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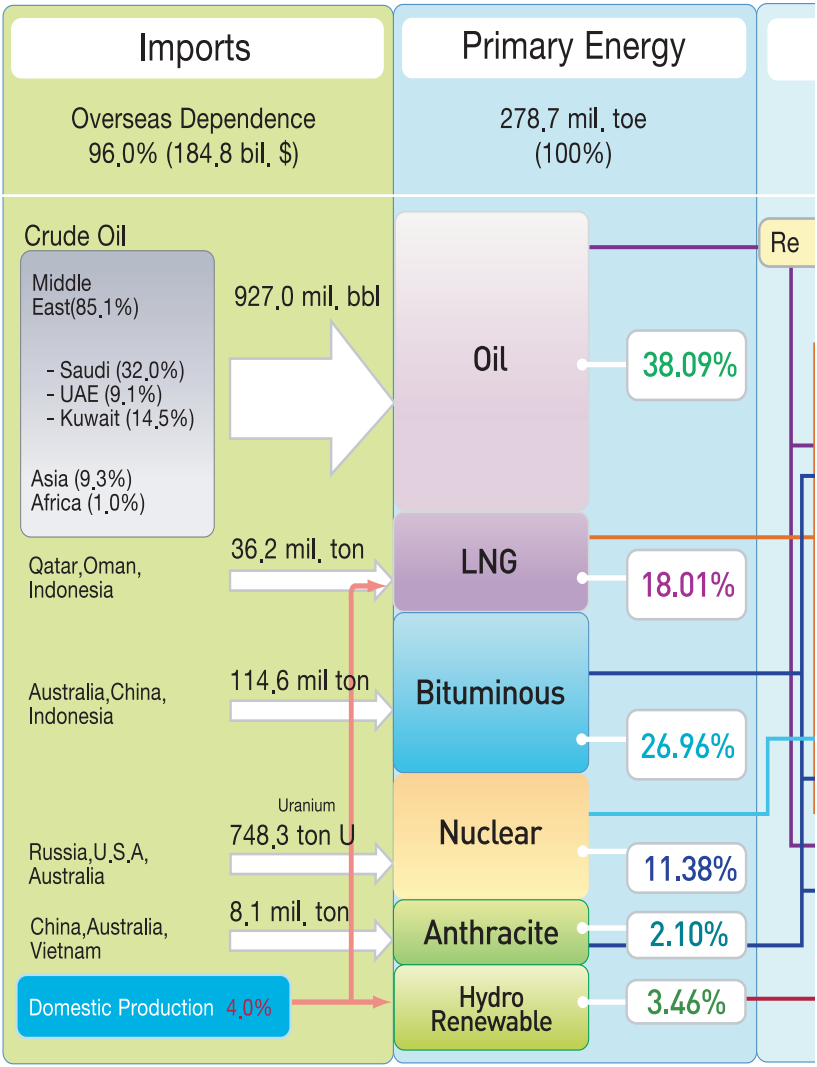
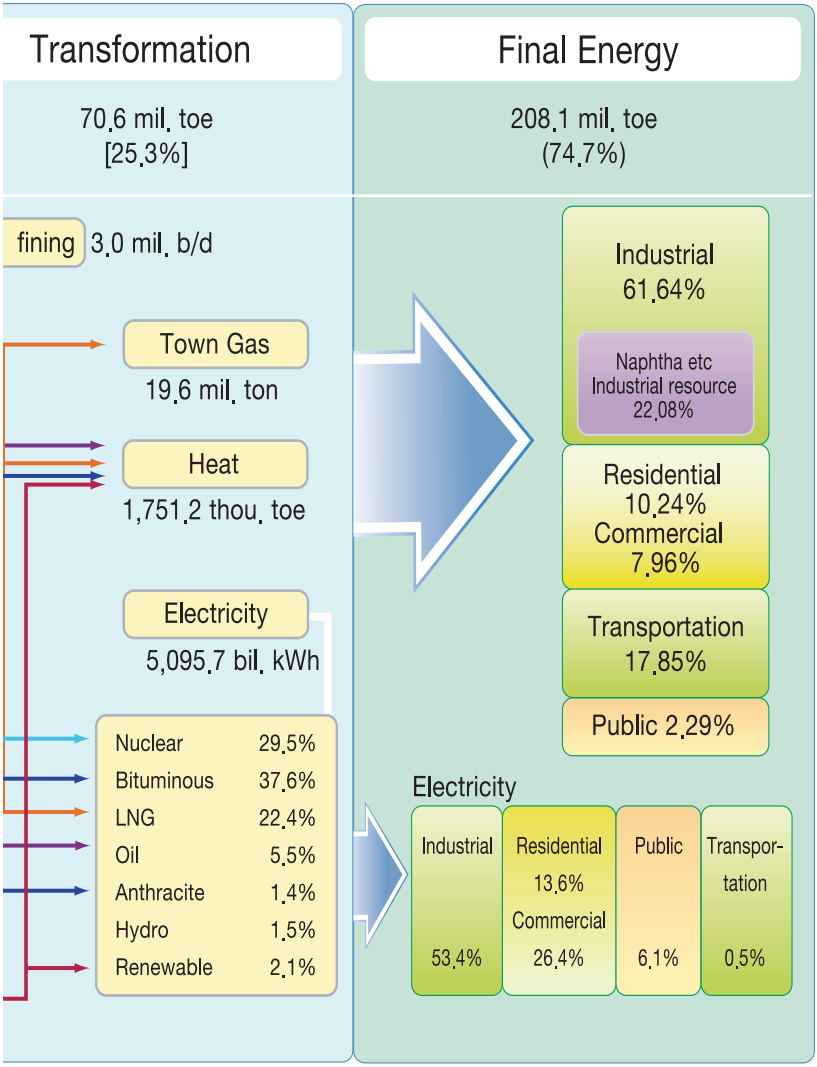
2013 Energy Info. Korea

Contents

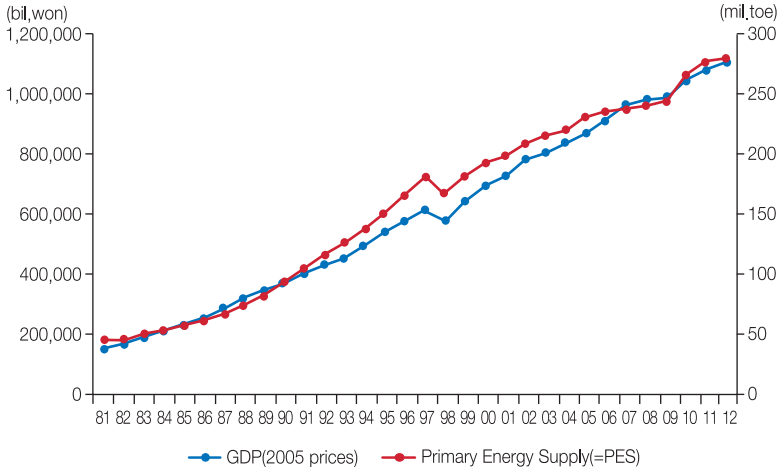
2012 Energy Balance Flow



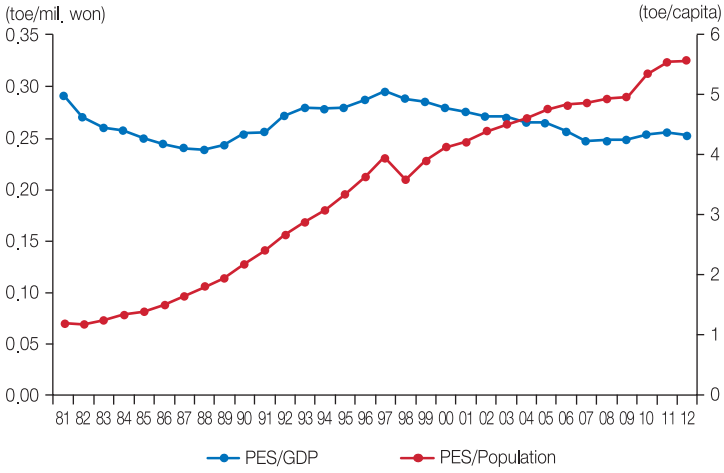

Transformation
70.6 mil. toe
[25.3%]
Final Energy
208.1 mil. toe
(74.7%)
fining
3.0 mil. b/d
Town Gas
19.6 mil. ton
Heat
1,751.2 thou. toe
Electricity
5,095.7 bil. kWh
Nuclear 29.5%
Bituminous 37.6%
LNG 22.4%
Oil 5.5%
Anthracite 1.4%
Hydro 1.5%
Renewable 2.1%
Industrial
61.64%
Naphtha etc
Industrial resource
22.08%
Residential
10.24%
Commercial
7.96%
Transportation
17.85%
Public 2.29%
Electricity
Industrial
53.4%
Residential
13.6%
Commercial
26.4%
Public
6.1%
Transpor-
tation
0.5%

1. Major Energy Indicators

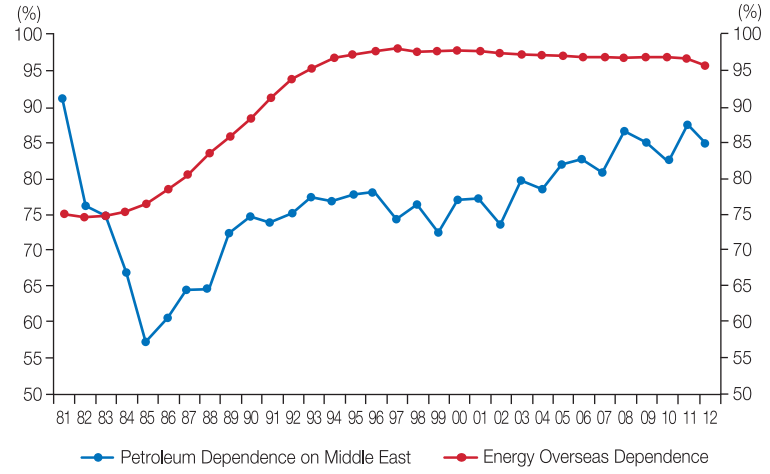
Trends in Primary Energy Supply and GDP



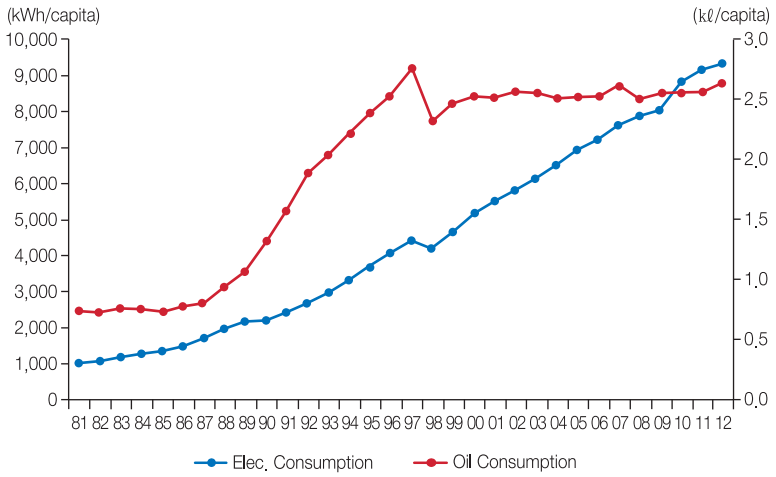
Primary Energy Supply per Capita and GDP



Energy Overseas Dependence and Petroleum Dependence on Middle East



Electricity and Oil Consumption per Capita



1. Major Energy Indicators

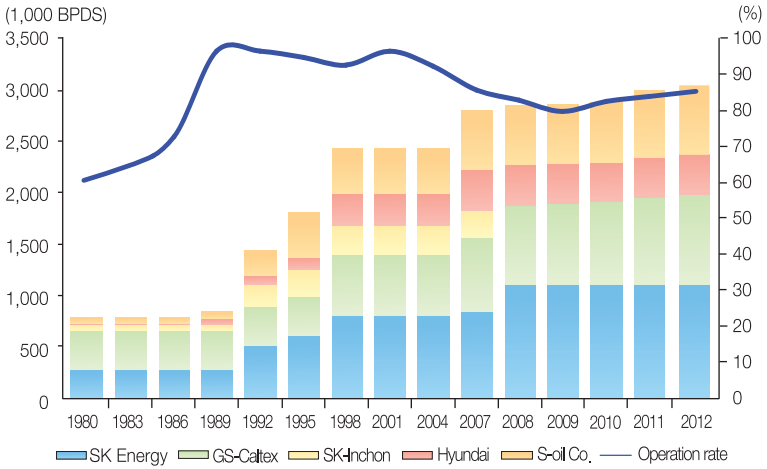
	Population[1]	GDP (2005 prices)		Primary Energy Supply(= PES)[2]		Final Energy Consumption(= FEC)[2]		CO_2 Emissions	
	(1,000)	(bil. won)	Growth Rates(%)	(mil. toe)	Growth Rates(%)	(mil. toe)	Growth Rates(%)	(mil. t-CO_2)	Growth Rates(%)
1981	38,723	156,706	7.4	45.7	4.1	39.0	3.6	129.4	4.0
1982	39,326	169,699	8.3	45.6	-0.2	38.7	-0.6	129.0	-0.3
1983	39,910	190,372	12.2	49.4	8.3	41.3	6.8	137.0	6.1
1984	40,406	209,141	9.9	53.5	8.3	45.0	8.9	148.9	8.7
1985	40,806	224,765	7.5	56.3	5.2	47.0	4.4	153.3	2.9
1986	41,214	252,276	12.2	61.5	9.2	50.5	7.5	159.7	4.2
1987	41,622	283,220	12.3	67.9	10.4	55.2	9.2	166.0	3.9
1988	42,031	316,245	11.7	75.4	11.0	61.0	10.6	189.3	14.1
1989	42,449	337,598	6.8	81.7	8.4	65.9	7.9	200.5	5.9
1990	42,869	368,986	9.3	93.2	14.1	75.1	14.0	229.3	14.4
1991	43,296	404,825	9.7	103.6	11.2	83.8	11.6	254.3	10.9
1992	43,748	428,164	5.8	116.0	12.0	94.6	12.9	276.9	8.9
1993	44,195	455,264	6.3	126.9	9.4	104.0	10.0	304.2	9.9
1994	44,642	495,199	8.8	137.2	8.2	112.2	7.8	329.0	8.2
1995	45,093	539,424	8.9	150.4	9.6	122.0	8.7	358.6	9.0
1996	45,525	578,186	7.2	165.2	9.8	132.0	8.3	383.7	7.0
1997	45,954	611,529	5.8	180.6	9.3	144.4	9.4	407.9	6.3
1998	46,287	576,587	-5.7	165.9	-8.1	132.1	-8.5	351.0	-13.9
1999	46,617	638,458	10.7	181.4	9.3	143.1	8.3	385.3	9.8
2000	47,008	694,628	8.8	192.9	6.4	149.9	4.7	437.7	13.6
2001	47,357	722,229	4.0	198.4	2.9	152.9	2.1	452.0	3.3
2002	47,622	773,868	7.1	208.6	5.2	160.5	4.9	446.1	-1.3
2003	47,859	795,558	2.8	215.1	3.1	164.0	2.2	448.9	0.6
2004	48,039	832,305	4.6	220.2	2.4	166.0	1.2	469.8	4.7
2005	48,138	865,241	4.0	228.6	3.8	170.9	2.9	469.1	-0.1
2006	48,372	910,049	5.2	233.4	2.1	173.6	1.6	476.6	1.6
2007	48,598	956,515	5.1	236.5	1.3	181.5	4.5	490.3	2.9
2008	48,949	978,499	2.3	240.8	1.8	182.6	0.6	501.7	2.3
2009	49,182	981,625	0.3	243.3	1.1	182.1	-0.3	515.5	2.7
2010	49,410	1,043,666	6.3	263.8	8.4	195.6	7.4	563.1	9.2
2011	49,779	1,082,096	3.7	275.7	4.5	205.9	5.3	587.7	4.4
2012	50,004	1,104,215	2.0	278.7	1.1	208.1	1.1	...	...

Note 1) mid-year estimates
2) 2007~2011, from 2012 figures are based on each revised calorific value.

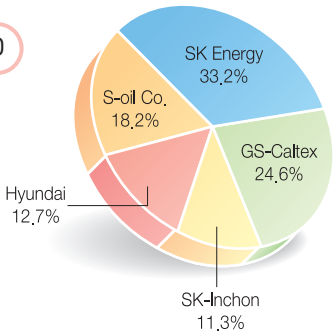
PES/GDP		CO_2 Emissions /GDP	PES /Population	CO_2 Emissions /Population	Oil Consumption /Population	Elec. Consumption /Population	
(toe/mil. won)	(toe/1,000$)	($t\text{-}CO_2$/mil. won)	(toe/capita)	($t\text{-}CO_2$/capita)	(kℓ/capita)	(kWh/capita)	
0.292	0.299	0.83	1.18	3.34	0.74	972	1981
0.269	0.275	0.76	1.16	3.28	0.72	1,028	1982
0.260	0.266	0.72	1.24	3.43	0.75	1,141	1983
0.256	0.262	0.71	1.32	3.68	0.75	1,250	1984
0.250	0.257	0.68	1.38	3.76	0.74	1,340	1985
0.244	0.250	0.63	1.49	3.87	0.77	1,480	1986
0.240	0.245	0.59	1.63	3.99	0.80	1,674	1987
0.238	0.244	0.60	1.79	4.50	0.95	1,921	1988
0.242	0.248	0.59	1.92	4.72	1.08	2,095	1989
0.253	0.259	0.62	2.17	5.35	1.32	2,202	1990
0.256	0.262	0.63	2.39	5.87	1.56	2,411	1991
0.271	0.277	0.65	2.65	6.33	1.87	2,634	1992
0.279	0.285	0.67	2.87	6.88	2.03	2,890	1993
0.277	0.284	0.66	3.07	7.37	2.21	3,283	1994
0.279	0.286	0.66	3.34	7.95	2.39	3,621	1995
0.286	0.293	0.66	3.63	8.43	2.52	4,008	1996
0.295	0.303	0.67	3.93	8.88	2.75	4,369	1997
0.288	0.295	0.61	3.58	7.58	2.30	4,180	1998
0.284	0.291	0.60	3.89	8.27	2.45	4,595	1999
0.278	0.284	0.63	4.10	9.31	2.51	5,096	2000
0.275	0.281	0.63	4.19	9.55	2.50	5,442	2001
0.270	0.276	0.58	4.38	9.37	2.55	5,847	2002
0.270	0.277	0.56	4.49	9.38	2.54	6,135	2003
0.265	0.271	0.56	4.58	9.78	2.49	6,497	2004
0.264	0.271	0.54	4.75	9.75	2.51	6,905	2005
0.256	0.263	0.52	4.82	9.85	2.52	7,209	2006
0.247	0.253	0.51	4.86	10.09	2.61	7,585	2007
0.246	0.252	0.51	4.92	10.25	2.49	7,867	2008
0.248	0.254	0.53	4.95	10.48	2.54	8,021	2009
0.253	0.259	0.54	5.34	11.40	2.56	8,787	2010
0.255	0.261	0.54	5.54	11.81	2.56	9,142	2011
0.252	0.258	…	5.57	…	2.63	9,331	2012

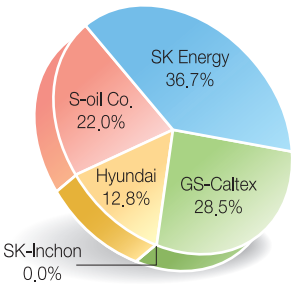
Source 1) IEA, 「CO_2 Emissions from Fuel Combustion(2013)」
2) IEA, 「Energy Balances of OECD Countries(2013)」

Cpacity of Oil Refining Facilities



2002 2,438 thou. BPSD





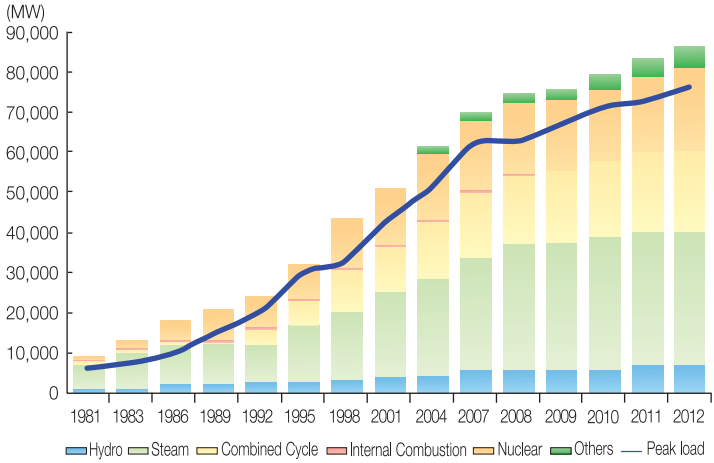
2012 3,039 thou. BPSD

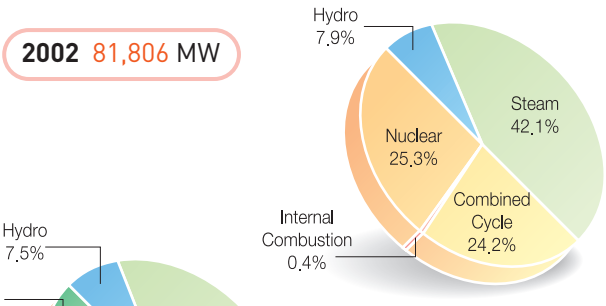
2-1. Capacity of Oil Refining Facilities

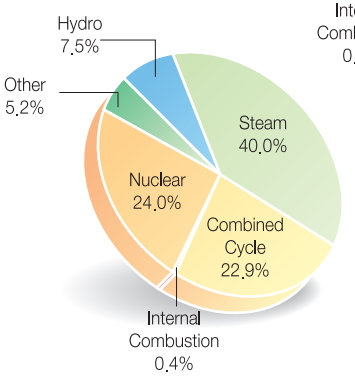
(1,000 Bbl)

	Crude Oil Runs	Product Production	Operation Rate(%)	Refining Capacity (1,000BPSD)					
				Total	SK Energy	GS-Caltex	SK-Inchon	Hyundai Oilbank	S-Oil
1981	178,322	173,793	61.85	790	280	380	60	10	60
1982	173,044	170,595	60.01	790	280	380	60	10	60
1983	190,643	188,667	66.11	790	280	380	60	10	60
1984	201,937	200,997	70.03	790	280	380	60	10	60
1985	201,131	197,559	69.75	790	280	380	60	10	60
1986	209,729	206,988	72.73	790	280	380	60	10	60
1987	210,914	208,662	73.15	790	280	380	60	10	60
1988	256,420	252,196	83.45	790	280	380	60	10	60
1989	296,722	292,062	96.78	840	280	380	60	60	60
1990	306,493	304,495	100.22	840	280	380	60	60	60
1991	413,055	408,215	109.12	1,035	375	380	68	60	160
1992	510,032	504,560	96.77	1,675	585	380	220	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	86.82	2,772	840	687	275	390	580
2007	882,117	955,898	85.94	2,812	840	727	275	390	580
2008	865,663	938,749	82.93	2,860	1,115	775	-	390	580
2009	838,475	912,654	79.90	2,875	1,115	790	-	390	580
2010	872,247	938,926	82.69	2,890	1,115	805	-	390	580
2011	924,441	1,002,257	84.14	3,010	1,115	851	-	390	654
2012	945,162	1,034,708	84.98	3,039	1,115	865	-	390	669

Generating Facilities







2012 86,287 MW

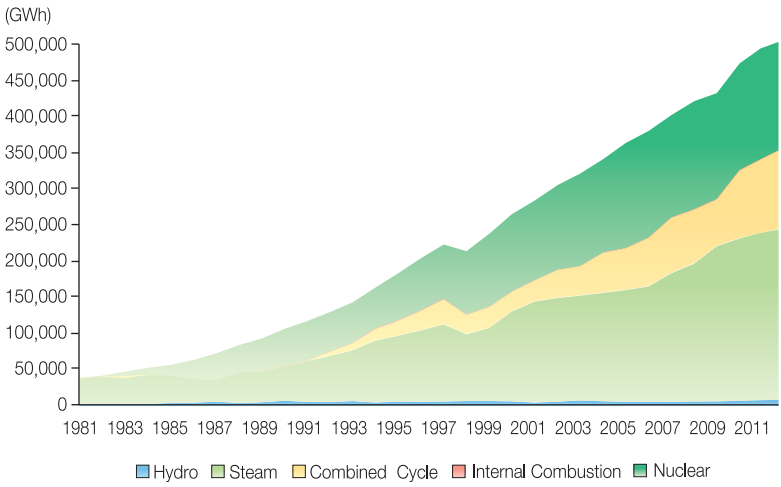
2-2. Generating Facilities

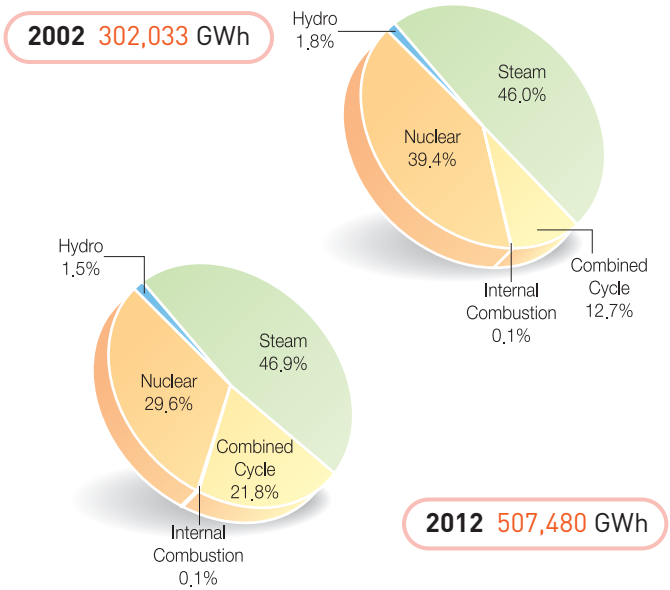
(MW)

	Total	Hydro	Steam	Combined Cycle	Internal Combustion	Nuclear	Others	Peak load
1981	9,835	1,202	6,088	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	390	7,616	-	22,112
1994	28,750	2,493	13,032	5,334	276	7,616	-	26,696
1995	32,184	3,093	14,032	6,184	259	8,616	-	29,878
1996	35,715	3,095	14,022	8,719	265	9,616	-	32,282
1997	41,042	3,115	16,078	11,269	266	10,316	-	35,851
1998	43,406	3,131	17,209	10,785	266	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	247	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	356	18,716	4,482	73,137
2012	81,806	6,446	29,371	19,799	367	20,716	5,106	75,987

Note : Exclude non-utility

Electric Power Generation by Facilities





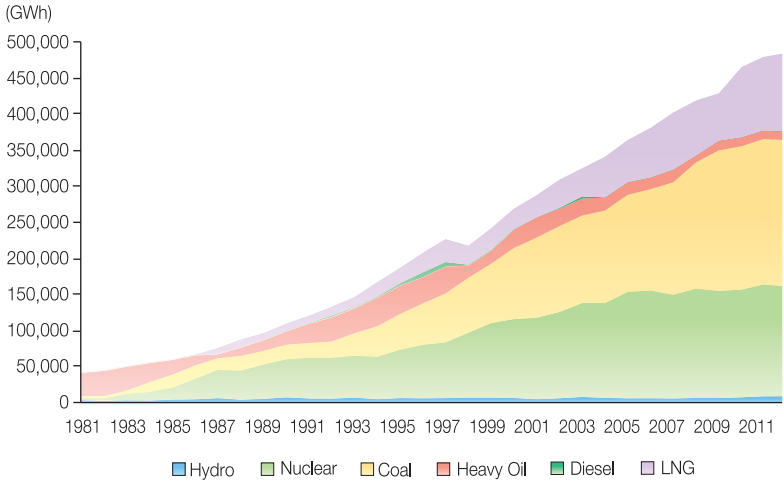
2-3. Electric Power Generation by Facilities

(GWh)

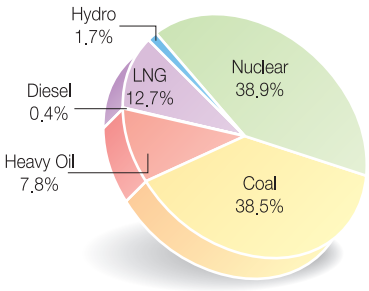
	Total	Hydro	Steam	Combined Cycle	Internal Combustion	Nuclear
1981	40,207	2,709	34,305	258	38	2,897
1982	43,122	2,005	36,961	332	45	3,777
1983	48,850	2,723	36,897	214	42	8,965
1984	53,808	2,399	39,461	99	41	11,792
1985	58,007	3,659	37,411	58	61	16,745
1986	64,695	4,019	32,107	53	122	28,311
1987	73,992	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	135,436	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	149,267	55,452	407	130,715
2005	364,639	5,189	154,369	57,457	575	146,779
2006	381,181	5,219	159,019	67,138	677	148,749
2007	403,125	5,042	177,331	76,405	578	142,937
2008	422,355	5,563	190,083	74,519	503	150,958
2009	433,604	5,641	214,153	64,486	697	147,771
2010	474,660	6,472	224,007	94,012	731	148,596
2011	496,893	7,831	231,226	101,479	821	154,723
2012	509,574	7,652	237,867	110,882	752	150,327

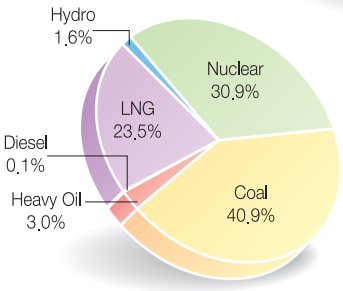
Note 1) Exclude non-utility
2) Includes Group & Alternative Energy

Electric Power Generation by Energy Source



2002 306,474 GWh





2012 485,993 GWh

2-4. Electric Power Generation by Energy Source

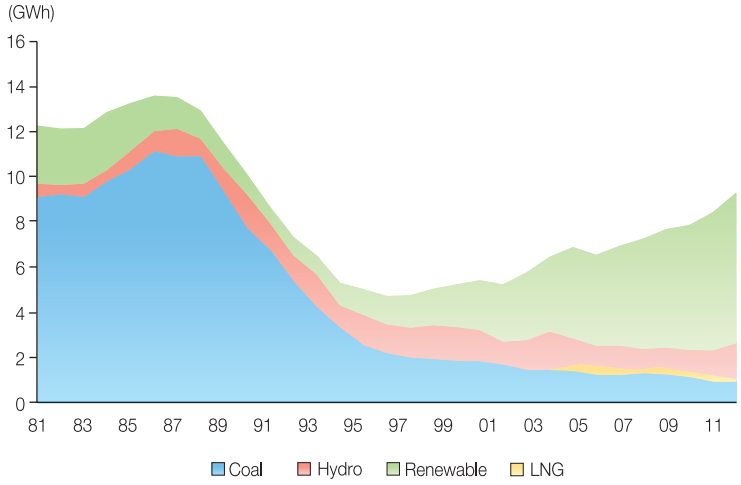
(GWh)

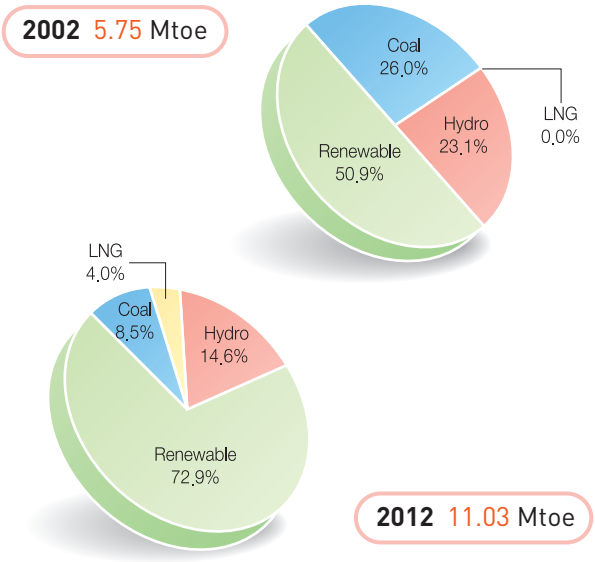
	Total	Hydro	Nuclear	Thermal			
				Coal	Heavy Oil	Diesel	LNG
1981	40,207	2,709	2,897	2,530	31,772	299	-
1982	43,122	2,005	3,777	2,612	34,358	370	-
1983	48,850	2,723	8,965	4,289	32,497	376	-
1984	53,808	2,399	11,792	13,383	25,748	486	-
1985	58,007	3,659	16,745	17,639	19,646	318	-
1986	64,695	4,019	28,311	18,220	13,604	291	250
1987	73,992	5,344	39,314	15,856	4,822	265	8,391
1988	85,462	3,566	40,101	19,840	11,222	301	10,432
1989	94,472	4,558	47,365	18,777	14,241	399	9,132
1990	107,670	6,361	52,887	19,961	17,928	928	9,604
1991	118,619	5,051	56,311	20,140	26,158	1,024	9,935
1992	130,963	4,863	56,530	22,072	33,001	2,310	12,187
1993	144,437	6,006	58,138	30,917	33,718	1,170	14,488
1994	164,993	4,098	58,651	41,835	38,781	1,582	20,046
1995	184,661	5,478	67,029	48,813	38,739	3,306	21,296
1996	205,494	5,201	73,924	56,881	35,699	6,737	27,050
1997	224,445	5,404	77,086	67,190	36,620	6,323	31,823
1998	215,300	6,099	89,689	75,498	16,430	1,282	26,302
1999	239,325	6,066	103,064	81,544	17,365	1,162	30,124
2000	266,400	5,610	108,964	97,538	25,485	657	28,146
2001	285,224	4,151	112,133	110,333	27,770	386	30,451
2002	306,474	5,311	119,103	118,022	23,940	1,155	38,943
2003	322,452	6,887	129,672	120,276	23,656	2,870	39,090
2004	342,148	5,861	130,715	127,158	18,037	474	55,999
2005	364,639	5,189	146,779	133,658	17,321	412	58,118
2006	381,181	5,219	148,749	139,205	15,999	599	68,302
2007	403,124	5,042	142,937	154,674	17,689	443	78,427
2008	422,355	5,561	150,958	173,508	9,701	393	75,809
2009	433,604	5,641	147,771	193,216	13,670	413	65,274
2010	474,660	6,472	148,596	197,916	12,405	473	96,734
2011	496,893	7,831	154,723	200,124	12,040	452	101,702
2012	509,574	7,695	150,327	198,831	14,453	703	113,984

Note : Includes Group & Alternative Energy

3. Primary Energy Supply by Source

Energy Production





3-1. Energy Production

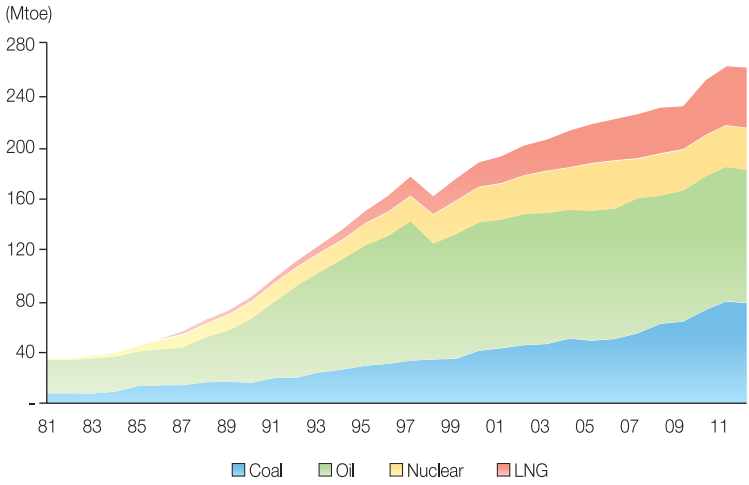
(1,000 toe)

	Primary Energy Supply	Energy Production				
		Total	Coal	L N G	Hydro	Renewable Energy
1981	45,718	11,418	9,138	-	677	2,492
1982	45,625	11,726	9,253	-	501	2,417
1983	49,420	12,533	9,136	-	681	2,378
1984	53,535	13,277	9,830	-	600	2,492
1985	56,296	13,393	10,370	-	915	2,031
1986	61,462	13,375	11,156	-	1,005	1,480
1987	67,878	13,553	10,923	-	1,336	1,319
1988	75,351	12,669	10,933	-	892	1,164
1989	81,660	11,827	9,353	-	1,140	1,033
1990	93,192	11,298	7,748	-	1,590	797
1991	103,619	9,052	6,776	-	1,263	617
1992	116,010	7,469	5,387	-	1,216	723
1993	126,879	6,631	4,249	-	1,502	742
1994	137,234	4,998	3,347	-	1,025	906
1995	150,437	4,835	2,574	-	1,369	1,051
1996	165,212	4,444	2,228	-	1,301	1,161
1997	180,638	4,342	2,031	-	1,351	1,344
1998	165,932	4,766	1,962	-	1,525	1,526
1999	181,363	5,034	1,889	-	1,517	1,806
2000	192,887	5,404	1,868	-	1,403	2,130
2001	198,409	5,305	1,718	-	1,038	2,456
2002	208,636	5,966	1,493	-	1,327	2,925
2003	215,066	6,728	1,484	-	1,722	3,241
2004	220,238	7,184	1,436	-	1,465	3,977
2005	228,622	7,732	1,274	518	1,297	3,961
2006	233,372	8,192	1,271	461	1,305	4,358
2007	236,454	8,141	1,342	353	1,084	4,828
2008	240,752	8,553	1,289	236	1,196	5,198
2009	243,311	8,639	1,171	498	1,213	5,480
2010	263,805	9,161	969	539	1,391	6,064
2011	276,636	9,794	969	451	1,715	6,618
2012	278,698	11,116	942	436	1,615	8,036

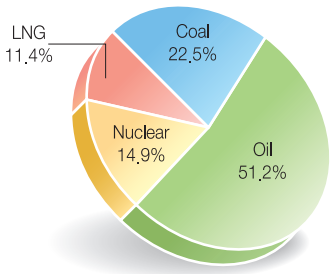
Note : 2007~2011, from 2012 figures are based on each revised calorific value.

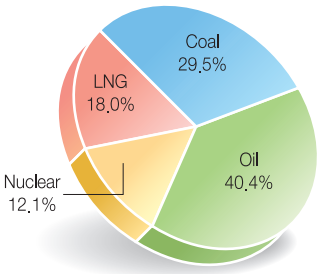
3. Primary Energy Supply by Source

Energy Imports



2002 199.9 Mtoe





2012 262.6 Mtoe

3-2. Energy Imports

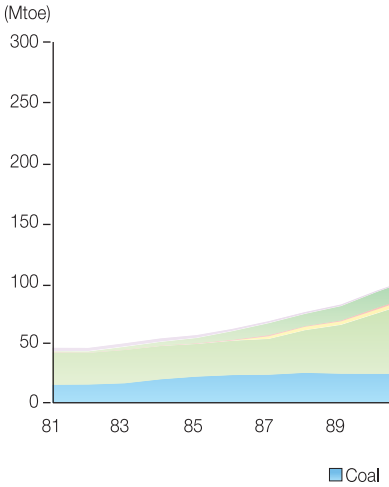
(1,000 toe)

	Primary Energy Supply	Energy Imports				
		Total	Coal	Oil	Nuclear	LNG
1981	45,718	34,300	7,358	26,580	724	-
1982	45,625	33,898	7,341	26,312	944	-
1983	49,420	36,887	7,202	27,629	2,241	-
1984	53,535	40,258	8,593	27,629	2,948	-
1985	56,296	42,903	13,005	27,142	4,186	-
1986	61,462	48,087	13,593	28,499	7,078	71
1987	67,878	54,325	13,865	29,653	9,829	2,104
1988	75,351	62,682	16,087	35,390	10,025	2,718
1989	81,660	69,833	16,426	40,524	11,841	2,630
1990	93,192	81,894	15,752	50,175	13,222	2,974
1991	103,619	94,570	19,321	59,627	14,078	3,586
1992	116,010	108,541	19,816	71,740	14,133	4,453
1993	126,879	120,248	23,696	78,495	14,535	5,790
1994	137,234	132,237	25,966	86,343	14,663	7,707
1995	150,437	145,601	28,956	93,955	16,757	9,178
1996	165,212	160,768	30,327	99,898	18,481	12,473
1997	180,638	176,296	32,850	109,080	19,272	15,118
1998	165,932	161,166	33,847	90,582	22,422	13,780
1999	181,363	176,329	34,410	97,270	25,766	16,865
2000	192,887	187,484	40,559	100,279	27,241	18,951
2001	198,409	193,104	42,691	100,385	28,033	21,013
2002	208,636	202,670	44,990	102,414	29,776	22,711
2003	215,066	208,338	45,894	102,380	32,415	25,264
2004	220,238	213,054	50,139	100,638	32,679	28,799
2005	228,622	220,890	48,498	101,526	36,695	29,044
2006	233,372	225,180	49,854	101,831	37,187	32,788
2007	236,454	228,313	54,237	105,494	30,731	33,239
2008	240,752	232,200	61,665	100,170	32,456	35,436
2009	243,311	234,672	63,431	102,336	31,771	33,568
2010	263,805	254,644	72,576	104,301	31,948	42,384
2011	276,636	266,842	79,861	105,146	32,285	47,690
2012	278,698	267,582	77,546	106,165	31,719	47,184

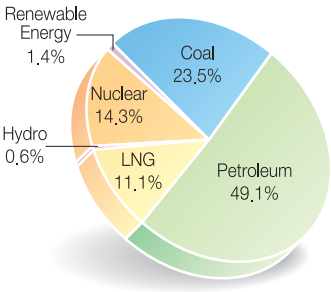
Note : 2007~2011, from 2012 figures are based on each revised calorific value.

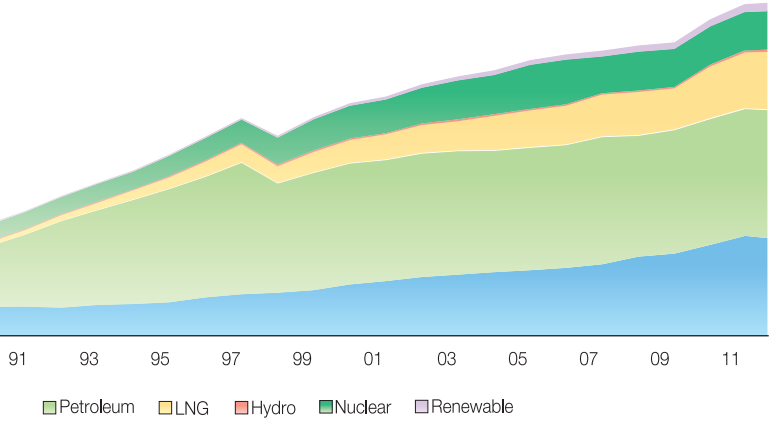
4. Primary Energy Supply

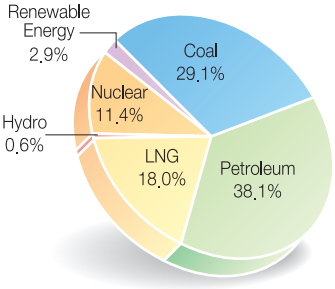
Primary Energy Supply



2002 208.6 Mtoe







2012 278.7 Mtoe

4. Primary Energy Supply

	Total		Coal			Petroleum	
		Growth Rate(%)	Sub-Total	Anthracite	Bituminous	Sub-Total	Fuel Oil
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	27,628	23,250
1984	53,535	8.3	19,867	11,455	8,412	27,628	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	29,652	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	40,523	32,506
1990	93,192	14.1	24,385	9,947	14,438	50,175	39,653
1991	103,619	11.2	24,535	8,144	16,391	59,627	45,773
1992	116,010	12.0	23,618	6,315	17,303	71,740	52,311
1993	126,879	9.4	25,882	5,058	20,824	78,495	57,139
1994	137,234	8.2	26,680	3,507	23,173	86,343	62,680
1995	150,437	9.6	28,091	2,953	25,139	93,955	68,949
1996	165,212	9.8	32,200	2,561	29,639	99,898	73,264
1997	180,638	9.3	34,799	1,989	32,810	109,080	74,144
1998	165,932	-8.1	36,039	2,207	33,832	90,582	53,952
1999	181,363	9.3	38,155	2,425	35,731	97,270	59,007
2000	192,887	6.4	42,911	3,094	39,817	100,279	59,743
2001	198,409	2.9	45,711	3,678	42,033	100,385	59,049
2002	208,636	5.2	49,096	4,041	45,054	102,414	58,601
2003	215,066	3.1	51,116	4,560	46,556	102,380	57,605
2004	220,238	2.4	53,127	4,302	48,826	100,638	54,100
2005	228,622	3.8	54,788	4,768	50,020	101,526	53,416
2006	233,372	2.1	56,687	5,208	51,479	101,831	51,800
2007	236,454	1.3	59,654	5,585	54,068	105,494	50,738
2008	240,752	1.8	66,060	5,906	60,155	100,170	45,705
2009	243,311	1.1	68,604	5,812	62,792	102,336	45,607
2010	263,805	8.4	77,092	6,141	70,951	104,301	46,420
2011	276,636	4.9	83,640	6,898	76,741	105,146	44,296
2012	278,698	0.7	80,978	5,850	75,128	106,165	44,327

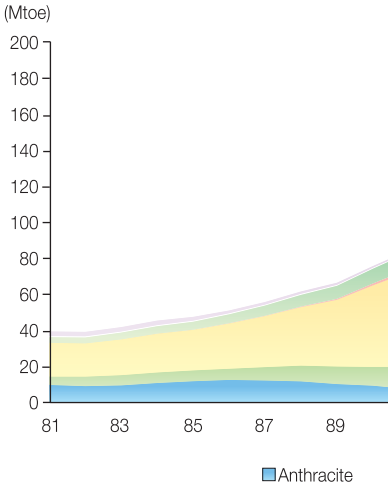
Note : 2007~2011, from 2012 figures are based on each revised calorific value.

(1,000 toe)

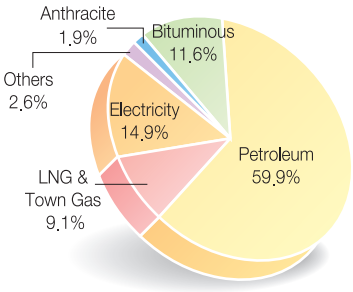
LPG	Non-Fuel Oil	LNG	Hydro	Nuclear	Renewable Energy	Overseas Dependence (%)	
511	2,959	-	677	724	2,492	75.0	1981
750	2,913	-	501	944	2,417	74.3	1982
1,031	3,347	-	681	2,241	2,378	74.6	1983
1,262	3,703	-	600	2,948	2,492	75.2	1984
1,467	3,839	-	915	4,186	2,031	76.2	1985
1,799	4,292	71	1,005	7,078	1,480	78.2	1986
2,161	4,533	2,104	1,336	9,829	1,319	80.0	1987
2,629	4,892	2,718	892	10,025	1,164	83.2	1988
3,066	4,951	2,630	1,140	11,841	1,033	85.5	1989
3,601	6,921	3,023	1,590	13,222	797	87.9	1990
4,339	9,515	3,503	1,263	14,078	617	91.0	1991
5,441	13,988	4,581	1,216	14,133	723	93.6	1992
5,990	15,366	5,723	1,502	14,535	742	94.8	1993
6,398	17,264	7,618	1,025	14,663	906	96.4	1994
6,675	18,331	9,213	1,369	16,757	1,051	96.8	1995
6,874	19,760	12,172	1,301	18,481	1,161	97.3	1996
7,201	27,735	14,792	1,351	19,272	1,344	97.6	1997
6,877	29,753	13,838	1,525	22,422	1,526	97.1	1998
7,808	30,455	16,849	1,517	25,766	1,806	97.2	1999
8,644	31,893	18,924	1,402	27,241	2,130	97.2	2000
8,676	32,660	20,787	1,038	28,033	2,456	97.3	2001
9,398	34,415	23,099	1,327	29,776	2,925	97.1	2002
9,140	35,634	24,194	1,722	32,415	3,241	96.9	2003
9,153	37,385	28,351	1,465	32,679	3,977	96.7	2004
9,484	38,626	30,355	1,297	36,695	3,961	96.6	2005
9,689	40,342	32,004	1,305	37,187	4,358	96.5	2006
10,127	44,629	34,663	1,084	30,731	4,828	96.5	2007
10,647	43,819	35,671	1,196	32,456	5,198	96.4	2008
11,079	45,651	33,908	1,213	31,771	5,480	96.4	2009
10,924	46,956	43,008	1,391	31,948	6,064	96.5	2010
10,303	50,547	46,284	1,684	33,265	6,618	96.5	2011
9,912	51,926	50,185	1,615	31,719	8,036	96.0	2012

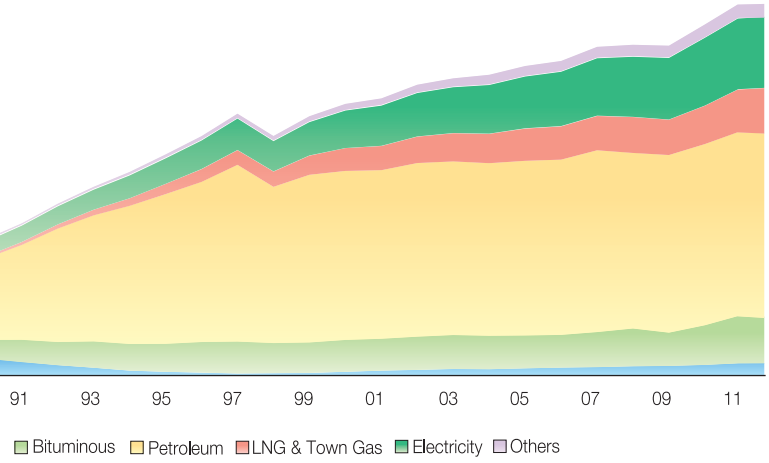
5. Final Energy Consumption

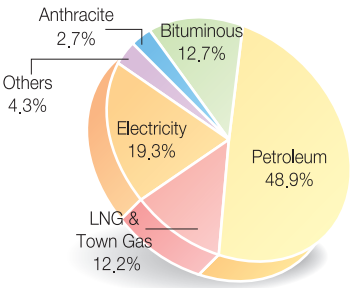
Final Energy Consumption



2002 160.5 Mtoe







2012 208.1 Mtoe

5. Final Energy Consumption

	Total		Coal			
		Growth Rate(%)	Sub-Total	Anthracite	Bituminous Coal	Sub-Total
1981	38,952	3.6	14,477	9,571	4,906	18,913
1982	38,711	-0.6	14,549	8,937	5,612	18,460
1983	41,337	6.8	15,335	9,338	5,997	19,921
1984	44,998	8.9	16,806	10,600	6,206	21,602
1985	46,998	4.4	17,940	11,632	6,308	22,579
1986	50,524	7.5	18,888	12,336	6,552	25,182
1987	55,197	9.2	19,778	12,006	7,772	28,372
1988	61,033	10.6	20,566	11,527	9,039	32,510
1989	65,875	7.9	20,116	10,057	10,059	36,967
1990	75,107	14.0	19,855	9,194	10,661	45,252
1991	83,803	11.6	19,915	7,336	12,579	52,675
1992	94,623	12.9	18,688	5,558	13,131	62,939
1993	104,048	10.0	19,058	4,179	14,879	69,876
1994	107,928	3.7	17,670	2,665	15,005	76,511
1995	121,962	13.0	17,758	2,011	15,748	82,876
1996	132,033	8.3	18,718	1,585	17,133	88,714
1997	144,432	9.4	18,918	1,099	17,819	97,901
1998	132,128	-8.5	18,151	1,269	16,882	86,526
1999	143,060	8.3	18,498	1,444	17,055	92,821
2000	149,852	4.7	19,847	2,011	17,836	93,596
2001	152,950	2.1	20,532	2,656	17,876	93,356
2002	160,451	4.9	21,629	3,069	18,560	96,159
2003	163,995	2.2	22,610	3,530	19,079	96,155
2004	166,009	1.2	22,194	3,407	18,788	95,513
2005	170,854	2.9	22,311	3,874	18,438	96,718
2006	173,584	1.6	22,660	4,313	18,347	97,037
2007	181,455	4.5	24,249	4,583	19,666	100,622
2008	182,576	0.6	26,219	4,994	21,225	97,217
2009	182,066	-0.3	23,895	5,180	18,715	98,369
2010	195,587	7.4	29,164	5,751	23,413	100,381
2011	205,863	5.3	33,544	6,646	26,898	101,976
2012	208,120	1.1	31,964	5,584	26,380	101,710

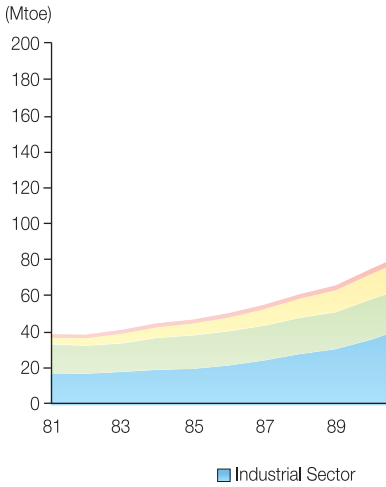
Note 1) Include Renewable energy & Heat
2) 2007~2011, from 2012 figures are based on each revised calorific value.

(1,000 toe)

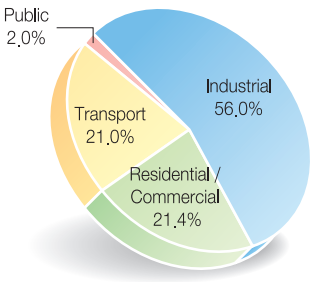
Petroleum			LNG	Town Gas	Electricity	Others[1]	
Energy Use	LPG	Non-Energy Use					
15,471	500	2,942	-	23	3,046	2,492	1981
14,835	735	2,890	-	28	3,258	2,417	1982
15,589	1,010	3,322	-	37	3,665	2,378	1983
16,690	1,242	3,670	-	52	4,046	2,492	1984
17,360	1,424	3,795	-	84	4,363	2,031	1985
19,211	1,736	4,235	-	132	4,843	1,480	1986
21,767	2,110	4,495	-	199	5,519	1,329	1987
25,083	2,561	4,866	-	339	6,391	1,226	1988
29,106	2,947	4,914	-	619	7,069	1,104	1989
34,991	3,368	6,893	-	1,011	8,117	872	1990
39,266	3,894	9,515	-	1,540	8,976	697	1991
44,139	4,812	13,988	-	2,219	9,911	866	1992
49,369	5,141	15,366	-	3,027	10,985	1,102	1993
53,833	5,414	17,264	-	4,057	8,324	1,366	1994
59,100	5,445	18,331	-	5,594	14,041	1,692	1995
63,221	5,733	19,760	-	6,937	15,692	1,972	1996
63,724	6,442	27,735	-	8,093	17,267	2,253	1997
50,300	6,472	29,753	-	8,425	16,638	2,387	1998
54,995	7,371	30,455	-	10,513	18,422	2,806	1999
53,369	8,333	31,893	-	12,561	20,600	3,249	2000
52,203	8,493	32,660	-	13,290	22,165	3,606	2001
52,509	9,235	34,415	-	14,567	23,947	4,148	2002
51,471	9,050	35,634	-	15,470	25,250	4,510	2003
49,067	9,061	37,385	-	16,191	26,840	5,271	2004
48,744	9,348	38,626	-	17,811	28,588	5,426	2005
47,088	9,608	40,342	-	18,379	29,990	5,517	2006
45,946	10,052	44,623	-	18,955	31,700	5,929	2007
42,971	10,432	43,814	-	19,765	33,116	6,259	2008
41,893	10,840	45,636	-	19,459	33,925	6,418	2009
43,002	10,448	46,931	559	21,081	37,338	7,064	2010
41,799	9,670	50,507	801	22,871	39,136	7,536	2011
40,639	9,194	51,876	717	24,728	40,127	8,875	2012

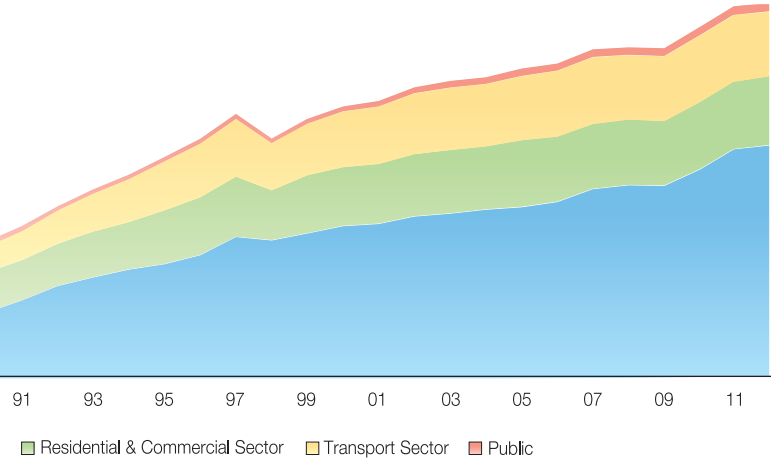
6. Final Energy Consumption by Sector

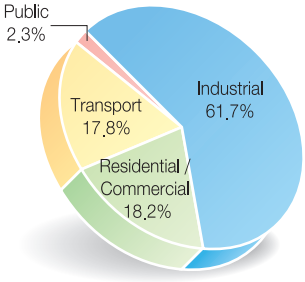
Final Energy Consumption by Sector



2002 160.5 Mtoe







2012 208.1 Mtoe

6

Final Energy Consumption by Sector

6. Final Energy Consumption by Sector

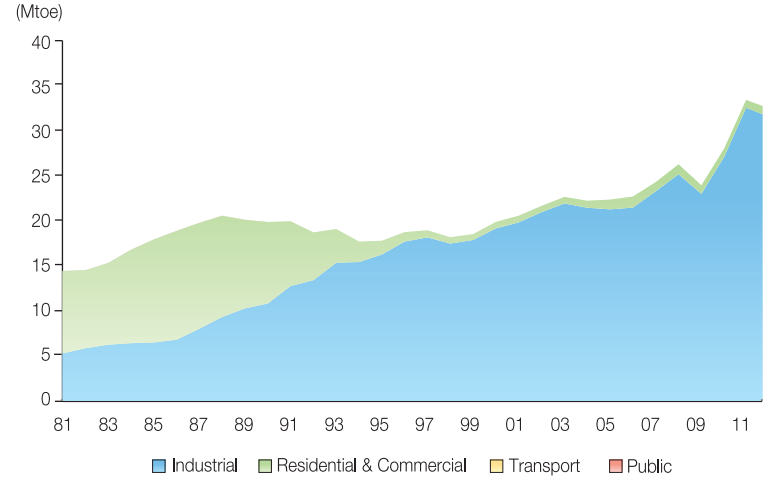
	Final Energy Consumption (1,000 toe)				
	Total	Industrial	Residential / Commercial	Transport	Public
1981	38,952	17,506	15,836	3,721	1,888
1982	38,711	17,354	15,197	4,216	1,945
1983	41,337	18,346	15,438	5,434	2,118
1984	44,998	19,508	17,342	6,007	2,141
1985	46,998	20,015	18,180	6,707	2,096
1986	50,524	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	75,107	36,150	21,971	14,173	2,812
1991	83,803	42,915	21,919	16,156	2,813
1992	94,623	50,825	23,008	18,531	2,259
1993	104,048	55,591	25,041	21,119	2,296
1994	107,928	59,937	25,941	23,860	2,647
1995	121,962	62,946	29,451	27,148	2,416
1996	132,033	67,868	31,713	29,792	2,659
1997	144,432	77,908	33,071	30,738	2,715
1998	132,128	76,039	27,418	26,184	2,487
1999	143,060	79,858	31,929	28,625	2,648
2000	149,852	83,912	32,370	30,945	2,625
2001	152,950	85,158	32,893	31,909	2,989
2002	160,451	89,197	34,299	33,763	3,191
2003	163,995	90,805	34,965	34,632	3,593
2004	166,009	92,992	34,807	34,615	3,595
2005	170,854	94,366	36,861	35,559	4,068
2006	173,584	97,235	35,986	28,588	3,836
2007	181,455	104,327	35,916	37,068	4,143
2008	182,576	106,458	36,225	35,793	4,100
2009	182,066	106,119	35,722	35,930	4,295
2010	195,587	116,910	37,255	36,938	4,483
2011	205,863	126,886	37,542	36,875	4,560
2012	208,120	128,324	37,884	37,143	4,769

Note : 2007~2011, from 2012 figures are based on each revised calorific value.

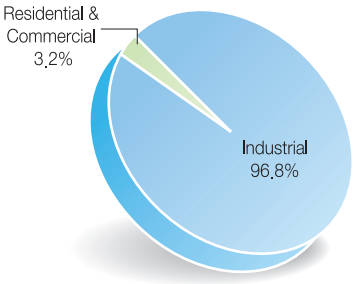
Final Energy Consumption (%)					
Total	Industrial	Residential / Commercial	Transport	Public	
100.0	44.9	40.7	9.6	4.8	1981
100.0	44.8	39.3	10.9	5.0	1982
100.0	44.4	37.3	13.1	5.1	1983
100.0	43.4	38.5	13.3	4.8	1984
100.0	42.6	38.7	14.3	4.5	1985
100.0	43.3	36.8	15.2	4.7	1986
100.0	44.7	34.2	16.8	4.3	1987
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	55.5	24.0	22.1	2.5	1994
100.0	51.6	24.1	22.3	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	20.7	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	55.2	21.6	20.8	2.4	2005
100.0	56.0	20.7	16.5	2.2	2006
100.0	57.5	19.8	20.4	2.3	2007
100.0	58.3	19.8	19.6	2.2	2008
100.0	58.3	19.6	19.7	2.4	2009
100.0	59.8	19.0	18.9	2.3	2010
100.0	61.6	18.2	17.9	2.2	2011
100.0	61.7	18.2	17.8	2.3	2012

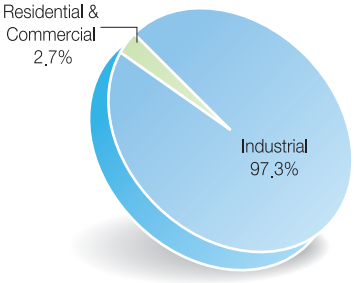
7. Final Energy Consumption by Source

Coal



2002 21.6 Mtoe





2012 32.0 Mtoe

7-1. Coal

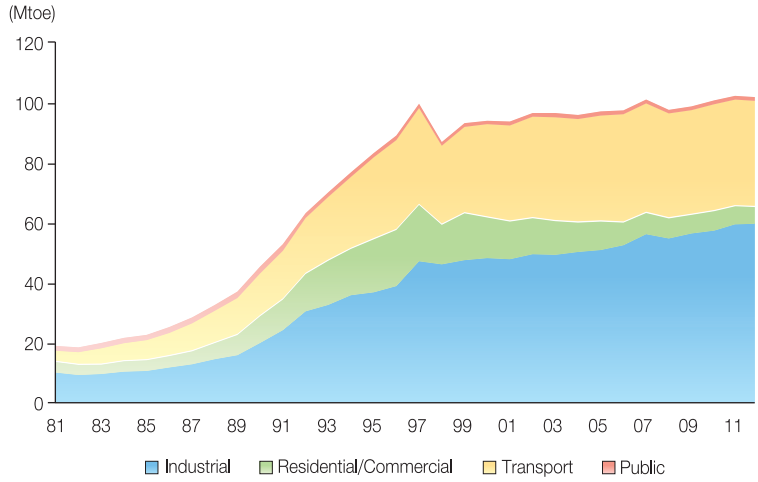
(1,000 toe)

	Final Energy Consumption	%	Total	Industry	Residential & Commercial	Transport	Public
1981	38,952	37.2	14,478	5,276	9,105	2	95
1982	38,711	37.6	14,549	5,844	8,629	2	74
1983	41,337	37.1	15,335	6,240	9,040	-	55
1984	44,998	37.3	16,806	6,412	10,323	-	71
1985	46,998	38.2	17,939	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	75,107	26.4	19,854	10,806	9,027	-	21
1991	83,803	23.8	19,915	12,745	7,170	-	-
1992	94,623	19.7	18,688	13,388	5,288	-	12
1993	104,048	18.3	19,058	15,327	3,731	-	-
1994	107,928	16.4	17,670	15,403	2,267	-	-
1995	121,962	14.6	17,758	16,244	1,514	-	-
1996	132,033	14.2	18,718	17,668	1,050	-	-
1997	144,432	13.1	18,918	18,139	779	-	-
1998	132,128	13.7	18,151	17,448	703	-	-
1999	143,060	12.9	18,498	17,845	653	-	-
2000	149,852	13.2	19,847	19,129	718	-	-
2001	152,950	13.4	20,532	19,805	727	-	-
2002	160,451	13.5	21,629	20,932	697	-	-
2003	163,995	13.8	22,610	21,888	722	-	-
2004	166,009	13.4	22,195	21,420	775	-	-
2005	170,854	13.1	22,312	21,238	1,074	-	-
2006	173,584	13.0	22,536	21,434	1,102	-	-
2007	181,455	13.4	24,250	23,236	1,014	-	-
2008	182,576	14.4	26,219	25,131	1,088	-	-
2009	182,066	13.1	23,895	22,955	940	-	-
2010	195,587	14.9	29,165	28,264	901	-	-
2011	205,863	16.3	33,544	32,673	871	-	-
2012	208,120	15.4	31,964	31,132	832	-	-

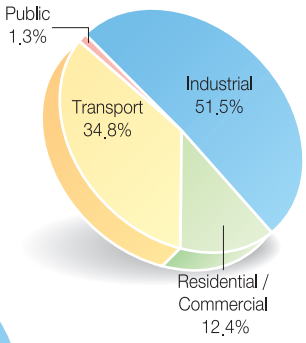
Note : 2007~2011, from 2012 figures are based on each revised calorific value.

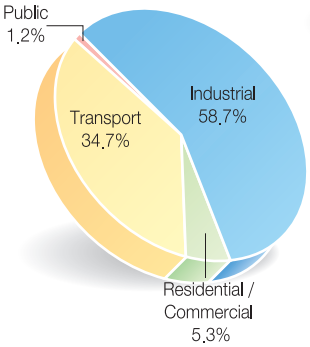
7. Final Energy Consumption by Source

Petroleum



2002 96.2 Mtoe





2012 101.7 Mtoe

7-2. Petroleum

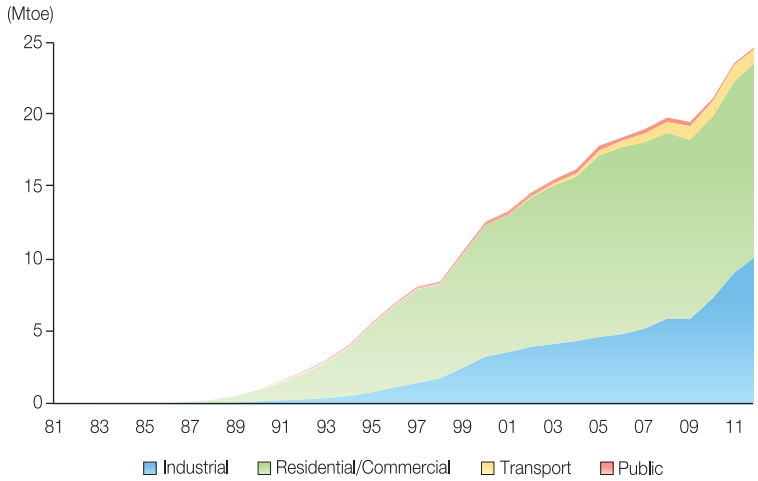
(1,000 toe)

	Final Energy Consumption	%	Total	Industry	Residential & Commercial	Transport	Public
1981	38,952	48.6	18,913	10,141	3,525	3,680	1,567
1982	38,711	47.7	18,459	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	22,579	10,697	3,525	6,645	1,712
1986	50,524	49.8	25,182	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	36,968	15,936	6,694	12,187	2,151
1990	75,107	60.3	45,252	20,014	8,876	14,086	2,276
1991	83,803	62.9	52,675	24,251	10,161	16,062	2,201
1992	94,623	66.5	62,939	30,514	12,405	18,430	1,590
1993	104,048	67.2	69,875	32,654	14,669	21,011	1,541
1994	107,928	70.9	76,511	35,881	15,375	23,736	1,519
1995	121,962	68.0	82,876	36,810	17,632	27,010	1,424
1996	132,033	67.2	88,714	38,913	18,623	29,648	1,530
1997	144,432	67.8	97,900	47,141	18,719	30,587	1,453
1998	132,128	65.5	86,526	46,133	13,130	26,048	1,215
1999	143,060	64.9	92,821	47,521	15,554	28,476	1,270
2000	149,852	62.5	93,595	48,193	13,492	30,770	1,140
2001	152,950	61.0	93,357	47,848	12,474	31,708	1,327
2002	160,451	59.9	96,159	49,499	11,955	33,488	1,217
2003	163,995	58.6	96,154	49,304	11,156	34,286	1,408
2004	166,009	57.5	95,512	50,236	9,773	34,160	1,343
2005	170,854	56.6	96,718	50,905	9,437	34,983	1,393
2006	173,584	55.9	97,037	52,474	7,513	35,780	1,270
2007	181,455	55.5	100,623	56,150	7,050	36,149	1,274
2008	182,576	53.2	97,216	54,745	6,654	34,642	1,175
2009	182,066	54.0	98,370	56,391	6,187	34,529	1,263
2010	195,587	51.3	100,382	57,351	6,450	35,282	1,299
2011	205,863	49.5	101,976	59,635	5,929	35,172	1,240
2012	208,120	48.9	101,710	59,748	5,363	35,341	1,258

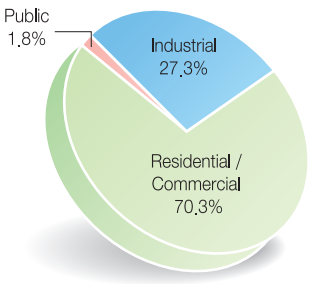
Note : 2007~2011, from 2012 figures are based on each revised calorific value.

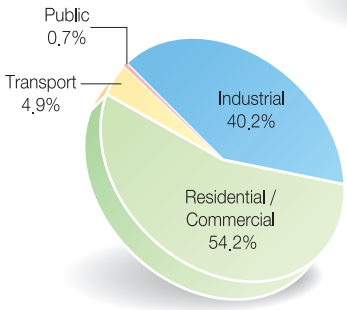
7. Final Energy Consumption by Source

LNG & Town Gas



2002 14.6 Mtoe





2012 25.4 Mtoe

7-3. LNG & Town Gas

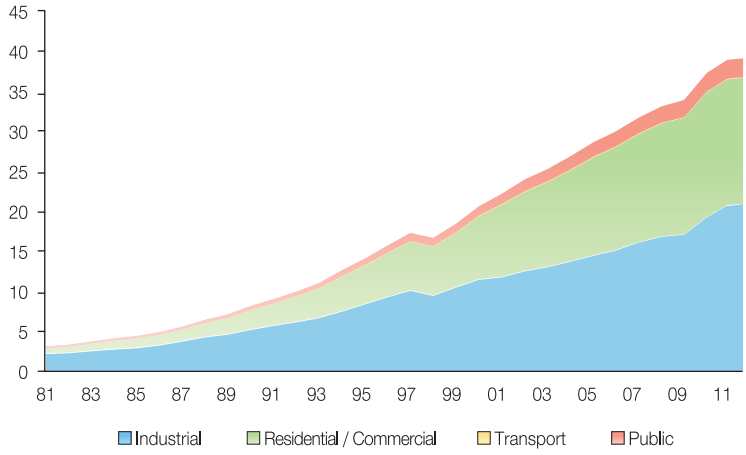
(1,000 toe)

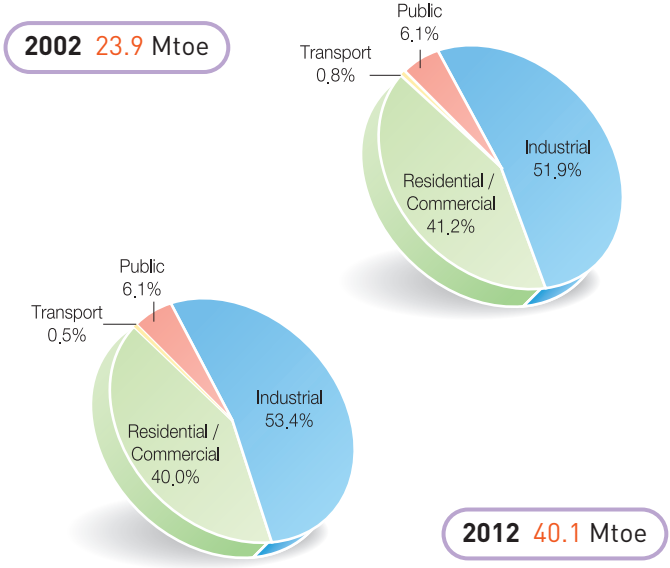
	Final Energy Consumption	%	Total	Industry	Residential & Commercial	Transport	Public
1981	38,952	0.1	23	-	23	-	-
1982	38,711	0.1	28	-	28	-	-
1983	41,337	0.1	37	-	37	-	-
1984	44,998	0.1	53	1	52	-	-
1985	46,998	0.2	84	15	69	-	-
1986	50,524	0.3	132	40	92	-	-
1987	55,197	0.4	199	75	124	-	-
1988	61,033	0.6	339	110	229	-	-
1989	65,875	0.9	619	158	461	-	-
1990	75,107	1.3	1,012	235	777	-	-
1991	83,803	1.8	1,541	313	1,160	-	68
1992	94,623	2.3	2,219	377	1,760	-	82
1993	104,048	2.9	3,027	460	2,450	-	117
1994	107,928	3.8	4,056	600	3,313	-	143
1995	121,962	4.6	5,595	863	4,607	-	125
1996	132,033	5.3	6,937	1,196	5,588	-	153
1997	144,432	5.6	8,093	1,496	6,436	-	161
1998	132,128	6.4	8,426	1,812	6,454	-	160
1999	143,060	7.3	10,513	2,530	7,784	-	199
2000	149,852	8.4	12,561	3,308	9,024	-	229
2001	152,950	8.7	13,290	3,612	9,412	7	259
2002	160,451	9.1	14,567	3,984	10,241	80	262
2003	163,995	9.4	15,471	4,177	10,889	146	259
2004	166,009	9.8	16,191	4,382	11,293	237	279
2005	170,854	10.4	17,811	4,656	12,503	339	313
2006	173,584	10.6	18,379	4,847	12,858	475	199
2007	181,455	10.4	18,956	5,225	12,831	615	285
2008	182,576	10.8	19,765	5,933	12,763	777	292
2009	182,066	10.7	19,460	5,891	12,332	960	277
2010	195,587	11.1	21,641	7,888	12,489	1,112	152
2011	205,863	11.5	23,671	9,184	13,201	1,174	112
2012	208,120	12.2	25,444	10,218	13,797	1,248	181

Note : 2007~2011, from 2012 figures are based on each revised calorific value.

7. Final Energy Consumption by Source

Electricity





7-4. Electricity (1964년 부터 자료있음, 전력수요예측통계집)

(1,000 toe)

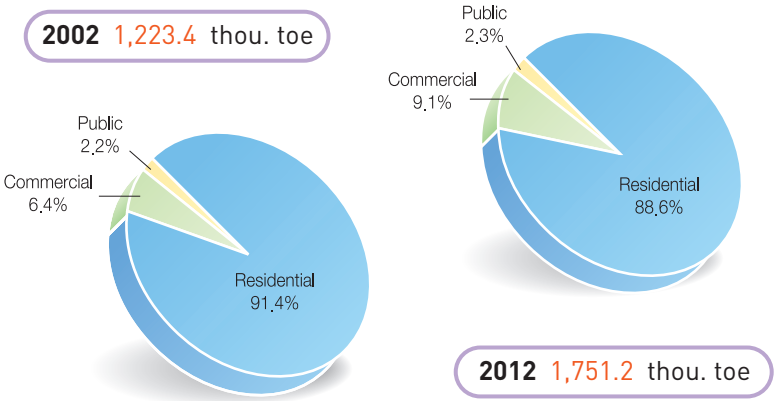
	Final Energy Consumption	%	Total	Industry	Residential & Commercial	Transport	Public
1981	38,952	7.8	3,046	2,089	691	40	226
1982	38,711	8.4	3,258	2,188	779	40	251
1983	41,337	8.9	3,665	2,435	910	44	276
1984	44,998	9.0	4,046	2,651	1,038	52	305
1985	46,998	9.3	4,362	2,812	1,155	62	333
1986	50,524	9.6	4,844	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	75,107	10.8	8,117	5,095	2,421	87	514
1991	83,803	10.7	8,976	5,606	2,732	94	544
1992	94,623	10.5	9,910	6,063	3,174	101	572
1993	104,048	10.6	10,985	6,581	3,663	108	633
1994	107,928	11.7	12,602	7,398	4,321	124	759
1995	121,962	11.5	14,040	8,293	4,801	138	808
1996	132,033	11.9	15,692	9,179	5,464	145	904
1997	144,432	12.0	17,267	10,009	6,090	151	1,017
1998	132,128	12.6	16,639	9,359	6,122	136	1,022
1999	143,060	12.9	18,422	10,394	6,793	149	1,086
2000	149,852	13.7	20,600	11,374	7,891	175	1,160
2001	152,950	14.5	22,165	11,678	9,005	194	1,288
2002	160,451	14.9	23,947	12,423	9,859	195	1,470
2003	163,995	15.4	25,249	12,933	10,585	200	1,531
2004	166,009	16.2	26,840	13,617	11,352	213	1,658
2005	170,854	16.7	28,588	14,346	12,233	224	1,785
2006	173,584	17.3	29,990	15,021	12,883	218	1,868
2007	181,455	17.5	31,700	16,018	13,513	209	1,960
2008	182,576	18.1	33,116	16,738	14,143	196	2,039
2009	182,066	18.6	33,925	17,006	14,594	187	2,138
2010	195,587	19.1	37,338	19,193	15,636	188	2,321
2011	205,863	19.0	39,136	20,830	15,758	193	2,355
2012	208,120	19.3	40,128	21,426	16,049	194	2,459

Note : 2007~2011, from 2012 figures are based on each revised calorific value.

7-5. Heat Energy

(1,000 toe)

	Production	Sales			
			Residential	Commercial	Public
1987	10.0	10.4	10.1	0.4	-
1988	63.0	55.0	51.5	2.9	0.6
1989	71.0	70.9	65.1	5.1	0.7
1990	75.0	75.4	68.4	6.1	0.9
1991	80.0	79.8	71.7	7.2	0.9
1992	143.0	142.7	134.2	7.3	1.2
1993	360.0	359.9	345.3	10.7	3.9
1994	460.0	459.8	438.9	14.5	6.4
1995	641.0	641.4	610.1	21.5	9.8
1996	811.0	810.8	761.5	34.0	15.3
1997	909.0	908.8	850.4	41.6	16.8
1998	862.0	861.4	806.5	41.6	13.3
1999	1,000.0	999.5	928.0	53.9	17.6
2000	1,166.1	1,118.5	1,029.9	66.5	22.1
2001	1,201.3	1,150.0	1,049.5	75.2	25.3
2002	1,283.0	1,223.4	1,118.2	77.7	27.5
2003	1,345.4	1,300.5	1,179.9	88.9	31.7
2004	1,353.4	1,343.1	1,204.1	107.8	31.2
2005	1,507.9	1,530.0	1,358.1	132.8	39.1
2006	1,579.4	1,425.0	1,272.3	118.4	34.3
2007	1,604.2	1,437.9	1,284.9	115.7	37.3
2008	1,589.7	1,512.2	1,351.5	124.9	35.8
2009	1,635.8	1,550.5	1,388.4	120.3	41.8
2010	1,785.8	1,717.6	1,530.6	144.5	42.5
2011	1,762.2	1,701.8	1,511.9	148.7	41.3
2012	1,802.8	1,751.2	1,552.5	158.7	40.1

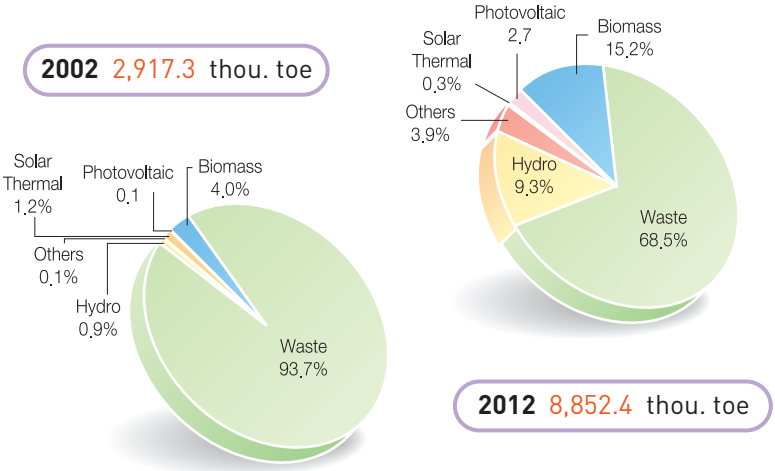


7-6. Renewable Energy

(1,000 toe)

	Total	Solar	Photovoltaic	Biomass	Waste	Hydro	Others[1)]
1991	411.6	-	-	-	-	-	-
1992	552.4	12.6	1.8	57.3	461.2	19.5	0.1
1993	648.1	14.1	0.5	58.8	545.6	28.8	0.3
1994	776.3	16.8	0.5	57.2	678.8	22.5	0.3
1995	906.9	22.1	0.6	59.2	804.5	20.4	0.1
1996	1,160.0	32.0	0.6	50.4	1,056.4	20.4	0.1
1997	1,419.0	45.5	0.8	67.6	1,282.5	22.5	0.2
1998	1,712.9	44.0	1.0	63.2	1,577.2	27.2	0.4
1999	1,897.3	42.1	1.1	65.0	1,760.5	27.1	1.5
2000	2,127.3	41.7	1.3	82.0	1,977.7	20.5	4.2
2001	2,453.3	37.2	1.6	82.5	2,308.0	20.9	3.2
2002	2,917.3	34.8	1.8	116.8	2,732.5	27.7	3.8
2003	4,437.4	32.9	1.9	131.1	3,039.3	1,225.6	6.6
2004	4,582.4	36.1	2.5	135.0	3,313.3	1,082.3	13.2
2005	4,879.2	34.7	3.6	181.3	3,705.6	918.5	35.6
2006	5,225.2	33.0	7.8	274.5	3,975.3	867.1	67.6
2007	5,608.8	29.4	15.3	370.2	4,319.3	780.9	93.7
2008	5,858.5	28.0	61.1	426.8	4,568.6	660.2	113.8
2009	6,086.3	30.7	121.7	580.4	4,558.1	606.6	188.7
2010	6,856.3	29.3	166.2	754.6	4,862.3	792.3	251.4
2011	7,582.9	27.4	197.2	963.4	5,121.5	965.4	296.7
2012	8,850.7	26.3	237.5	1,334.7	5,998.5	814.9	340.5

Note 1) Include wind, fuel cells, geothermal and tidal
2) 2007~2011, from 2012 figures are based on each revised calorific value.



8. Energy Balance

2002

	Coal (1,000 ton)	Petroleum (1,000 bbl)	L N G (1,000 ton)	Town Gas (10^6 m³)
Domestic Production	3,318	-	-	-
Imports	68,519	1,073,154	17,470	-
Exports	-	-239,127	-	-
Intl' Bunkers	-	-46,466	-	-
Stock Changes(+/-)	475	6,100	312	-
Staistical Difference	3,640	-30,793	-14	-
Primary Supply	75,952	762,868	17,768	-
Transformation	-42,701	-40,564	-17,768	13,873
Electric Generation	-42,701	-36,403	-5,900	-29
District Heating	-	-2,474	-609	-188
Gas Manufacturing	-	-1,687	-11,194	13,815
Own Use & Loss	-	-	-65	275
Final Consumption	33,251	722,304	-	13,873
Industry	32,075	374,906	-	3,794
Agri. Fishery	-	26,231	-	18
Mining	-	425	-	-
Manufacturing	32,075	334,089	-	3,776
Food. Tabacco	49	5,072	-	239
Textile & Apparel	174	9,609	-	421
Wood & Wood Prod.	-	528	-	3
Pulp & Publications	-	7,340	-	64
Petro. Chemical	258	278,315	-	381
Non-Metallic	5,698	7,433	-	261
Iron & Steel	21,189	4,496	-	685
Non-Ferrous	-	1,158	-	-
Fabricated Metal	-	9,186	-	748
Other Manufact.	4,707	7,010	-	974
Other Energy	-	3,942	-	-
Construction	-	14,162	-	-
Transportation	-	244,045	-	76
Rail	-	2,329	-	-
Land	-	196,517	-	76
Water	-	28,506	-	-
Air	-	16,694	-	-
Residential	1,175	70,723	-	7,723
Commercial	-	23,976	-	2,030
Public	-	8,653	-	250

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

Hydro (GWh)	Nuclear (GWh)	Electricity (GWh)	Heat (1,000 toe)	Renewable Energy (1,000 toe)	Total (1,000 toe)
5,309	119,102	-	-	2,925	35,521
-	-	-	-	-	214,833
-	-	-	-	-	-33,770
-	-	-	-	-	-7,115
-	-	-	-	-	1,553
-	-	-	-	-	-2,387
5,309	119,102	-	-	2,925	208,636
-5,309	-119,102	278,451	1,223	-	-48,185
-5,309	-119,102	306,473	842	-	-44,774
-	-	-	441	-	-937
-	-	-	-	-	-211
-	-	-28,022	-59	-	-2,265
-	-	278,451	1,223	2,925	160,451
-	-	144,454	-	2,359	89,197
-	-	6,156	-	-	4,321
-	-	1,155	-	-	162
-	-	137,143	-	2,359	82,528
-	-	6,768	-	-	1,616
-	-	15,543	-	-	3,389
-	-	1,388	-	-	204
-	-	9,329	-	-	2,014
-	-	29,267	-	-	38,302
-	-	9,923	-	-	5,979
-	-	24,982	-	-	17,465
-	-	-	-	-	159
-	-	37,967	-	-	5,409
-	-	1,975	-	2,359	7,423
-	-	-	-	-	568
-	-	-	-	-	2,186
-	-	2,271	-	-	33,763
-	-	2,271	-	-	536
-	-	-	-	-	26,484
-	-	-	-	-	4,434
-	-	-	-	-	2,309
-	-	42,278	1,118	325	22,508
-	-	72,361	78	26	11,791
-	-	17,088	27	215	3,191

8. Energy Balance

2002

	Coal	Petroleum	L N G	Town Gas
Domestic Production	1,493	-	-	-
Imports	44,990	147,133	22,711	-
Exports	-	-33,770	-	-
Intl' Bunkers	-	-7,115	-	-
Stock Changes(+/-)	221	926	406	-
Staistical Difference	2,392	-4,761	-18	-
Primary Supply	49,096	102,414	23,099	-
Transformation	-27,466	-6,255	-23,099	14,567
Electric Generation	-27,466	-5,702	-7,671	-31
District Heating	-	-389	-791	-197
Gas Manufacturing	-	-164	-14,552	14,506
Own Use & Loss	-	-	-85	289
Final Consumption	21,629	96,159	-	14,567
Industry	20,932	49,499	-	3,984
Agri. Fishery	-	3,773	-	19
Mining	-	63	-	-
Manufacturing	20,932	43,477	-	3,965
Food. Tabacco	32	751	-	251
Textile & Apparel	115	1,496	-	442
Wood & Wood Prod.	-	81	-	3
Pulp & Publications	-	1,145	-	67
Petro. Chemical	170	35,215	-	400
Non-Metallic	3,759	1,093	-	274
Iron & Steel	13,919	678	-	719
Non-Ferrous	-	159	-	-
Fabricated Metal	-	1,358	-	786
Other Manufact.	2,937	934	-	1,023
Other Energy	-	568	-	-
Construction	-	2,186	-	-
Transportation	-	33,488	-	80
Rail	-	341	-	-
Land	-	26,405	-	80
Water	-	4,434	-	-
Air	-	2,309	-	-
Residential	697	8,623	-	8,109
Commercial	-	3,332	-	2,132
Public	-	1,217	-	262

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

(1,000 toe)

Hydro	Nuclear	Electricity	Heat	Renewable Energy	Total
1,327	29,776	-	-	2,925	35,521
-	-	-	-	-	214,833
-	-	-	-	-	-33,770
-	-	-	-	-	-7,115
-	-	-	-	-	1,553
-	-	-	-	-	-2,387
1,327	29,776	-	-	2,925	208,636
-1,327	-29,776	23,947	1,223	-	-48,185
-1,327	-29,776	26,357	842	-	-44,774
-	-	-	441	-	-937
-	-	-	-	-	-211
-	-	-2,410	-59	-	-2,265
-	-	23,947	1,223	2,925	160,451
-	-	12,423	-	2,359	89,197
-	-	529	-	-	4,321
-	-	99	-	-	162
-	-	11,794	-	2,359	82,528
-	-	582	-	-	1,616
-	-	1,337	-	-	3,389
-	-	119	-	-	204
-	-	802	-	-	2,014
-	-	2,517	-	-	38,302
-	-	853	-	-	5,979
-	-	2,148	-	-	17,465
-	-	-	-	-	159
-	-	3,265	-	-	5,409
-	-	170	-	2,359	7,423
-	-	-	-	-	568
-	-	-	-	-	2,186
-	-	195	-	-	33,763
-	-	195	-	-	536
-	-	-	-	-	26,484
-	-	-	-	-	4,434
-	-	-	-	-	2,309
-	-	3,636	1,118	325	22,508
-	-	6,223	78	26	11,791
-	-	1,470	27	215	3,191

8. Energy Balance

2012

	Coal (1,000 ton)	Petroleum (1,000 bbl)	L N G (1,000 ton)	Town Gas (10^6 m³)
Domestic Production	2,094	-	334	-
Imports	122,700	1,344,307	36,184	-
Exports	-	-440,897	-	-
Intl' Bunkers	-	-49,091	-	-
Stock Changes(+/-)	92	-7,299	1,483	-
Staistical Difference	3,260	-19,340	484	-
Primary Supply	128,146	827,679	38,485	-
Transformation	-79,727	-31,185	-37,935	23,776
Electric Generation	-79,727	-22,398	-16,132	-395
District Heating	-	-1,300	-2,046	-533
Gas Manufacturing	-	-7,486	-19,558	24,327
Own Use & Loss	-	-	-200	376
Final Consumption	48,419	796,495	550	23,776
Industry	46,586	477,950	550	9,135
Agri. Fishery	-	15,013	-	6
Mining	-	633	-	-
Manufacturing	38,531	446,759	550	9,129
Food. Tabacco	50	1,163	-	672
Textile & Apparel	152	833	-	549
Wood & Wood Prod.	-	146	-	46
Pulp & Publications	-	635	-	418
Petro. Chemical	230	419,626	250	2,080
Non-Metallic	4,625	4,133	-	553
Iron & Steel	31,487	1,136	300	1,289
Non-Ferrous	-	425	-	231
Fabricated Metal	-	4,201	-	1,595
Other Manufact.	1,986	9,019	-	1,697
Other Energy	-	5,443	-	-
Construction	-	15,546	-	1
Transportation	-	265,983	-	1,200
Rail	-	1,231	-	-
Land	-	217,607	-	1,200
Water	-	20,254	-	-
Air	-	26,891	-	-
Residential	1,833	25,677	-	9,720
Commercial	-	17,865	-	3,546
Public	-	9,020	-	174

Note 1) Domestic anthracite consumption for the commercial sector is included in the residential sector.
2) Based on the 6th calorific value.

Hydro (GWh)	Nuclear (GWh)	Electricity (GWh)	Heat (1,000 toe)	Renewable Energy (1,000 toe)	Total (1,000 toe)
7,652	150,328	-	-	8,036	42,748
-	-	-	-	-	304,116
-	-	-	-	-	-61,454
-	-	-	-	-	-7,536
-	-	-	-	-	1,007
-	-	-	-	-	-183
7,652	150,328	-	-	8,036	278,698
-7,652	-150,328	466,593	1,751	-912	-70,577
-7,652	-150,328	507,481	1,143	-912	-63,438
-	-	-	660	-	-2,767
-	-	-	-	-	-936
-	-	-40,888	-52	-	-3,437
-	-	466,593	1,751	7,124	208,120
-	-	249,136	-	5,800	128,324
-	-	12,074	-	-	3,172
-	-	1,616	-	-	228
-	-	235,445	-	-	111,977
-	-	9,793	-	-	1,739
-	-	12,723	-	-	1,882
-	-	1,772	-	-	222
-	-	10,051	-	-	1,394
-	-	50,540	-	-	58,447
-	-	10,928	-	-	4,994
-	-	45,676	-	-	27,837
-	-	-	-	-	299
-	-	91,515	-	-	10,131
-	-	2,448	-	-	4,257
-	-	-	-	-	775
-	-	-	-	-	2,395
-	-	2,250	-	360	37,143
-	-	2,250	-	-	370
-	-	-	-	360	29,886
-	-	-	-	-	3,154
-	-	-	-	-	3,733
-	-	63,536	1,552	88	21,318
-	-	123,083	159	44	16,567
-	-	28,588	40	832	4,769

8. Energy Balance

2012 (The 5th calorific value)

	Coal (1,000 ton)	Petroleum (1,000 bbl)	L N G (1,000 ton)	Town Gas (10^6 m³)
Domestic Production	974	-	435	-
Imports	78,424	182,210	47,039	-
Exports	-	-61,920	-	-
Intl' Bunkers	-	-7,512	-	-
Stock Changes(+/-)	40	-989	1,928	-
Staistical Difference	2,464	-3,236	629	-
Primary Supply	81,901	108,554	50,031	-
Transformation	-49,339	-4,439	-49,316	25,084
Electric Generation	-49,339	-3,501	-20,972	-417
District Heating	-	-205	-2,659	-562
Gas Manufacturing	-	-734	-25,425	25,665
Own Use & Loss	-	-	-260	397
Final Consumption	32,562	104,115	715	25,084
Industry	31,684	61,834	715	9,638
Agri. Fishery	-	2,139	-	6
Mining	-	89	-	-
Manufacturing	26,408	57,211	715	9,631
Food. Tabacco	31	167	-	708
Textile & Apparel	94	124	-	579
Wood & Wood Prod.	-	21	-	49
Pulp & Publications	-	94	-	442
Petro. Chemical	143	53,556	326	2,194
Non-Metallic	2,868	630	-	584
Iron & Steel	22,041	136	389	1,360
Non-Ferrous	-	59	-	243
Fabricated Metal	-	602	-	1,683
Other Manufact.	1,231	1,060	-	1,790
Other Energy	-	762	-	-
Construction	-	2,395	-	1
Transportation	-	35,648	-	1,266
Rail	-	177	-	-
Land	-	28,587	-	1,266
Water	-	3,142	-	-
Air	-	3,742	-	-
Residential	878	3,276	-	10,255
Commercial	-	2,094	-	3,741
Public	-	1,263	-	184

Note 1) Domestic anthracite consumption for the commercial sector is included in the residential sector.
2) Based on the 5th calorific value.

Hydro (GWh)	Nuclear (GWh)	Electricity (GWh)	Heat (1,000 toe)	Renewable Energy (1,000 toe)	Total (1,000 toe)
1,645	32,321	-	-	8,036	43,410
-	-	-	-	-	307,674
-	-	-	-	-	-61,920
-	-	-	-	-	-7,512
-	-	-	-	-	979
-	-	-	-	-	-143
1,645	32,321	-	-	8,036	282,488
-1,645	-32,321	40,127	1,751	-912	-71,010
-1,645	-32,321	43,643	1,143	-912	-64,321
-	-	-	660	-	-2,766
-	-	-	-	-	-493
-	-	-3,516	-52	-	-3,430
-	-	40,127	1,751	7,124	211,478
-	-	21,426	-	5,800	131,097
-	-	1,038	-	-	3,183
-	-	139	-	-	228
-	-	20,248	-	-	114,213
-	-	842	-	-	1,749
-	-	1,094	-	-	1,891
-	-	152	-	-	222
-	-	864	-	-	1,400
-	-	4,346	-	-	60,565
-	-	940	-	-	5,022
-	-	3,928	-	-	27,855
-	-	-	-	-	302
-	-	7,870	-	-	10,155
-	-	211	-	-	4,291
-	-	-	-	-	762
-	-	-	-	-	2,396
-	-	194	-	360	37,468
-	-	194	-	-	371
-	-	-	-	360	30,213
-	-	-	-	-	3,142
-	-	-	-	-	3,742
-	-	5,464	1,552	88	21,514
-	-	10,585	159	44	16,623
-	-	2,459	40	832	4,777

8. Energy Balance

2012 (The 6th calorific value)

	Coal	Petroleum	L N G	Town Gas
Domestic Production	942	-	436	-
Imports	77,546	179,387	47,184	-
Exports	-	-61,454	-	-
Intl' Bunkers	-	-7,536	-	-
Stock Changes(+/-)	39	-966	1,934	-
Staistical Difference	2,451	-3,265	631	-
Primary Supply	80,978	106,165	50,185	-
Transformation	-49,014	-4,456	-49,468	24,728
Electric Generation	-49,014	-3,516	-21,037	-411
District Heating	-	-206	-2,668	-554
Gas Manufacturing	-	-734	-25,503	25,300
Own Use & Loss	-	-	-260	392
Final Consumption	31,964	101,710	717	24,728
Industry	31,132	59,748	717	9,501
Agri. Fishery	-	2,128	-	6
Mining	-	89	-	-
Manufacturing	26,380	55,137	717	9,494
Food. Tabacco	31	167	-	698
Textile & Apparel	94	124	-	570
Wood & Wood Prod.	-	21	-	48
Pulp & Publications	-	95	-	435
Petro. Chemical	142	51,470	327	2,163
Non-Metallic	2,849	630	-	576
Iron & Steel	22,041	136	391	1,341
Non-Ferrous	-	59	-	240
Fabricated Metal	-	602	-	1,659
Other Manufact.	1,223	1,059	-	1,764
Other Energy	-	775	-	-
Construction	-	2,394	-	1
Transportation	-	35,341	-	1,248
Rail	-	176	-	-
Land	-	28,278	-	1,248
Water	-	3,154	-	-
Air	-	3,733	-	-
Residential	832	3,272	-	10,109
Commercial	-	2,091	-	3,688
Public	-	1,258	-	181

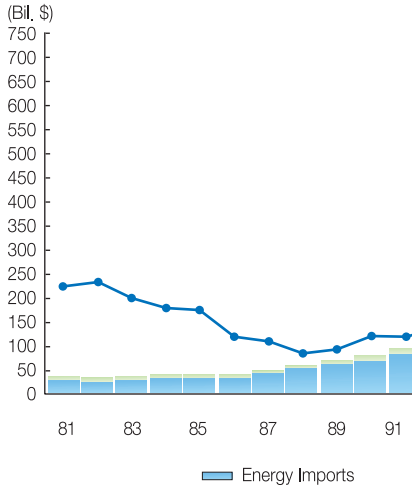
Note 1) Domestic anthracite consumption for the commercial sector is included in the residential sector.
2) Based on the 6th calorific value.

(1,000 toe)

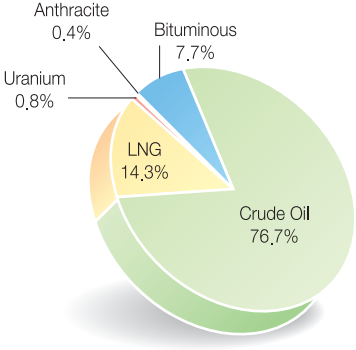
Hydro	Nuclear	Electricity	Heat	Renewable Energy	Total
1,615	31,719	-	-	8,036	42,748
-	-	-	-	-	304,116
-	-	-	-	-	-61,454
-	-	-	-	-	-7,536
-	-	-	-	-	1,007
-	-	-	-	-	-183
1,615	31,719	-	-	8,036	278,698
-1,615	-31,719	40,127	1,751	-912	-70,577
-1,615	-31,719	43,643	1,143	-912	-63,438
-	-	-	660	-	-2,767
-	-	-	-	-	-936
-	-	-3,516	-52	-	-3,437
-	-	40,127	1,751	7,124	208,120
-	-	21,426	-	5,800	128,324
-	-	1,038	-	-	3,172
-	-	139	-	-	228
-	-	20,248	-	-	111,977
-	-	842	-	-	1,739
-	-	1,094	-	-	1,882
-	-	152	-	-	222
-	-	864	-	-	1,394
-	-	4,346	-	-	58,447
-	-	940	-	-	4,994
-	-	3,928	-	-	27,837
-	-	-	-	-	299
-	-	7,870	-	-	10,131
-	-	211	-	-	4,257
-	-	-	-	-	775
-	-	-	-	-	2,395
-	-	194	-	360	37,143
-	-	194	-	-	370
-	-	-	-	360	29,886
-	-	-	-	-	3,154
-	-	-	-	-	3,733
-	-	5,464	1,552	88	21,318
-	-	10,585	159	44	16,567
-	-	2,459	40	832	4,769

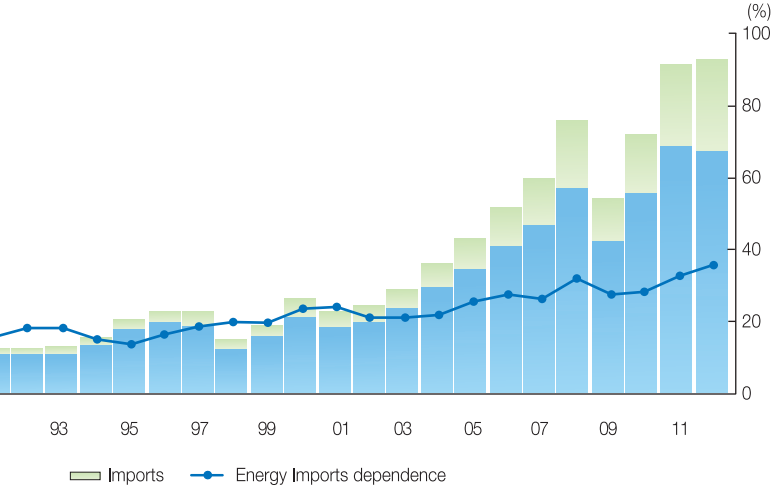
9. Imports

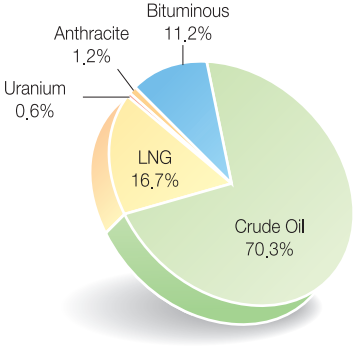
Energy Imports



2002 26.0 bil. $







2012 151.9 bil. $

9. Imports

9-1. Energy Imports

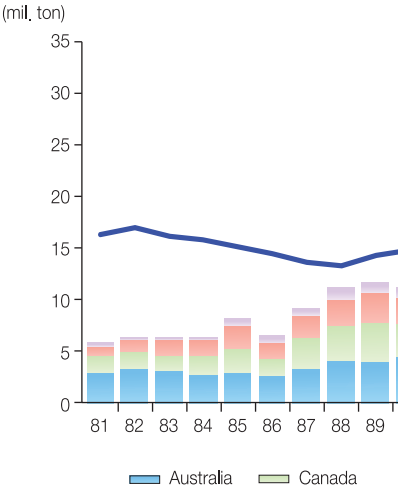
	Total Imports (CIF)	Energy Imports/ Total Imports(%)	Total	
				Growth Rate(%)
1981	26,131	29.7	7,762	17.9
1982	24,251	31.3	7,581	-2.3
1983	26,192	26.5	6,936	-8.5
1984	30,631	23.7	7,263	4.7
1985	31,136	23.5	7,322	0.8
1986	31,584	15.8	4,995	-31.8
1987	41,020	14.4	5,926	18.6
1988	51,811	11.4	5,920	-0.1
1989	61,465	12.2	7,516	27.0
1990	69,844	15.6	10,908	45.1
1991	81,525	15.6	12,754	16.9
1992	81,775	17.9	14,654	14.9
1993	83,800	18.0	15,088	3.0
1994	102,348	15.1	15,471	2.5
1995	135,119	14.1	19,053	23.2
1996	150,339	16.1	24,243	27.2
1997	144,616	18.9	27,308	12.6
1998	93,282	19.6	18,276	-33.1
1999	119,752	19.0	22,745	24.5
2000	160,481	23.6	37,888	66.6
2001	141,098	24.0	33,894	-10.5
2002	152,126	21.2	32,290	-4.7
2003	178,827	21.4	38,306	18.6
2004	224,463	22.1	49,600	29.5
2005	261,238	25.5	66,697	34.5
2006	309,383	27.7	85,566	28.3
2007	356,846	26.6	94,978	11.0
2008	435,275	32.5	141,475	49.0
2009	323,085	28.2	91,160	-35.6
2010	425,212	28.6	121,654	33.5
2011	524,413	32.9	172,490	41.8
2012	519,584	35.6	184,800	7.1

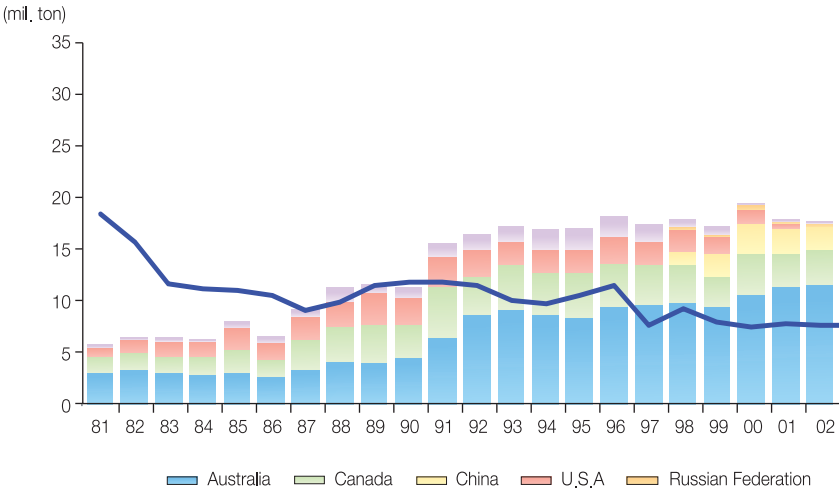
Source : IEA, 「Oil, Gas, Coal and Electricity(2012, 2Q)」

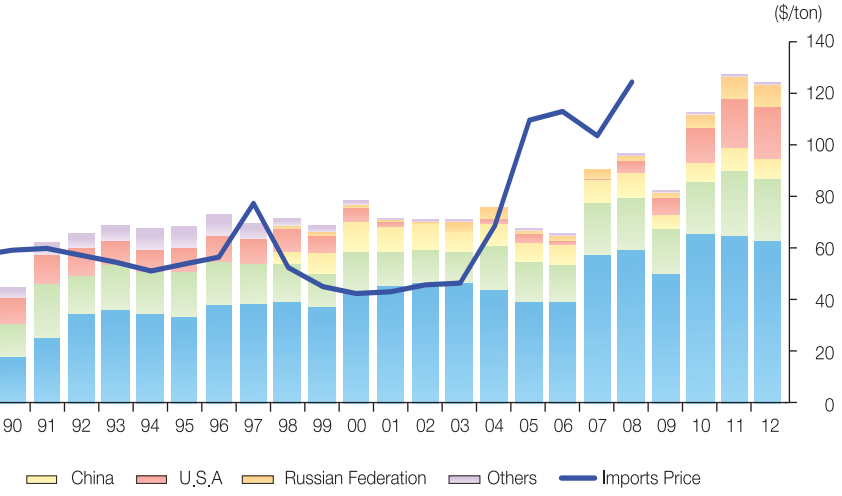
(mil. $)

Coal		Petroleum		LNG	Uranium
Anthracite	Bituminous	Crude Oil	Petroleum Products		
302	484	6,371	551	-	23
165	601	6,097	684	-	14
49	588	5,572	701	-	8
46	663	5,771	747	-	19
138	890	5,572	685	-	22
214	798	3,346	585	13	24
149	828	3,702	949	284	-
129	1,021	3,688	743	323	-
75	1,212	4,933	928	347	1
52	1,217	6,386	2,774	460	1
66	1,514	8,134	2,451	485	84
42	1,535	9,548	2,829	562	98
40	1,643	9,151	3,288	781	135
33	1,695	8,878	3,664	961	191
35	1,992	10,809	4,673	1,275	215
46	2,251	14,432	5,395	1,878	201
38	2,301	17,772	4,606	2,296	236
36	2,147	11,241	3,043	1,549	214
46	1,866	14,783	3,802	1,973	222
72	2,033	25,216	6,379	3,882	225
118	2,157	21,368	5,956	3,990	233
148	2,254	19,200	6,214	4,120	280
177	2,266	23,082	7,325	5,082	265
233	3,891	29,917	8,357	6,552	336
429	4,803	42,606	9,716	8,646	286
407	4,700	55,865	12,119	11,925	339
447	5,675	60,324	15,066	12,653	489
991	11,156	85,855	22,275	19,806	729
672	8,997	50,757	15,811	13,875	722
1,016	11,425	68,662	22,241	17,006	615
1,774	16,052	100,806	28,541	23,859	807
1,361	14,221	108,298	32,373	27,364	695

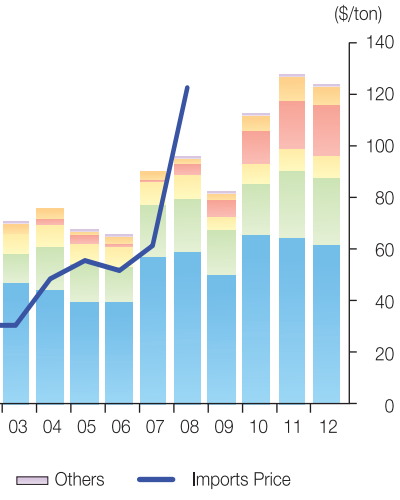
Imports of Coking Coal by Country







Imports of Steaming Coal by Country



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

	Coking Coal						
	Total	Australia	Canada	China	U.S.A	Russian Federation	Others[1)]
1981	5,811	3,038	1,585	-	903	-	285
1982	6,439	3,414	1,616	-	1,267	-	142
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[e]	31,256	15,787	6,361	1,864	5,055	2,189	-

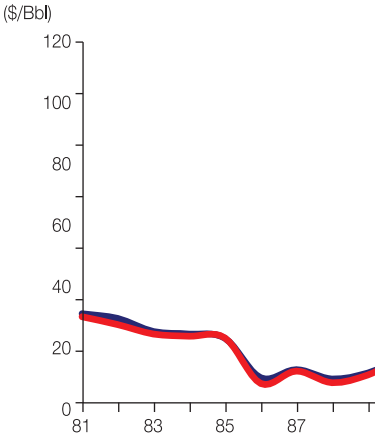
Note 1) Include Indonesia etc.
Source : IEA, 「Oil, Gas, Coal and Electricity(2013, 1Q)」

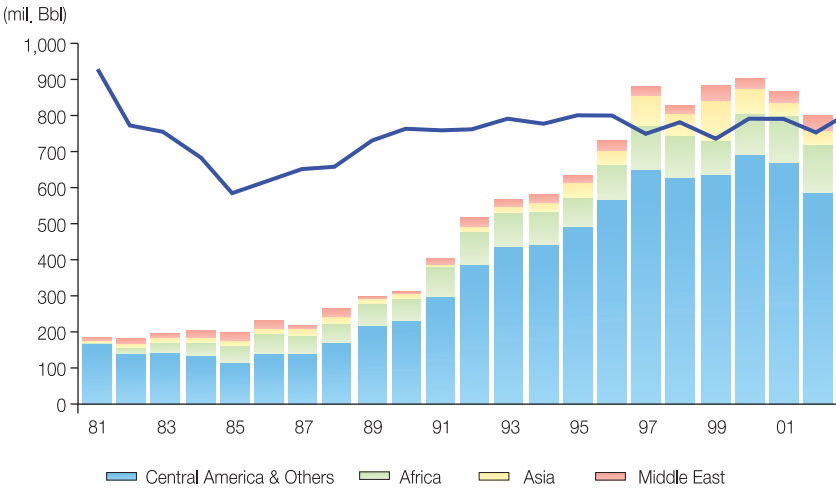
(Thousand metric tons)

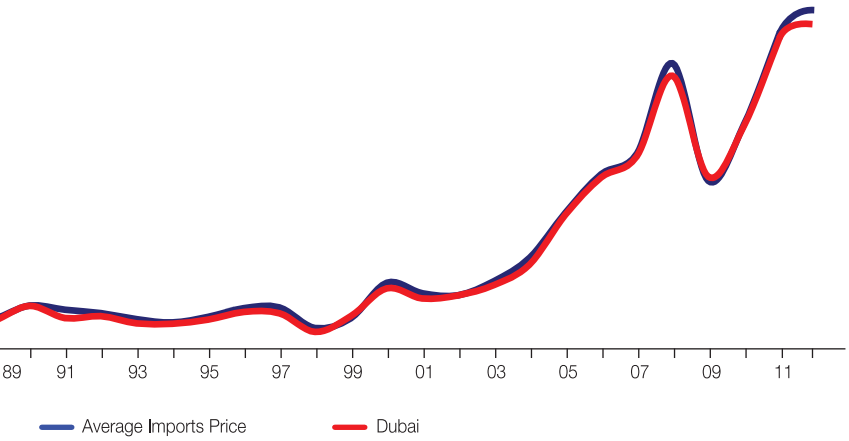
	Steaming Coal						
	Total	Australia	Canada	China	U.S.A	Russian Federation	Others[1]
1981	1,421	51	37	-	544	-	789
1982	2,600	445	590	-	52	-	1,513
1983	3,757	1,523	440	-	40	-	1,754
1984	5,873	3,067	1,157	-	55	-	1,594
1985	9,006	4,800	1,664	-	634	-	1,908
1986	9,862	5,281	1,453	-	627	-	2,501
1987	8,587	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	1,647	18,660	-	2,171	5,950
2001	43,958	12,765	2,114	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[e]	94,279	27,339	7,878	3,167	861	10,587	44,447

Note 1) Include Indonesia and South Africa etc.

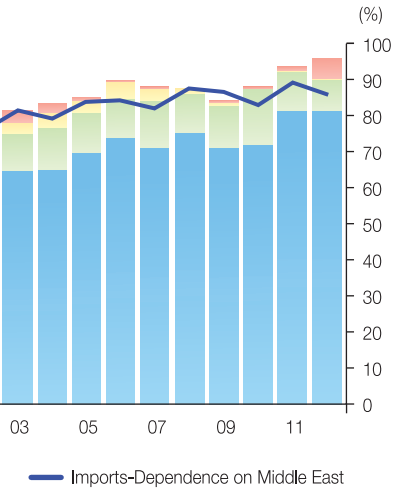
Crude Oil Price







Crude Oil Imports by Region



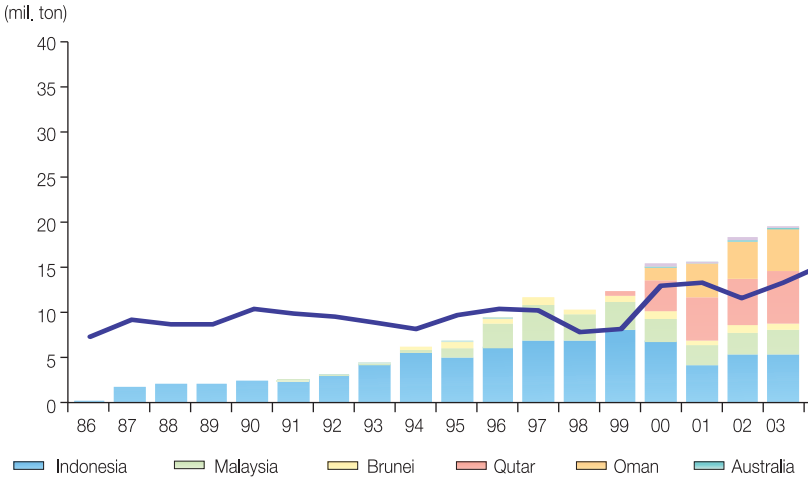
9-3. Crude Oil Imports by Region and Prices

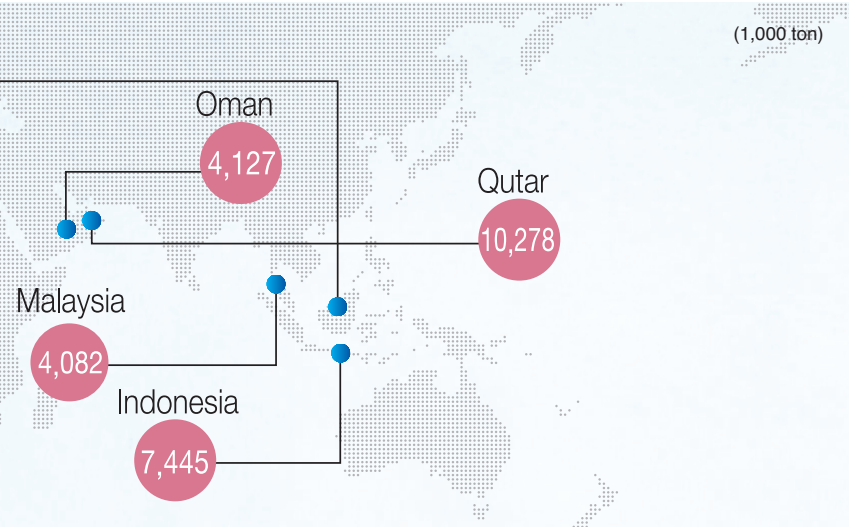
	Region(1,000 bbl)			
	Total	Middle East	Asia	Africa
1981	182,814	165,858	5,141	1,467
1982	178,369	135,527	21,942	6,415
1983	192,969	141,816	27,367	12,053
1984	199,681	132,467	39,329	11,705
1985	198,313	113,013	47,996	11,912
1986	230,063	142,423	52,128	9,912
1987	216,163	138,659	51,265	15,141
1988	261,079	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	99,147	12,876
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	122,379	81,119
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

Source : IEA, 「Energy Prices and Taxes(2nd Quarter 2013)」

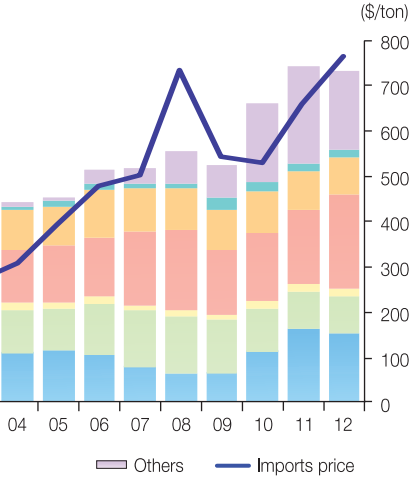
Central America & Others	Imports-Dependence on Middle East(%)	Imports Price(C&F, $/bbl)	Dubai(FOB, $/bbl)
10,348	90.70	35.57	34.32
14,486	76.00	34.05	31.80
11,734	73.50	29.89	28.78
16,180	66.30	29.06	28.07
25,392	57.00	27.73	27.53
25,601	61.90	15.11	12.95
11,098	64.10	17.74	16.92
23,845	64.50	14.71	13.19
3,826	71.50	16.63	15.68
7,132	74.30	20.96	20.50
16,701	73.70	19.62	16.56
21,071	74.70	18.54	17.21
17,702	76.90	16.59	14.90
20,075	76.60	15.55	14.76
18,456	77.90	17.32	16.09
25,174	77.70	20.11	18.56
24,240	73.90	20.35	18.13
21,689	75.90	13.71	12.16
38,946	72.30	16.91	17.24
26,610	76.80	28.22	26.12
28,530	77.00	24.86	22.84
38,494	73.30	24.24	23.88
30,479	79.50	28.74	27.16
21,447	78.10	36.18	33.72
7,487	81.80	50.53	49.61
4,831	82.20	62.83	61.58
1,690	80.70	69.37	68.35
-	86.30	98.28	94.20
1,734	84.50	60.75	61.86
1,823	81.80	78.72	78.13
7,962	87.10	108.00	106.33
43,899	85.10	112.79	109.02

LNG Imports by Region 2012





LNG Imports & Prices



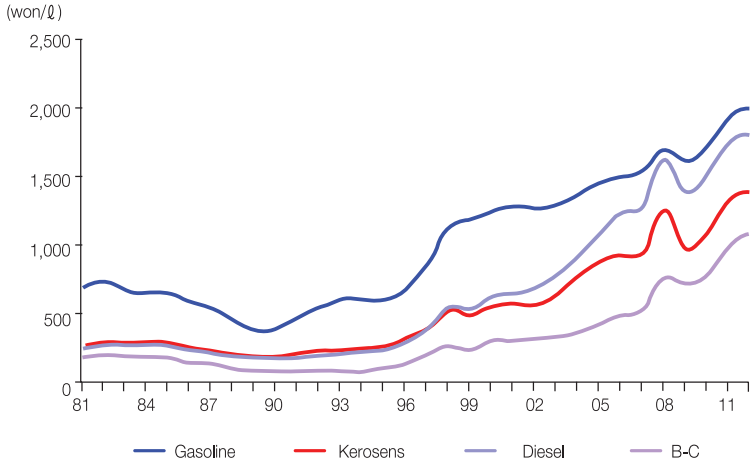
9-4. LNG Imports by Region and Prices

	Imports Price ($/ton)			
		Total	Indonesia	Malaysia
1986	143	117	117	-
1987	179	1,682	1,682	-
1988	169	1,898	1,898	-
1989	171	2,015	2,015	-
1990	205	2,237	2,237	-
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
1997	200	11,471	6,730	3,928
1998	152	10,189	6,736	2,851
1999	161	12,284	7,943	3,046
2000	255	15,239	6,633	2,529
2001	260	15,318	4,055	2,175
2002	229	17,993	5,256	2,400
2003	263	19,308	5,200	2,798
2004	301	21,781	5,290	4,638
2005	387	22,317	5,502	4,688
2006	472	25,256	5,060	5,546
2007	495	25,569	3,755	6,161
2008	727	27,259	3,053	6,247
2009	537	25,822	3,084	5,874
2010	522	32,603	5,451	4,745
2011	650	36,685	7,894	4,144
2012	756	36,184	7,445	4,082

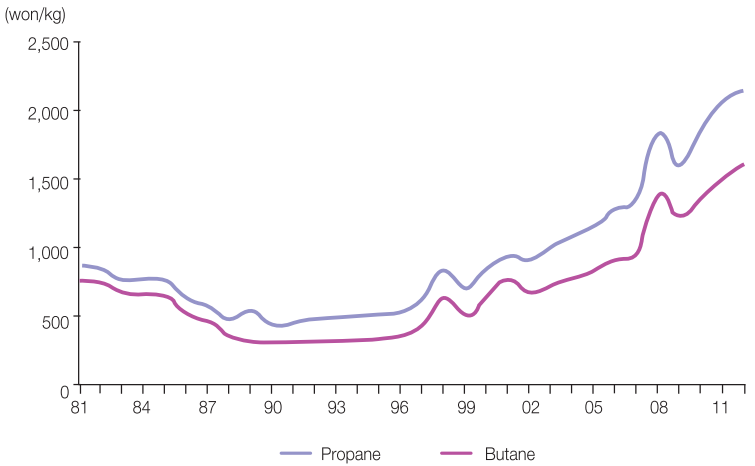
Note : Include Russia, Yemen, Equatorial Guinea, Trinidad, Nigeria, Algeria and UAE etc.

Region (1,000 ton)				
Brunei	Qutar	Oman	Australia	Others[1)]
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	57	-
271	-	-	-	-
710	-	-	114	-
654	-	-	56	-
757	-	-	-	-
541	-	-	-	-
698	480	-	-	-
849	3,251	1,619	54	304
591	4,655	3,784	57	1
769	5,123	3,970	176	299
610	5,694	4,714	123	169
838	5,818	4,411	285	501
594	6,211	4,244	748	330
850	6,458	5,221	701	1,420
590	8,031	4,792	422	1,818
738	8,744	4,544	398	3,535
530	6,973	4,551	1,314	3,496
787	7,449	4,557	1,030	8,584
756	8,153	4,195	787	10,756
773	10,278	4,127	832	8,647

Major Petroleum Products -1



Major Petroleum Products -2

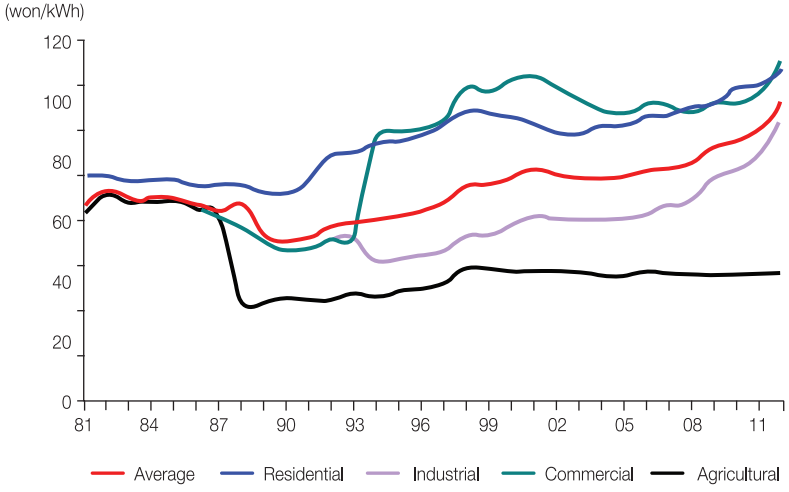


10-1. Prices of Major Petroleum Products

	Gasoline	Kerosene	Diesel	B-C	Propane	Butane[1]
	won/ $				won/ $	
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	179.0	87.4	415.0	293.0
1991	482.2	226.9	179.0	82.4	430.4	286.3
1992	546.0	231.1	195.1	83.4	449.4	293.9
1993	610.0	254.0	210.0	86.7	460.0	304.0
1994	611.0	252.3	219.5	81.9	475.0	304.0
1995	598.0	261.6	231.5	105.6	489.7	314.9
1996	675.9	314.3	294.1	129.9	510.0	330.0
1997	838.7	373.5	376.2	196.1	599.0	417.8
1998	1,122.6	524.2	553.5	262.7	815.0	620.0
1999	1,191.9	491.2	521.8	232.5	678.3	483.3
2000	1,248.4	559.6	612.8	294.3	809.3	614.3
2001	1,280.0	580.2	644.6	309.7	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	367.0	1,050.2	750.6
2005	1,432.3	871.0	1,079.7	420.2	1,131.5	807.1
2006	1,492.4	931.9	1,228.2	489.4	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

Note 1) Residential · Commercial

Electricity

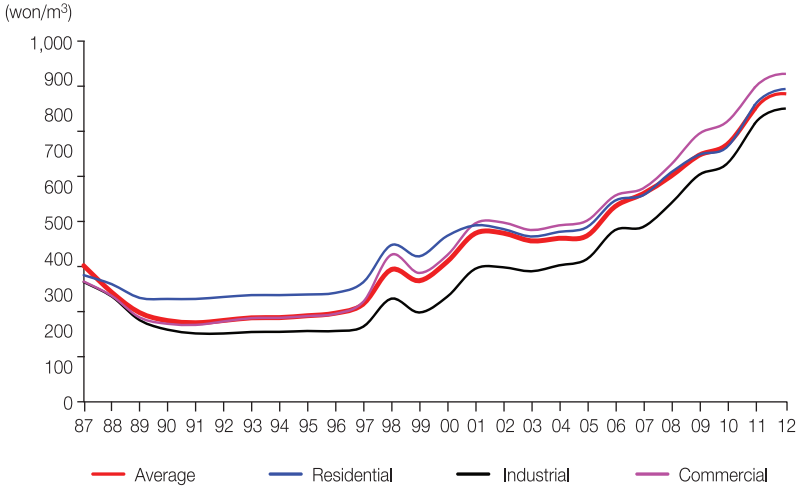


10-2. Average Revenues per kWh Sold

(won / kWh)

	Average	Residential	Industrial	Commercial	Agricultural
1981	64.31	74.61	62.35	62.35	62.35
1982	69.87	75.19	68.76	68.76	68.76
1983	67.71	73.26	66.50	66.50	66.50
1984	67.42	73.33	66.10	66.10	66.10
1985	67.92	73.42	66.64	66.64	66.64
1986	65.51	71.33	64.21	64.21	64.21
1987	63.48	71.75	61.74	61.74	61.74
1988	65.49	71.94	57.47	57.47	33.48
1989	55.43	69.13	52.97	52.97	32.70
1990	52.94	68.66	49.81	49.81	34.06
1991	54.23	73.03	50.53	50.53	33.80
1992	58.09	81.22	53.59	53.59	33.56
1993	58.90	82.29	54.53	54.53	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	96.60	55.01	104.16	44.31
1999	71.59	96.41	54.78	102.45	44.04
2000	74.65	94.72	58.30	106.04	43.04
2001	77.06	91.57	61.56	107.99	43.51
2002	75.21	88.67	60.08	104.42	43.16
2003	74.68	88.00	60.30	100.59	43.45
2004	74.58	90.94	60.23	96.85	41.95
2005	74.46	91.07	60.25	95.24	41.67
2006	76.43	93.70	61.92	97.91	42.96
2007	77.85	94.78	64.56	97.68	42.45
2008	78.76	97.58	66.24	95.30	42.38
2009	83.59	98.07	73.69	98.50	42.13
2010	86.12	103.38	76.63	98.93	42.54
2011	89.32	105.12	81.23	101.69	42.72
2012	99.10	109.90	92.83	112.50	42.90

Town Gas


(won/m3)
1,000
900
800
700
600
500
400
300
200
100
0
87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
Average
Residential
Industrial
Commercial

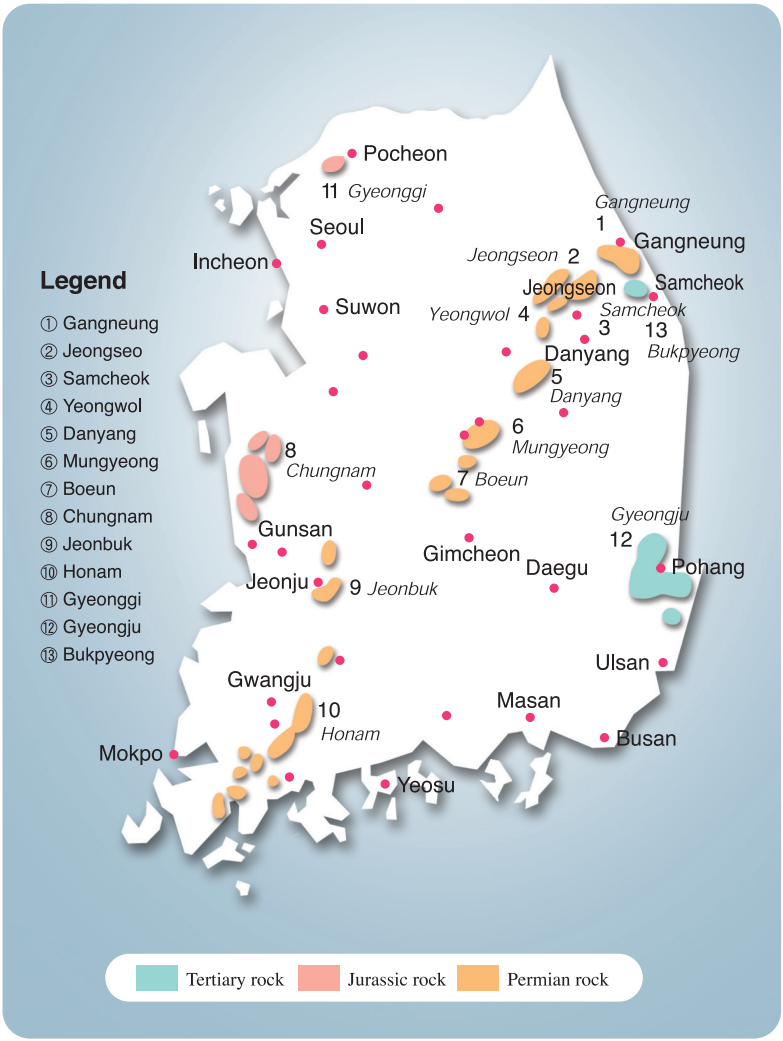
10-3. Town Gas per m^3

(won / m^3)

	Average	Residential	Industrial	Commercial
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	378.4	351.6	332.8	332.8
1988	304.2	326.3	292.7	292.7
1989	247.1	287.9	227.0	232.1
1990	224.9	284.9	200.5	214.4
1991	218.8	284.9	190.0	211.3
1992	225.4	290.4	189.8	221.2
1993	232.7	295.5	194.0	230.4
1994	233.3	295.5	194.5	230.9
1995	238.6	297.2	196.7	236.0
1996	245.7	301.9	196.7	242.4
1997	271.2	331.5	208.8	276.1
1998	367.5	435.5	286.6	407.3
1999	336.3	404.1	248.2	356.7
2000	389.3	461.3	291.8	406.0
2001	468.3	490.9	369.2	494.8
2002	469.5	480.8	373.7	497.8
2003	447.6	459.6	362.5	476.6
2004	454.9	472.7	378.9	489.7
2005	461.4	485.6	396.1	502.6
2006	543.2	559.7	476.5	572.2
2007	578.6	574.6	485.1	592.3
2008	627.7	638.4	549.8	658.5
2009	686.3	688.1	629.4	744.8
2010	715.4	708.9	660.0	778.3
2011	815.8	826.8	771.2	874.2
2012[1]	856.1	868.7	814.1	908.7

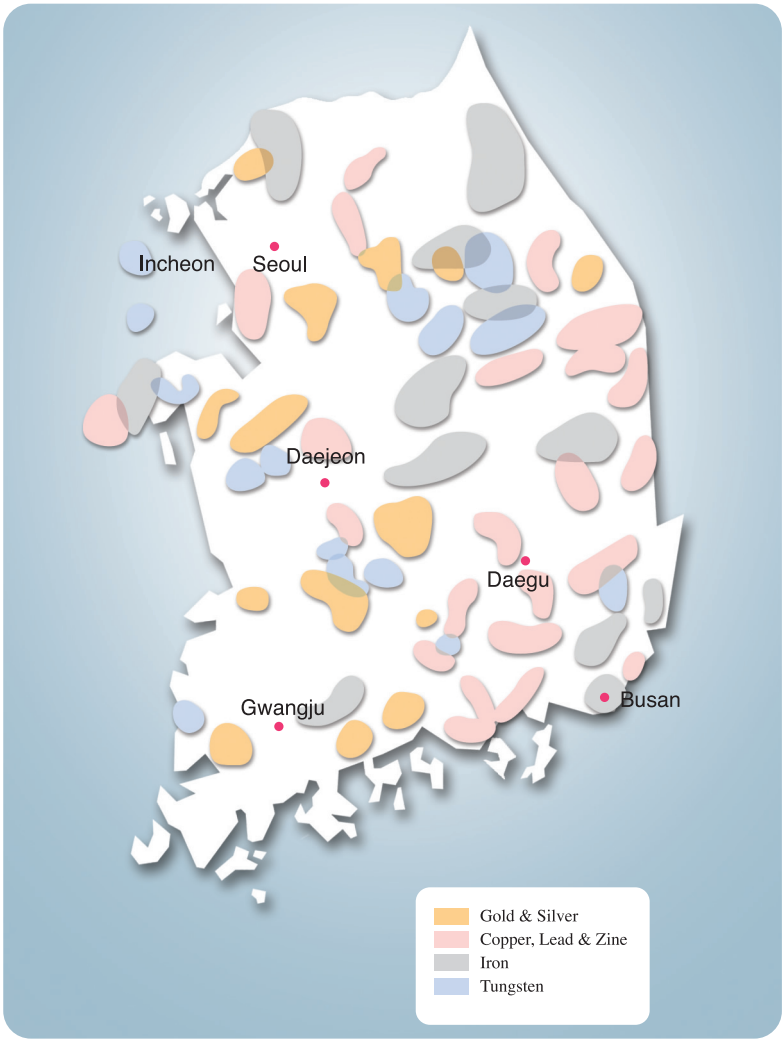
Note 1) On June 30, 2012
2) Retail prices in Seoul.
Source : Korea City Gas Association, 「Yearbook(2013)」

11-1. Major Coal Fields



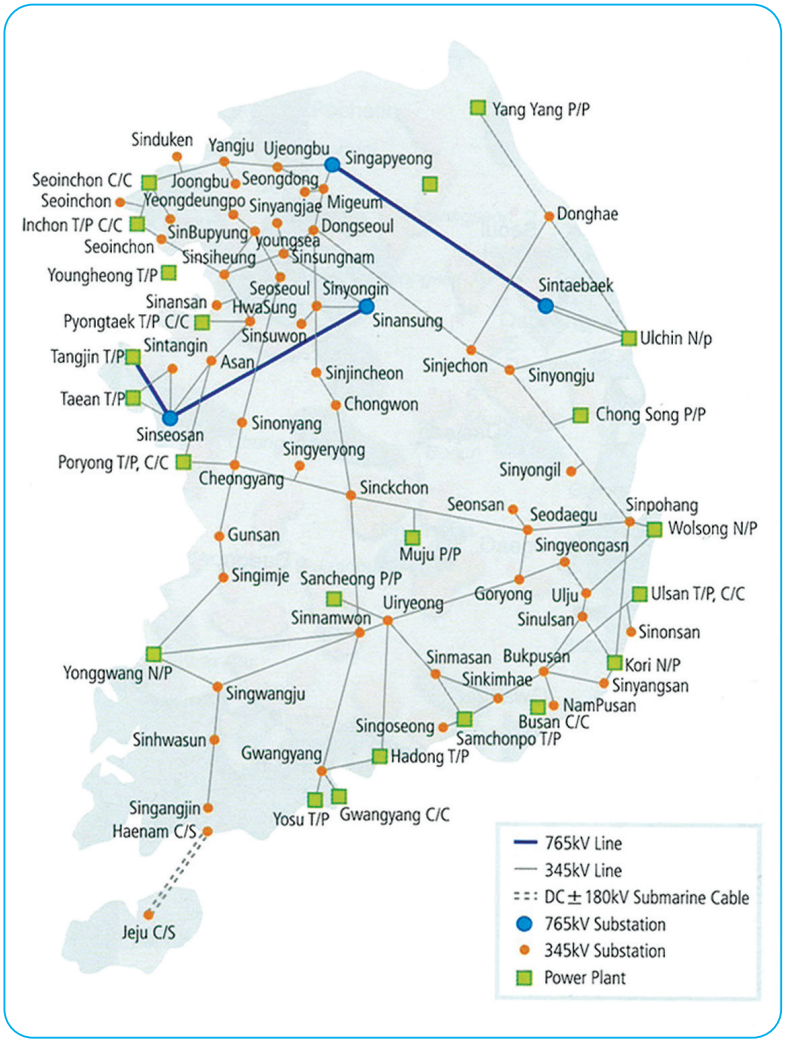
Source : www.kores.or.kr

11-2. Metallic Mineral



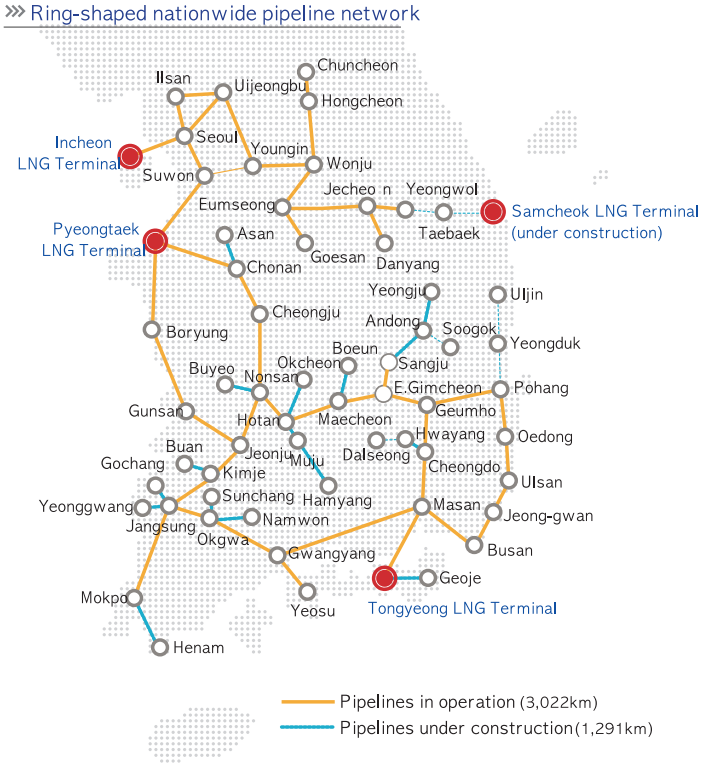
Source : www.kores.or.kr

11-3. Electric Power Transmission



Source : www.kpx.or.kr

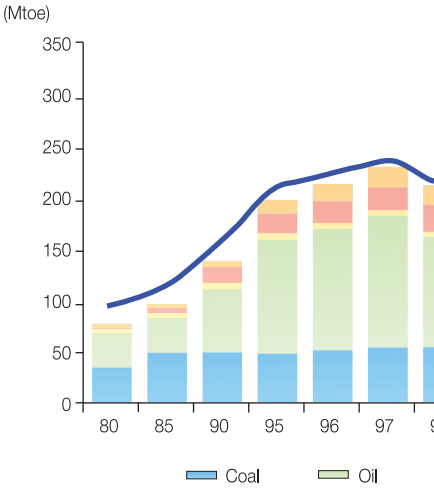
11-4. LNG Pipeline Network



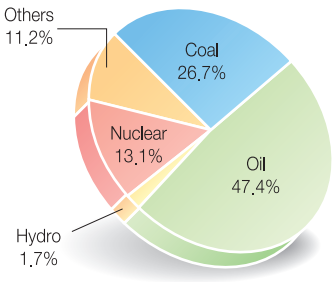
Source : www.kogas.co.kr

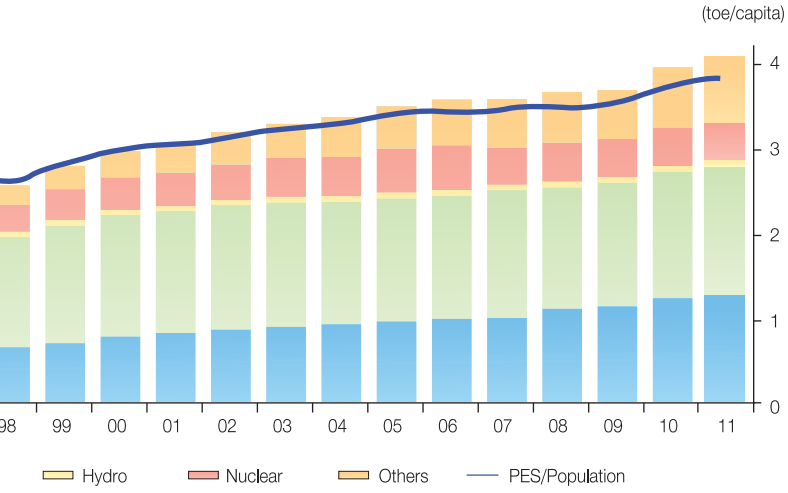
12. Energy Consumption in the Korean Peninsula

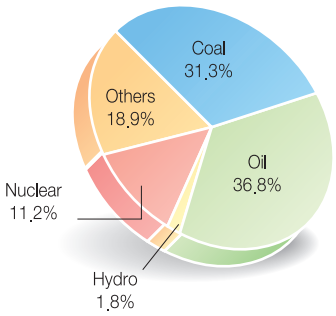
Primary Energy Supply



2001 214.6 Mtoe







2011 287.0 Mtoe

12-1. Primary Energy Supply

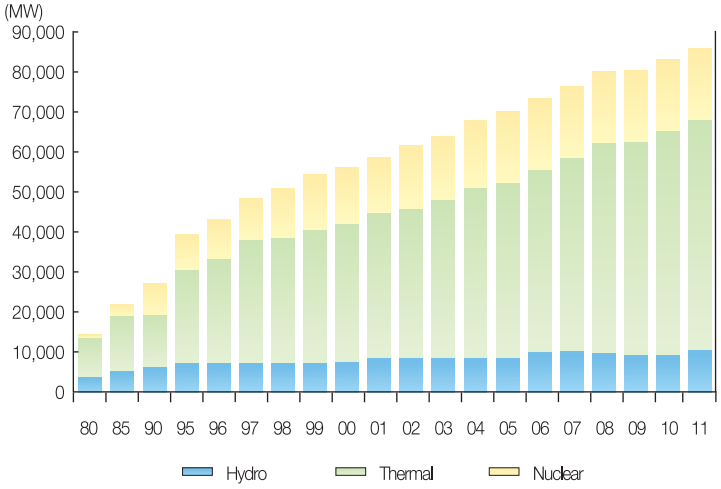
	R. O. K						
	Total	Coal	Oil	Hydro	Nuclear	Others[1]	Total
1980	43,911	13,199	26,830	496	869	2,517	21,013
1985	56,296	22,022	27,142	915	4,186	2,031	24,940
1990	93,192	24,385	50,175	1,590	13,222	3,820	23,963
1991	103,619	24,535	59,627	1,263	14,078	4,116	21,920
1992	116,010	23,618	71,740	1,216	14,133	5,303	20,450
1993	126,879	25,882	78,495	1,502	14,535	6,465	19,013
1994	137,234	26,680	86,342	1,025	14,663	8,524	17,870
1995	150,437	28,092	93,955	1,369	16,757	10,264	17,280
1996	165,212	32,200	99,898	1,301	18,481	13,332	15,836
1997	180,638	34,799	109,080	1,351	19,272	16,136	14,746
1998	165,932	36,039	90,582	1,525	22,422	15,364	14,030
1999	181,363	38,156	97,270	1,517	25,766	18,654	14,955
2000	192,887	42,911	100,280	1,402	27,241	21,053	15,687
2001	198,409	45,711	100,385	1,038	28,033	23,242	16,230
2002	208,636	49,096	102,414	1,327	29,776	26,023	15,638
2003	215,067	51,116	102,379	1,722	32,415	27,435	16,079
2004	220,238	53,128	100,638	1,465	32,679	32,328	16,535
2005	228,622	54,788	101,526	1,297	36,695	34,316	17,127
2006	233,372	56,687	101,831	1,305	37,187	36,363	17,955
2007	236,454	59,654	105,494	1,084	30,731	39,291	15,594
2008	240,752	66,060	100,170	1,196	32,456	40,869	16,980
2009	243,311	68,604	102,336	1,213	31,771	39,388	15,914
2010	262,609	75,896	104,301	1,392	31,948	49,072	15,662
2011	271,346	79,393	105,022	1,715	32,285	52,931	15,662

Note 1) Include LNG and renewable energy
Source : Statistics Korea(KOSIS)

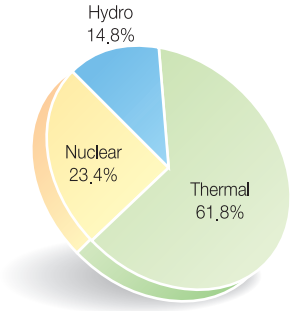
(1,000 toe)

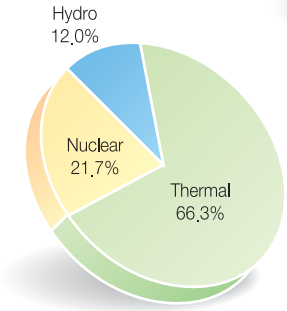
D. P. R. K					toe per capita		
Coal	Oil	Hydro	Nuclear	Others[1)]	R. O. K	D. P. R. K	
15,135	2,100	2,658	-	1,120	1.15	1.19	1980
18,750	1,960	3,110	-	1,120	1.38	1.31	1985
16,575	2,520	3,748	-	1,120	2.17	1.19	1990
15,500	1,890	3,750	-	780	2.39	1.07	1991
14,600	1,520	3,550	-	780	2.65	0.98	1992
13,550	1,360	3,304	-	799	2.87	0.90	1993
12,700	910	3,475	-	785	3.07	0.84	1994
11,850	1,100	3,535	-	795	3.34	0.80	1995
10,500	1,436	3,109	-	791	3.63	0.73	1996
10,300	1,006	2,656	-	784	3.93	0.68	1997
9,300	1,400	2,554	-	776	3.58	0.64	1998
10,500	881	2,794	-	780	3.89	0.68	1999
11,250	1,117	2,540	-	780	4.10	0.71	2000
11,550	1,250	2,650	-	780	4.19	0.73	2001
10,950	1,253	2,655	-	780	4.38	0.70	2002
11,150	1,219	2,930	-	780	4.49	0.71	2003
11,400	1,230	3,125	-	780	4.58	0.73	2004
12,030	1,034	3,283	-	780	4.75	0.75	2005
12,340	790	3,155	-	1,670	4.83	0.78	2006
10,060	944	3,320	-	1,270	4.96	0.67	2007
11,236	967	3,517	-	1,260	4.95	0.73	2008
10,800	738	3,116	-	1,260	4.97	0.66	2009
10,347	704	3,352	-	1,260	5.31	0.65	2010
10,347	704	3,352	-	1,260	5.45	0.65	2011

Generating Facilities



2001 58,611 MW





2011 86,262 MW

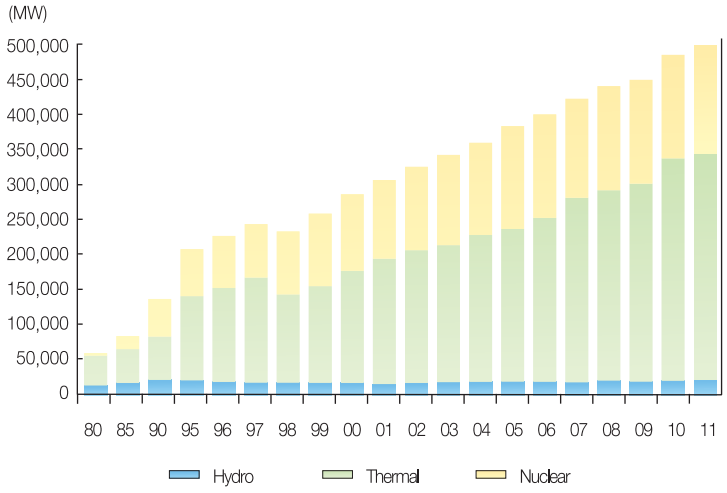
12-2. Generating Facilities

(MW)

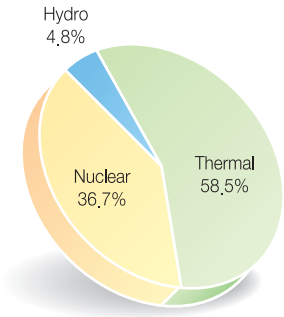
	R. O. K				D. P. R. K.			
	Total	Hydro	Thermal[1)]	Nuclear	Total	Hydro	Thermal[1)]	Nuclear
1980	9,391	1,157	7,647	587	5,010	2,910	2,100	-
1985	16,137	2,223	11,048	2,866	5,915	3,310	2,605	-
1990	20,021	2,340	10,065	7,616	7,142	4,292	2,850	-
1991	21,111	2,445	11,050	7,616	7,142	4,292	2,850	-
1992	24,120	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	50,239	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	-

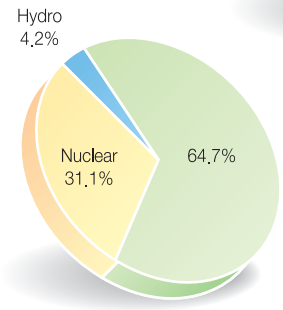
Note 1) Include Alternative and Group energy
Source : Statistics Korea(KOSIS)

Electric Power Generation by Facilities



2001 305,424 GWh





2011 497,972 GWh

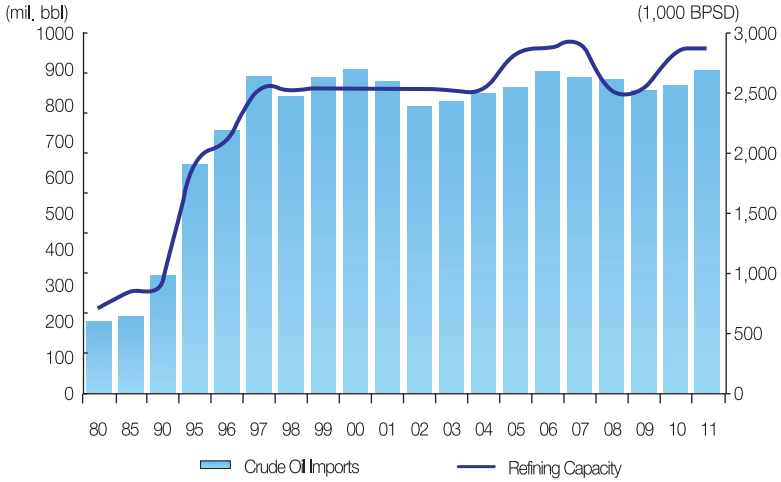
12-3. Electric Power Generation by Facility

(GWh)

	R. O. K				D. P. R. K.			
	Total	Hydro	Thermal[1)]	Nuclear	Total	Hydro	Thermal[1)]	Nuclear
1980	37,239	1,984	31,778	3,477	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	15,030	11,270	-
1992	130,963	4,863	69,569	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	126,368	73,924	21,300	12,500	8,800	-
1997	224,445	5,404	142,005	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	201,669	130,715	20,600	12,500	8,100	-
2005	364,639	5,189	209,509	146,779	21,500	13,100	8,400	-
2006	381,181	5,219	224,105	148,749	22,500	12,600	9,900	-
2007	403,125	5,042	251,229	142,937	23,600	13,300	10,300	-
2008	422,355	5,563	259,407	150,958	25,640	14,070	11,390	-
2009	433,604	5,641	272,574	147,771	23,500	12,500	11,000	-
2010	474,660	6,472	307,034	148,596	23,700	13,400	10,300	-
2011	496,893	7,831	314,318	154,723	21,100	13,200	7,900	-

Note 1) Include Alternative and Group energy
Source : Statistics Korea(KOSIS)

Refinery Capacity



12-4. Refinery Capacity

	R. O. K			D. P. R. K.		
	Imports		Refining Capacity	Imports		Refining Capacity
	(1,000 bbl)	(1,000㎘)	(1,000 BPSD)	(1,000 bbl)	(1,000㎘)	(1,000 BPSD)
1980	182,861	29,057	640	15,393	2,446	70
1985	198,313	31,512	790	14,369	2,283	70
1990	308,368	49,000	840	18,472	2,935	70
1991	399,304	63,449	1,036	13,854	2,201	70
1992	509,377	80,940	1,442	11,142	1,770	70
1993	560,563	89,073	1,675	9,969	1,584	70
1994	573,714	91,163	1,770	6,670	1,060	70
1995	624,945	99,304	1,818	8,063	1,281	70
1996	721,927	114,714	2,018	6,861	1,090	70
1997	873,415	138,786	2,438	3,709	589	70
1998	819,094	130,154	2,438	3,694	587	70
1999	874,090	138,893	2,438	2,325	369	70
2000	893,943	142,048	2,438	2,851	453	70
2001	859,367	136,553	2,438	4,244	674	70
2002	790,992	125,689	2,438	4,376	695	70
2003	804,809	127,884	2,438	4,207	668	70
2004	825,790	131,218	2,438	4,156	660	70
2005	843,203	133,985	2,735	4,068	646	70
2006	888,794	141,229	2,772	3,841	610	70
2007	872,541	138,647	2,812	3,834	609	70
2008	864,872	137,428	2,855	3,878	616	70
2009	835,085	132,695	2,855	3,795	603	70
2010	872,415	138,627	2,855	3,854	612	70
2011	926,763	147,263	2,929	3,840	610	70

Source : Statistics Korea(KOSIS)

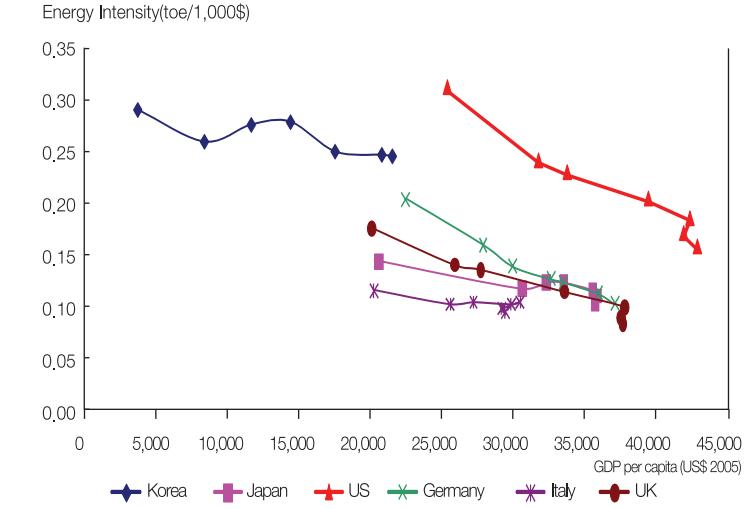
13-1. Energy Indicators (2011)

	Population (mil)	GDP (billion 2005 US $)	GDP(ppp) (billion 2005 US $)	Energy Production (Mtoe)	Net Imports (Mtoe)	TPES[3] (Mtoe)	Elec. Cons.[1] (TWh)	CO_2 Emis[2] (Mt of CO_2)
Australia	22.76	899.11	848.02	296.73	-179.65	122.89	239.31	396.77
Austria	8.42	335.39	304.26	11.51	23.51	33.02	70.39	68.49
Belgium	10.98	407.96	364.66	18.21	49.43	59.09	88.62	108.59
Canada	34.48	1,234.78	1,232.87	409.03	-158.46	251.85	565.73	529.84
Czech Rep.	10.50	151.18	252.99	32.06	12.03	43.43	66.01	112.68
Denmark	5.57	260.14	181.61	21.01	-1.66	48.00	34.10	41.68
Finland	5.39	209.75	172.59	17.09	19.17	34.75	84.80	55.61
France	65.12	2,249.13	1,958.74	136.07	126.40	252.83	476.50	328.31
Germany	81.78	3,048.69	2,827.99	124.19	199.04	311.77	579.21	747.58
Greece	11.31	223.83	252.07	9.60	19.59	26.72	59.85	83.64
Hungary	9.97	111.16	172.52	10.78	13.12	24.96	38.84	47.39
Iceland	0.32	16.86	10.72	4.80	1.13	5.73	16.71	1.85
Ireland	4.58	209.92	167.09	1.79	12.45	13.22	26.09	34.93
Italy	60.72	1,770.47	1,642.74	31.56	141.12	167.42	327.47	392.97
Japan	127.83	4,621.97	3,932.20	51.67	421.10	461.47	1,003.09	1,186.04
Korea	49.78	1,056.12	1,370.98	46.99	227.36	260.44	505.86	587.73
(DPR of Korea)	24.45	28.11	101.76	25.19	-6.16	19.04	18.21	64.82
Luxembourg	0.52	41.94	35.39	0.12	4.45	4.17	8.05	10.43
Mexico	109.22	956.82	1,463.10	228.21	-35.96	186.17	249.67	432.30
Netherlands	16.69	690.53	619.62	64.40	29.24	77.42	117.45	174.47
New Zealand	4.42	119.53	110.60	16.13	3.18	18.17	41.40	30.31
Norway	4.95	319.64	231.47	195.35	-165.84	28.14	114.78	38.10
Poland	38.53	399.89	692.21	68.51	34.57	101.31	147.67	300.00
Portugal	10.65	194.10	228.08	5.31	19.08	23.08	51.19	48.08
Slovak Rep.	5.44	62.11	112.99	6.42	11.29	17.35	28.87	33.86
Spain	46.13	1,183.83	1,244.51	31.78	105.16	125.57	258.48	270.32
Sweden	9.45	416.51	331.89	32.50	18.84	49.04	132.57	44.90
Switzerland	7.87	436.15	311.63	12.33	14.38	25.37	62.73	39.86
Turkey	73.95	614.68	994.25	32.06	80.16	112.46	197.94	285.73
United Kingdom	62.74	2,386.63	2,063.34	129.54	72.52	188.07	346.16	443.01
United States	312.04	13,225.90	13,225.90	1,784.77	457.62	2,191.19	4,127.31	5,287.18

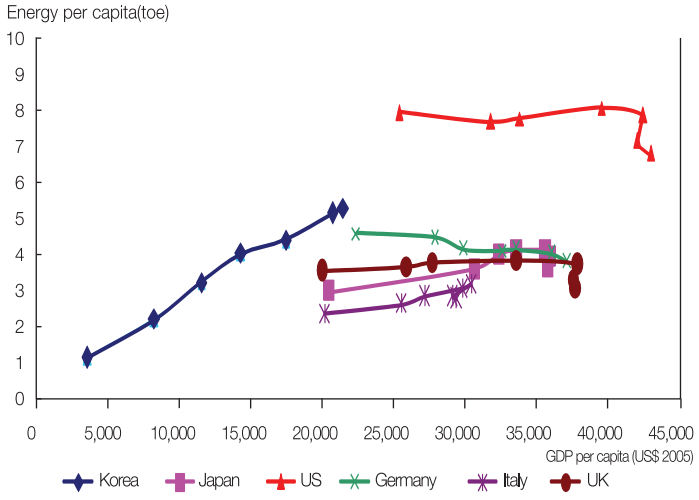
Note 1) Gross Production + imports - exports - transmission and distribution losses
2) CO_2 emissions from fuel combustion only. Emission are calculated using the IEA's energy balances and the Revised 1996 IPCC Guidelines.
3) TPES for world includes international aviation and marine bunkers as well as electricity and heat trade.
4) CO_2 emissions for world include emission from international aviation and international marine bunkers.
Source : IEA, 「Key World Energy Statistics 2013」

TPES/Pop (toe/capita)	TPES/GDP (toe/1000$)	TPES/GDP (ppp) (toe/1000$)	Elec. Cons. /Pop (kWh/capita)	CO_2/TPES (t CO_2/toe)	CO_2/Pop (t CO_2/capita)	CO_2/GDP (kg CO_2/$)	CO_2/GDP (ppp) (kg CO_2/$ ppp)	
5.40	0.14	0.14	10,514	3.23	17.43	0.44	0.47	Australia
3.92	0.10	0.11	8,359	2.07	8.13	0.20	0.23	Austria
5.38	0.14	0.16	8,072	1.84	9.89	0.27	0.30	Belgium
7.30	0.20	0.20	16,406	2.10	15.37	0.43	0.43	Canada
4.14	0.29	0.17	6,288	2.59	10.73	0.75	0.45	Czech Rep.
3.23	0.07	0.10	6,124	2.32	7.48	0.16	0.23	Denmark
6.45	0.17	0.20	15,742	1.60	10.32	0.27	0.32	Finland
3.88	0.11	0.13	7,318	1.30	5.04	0.15	0.17	France
3.81	0.10	0.11	7,083	2.40	9.14	0.25	0.26	Germany
2.36	0.12	0.11	5,292	3.13	7.40	0.37	0.33	Greece
2.50	0.22	0.14	3,895	1.90	4.75	0.43	0.27	Hungary
17.97	0.34	0.53	52,376	0.32	5.81	0.11	0.17	Iceland
2.89	0.06	0.08	5,701	2.64	7.63	0.17	0.21	Ireland
2.76	0.09	0.10	5,393	2.35	6.47	0.22	0.24	Italy
3.61	0.10	0.12	7,847	2.57	9.28	0.26	0.30	Japan
5.23	0.25	0.19	10,162	2.26	11.81	0.56	0.43	Korea
0.78	0.68	0.19	745	3.41	2.65	2.31	0.64	(DPR of Korea)
8.04	0.10	0.12	15,511	2.50	20.10	0.25	0.29	Luxembourg
1.70	0.19	0.13	2,286	2.32	3.96	0.45	0.30	Mexico
4.64	0.11	0.12	736	2.25	10.45	0.25	0.28	Netherlands
4.11	0.15	0.16	9,378	1.67	6.87	0.25	0.27	New Zealand
5.68	0.09	0.12	23	1.35	7.69	0.12	0.16	Norway
2.63	0.25	0.15	3,833	2.96	7.79	0.75	0.43	Poland
2.17	0.12	0.10	4,806	2.08	4.51	0.25	0.21	Portugal
3.19	0.28	0.15	5,306	1.95	6.22	0.55	0.30	Slovak Rep.
2.72	0.11	0.10	5,604	2.15	5.86	0.23	0.22	Spain
5.19	0.12	0.15	14,029	0.92	4.75	0.11	0.14	Sweden
3.22	0.06	0.08	7,972	1.57	5.06	0.09	0.13	Switzerland
1.52	0.18	0.11	2,677	2.54	3.86	0.46	0.29	Turkey
3.00	0.08	0.09	5,518	2.36	7.06	0.19	0.21	United Kingdom
7.02	0.17	0.17	13,227	2.41	16.94	0.40	0.40	United States

Energy Intensity by Country(1980, 1990, 1995, 2000, 2005, 2010, 2012e)



Energy Consumption per capita by Country(1980, 1990, 1995, 2000, 2005, 2010, 2012e)



13-2. Energy Indicators of Major Countries

		1980	1990	1995	2000	2005	2010	2012[e)]
Germany								
Population	millions	78.30	79.36	81.66	82.19	82.46	81.76	81.64
GDP	bil. 2005 US$	1,760.61	2,216.25	2,448.69	2,685.20	2,766.25	2,945.78	3,068.88
GDP/Pop.	2005 US $	22,485.4	27,926.5	29,986.4	32,670.6	33,546.6	36,029.6	37,590.4
TPES	Mtoe	357.18	351.15	336.50	336.58	338.26	327.37	307.38
TPES/Pop.	toe/capita	4.56	4.42	4.12	4.10	4.10	4.00	3.77
TPES/GDP	toe/thou. US$	0.20	0.16	0.14	0.13	0.12	0.11	0.10
Italy								
Population	millions	56.43	56.72	56.84	56.94	58.61	60.48	60.43
GDP	bil. 2005 US$	1,144.33	1,451.61	1,547.70	1,700.99	1,786.28	1,765.29	1,728.53
GDP/Pop.	2005 US $	20,278.8	25,592.6	27,229.1	29,873.4	30,477.4	29,188.0	28,603.8
TPES	Mtoe	130.84	146.56	159.13	171.52	183.87	170.24	158.62
TPES/Pop.	toe/capita	2.32	2.58	2.80	3.01	3.14	2.81	2.62
TPES/GDP	toe/thou. US$	0.11	0.10	0.10	0.10	0.10	0.10	0.09
Japan								
Population	millions	117.06	123.61	125.57	126.93	127.77	127.38	127.26
GDP	bil. 2005 US$	2,411.74	3,794.08	4,068.40	4,266.88	4,552.20	4,578.55	4,714.24
GDP/Pop.	2005 US $	20,602.6	30,694.0	32,399.5	33,616.0	35,628.1	35,944.0	37,044.2
TPES	Mtoe	344.52	439.33	496.26	518.96	520.54	496.85	451.50
TPES/Pop.	toe/capita	2.94	3.55	3.95	4.09	4.07	3.90	3.55
TPES/GDP	toe/thou. US$	0.14	0.12	0.12	0.12	0.11	0.11	0.10
Korea								
Population	millions	38.12	42.87	45.09	47.01	48.14	48.88	49.96
GDP	bil. 2005 US$	142.47	360.30	526.72	678.27	844.86	1,017.57	1,077.71
GDP/Pop.	2005 US $	3,737.4	8,404.5	11,681.5	14,428.2	17,550.1	20,817.7	21,571.5
TPES	Mtoe	41.21	93.09	144.76	188.16	210.18	250.01	263.00
TPES/Pop.	toe/capita	1.08	2.17	3.21	4.00	4.37	5.12	5.26
TPES/GDP	toe/thou. US$	0.29	0.26	0.27	0.28	0.25	0.25	0.24
United Kingdom								
Population	millions	56.33	57.24	58.03	58.89	60.24	62.18	63.22
GDP	bil. 2005 US$	1,132.21	1,485.13	1,611.07	1,979.33	2,280.54	2,337.59	2,393.14
GDP/Pop.	2005 US $	20,099.6	25,945.7	27,762.7	33,610.6	37,857.6	37,593.9	37,854.2
TPES	Mtoe	198.43	205.92	216.26	222.94	222.37	202.51	192.38
TPES/Pop.	toe/capita	3.52	3.60	3.73	3.79	3.69	3.26	3.04
TPES/GDP	toe/thou. US$	0.18	0.14	0.13	0.11	0.10	0.09	0.08
United States								
Population	millions	227.73	250.18	266.59	282.42	296.23	310.11	315.08
GDP	bil. 2005 US$	5,796.40	7,962.60	9,019.90	11,158.10	12,564.30	13,017.00	13,518.00
GDP/Pop.	2005 US $	25,452.9	31,827.5	33,834.4	39,508.9	42,414.0	41,975.4	42,903.4
TPES	Mtoe	1,804.68	1,915.00	2,067.21	2,273.33	2,318.86	2,216.32	2,132.45
TPES/Pop.	toe/capita	7.92	7.65	7.75	8.05	7.83	7.15	6.77
TPES/GDP	toe/thou. US$	0.31	0.24	0.23	0.20	0.18	0.17	0.16

Source : IEA, 「Energy Balances of OECD Countries 2013」

1. Energy Conversion Factors / Oil Equivalent

Energy by Source		Unit	Gross Calorific Values					
			1980	1981	1987	1990	2007	2012
Petroleum	Crude Oil	kcal/kg	10,000	10,000	10,000	10,000	10,750	10,730
	Gasoline	kcal/ℓ	8,300	8,300	8,300	8,300	8,000	7,780
	Kerosene	kcal/ℓ	8,700	8,700	8,700	8,700	8,800 8,950	8,790
	Diesel	kcal/ℓ	9,200	9,200	9,200	9,200	9,050	9,010
	Bunker-A	kcal/ℓ	9,500	9,400	9,400	9,400	9,300	9,290
	Bunker-B	kcal/ℓ	9,200	9,700	9,700	9,700	9,650	9,670
	Bunker-C	kcal/ℓ	9,900	9,900	9,900	9,900	9,900	9,950
	Propane	kcal/kg	12,000	12,000	12,000	12,000	12,050	12,050
	Butane	kcal/kg	11,800	11,800	11,800	11,800	11,850	11,850
	Naphtha	kcal/ℓ	8,000	8,000	8,000	8,000	8,050	7,710
	Solvent	kcal/ℓ	-	-	-	(8,200)	7,950	7,950
	Jet-Oil(JA-1)	kcal/ℓ	-	8,700	8,700	8,700	8,750	8,730
Gas	LNG	kcal/kg	-	9,500	12,980	13,000	13,000	13,040
	Town Gas(LNG)	kcal/Nm^3	7,000	7,000	7,000	10,500	10,550	10,430
	Town Gas(LPG)	kcal/Nm^3	-	-	-	15,000	15,000	15,000
Coal	Domestic Anthracite	kcal/kg	4,600	4,600	4,500	4,500	4,650	4,500
	Anthracite(Steaming)	kcal/kg	-	-	-	6,000	6,550	5,020
	Bituminous(Coking)	kcal/kg	6,600	6,600	6,600	6,600	7,000	7,000
	Cokes	kcal/kg	6,500	6,500	6,500	6,500	7,050	6,960
Electricity	Electricity(Generation)	kcal/kWh	2,500	2,500	2,500	2,500	2,150	2,110
	Electricity(Consumption)	kcal/kWh	-	-	-	-	-	2,300

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

UnitsUnits	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	1.120	2240.0
Short ton(st)	907.2	0.9072	0.893	1	2000.0
pound(lb)	0.454	4.54×10^{-4}	4.46×10^{-4}	5.0×10^{-4}	1

Volume

Units	m^3	liter	ft^3	gal(U.S)	gal(U.K)	bbl
m^3	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}
ft^3	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)	0.004561	4.5461	0.1605	1.2009	1	0.0285
bbl	0.1589	158.988	5.6146	42	34.9726	1