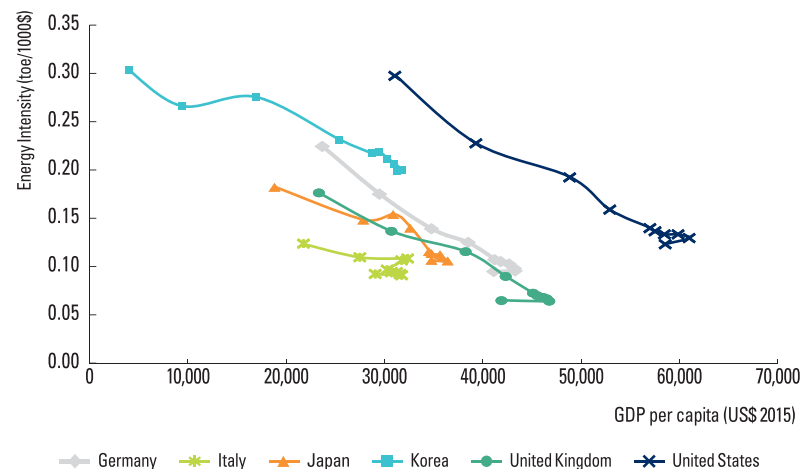
| | Population (mil.person) | GDP (bil. USD(2010)) | GDP(ppp) | Energy Prod. | Net Imports | TPES | Elec. Cons. | CO ₂ Emis |
|----------------|----------------------------|-------------------------|-----------------|-----------------|---------------|---------------|---------------|--------------------------|
| | | | | (mil. toe) | | | (TWh) | (Mt of CO ₂) |
| Australia | 25.37 | 1,338.55 | 1,209.03 | 444.80 | -303.98 | 128.74 | 251.05 | 380.74 |
| Austria | 8.88 | 415.02 | 468.26 | 12.00 | 24.90 | 33.39 | 74.06 | 63.00 |
| Belgium | 11.49 | 492.93 | 555.35 | 15.82 | 49.82 | 54.88 | 88.30 | 90.19 |
| Canada | 37.59 | 1,690.13 | 1,731.76 | 535.59 | -229.94 | 305.59 | 564.56 | 571.01 |
| Chile | 19.04 | 262.81 | 439.46 | 13.67 | 28.63 | 41.36 | 80.99 | 90.50 |
| Columbia | 48.91 | 321.69 | 684.10 | 127.29 | -80.26 | 44.05 | 75.00 | 74.88 |
| Czech Rep. | 10.67 | 214.10 | 407.06 | 26.84 | 17.57 | 42.76 | 69.63 | 94.31 |
| Denmark | 5.82 | 337.66 | 310.97 | 12.23 | 6.98 | 16.00 | 33.73 | 28.35 |
| Estonia | 1.33 | 27.50 | 46.11 | 5.40 | 0.25 | 5.24 | 9.27 | 9.88 |
| Finland | 5.52 | 255.30 | 253.49 | 19.24 | 14.51 | 33.32 | 85.97 | 40.12 |
| France | 67.46 | 2,616.81 | 2,916.46 | 131.19 | 120.45 | 242.48 | 475.07 | 293.87 |
| Germany | 83.09 | 3,586.24 | 4,153.93 | 104.39 | 207.48 | 294.33 | 548.92 | 644.11 |
| Greece | 10.72 | 203.71 | 301.45 | 6.02 | 19.31 | 22.07 | 54.88 | 56.64 |
| Hungary | 9.77 | 146.98 | 309.74 | 11.01 | 18.61 | 26.66 | 43.45 | 45.36 |
| Iceland | 0.36 | 20.84 | 19.36 | 5.33 | 1.02 | 6.01 | 18.96 | 1.64 |
| Ireland | 4.93 | 371.86 | 413.93 | 4.08 | 10.25 | 13.64 | 29.31 | 33.86 |
| Israel | 9.05 | 345.52 | 342.25 | 8.04 | 15.57 | 21.69 | 63.57 | 60.87 |
| Italy | 60.34 | 1,914.72 | 2,336.20 | 34.41 | 122.49 | 148.97 | 314.18 | 309.32 |
| Japan | 126.14 | 4,592.15 | 5,372.14 | 49.83 | 377.09 | 415.31 | 1,000.88 | 1,056.19 |
| Korea | 51.71 | 1,634.87 | 2,156.26 | 48.36 | 246.79 | 280.19 | 562.49 | 585.71 |
| DPR of Korea | 25.67 | 29.75 | 111.67 | 14.48 | 1.11 | 15.59 | 11.43 | 53.41 |
| Latvia | 1.91 | 30.57 | 55.38 | 2.83 | 2.17 | 4.49 | 7.13 | 7.01 |
| Luxembourg | 0.62 | 64.87 | 66.34 | 0.23 | 4.33 | 3.95 | 7.63 | 9.09 |
| Mexico | 125.78 | 1,254.38 | 2,387.22 | 149.28 | 35.16 | 183.71 | 304.98 | 419.39 |
| Netherlands | 17.35 | 840.25 | 934.98 | 32.99 | 56.58 | 71.54 | 116.86 | 146.32 |
| New Zealand | 5.01 | 205.06 | 198.95 | 15.38 | 6.48 | 20.48 | 41.86 | 33.40 |
| Norway | 5.35 | 406.90 | 330.36 | 194.46 | -167.11 | 27.42 | 127.08 | 34.86 |
| Poland | 38.39 | 570.12 | 1,217.51 | 59.32 | 48.79 | 102.72 | 165.66 | 287.38 |
| Portugal | 10.29 | 221.94 | 341.97 | 5.88 | 18.36 | 21.77 | 51.61 | 42.41 |
| Slovak Rep. | 5.45 | 98.91 | 181.37 | 7.04 | 11.86 | 17.06 | 28.44 | 29.67 |
| Slovenia | 2.09 | 50.21 | 76.02 | 3.47 | 3.61 | 6.80 | 14.92 | 13.12 |
| Spain | 47.10 | 1,324.64 | 1,796.02 | 34.10 | 100.56 | 121.40 | 255.33 | 230.91 |
| Sweden | 10.28 | 549.82 | 523.77 | 37.11 | 15.75 | 49.03 | 131.44 | 33.65 |
| Switzerland | 8.58 | 757.91 | 590.23 | 13.06 | 13.44 | 24.44 | 63.06 | 35.64 |
| Turkey | 82.58 | 997.50 | 2,334.03 | 45.70 | 105.76 | 146.50 | 272.03 | 366.42 |
| United Kingdom | 66.80 | 3,115.36 | 2,944.40 | 121.65 | 64.11 | 170.66 | 317.28 | 342.24 |
| United States | 328.53 | 19,974.53 | 19,974.53 | 2,309.79 | -20.18 | 2,212.75 | 4,186.69 | 4,744.45 |

Note: CO₂ emissions from fuel combustion only.
Emissions are calculated using the IEA's energy balances and the Revised 1966 IPCC Guidelines.

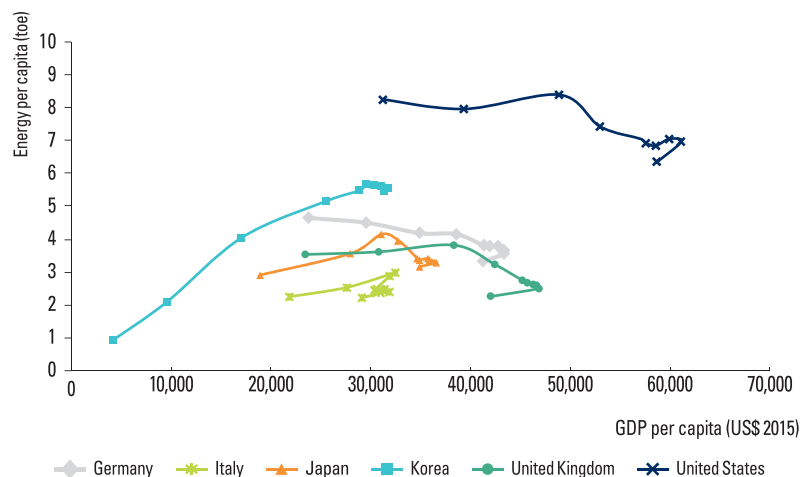
| TPES/Pop. | TPES/GDP | TPES/ GDP(PPP) | Elec. Cons./ Pop. | CO ₂ /TPES | CO ₂ /Pop. | CO ₂ /GDP | CO ₂ / GDP(PPP) | |
|--------------|----------------|-------------------|----------------------|-------------------------|--------------------------------|--------------------------|-------------------------------|----------------|
| (toe/capita) | (toe/1,000USD) | | (kWh/ capita) | (tCO ₂ /toe) | (tCO ₂ / capita) | (kgCO ₂ /USD) | | |
| 5.07 | 0.10 | 0.11 | 9,897 | 2.96 | 15.01 | 0.28 | 0.31 | Australia |
| 3.76 | 0.08 | 0.07 | 8,342 | 1.89 | 7.09 | 0.15 | 0.13 | Austria |
| 4.78 | 0.11 | 0.10 | 7,686 | 1.64 | 7.85 | 0.18 | 0.16 | Belgium |
| 8.13 | 0.18 | 0.18 | 15,018 | 1.87 | 15.19 | 0.34 | 0.33 | Canada |
| 2.17 | 0.16 | 0.09 | 4,254 | 2.19 | 4.75 | 0.34 | 0.21 | Chile |
| 0.90 | 0.14 | 0.06 | 1,534 | 1.70 | 1.53 | 0.23 | 0.11 | Columbia |
| 4.01 | 0.20 | 0.11 | 6,527 | 2.21 | 8.84 | 0.44 | 0.23 | Czech Rep. |
| 2.75 | 0.05 | 0.05 | 5,798 | 1.77 | 4.87 | 0.08 | 0.09 | Denmark |
| 3.94 | 0.19 | 0.11 | 6,998 | 1.88 | 7.43 | 0.36 | 0.21 | Estonia |
| 6.04 | 0.13 | 0.13 | 15,568 | 1.20 | 7.27 | 0.16 | 0.16 | Finland |
| 3.59 | 0.09 | 0.08 | 7,043 | 1.21 | 4.36 | 0.11 | 0.10 | France |
| 3.54 | 0.08 | 0.07 | 6,606 | 2.19 | 7.75 | 0.18 | 0.16 | Germany |
| 2.06 | 0.11 | 0.07 | 5,118 | 2.57 | 5.28 | 0.28 | 0.19 | Greece |
| 2.73 | 0.18 | 0.09 | 4,446 | 1.70 | 4.64 | 0.31 | 0.15 | Hungary |
| 16.70 | 0.29 | 0.31 | 52,514 | 0.27 | 4.55 | 0.08 | 0.08 | Iceland |
| 2.77 | 0.04 | 0.03 | 5,949 | 2.48 | 6.87 | 0.09 | 0.08 | Ireland |
| 2.40 | 0.06 | 0.06 | 7,024 | 2.81 | 6.73 | 0.18 | 0.18 | Israel |
| 2.47 | 0.08 | 0.06 | 5,207 | 2.08 | 5.13 | 0.16 | 0.13 | Italy |
| 3.29 | 0.09 | 0.08 | 7,935 | 2.54 | 8.37 | 0.23 | 0.20 | Japan |
| 5.42 | 0.17 | 0.13 | 10,878 | 2.09 | 11.33 | 0.36 | 0.27 | Korea |
| 0.61 | 0.52 | 0.14 | 446 | 3.43 | 2.08 | 1.80 | 0.48 | DPR of Korea |
| 2.35 | 0.15 | 0.08 | 3,727 | 1.56 | 3.67 | 0.23 | 0.13 | Latvia |
| 6.37 | 0.06 | 0.06 | 12,269 | 2.30 | 14.67 | 0.14 | 0.14 | Luxembourg |
| 1.46 | 0.15 | 0.08 | 2,425 | 2.28 | 3.33 | 0.33 | 0.18 | Mexico |
| 4.12 | 0.09 | 0.08 | 6,737 | 2.05 | 8.43 | 0.17 | 0.16 | Netherlands |
| 4.09 | 0.10 | 0.10 | 8,350 | 1.63 | 6.67 | 0.16 | 0.17 | New Zealand |
| 5.12 | 0.07 | 0.08 | 23,762 | 1.27 | 6.52 | 0.09 | 0.11 | Norway |
| 2.68 | 0.18 | 0.08 | 4,316 | 2.80 | 7.49 | 0.50 | 0.24 | Poland |
| 2.12 | 0.10 | 0.06 | 5,017 | 1.95 | 4.12 | 0.19 | 0.12 | Portugal |
| 3.13 | 0.17 | 0.09 | 5,215 | 1.74 | 5.44 | 0.30 | 0.16 | Slovak Rep. |
| 3.25 | 0.14 | 0.09 | 7,143 | 1.93 | 6.28 | 0.26 | 0.17 | Slovenia |
| 2.58 | 0.09 | 0.07 | 5,421 | 1.90 | 4.90 | 0.17 | 0.13 | Spain |
| 4.77 | 0.09 | 0.09 | 12,787 | 0.69 | 3.27 | 0.06 | 0.06 | Sweden |
| 2.85 | 0.03 | 0.04 | 7,354 | 1.46 | 4.15 | 0.05 | 0.06 | Switzerland |
| 1.77 | 0.15 | 0.06 | 3,294 | 2.50 | 4.44 | 0.37 | 0.16 | Turkey |
| 2.55 | 0.05 | 0.06 | 4,750 | 2.01 | 5.12 | 0.11 | 0.12 | United Kingdom |
| 6.74 | 0.11 | 0.11 | 12,744 | 2.14 | 14.44 | 0.24 | 0.24 | United States |

Source : IEA, Key World Energy Statistics 2021

Energy Intensity by Country(1980~2019)



Energy Consumption per capita by Country(1980~2019)



13-2. Energy Indicators of Major Countries

| | | 1980 | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-----------------------|----------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Germany | | | | | | | | | | |
| Population | millions | 78.30 | 79.36 | 81.46 | 80.28 | 81.69 | 82.35 | 82.66 | 82.91 | 83.09 |
| GDP | bil. 2015 US\$ | 1,858.18 | 2,339.07 | 2,831.73 | 3,084.21 | 3,361.90 | 3,436.87 | 3,521.59 | 3,575.38 | 3,586.24 |
| GDP/Pop. | 2015 US\$ | 23,731.5 | 29,474.2 | 34,762.2 | 38,418.2 | 41,154.4 | 41,734.9 | 42,603.3 | 43,123.6 | 43,160.9 |
| TPES | Mtoe | 357.19 | 351.23 | 336.60 | 329.55 | 308.84 | 310.06 | 311.05 | 302.08 | 294.33 |
| TPES/Pop. | toe/capita | 4.56 | 4.43 | 4.13 | 4.10 | 3.78 | 3.77 | 3.76 | 3.64 | 3.54 |
| TPES/GDP | toe/thou. US\$ | 0.19 | 0.15 | 0.12 | 0.11 | 0.09 | 0.09 | 0.09 | 0.08 | 0.08 |
| Italy | | | | | | | | | | |
| Population | millions | 56.43 | 56.72 | 56.94 | 59.83 | 60.73 | 60.63 | 60.54 | 60.46 | 60.34 |
| GDP | bil. 2015 US\$ | 1,229.99 | 1,559.25 | 1,842.13 | 1,900.33 | 1,836.64 | 1,860.39 | 1,891.42 | 1,906.52 | 1,914.72 |
| GDP/Pop. | 2015 US\$ | 21,796.7 | 27,490.3 | 32,352.1 | 31,762.2 | 30,242.7 | 30,684.3 | 31,242.5 | 31,533.6 | 31,732.2 |
| TPES | Mtoe | 130.84 | 146.57 | 171.54 | 173.74 | 152.56 | 150.98 | 153.45 | 150.58 | 148.97 |
| TPES/Pop. | toe/capita | 2.32 | 2.58 | 3.01 | 2.90 | 2.51 | 2.49 | 2.53 | 2.49 | 2.47 |
| TPES/GDP | toe/thou. US\$ | 0.11 | 0.09 | 0.09 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Japan | | | | | | | | | | |
| Population | millions | 117.06 | 123.61 | 126.83 | 128.04 | 127.11 | 126.93 | 126.71 | 126.44 | 126.14 |
| GDP | bil. 2015 US\$ | 2,213.07 | 3,447.57 | 3,920.57 | 4,177.96 | 4,389.48 | 4,412.39 | 4,508.06 | 4,522.63 | 4,592.15 |
| GDP/Pop. | 2015 US\$ | 18,905.4 | 27,890.7 | 30,912.0 | 32,630.1 | 34,532.9 | 34,762.4 | 35,577.8 | 35,769.0 | 36,405.2 |
| TPES | Mtoe | 344.52 | 438.66 | 518.17 | 501.37 | 432.44 | 427.20 | 431.88 | 426.00 | 415.31 |
| TPES/Pop. | toe/capita | 2.94 | 3.55 | 4.09 | 3.92 | 3.40 | 3.37 | 3.41 | 3.37 | 3.29 |
| TPES/GDP | toe/thou. US\$ | 0.16 | 0.13 | 0.13 | 0.12 | 0.10 | 0.10 | 0.10 | 0.09 | 0.09 |
| Korea | | | | | | | | | | |
| Population | millions | 38.12 | 42.87 | 47.01 | 49.55 | 51.02 | 51.22 | 51.36 | 51.61 | 51.71 |
| GDP | bil. 2015 US\$ | 158.68 | 408.24 | 798.78 | 1,261.20 | 1,465.77 | 1,508.97 | 1,556.65 | 1,598.13 | 1,634.87 |
| GDP/Pop. | 2015 US\$ | 4,162.6 | 9,522.7 | 16,991.7 | 25,453.1 | 28,729.3 | 29,460.6 | 30,308.6 | 30,965.5 | 31,616.1 |
| TPES | Mtoe | 41.26 | 92.91 | 188.16 | 250.03 | 272.68 | 282.41 | 282.25 | 282.26 | 280.19 |
| TPES/Pop. | toe/capita | 1.08 | 2.17 | 4.00 | 5.05 | 5.35 | 5.51 | 5.50 | 5.47 | 5.42 |
| TPES/GDP | toe/thou. US\$ | 0.26 | 0.23 | 0.24 | 0.20 | 0.19 | 0.19 | 0.18 | 0.18 | 0.17 |
| United Kingdom | | | | | | | | | | |
| Population | millions | 56.33 | 57.24 | 58.89 | 62.76 | 65.11 | 65.65 | 66.04 | 66.44 | 66.80 |
| GDP | bil. 2015 US\$ | 1,317.95 | 1,758.38 | 2,248.75 | 2,649.48 | 2,928.59 | 2,984.77 | 3,041.24 | 3,082.02 | 3,115.36 |
| GDP/Pop. | 2015 US\$ | 23,396.9 | 30,719.4 | 38,185.6 | 42,216.1 | 44,979.1 | 45,464.9 | 46,051.5 | 46,388.0 | 46,637.1 |
| TPES | Mtoe | 198.44 | 205.94 | 222.99 | 203.67 | 181.74 | 178.73 | 176.14 | 175.21 | 170.66 |
| TPES/Pop. | toe/capita | 3.52 | 3.60 | 3.79 | 3.25 | 2.79 | 2.72 | 2.67 | 2.64 | 2.55 |
| TPES/GDP | toe/thou. US\$ | 0.15 | 0.12 | 0.10 | 0.08 | 0.06 | 0.06 | 0.06 | 0.06 | 0.05 |
| United States | | | | | | | | | | |
| Population | millions | 227.73 | 250.18 | 282.40 | 309.78 | 321.03 | 323.32 | 325.41 | 327.44 | 328.53 |
| GDP | bil. 2015 US\$ | 7,078.01 | 9,807.26 | 13,750.37 | 16,334.54 | 18,224.78 | 18,523.27 | 18,962.24 | 19,517.32 | 19,974.53 |
| GDP/Pop. | 2015 US\$ | 31,080.7 | 39,200.8 | 48,691.1 | 52,729.5 | 56,769.7 | 57,290.8 | 58,271.8 | 59,605.8 | 60,799.7 |
| TPES | Mtoe | 1,804.81 | 1,915.02 | 2,273.78 | 2,216.89 | 2,186.47 | 2,163.05 | 2,155.23 | 2,230.77 | 2,212.75 |
| TPES/Pop. | toe/capita | 7.93 | 7.65 | 8.05 | 7.16 | 6.81 | 6.69 | 6.62 | 6.81 | 6.74 |
| TPES/GDP | toe/thou. US\$ | 0.26 | 0.20 | 0.17 | 0.14 | 0.12 | 0.12 | 0.11 | 0.11 | 0.11 |

Source : World Energy Balance, IEA, 2021

1. Energy Conversion Factors/Oil Equivalent

| Energy by Source | | Unit | Gross Calorific Values(kcal) | | | | | | |
|------------------|---------------------------|------|------------------------------|--------|--------|----------|----------------|--------|--------|
| | | | 1980 | 1981 | 1987 | 1990 | 2007 | 2012 | 2017 |
| Petroleum | Crude Oil | kg | 10,000 | 10,000 | 10,000 | 10,000 | 10,750 | 10,730 | 10,750 |
| | Gasoline | ℓ | 8,300 | 8,300 | 8,300 | 8,300 | 8,000 | 7,780 | 7,810 |
| | Kerosene | ℓ | 8,700 | 8,700 | 8,700 | 8,700 | 8,800 8,950 | 8,790 | 8,770 |
| | Diesel | ℓ | 9,200 | 9,200 | 9,200 | 9,200 | 9,050 | 9,010 | 9,030 |
| | Bunker-A | ℓ | 9,500 | 9,400 | 9,400 | 9,400 | 9,300 | 9,290 | 9,310 |
| | Bunker-B | ℓ | 9,200 | 9,700 | 9,700 | 9,700 | 9,650 | 9,670 | 9,670 |
| | Bunker-C | ℓ | 9,900 | 9,900 | 9,900 | 9,900 | 9,900 | 9,950 | 9,960 |
| | Propane | kg | 12,000 | 12,000 | 12,000 | 12,000 | 12,050 | 12,050 | 12,040 |
| | Butane | kg | 11,800 | 11,800 | 11,800 | 11,800 | 11,850 | 11,850 | 11,820 |
| | Naphtha | ℓ | 8,000 | 8,000 | 8,000 | 8,000 | 8,050 | 7,710 | 7,710 |
| | Solvent | ℓ | - | - | - | [8,200] | 7,950 | 7,950 | 7,830 |
| | Jet-Oil(JA-1) | ℓ | - | 8,700 | 8,700 | 8,700 | | | |
| | Jet-Oil(JA-4) | ℓ | - | 8,500 | 8,500 | 8,500 | 8,750 | 8,730 | 8,720 |
| | Jet-Oil(AVI-G) | ℓ | - | 8,700 | 8,700 | 8,700 | | | |
| | Asphalt | kg | - | - | - | [10,000] | 9,900 | 9,910 | 9,890 |
| | Lubricants | ℓ | - | - | - | [9,400] | 9,250 | 9,500 | 9,550 |
| | Pet. Coke | kg | - | - | - | [10,800] | 8,100 | 8,000 | 8,360 |
| Gas | LNG | kg | - | 9,500 | 12,980 | 13,000 | 13,000 | 13,040 | 13,060 |
| | City Gas(LNG) | Nm³ | 7,000 | 7,000 | 7,000 | 10,500 | 10,550 | 10,430 | 10,290 |
| | City Gas(LPG) | Nm³ | - | - | - | 15,000 | 15,000 | 15,000 | 15,190 |
| Coal | Domestic Anthracite | kg | 4,600 | 4,600 | 4,500 | 4,500 | 4,650 | 4,500 | 4,730 |
| | Import Anthracite(Steam) | kg | - | - | - | 6,000 | 6,550 | 5,020 | 5,060 |
| | Import Anthracite(Coking) | kg | - | - | - | - | - | 5,900 | 6,020 |
| | Bituminous(Steam) | kg | - | - | - | - | 6,200 | 5,020 | 5,920 |
| | Bituminous(Coking) | kg | 6,600 | 6,600 | 6,600 | 6,600 | 7,000 | 7,000 | 6,970 |
| | Sub-bituminous Coal | kg | - | - | - | - | 5,350 | 5,420 | 5,110 |
| | Cokes | kg | 6,500 | 6,500 | 6,500 | 6,500 | 7,050 | 6,960 | 6,930 |
| Electricity | Electricity(Generation) | kWh | 2,500 | 2,500 | 2,500 | 2,500 | 2,150 | 2,110 | 2,130 |
| | Electricity(Consumption) | kWh | - | - | - | - | - | 2,300 | 2,290 |

Note: Electricity conversion factor for final consumption: 1kWh=860kcal

2. Unit Conversion Factors

Energy

| Units | TJ | Gcal | Mtoe | MBtu | GWh |
|-------|-------------------------|--------|------------------------|------------------------|------------------------|
| TJ | 1 | 238.8 | 2.388×10^{-5} | 947.8 | 0.2778 |
| Gcal | 4.1868×10^{-3} | 1 | 10^{-7} | 3.968 | 1.163×10^{-3} |
| Mtoe | 4.1868×10^{-4} | 10^7 | 1 | 3.968×10^{-7} | 1.163 |
| MBtu | 1.0551×10^{-3} | 0.252 | 2.52×10^{-8} | 1 | 2.931×10^{-4} |
| GWh | 3.6 | 860 | 8.6×10^{-5} | 3412 | 1 |

Mass

| Units | kg | tonne | Long ton(lt) | Short ton(st) | pound(lb) |
|---------------|-------|-----------------------|-----------------------|------------------------|-----------|
| kg | 1 | 0.001 | 9.84×10^{-4} | 1.102×10^{-3} | 2.2046 |
| tonne | 1000 | 1 | 0.984 | 1.1023 | 2204.6 |
| Long ton(lt) | 1016 | 1.016 | 1 | 1.12 | 2240 |
| Short ton(st) | 907.2 | 0.9072 | 0.893 | 1 | 2000 |
| pound(lb) | 0.454 | 4.54×10^{-4} | 4.46×10^{-4} | 5.0×10^{-4} | 1 |

Volume

| Units | m³ | liter | ft³ | gal(U.S) | gal(U.K) | bbl |
|----------|-------------------------|---------|---------|----------|----------|-------------------------|
| m³ | 1 | 10^3 | 35.3146 | 264.1721 | 219.969 | 6.2892 |
| liter | 10^{-3} | 1 | 0.0353 | 0.2641 | 0.2199 | 6.2892×10^{-3} |
| ft³ | 2.8316×10^{-2} | 28.3168 | 1 | 7.4805 | 6.2288 | 0.178 |
| gal(U.S) | 3.7854×10^{-3} | 3.7854 | 0.1336 | 1 | 0.8326 | 0.0238 |
| gal(U.K) | 0.0045461 | 4.5461 | 0.1605 | 1.2009 | 1 | 0.0285 |
| bbl | 0.1589 | 158.988 | 5.6146 | 42 | 34.9726 | 1 |



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