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STATISTICS OF ELECTRIC POWER IN KOREA

2012. 6



## 머리말

우리 나라 전력사업 발전의 발자취를 담고 있는 "한국전력통계"는 1961년 한국전력주식회사가 설립되면서 해방 이후 한성전기, 조선전업, 남선전기 등 전력 3사에서 발행하여 온 통계자료를 통합하여 발간하여 왔으며,

2001년 4월 전력산업구조개편에 따라 한국전력공사에서 발전부문이 6개 발전회사로 분리된 이후에도 통계관리 체계를 구축하여 통계의 일관성을 유지하고 있습니다.

이 책자는 우리나라 전체의 전력관련 통계자료와 한국전력공사의 경영관리 실적을 부문별로 수록하여, 회사의 업무수행은 물론 국가정책 수립과 각종 연구의 기초자료로 활용하기 위한 포괄적인 내용을 수록하고 있습니다.

본 책자는 발전 · 전력설비 · 구입 · 판매 4개 부문의 30개 지표와 경영관리 부문의 6개 지표의 최신 자료를 수록하고 있으며, 주요지표 10개 항목에 대해서는 세계 주요국가와 우리나라를 비교할 수 있도록 수록하였습니다.

앞으로도 통계품질 향상을 위해 노력해 나갈 것을 약속드리며. 이 책자가 이용자 여러분에게 많은 도움이 되시기를 기대합니다.

2012. 6

한국전력공사 그룹경영실장

## P R E F A C E

The "Statistics of Electric Power in Korea" has been mirroring the footprint of Korean electric power business since it was first published in 1961 when three electric companies, Korea Electric, Seoul Electric, and South Korea Electric, were merged into Korea Electric Company, Ltd. (KECO). KEPCO is maintaining statistical consistency through a well-established statistics management system even after the spin-off of its generation sector into six generating companies.

This report includes wide-ranging statistics on the Korean electric power industry and KEPCO's sector-by-sector management performance. It is used as a valuable source of information by KEPCO and the government for R&D and the establishment of energy policy.

30 items on four electric power sectors (generation, facility, purchase and sales) and 6 items (management performance) are up-to-date. The latest electric industry data of major countries on 10 core items will help the prospective readers have an overall understanding of current status of Korean electronic industry.

We will continue to make every effort to improve the quality of our statistics.  
We hope the readers find this report useful.

June, 2012

Corporate Management Office.

KEPCO

## 일 러 두 기

## EXPLANATORY NOTES

1. 이 책자는 대한민국의 전력사업에 관한 통계자료를 종합 편집한 것입니다.

This volume covers a variety of statistical data concerning electric utility operations in The Republic of Korea.

2. 통계표 중에서 사용된 기호의 뜻은 다음과 같습니다.

- 0 단위미만
- 해당사항 없음
- ... 해당숫자 미상
- p 잠정치

Symbols used in tables as follow.

- 0 Less than half of unit value
- Data not applicable
- ... Data not available
- p Preliminary figures

3. 통계 수치는 각각 반올림되었으므로 세목의 합계가 총계와 일치되지 않는 경우도 있습니다.

Figures may not add up to the total due to rounding.

4. 이 책자에 수록된 통계수치 중 이미 발표분과 서로 다른 것은 이 책자에서 바로 잡은 것입니다.

Inconsistencies may occur between present volume and preceding series. Should this occur, the present series is regarded as being correct.

5. 이 책자에 수록되지 않은 과거년도의 자료는 기발행 책자를 활용하시기 바랍니다.

Please make use of preceding series, if you want to know the past data not contained in this volume.

6. 수록된 자료에 대하여 문의 사항이 있으시면 한국전력공사 그룹경영실 그룹전략팀 (☎ 3456-3436, 7)으로 문의하시기 바랍니다.

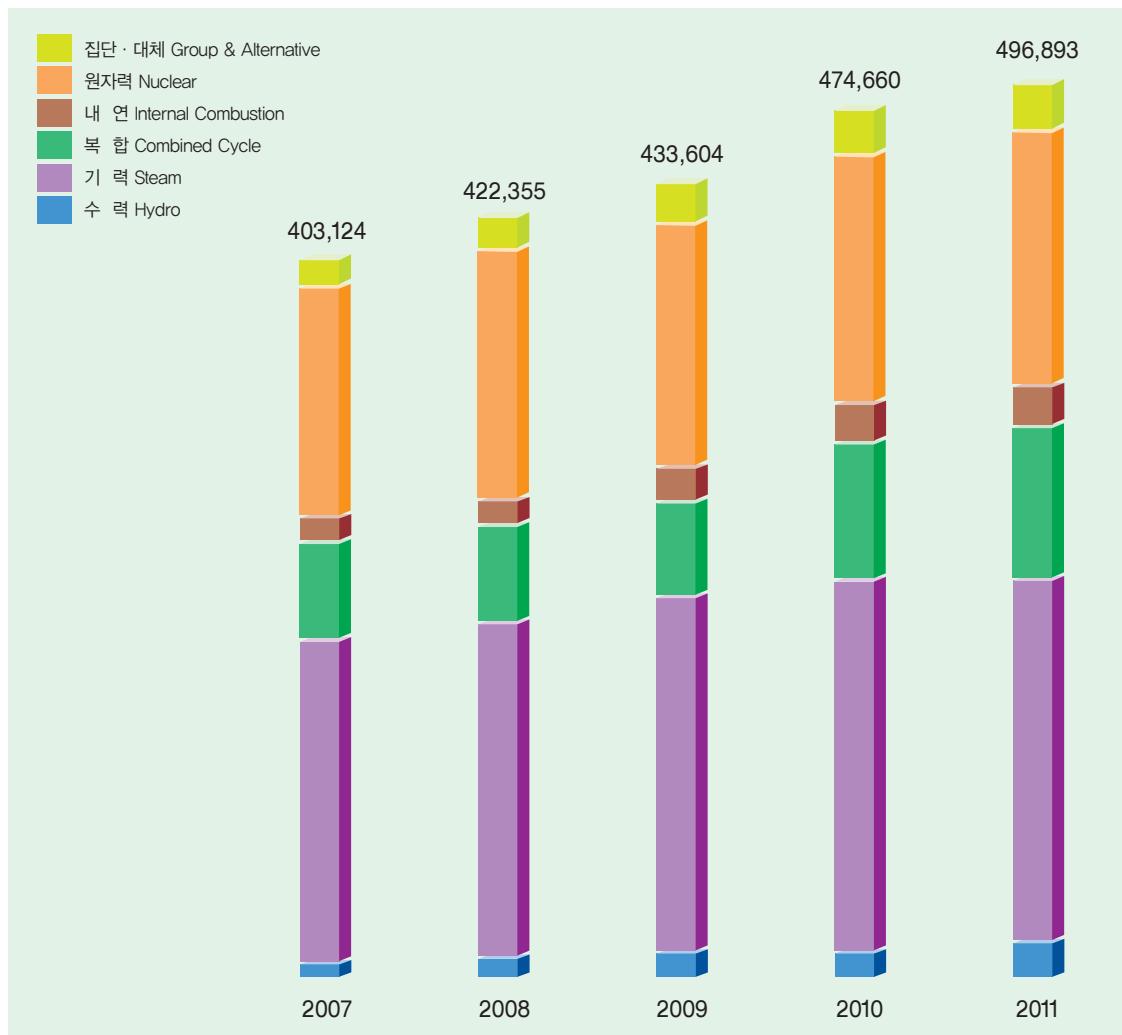
Readers desiring further details are requested to contact the Corporate Strategy Team of Corporate Management Dept. (☎ 3456-3436, 7) in KEPCO.

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## 1. 발전량 추이| Trends in power generation

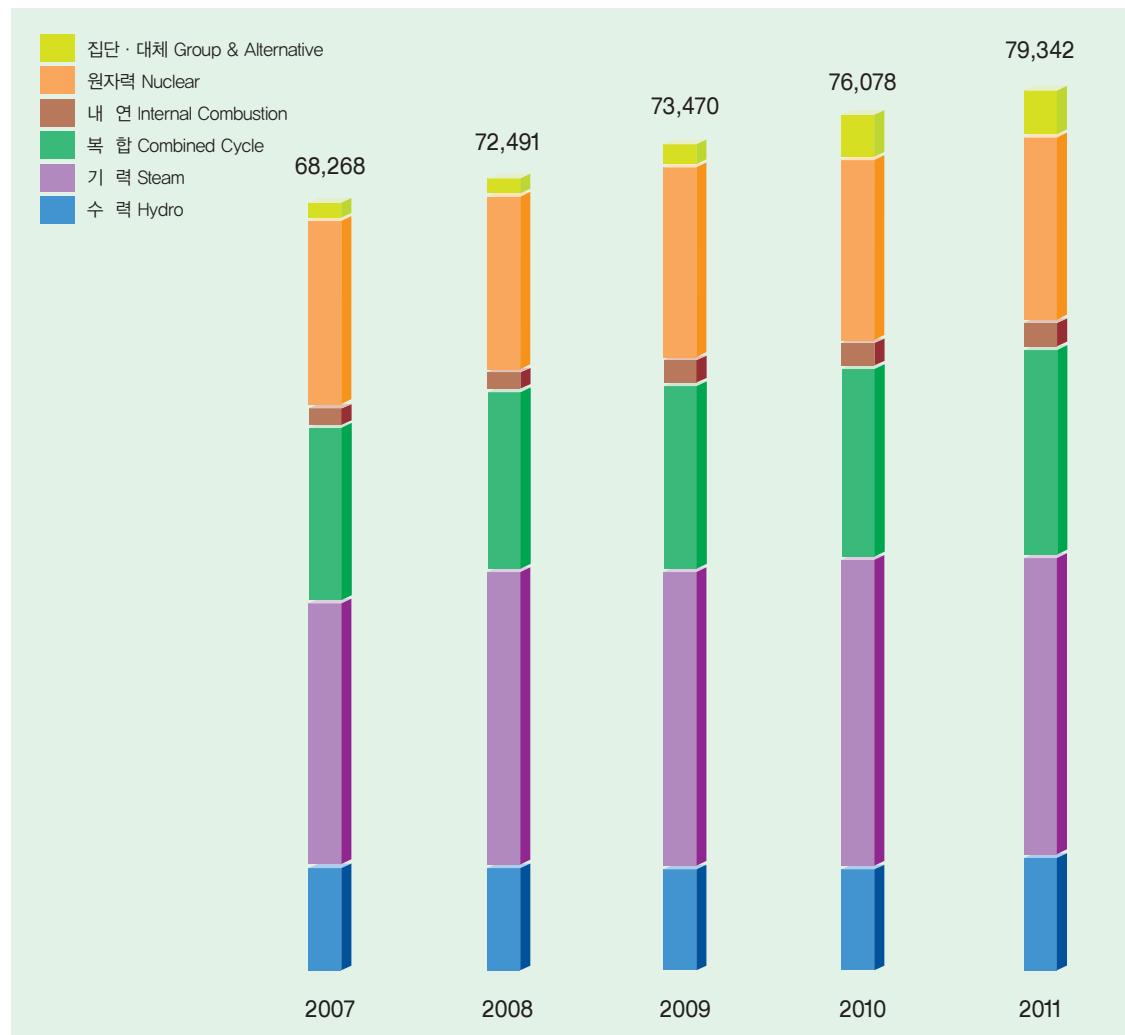


구 분	2007	2008	2009	2010	2011
수력 Hydro	5,042	5,563	5,641	6,472	7,831
기력 Steam	174,246	184,384	207,391	211,449	211,205
복합 Combined Cycle	76,405	74,519	64,486	94,506	101,479
내연력 Internal Combustion	578	503	697	731	820
원자력 Nuclear	142,937	150,958	147,771	148,596	154,723
집단·대체 Group & Alternative	3,916	6,428	7,618	12,906	20,835
사업자 Public utility	403,124	422,355	433,604	474,660	496,893
상용자가 Non-utility in common use	22,283	20,256	18,844	20,368	21,217p
합계	425,407	442,611	452,448	495,028	518,111p

\* 상용 자가설비 발전량은 자체소비량임。 Gross generation of non-utility in common use is self-consumption.

\* 그래프는 사업자용 발전량 기준임。 The graphs exclude non-utility generation.

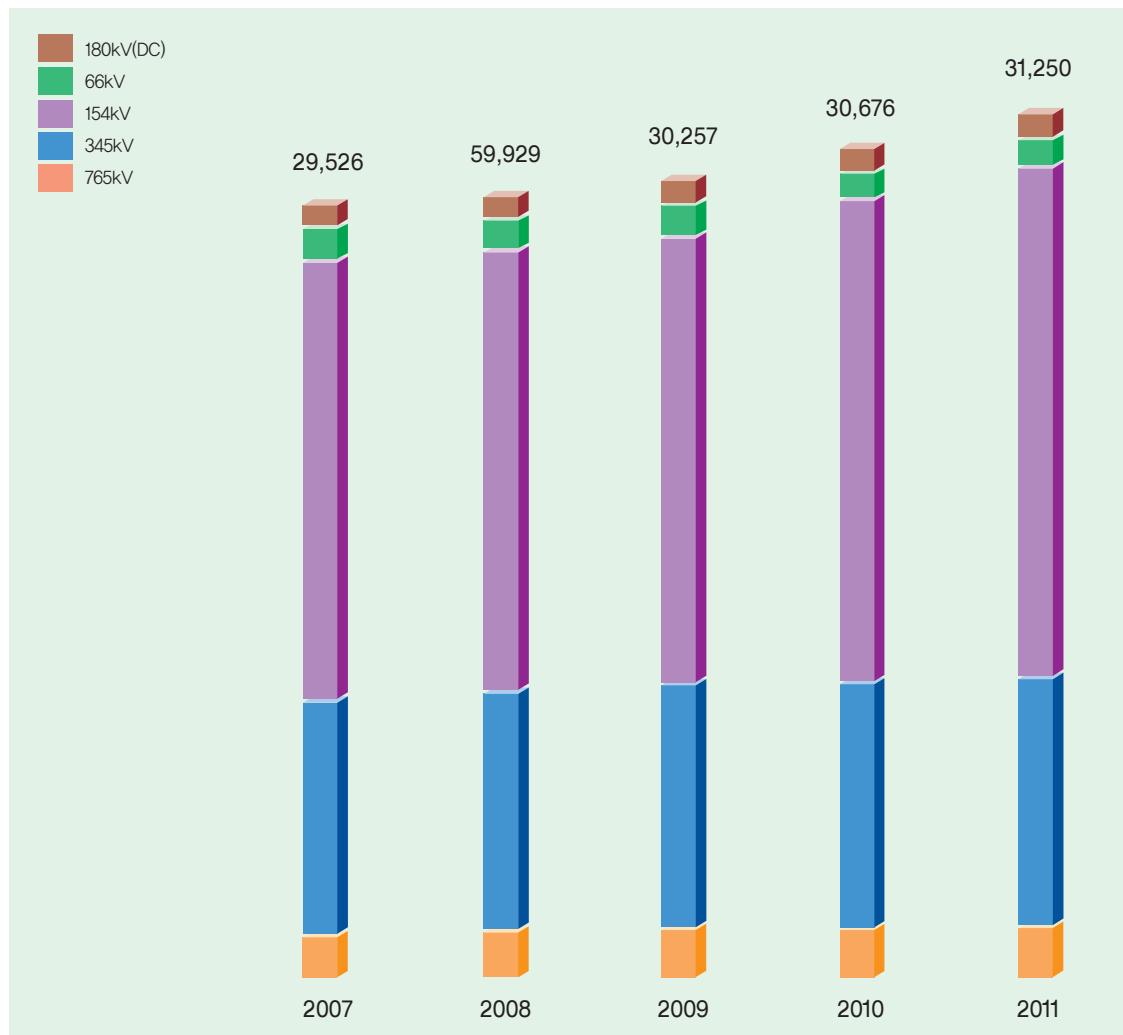
## 2. 발전설비 추이 Trends in generating facilities



구 분	2007	2008	2009	2010	2011
수력 Hydro	5,492	5,505	5,515	5,525	6,418
기력 Steam	26,491	29,273	29,571	29,571	29,571
복합 Combined Cycle	16,511	17,044	17,575	19,100	19,799
내연력 Internal Combustion	303	307	347	351	355
원자력 Nuclear	17,716	17,716	17,716	17,716	18,716
집단·대체 Group & Alternative	1,755	2,188	2,746	3,816	4,482
사업자 Public utility	68,268	72,491	73,470	76,078	79,342
상용자가 Non-utility in common use	4,856	4,089	4,223	3,906	3,969p
합 계	73,124	76,580	77,693	79,984	83,310p

※ 그래프는 사업자용 발전설비 기준임. The graphs exclude non-utility.

### 3. 송전회선길이 추이 | Trends in transmission Circuit length



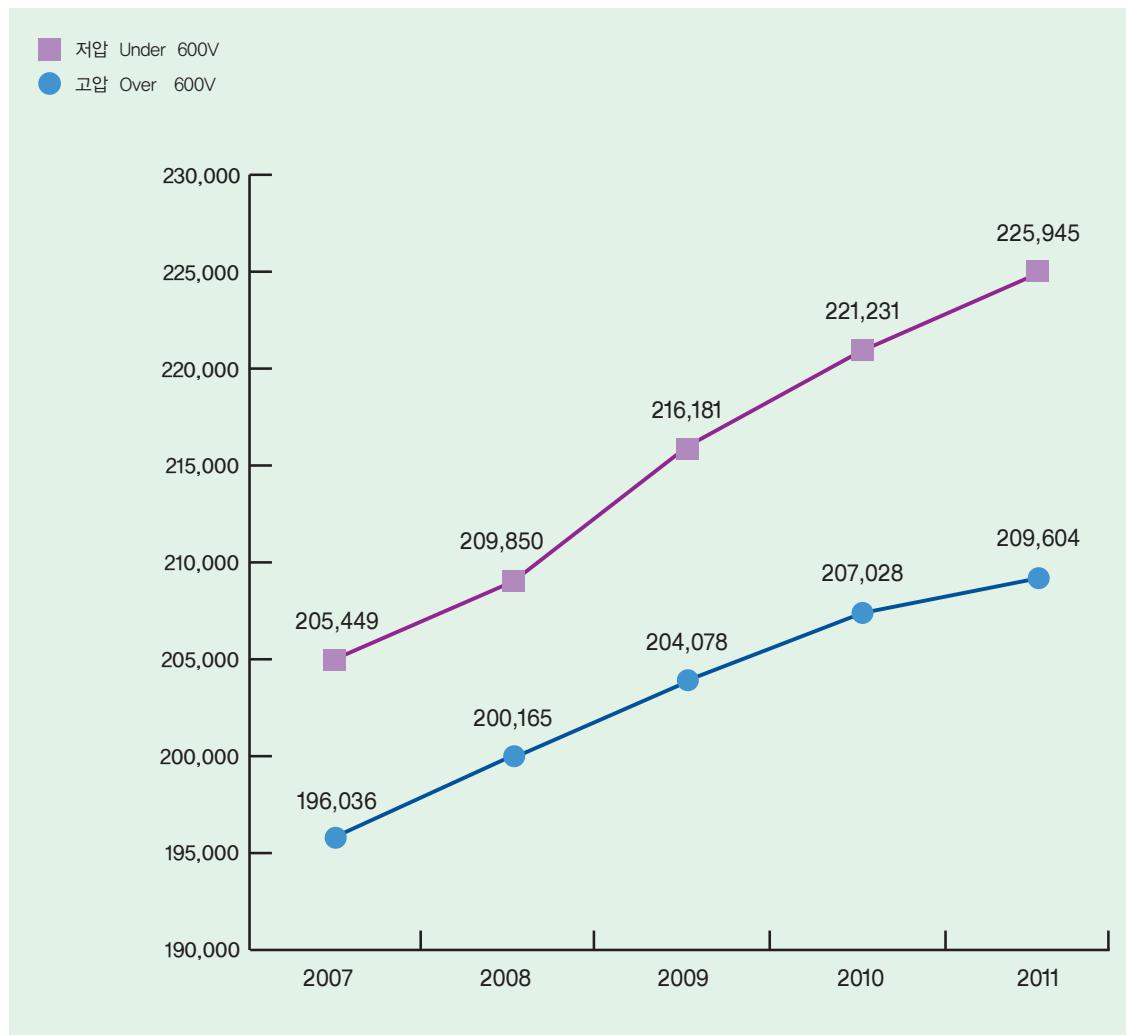
구 분	2007	2008	2009	2010	2011
765kV	755	755	755	835	835
345kV	8,284	8,310	8,552	8,580	8,653
154kV	19,917	20,298	20,469	20,777	21,280
66kV	338	335	250	253	251
180kV(DC)	232	231	231	231	231
합 계	29,526	29,929	30,257	30,676	31,250

#### 4. 변전설비 추이(변압기 용량) Trends in capacity of transformer



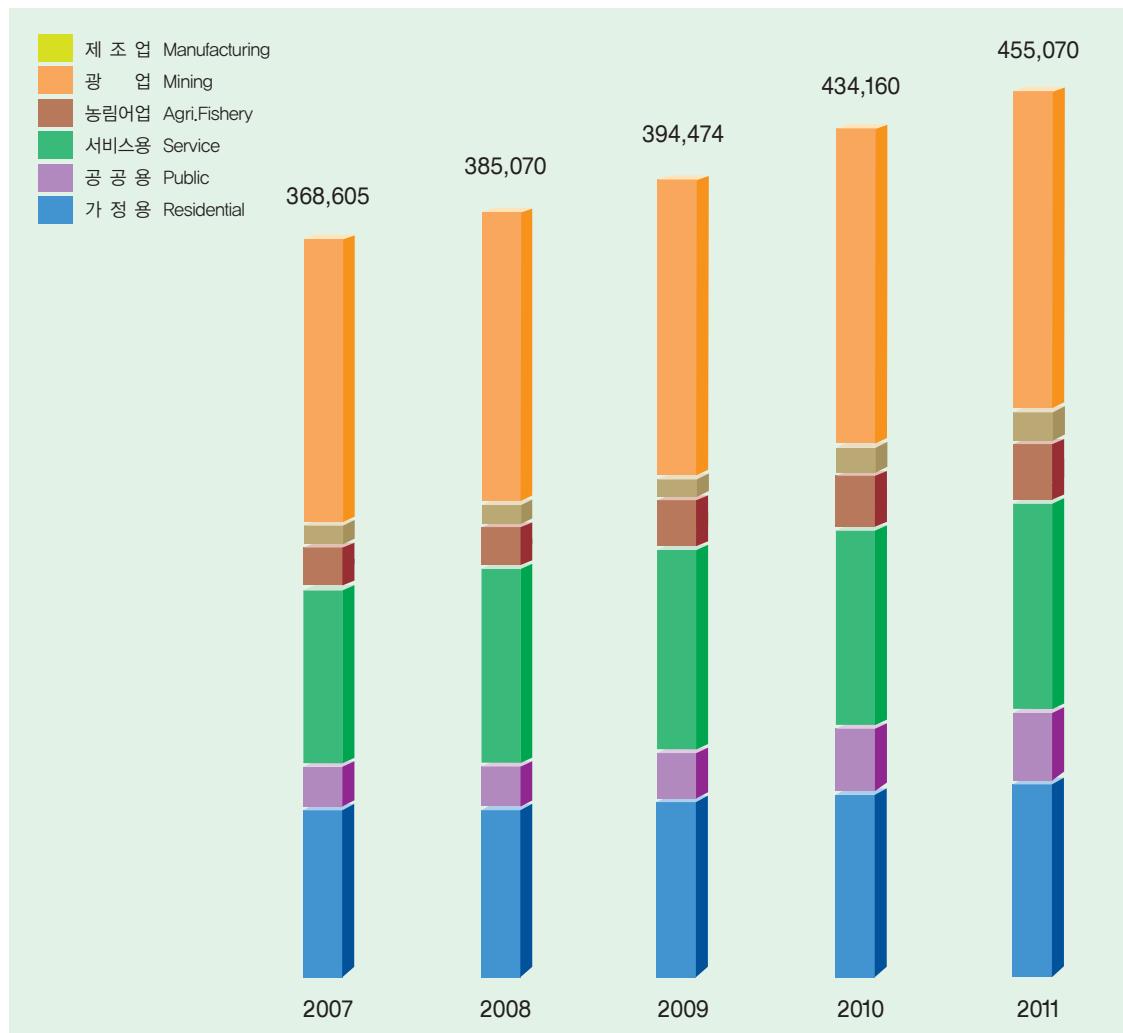
구 분	2007	2008	2009	2010	2011
765kV	23,114	23,114	24,115	27,115	29,116
345kV	95,279	98,884	104,595	108,096	111,597
154kV	109,268	114,808	118,643	120,683	123,226
66kV	454	359	354	339	356
22kV	134	134	79	84	78
합 계	228,249	237,300	247,786	258,318	264,373

## 5. 배전선로 전체 길이 추이 Trends in distribution line



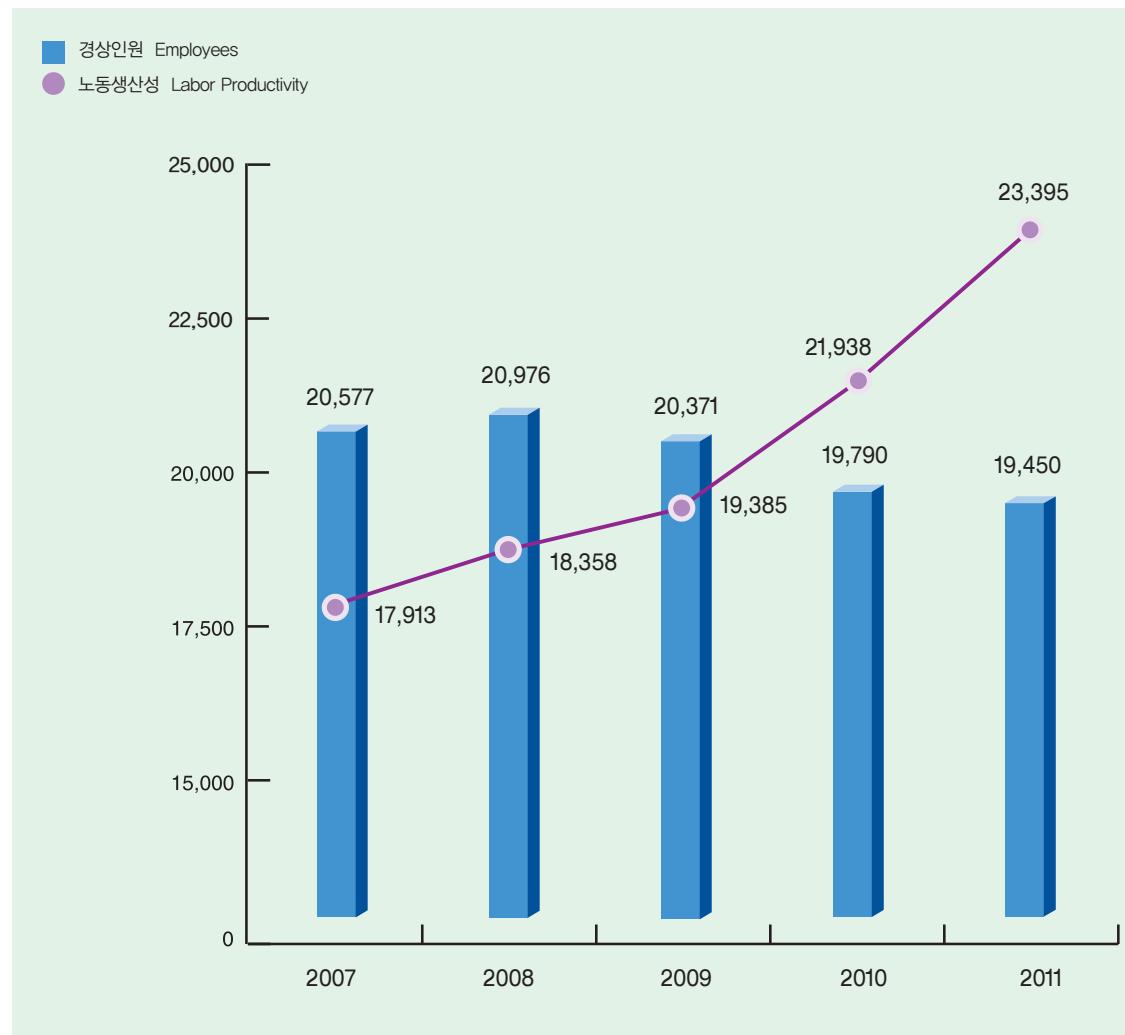
구 분	2007	2008	2009	2010	2011
저압 Under 600V	205,449	209,850	216,181	221,231	225,945
고압 Over 600V	196,036	200,165	204,078	207,028	209,604
합 계	401,485	410,015	420,258	428,259	435,549

## 6. 판매전력량 추이 Trends in power sales



구 분	2007	2008	2009	2010	2011	(Gwh)
가정용 Residential	54,174	56,228	57,595	61,194	61,564	
공공용 Public	15,578	16,577	17,932	19,871	20,539	
서비스업 Service	112,601	117,635	121,203	129,923	130,762	
농림어업 Agri.Fishery	7,795	8,389	9,145	10,042	10,575	
광업 Mining	1,484	1,446	1,350	1,683	1,928	
제조업 Manufacturing	176,973	184,795	187,249	211,447	229,701	
합 계	368,605	385,070	394,474	434,160	455,070	

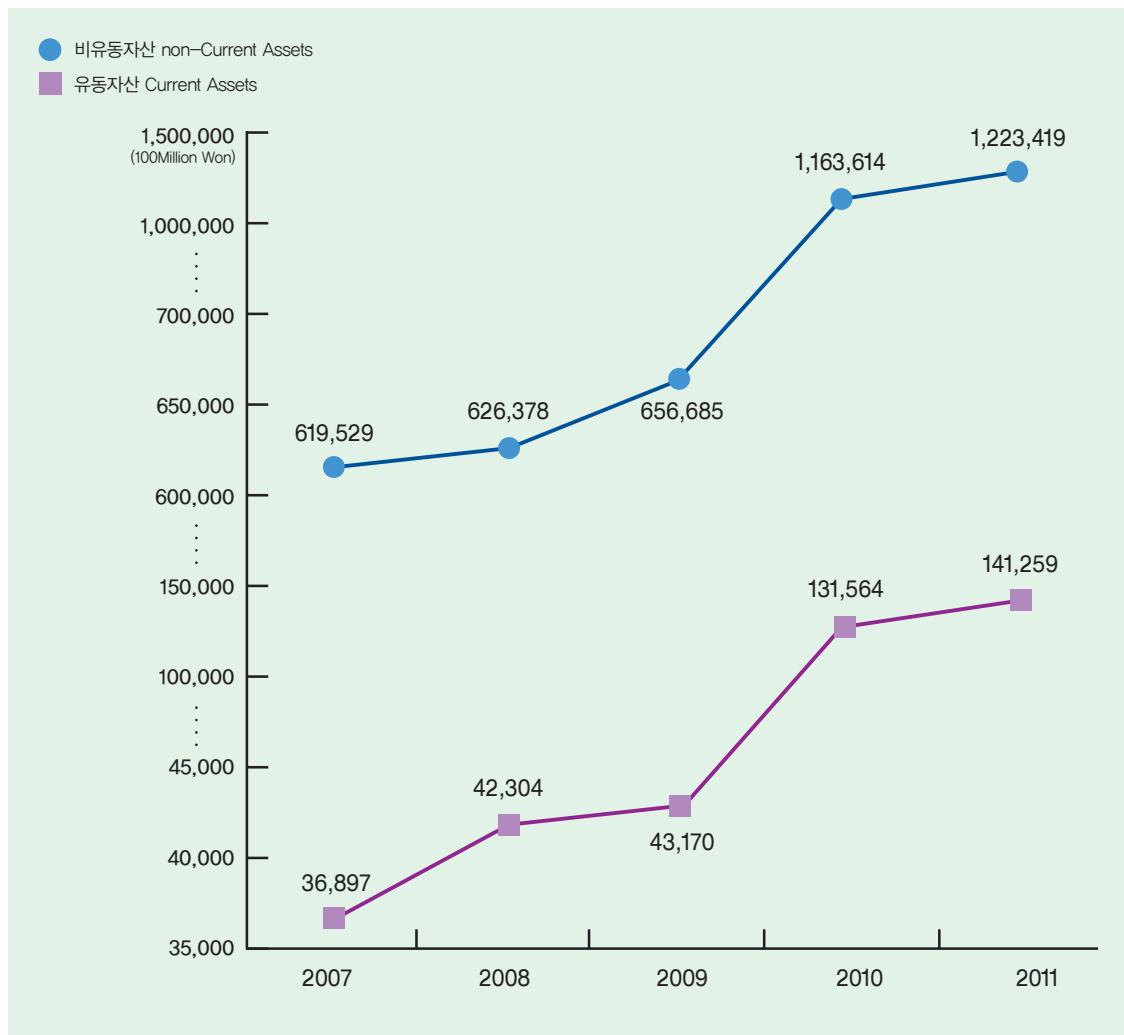
## 7. 노동생산성 추이 Trends in labor productivity



구 분	2007	2008	2009	2010	2011	(Gwh, 명, MWh/인)
판매전력량 Power Sold	368,605 (5.7)	385,070 (4.5)	394,474 (2.4)	434,160 (10.1)	455,070 (4.8)	
경상인원 Employees	20,577 (0.5)	20,976 (1.9)	20,371 (-2.9)	19,790 (-2.9)	19,452 (-1.7)	
노동생산성 Labor Productivity	17,913 (5.2)	18,358 (2.5)	19,365 (5.5)	21,938 (13.3)	23,395 (6.6)	

※ ( ) 내는 전년대비 증가율 (%) Figures in ( ) indicate increasing rate versus last year

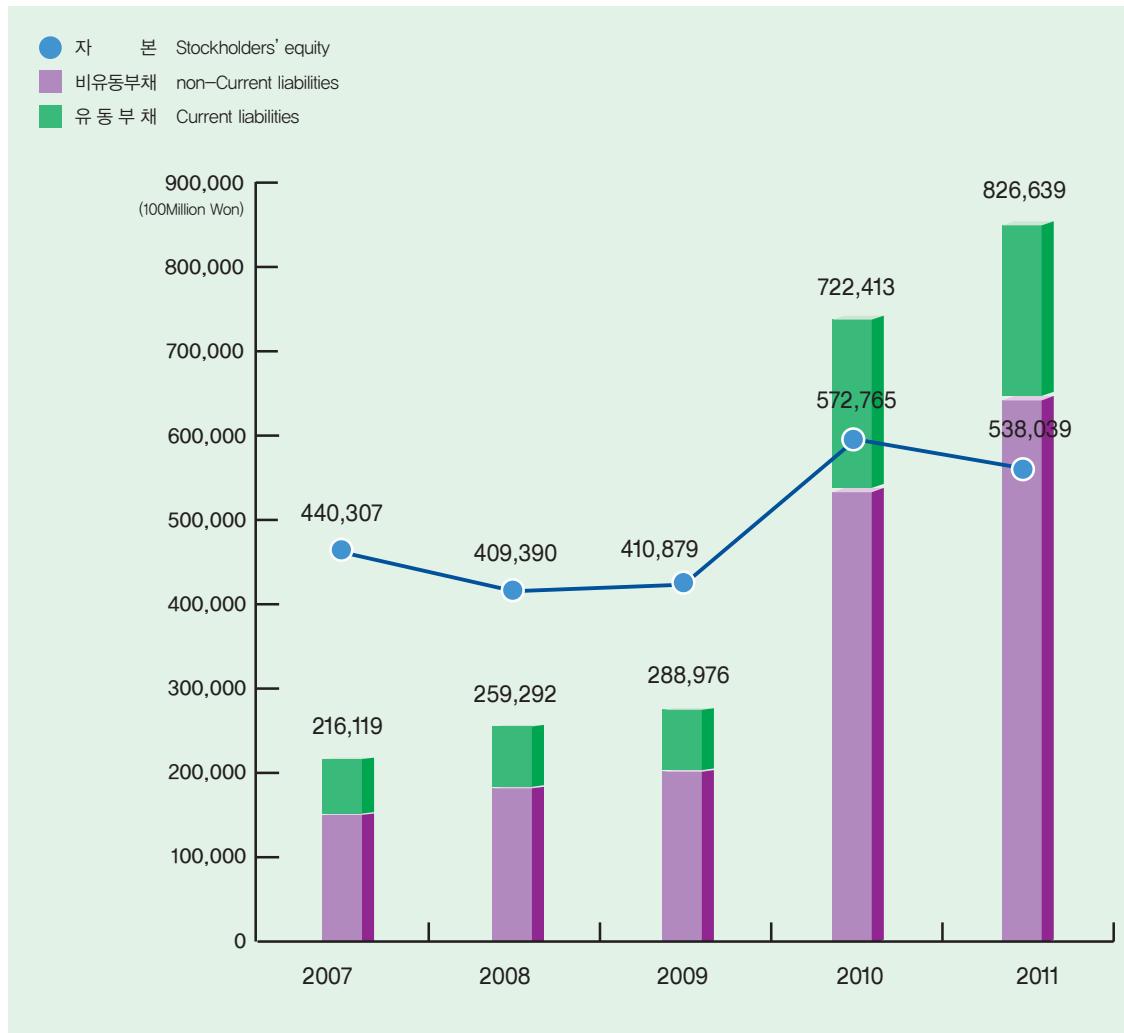
## 8. 자산 추이 Trends in assets



구 분	2007	2008	2009	2010	2011
비유동자산 non-Current Assets	619,529	626,378	656,685	1,163,614	1,223,419
유동자산 Current Assets	36,897	42,304	43,170	131,564	141,259
자산총계	656,426	668,682	699,855	1,295,178	1,364,678

※ 2010년부터 연결 재무제표 적용 Consolidated financial sheets was applied since 2010

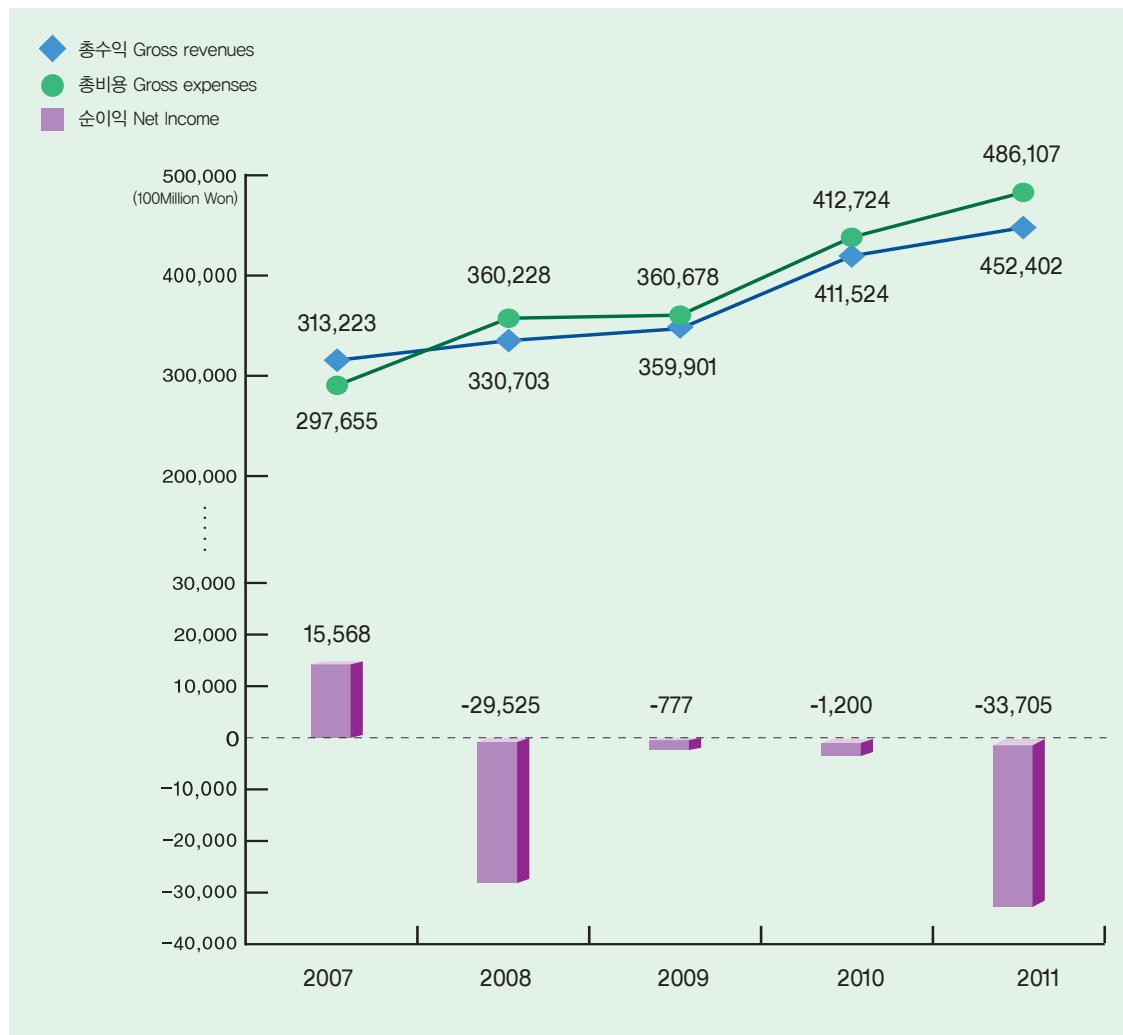
## 9. 부채 및 자본 Liabilities & capital



구 분	2007	2008	2009	2010	2011
자본 Stockholders' equity	440,307	409,390	410,879	572,765	538,039
비유동부채 non-Current liabilities	146,280	180,537	208,101	581,691	649,227
유동부채 Current liabilities	69,839	78,755	80,875	140,722	177,412
자본 및 부채 총계	656,426	668,682	699,855	1,295,178	1,364,678

※ 2010년부터 연결 재무제표 적용 Consolidated financial sheets was applied since 2010

## 10. 이익 추이 Trends in Income



구 분	2007	2008	2009	2010	2011
총수익 Gross revenues	313,223	330,703	359,901	411,524	452,402
총비용 Gross expenses	297,655	360,228	360,678	412,724	486,107
순이익 Net Income	15,568	-29,525	-777	-1,200	-33,705

※ 2010년부터 연결 재무제표 적용 Consolidated financial sheets was applied since 2010

## □ 주 요 통 계 지 표 종 합

Indicators of major statistics

구 분	단 위 Unit	1961	2001	2002	2003	2004	2005
발 전 설 비	kW	426,287	56,716,042	59,614,102	60,719,720	64,552,574	67,075,240
한전, 자회사	kW	367,254	46,768,483	49,560,683	50,432,383	53,906,843	55,956,412
타    사	kW	-	4,090,164	4,240,164	5,620,294	6,054,288	6,301,785
상용자가	kW	59,033	5,857,395	5,813,255	4,667,043	4,591,443	4,817,043
총 발 전 량	MWh	1,936,418	309,885,952	332,020,947	347,756,209	368,033,552	389,479,512
한전, 자회사	MWh	1,772,921	274,398,456	292,182,776	306,866,082	327,191,187	349,758,383
타    사	MWh	-	6,679,980	9,850,632	10,706,909	14,511,327	14,611,607
상용자가 <sup>1)</sup>	MWh	163,497	28,807,516	29,987,539	30,183,218	26,331,038	25,109,522
-		(4,145,321)	(4,440,656)	(4,878,706)	(445,453)	(269,341)	
소 내 전력량	MWh	89,337	12,980,240	13,728,064	14,225,808	15,268,295	16,451,551
소내전력을	%	5.04	4.62	4.55	4.48	4.52	4.56
양수용전력량	MWh	-	2,401,471	2,687,557	2,581,202	1,994,428	1,980,383
송전단전력량 (양수제외)	MWh	1,683,584	269,842,046	290,058,444	305,644,685	324,885,244	346,207,397
송배전순실량	MWh	494,198	12,140,439	12,994,484	13,539,237	14,490,446	15,614,768
송배전순실률	%	29.35	4.50	4.48	4.43	4.46	4.51
판 매 전력량	MWh	1,189,386	257,731,354	278,451,371	293,599,230	312,095,586	332,412,828
수요성장률	%	-	7.6	8.0	5.4	6.3	6.5
최 대 전 력	kW	305,686	43,125,000	45,773,000	47,385,000	51,264,000	54,631,000
평 균 전 력	kW	202,388	32,559,790	34,985,624	36,809,554	39,057,987	41,625,494
부 하 을	%	66.2	75.5	76.4	77.7	76.2	76.2
이 용 을	%	55.1	64.4	65.7	65.9	66.5	67.5
판 매 단 가	원/kWh	3.22	77.06	73.88	74.68	74.58	74.46
고 객 호 수	호	797,252	15,618,745	16,490,026	16,775,526	17,061,591	17,329,494
종 업 원 수	명	10,095	16,641	16,773	17,122	18,081	18,261
납 입 자 본 금	백만원	3,836	3,200,504	3,200,504	3,203,743	3,203,743	3,207,839
총    자    산	백만원	13,393	50,900,715	53,945,613	56,469,662	58,917,324	61,626,841
인구 1인당 전력생산량 <sup>2)</sup>	kWh/人	69	6,025	6,433	6,728	7,116	7,550
-		(6,546)	(6,969)	(7,256)	(7,654)	(8,065)	
인구 1인당 전력소비량 <sup>3)</sup>	kWh/人	46	5,444	5,845	6,126	6,491	6,883
-		(5,965)	(6,381)	(6,654)	(7,029)	(7,397)	

1) ( ) 내는 상용자가 발전량 중 한전의 구입전력량

2~3) ( ) 내는 상용발전 자체 소비량 포함분임

2006	2007	2008	2009	2010	2011	Items
69,833,742	73,123,950	76,580,350	77,692,749	79,983,793	83,310,472p	Generating facilities
58,141,662	60,268,657	63,529,309	63,962,317	65,559,674	67,002,722	KEPCO & Subsidiaries
7,372,580	7,999,531	8,961,382	9,507,661	10,518,514	12,339,145	Other co.
4,319,500	4,855,762	4,089,658	4,222,771	3,905,605	3,968,605p	Non-utility in common use
402,988,942	425,407,289	442,610,958	452,447,461	495,028,363	518,110,529p	Gross generation
362,446,663	380,201,047	394,929,871	406,779,556	435,384,166	443,409,223	KEPCO & Subsidiaries
18,355,353	22,093,391	26,695,978	25,968,054	38,433,844	52,670,709	Other co.
22,186,927 (378,693)	23,112,851 (830,063)	20,985,109 (729,277)	19,699,851 (856,135)	21,210,354 (842,196)	22,030,597p (813,434)	Non-utility generation in common use <sup>1)</sup>
15,811,741	16,614,307	17,374,100	18,258,121	19,371,717	19,689,178	Auxiliary use
4.19	4.17	4.19	4.30	4.20	4.14	Aux.use factor
2,315,002	1,816,953	3,242,816	3,712,816	3,662,630	4,256,763	Pumping storage
363,053,966	384,693,240	401,726,293	411,631,123	451,432,992	472,650,336	Net generation
14,587,227 4.02	15,345,161 3.99	16,106,376 4.01	16,769,741 4.07	18,034,237 3.99	17,430,383 3.69	T&D losses Loss factor (T&D)
348,719,371 4.9	368,605,433 5.7	385,070,137 4.5	394,474,637 2.4	434,160,228 10.1	455,070,261 4.8	Power sold Growth rate
58,994,000	62,285,000	62,794,000	66,797,000	71,308,000	73,137,000	Peak load
43,513,780 73.8	46,018,779 73.9	48,082,323 76.6	49,498,144 74.1	54,184,955 75.9	56,722,987 77.6	Average load Load factor
66.9	67.9	67.7	67.8	73.3	73.9	Utilization plant factor
76.43	77.85	78.76	83.59	86.12	89.32	Average revenues per kWh sold
17,624,836 18,341	18,038,810 18,599	18,419,048 18,534	18,727,411 17,885	19,229,450 17,486	19,814,866 17,095	Customers Employees
3,207,839	3,207,839	3,207,839	3,207,839	3,207,839	3,209,820	Paid-in capital (Million won)
63,536,201 7,893 (8,317)	65,642,590 8,319 (8,779)	66,868,176 8,689 (9,106)	69,985,451 8,895 (9,282)	74,398,204 9,712 (10,129)	94,769,898 9,982 (10,408)	Total assets (Million won) Generation per capita <sup>2)</sup>
7,191 (7,647)	7,607 (8,067)	7,922 (8,339)	8,092 (8,479)	8,883 (9,300)	9,142 (9,568) <sup>3)</sup>	Consumption per capita

1) Figures in ( ) are power sold(Non-utility generation) to KEPCO.

2~3) Figures in ( ) include non-utility generation self\_consumption in common use

# 1. 발전전력량 추이(1)

(단위:MWh) Trends in power generation

구 분 연월별	한 전 , 자 회 사							
	수 력 Hydro			기 력 Steam				
	일 반 General	양 수 Pumping	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal	종 유 Heavy oil	L N G	계 Total
1961	652,611	-	652,611	1,118,279	-	-	-	1,118,279
1996	1,097,385	2,776,967	3,874,352	6,948,793	52,701,093	26,632,776	8,229,139	94,511,801
1997	1,167,963	2,589,533	3,757,496	6,048,404	63,680,222	26,303,749	7,661,219	103,693,594
1998	1,805,551	1,819,618	3,625,169	6,510,169	71,152,157	9,942,627	1,436,625	89,041,578
1999	1,652,680	1,906,973	3,559,653	6,697,467	76,906,300	11,523,950	1,344,831	96,472,548
2000	1,595,939	1,600,269	3,196,208	7,029,753	92,397,718	18,888,171	1,631,891	119,947,533
2001	1,094,114	1,820,814	2,914,929	7,007,385	105,250,087	21,622,339	1,556,930	135,436,741
2002	1,183,990	2,078,269	3,262,259	6,674,542	112,990,671	17,493,064	1,771,207	138,929,484
2003	1,478,060	2,001,406	3,479,466	6,959,937	114,971,490	16,663,865	1,674,183	140,269,475
2004	1,491,142	1,550,355	3,041,497	5,787,070	122,760,316	16,084,006	733,318	145,364,710
2005	1,351,427	1,515,588	2,867,016	5,789,778	129,101,944	15,529,107	786,366	151,207,195
2006	1,162,850	1,751,083	2,913,934	5,709,388	134,636,585	14,306,788	1,258,155	155,910,915
2007	1,368,478	1,410,813	2,779,290	6,061,545	149,623,092	15,702,736	2,027,701	173,415,074
2008	1,343,461	2,492,539	3,836,000	6,928,993	167,227,037	7,981,563	1,517,763	183,655,356
2009	1,262,720	2,827,991	4,090,711	7,977,658	185,825,633	11,970,100	761,682	206,535,073
2010	1,602,608	2,789,934	4,392,542	8,359,873	189,927,487	10,874,371	2,287,541	211,449,271
2011	1,581,969	3,232,985	4,814,954	8,503,983	191,011,864	9,456,338	2,232,618	211,204,803
1	81,734	411,295	493,029	724,125	17,352,140	1,894,751	385,776	20,356,791
2	82,223	253,550	335,773	664,105	14,842,371	782,549	166,000	16,455,025
3	96,959	163,052	260,011	690,888	15,492,299	1,131,160	300,761	17,615,108
4	94,331	116,364	210,695	660,112	13,851,742	487,376	245,112	15,244,342
5	214,358	178,799	393,157	552,866	14,399,269	246,263	36,241	15,234,639
6	190,520	272,577	463,097	751,314	14,777,294	751,583	199,511	16,479,702
7	287,164	369,594	656,758	775,527	17,212,289	425,432	129,764	18,543,012
8	273,141	472,255	745,395	767,991	17,157,139	444,141	70,161	18,439,432
9	89,692	410,673	500,365	665,173	15,701,899	797,576	185,328	17,349,977
10	51,726	211,395	263,120	731,997	16,695,879	563,498	141,252	18,132,625
11	45,835	186,032	231,867	725,007	16,293,367	665,818	73,973	17,758,166
12	74,287	187,400	261,687	794,878	17,236,176	1,266,191	298,739	19,595,985

※ 2001. 4. 2. 6개 발전자회사 및 전력거래소로 분리

(Unit:MWh)

KEPCO & Subsidiaries						Items	
복합화력 General	Combined cycle Heat & Electric	계 Total	내연력 Internal Combustion	대체력 Alternative energy	원자력 Nuclear		
-	-	-	2,031		-	1,772,921	1961
14,663,461	11,147,515	25,810,976	771,846		73,924,340	198,893,315	1996
18,908,214	10,832,470	29,740,684	718,025		77,085,649	214,945,447	1997
15,026,200	8,853,811	23,880,011	575,291		89,688,972	206,811,020	1998
16,799,417	9,909,484	26,708,901	381,697		103,063,779	230,186,578	1999
15,734,372	8,705,870	24,440,242	293,861		108,963,740	256,841,584	2000
17,495,545	6,093,270	23,588,815	324,939		112,133,033	274,398,456	2001
24,130,603	6,404,503	30,535,106	353,023		119,102,905	292,182,776	2002
26,530,265	6,544,989	33,075,254	370,125		129,671,763	306,866,082	2003
40,608,047	7,044,404	47,652,451	406,895	10,822	130,714,816	327,191,187	2004
41,592,643	6,718,302	48,310,945	575,339	18,863	146,779,023	349,758,383	2005
46,977,024	7,196,749	54,173,773	677,296	21,857	148,748,887	362,446,663	2006
53,104,572	7,359,635	60,464,207	578,356	26,955	142,937,164	380,201,047	2007
48,563,484	7,345,769	55,909,252	502,708	68,619	150,957,936	394,929,871	2008
41,111,274	6,468,635	47,579,909	696,953	106,104	147,770,807	406,779,556	2009
61,327,401	8,754,053	70,081,455	730,695	134,491	148,595,712	435,384,166	2010
64,369,566	7,298,519	71,668,085	820,533	177,742	154,723,107	443,409,223	2011
8,062,074	1,130,828	9,192,902	83,092	20,463	12,489,488	42,635,767	1
5,343,342	729,697	6,073,039	69,917	12,318	11,880,871	34,826,943	2
6,531,020	804,022	7,335,042	80,747	19,791	13,089,307	38,400,007	3
5,631,066	601,459	6,232,524	66,158	16,067	12,755,770	34,525,557	4
4,473,930	434,850	4,908,781	70,438	13,728	13,578,061	34,198,803	5
5,185,586	378,784	5,564,371	47,389	10,608	12,260,303	34,825,469	6
4,565,525	464,156	5,029,682	63,800	12,846	13,982,548	38,288,644	7
4,229,468	468,920	4,698,388	67,084	10,705	14,445,934	38,406,939	8
4,788,937	483,906	5,272,844	59,933	12,950	12,056,994	35,253,063	9
4,016,525	423,609	4,440,134	63,815	14,774	12,793,369	35,707,838	10
4,918,448	467,440	5,385,888	69,701	14,009	12,503,594	35,963,225	11
6,623,643	910,847	7,534,490	78,459	19,482	12,886,867	40,376,968	12

※ On Apr. 2, 2001, KEPCO's power generation division was divided into 6 generation subsidiary companies and a Power Exchange.

# 1. 발전전력량 추이 (2)

(단위:MWh) Trends in power generation

구 분 연도별	타 사						Other	co.
	수력 Hydro			기력 (종유) Steam	복합화력 Combined cycle			집단 & 대체 Group & Alternative energy
	일반 General	소수력 Micro hydro	계 Total		일반 General	열공급 Heat&Electri c	계 Total	
1961	-	-	-	-	-	-	-	
1996	1,256,303	70,669	1,326,972	2,434,375	1,131,550	-	1,131,550	
1997	1,569,198	76,831	1,646,029	1,104,349	4,683,427	-	4,683,427	
1998	2,381,041	92,826	2,473,867	-	2,625,036	-	2,625,036	
1999	2,415,980	90,600	2,506,580	-	1,966,145	-	1,966,145	
2000	2,345,078	68,536	2,413,614	-	1,565,280	857,618	2,422,898	
2001	1,163,470	72,354	1,235,824	-	2,790,240	2,653,916	5,444,156	
2002	1,952,684	96,103	2,048,788	-	4,493,080	3,308,765	7,801,845	
2003	3,278,881	128,636	3,407,517	-	3,992,036	3,307,356	7,299,392	
2004	2,707,206	112,732	2,819,938	-	4,816,914	2,982,576	7,799,490	3,891,899
2005	2,184,144	137,729	2,321,873	-	6,248,041	2,897,912	9,145,953	3,143,782
2006	2,163,431	141,256	2,304,687	-	10,385,065	2,579,503	12,964,568	3,086,097
2007	2,106,791	156,381	2,263,172	-	12,732,371	3,208,840	15,941,211	3,889,009
2008	1,581,093	145,558	1,726,650	-	15,248,475	3,361,624	18,610,099	6,359,229
2009	1,425,109	125,343	1,550,452	-	13,996,856	2,909,244	16,906,100	7,511,502
2010	1,881,192	198,169	2,079,361	-	20,236,407	3,694,276	23,930,683	12,423,799
2011	2,739,934	275,763	3,015,698	-	26,083,420	3,727,879	29,811,299	19,843,712
1	146,516	11,381	157,897	-	2,791,498	579,266	3,370,764	2,168,179
2	137,837	9,762	147,599	-	1,898,693	404,010	2,302,703	1,889,404
3	151,568	13,020	164,588	-	2,128,174	417,248	2,545,422	1,943,906
4	130,811	16,415	147,226	-	1,999,745	321,916	2,321,661	1,672,849
5	326,814	26,289	353,103	-	2,175,769	196,202	2,371,971	1,372,920
6	302,282	22,089	324,372	-	2,021,795	228,126	2,249,921	1,437,255
7	607,337	29,467	636,804	-	1,899,749	173,719	2,073,468	1,331,352
8	460,288	39,744	500,032	-	1,980,224	164,330	2,144,554	1,292,020
9	136,147	28,538	164,685	-	2,037,632	175,995	2,213,627	1,164,335
10	114,794	18,661	133,455	-	2,046,165	236,181	2,282,346	1,646,173
11	105,377	23,728	129,104	-	2,239,402	309,191	2,548,593	1,779,043
12	120,165	36,667	156,832	-	2,864,573	521,695	3,386,268	2,146,276

(Unit:MWh)

	사 업 자 (종 합) Public utility						Items During	
합 계	수 력 Hydro			기 력 Steam				
	일 반 General	양 수 Pumping	소 수 력 Micro hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal		
-	652,611	-	-	652,611	1,118,279	-	1961	
4,892,897	2,353,688	2,776,967	70,669	5,201,324	6,948,793	52,701,093	1996	
7,433,805	2,737,161	2,589,533	76,831	5,403,525	6,048,404	63,680,222	1997	
5,098,903	4,186,592	1,819,618	92,826	6,099,036	6,510,169	71,152,157	1998	
4,472,725	4,068,660	1,906,973	90,600	6,066,233	6,697,467	76,906,300	1999	
4,836,511	3,941,017	1,600,269	68,536	5,609,822	7,029,753	92,397,718	2000	
6,679,980	2,257,585	1,820,814	72,354	4,150,753	7,007,385	105,250,087	2001	
9,850,632	3,136,674	2,078,269	96,103	5,311,047	6,674,542	112,990,671	2002	
10,706,909	4,756,941	2,001,406	128,636	6,886,983	6,959,937	114,971,490	2003	
14,511,327	4,198,348	1,550,355	112,732	5,861,434	5,787,070	122,760,316	2004	
14,611,607	3,535,571	1,515,588	137,729	5,188,888	5,789,778	129,101,944	2005	
18,355,353	3,326,281	1,751,083	141,256	5,218,621	5,709,388	134,636,585	2006	
22,093,391	3,475,269	1,410,813	156,381	5,042,462	6,061,545	149,623,092	2007	
26,695,978	2,852,127	2,492,539	217,984	5,562,651	6,928,993	167,227,037	2008	
25,968,054	2,596,100	2,827,991	217,071	5,641,162	7,977,658	185,825,633	2009	
38,433,844	3,339,560	2,789,934	342,409	6,471,903	8,359,873	189,927,487	2010	
52,670,709	4,178,868	3,232,985	418,799	7,830,652	8,503,983	191,011,864	2011	
5,696,840	218,425	411,295	21,206	650,927	724,125	17,352,140	1	
4,339,706	211,694	253,550	18,127	483,372	664,105	14,842,371	2	
4,653,916	239,363	163,052	22,184	424,599	690,888	15,492,299	3	
4,141,737	215,795	116,364	25,763	357,922	660,112	13,851,742	4	
4,097,994	529,442	178,799	38,018	746,259	552,866	14,399,269	5	
4,011,548	481,806	272,577	33,085	787,468	751,314	14,777,294	6	
4,041,624	879,422	369,594	44,546	1,293,562	775,527	17,212,289	7	
3,936,606	717,873	472,255	55,300	1,245,427	767,991	17,157,139	8	
3,542,647	211,461	410,673	42,916	665,051	665,173	15,701,899	9	
4,061,974	153,724	211,395	31,457	396,576	731,997	16,695,879	10	
4,456,741	137,909	186,032	37,030	360,971	725,007	16,293,367	11	
5,689,375	181,953	187,400	49,166	418,519	794,878	17,236,176	12	

# 1. 발전전력량 추이 (3)

(단위:MWh) Trends in power generation

구 분 연도별	사 업 자 (총) 합)						Public utility	
	기 力 Steam			복 합 화 力 Combined cycle			내 연 력 Internal Combustion	원 자 력 Nuclear
	중 유 Heavy oil	L N G	계 Total	일 반 General	열 공 급 Heat&Electric	계 Total		
1961	-	-	1,118,279	-	-	-	2,031	-
1996	29,067,151	8,229,139	96,946,176	15,795,011	11,147,515	26,942,526	771,846	73,924,340
1997	27,408,098	7,661,219	104,797,943	23,591,641	10,832,470	34,424,111	718,025	77,085,649
1998	9,942,627	1,436,625	89,041,578	17,651,236	8,853,811	26,505,047	575,291	89,688,972
1999	11,523,950	1,344,831	96,472,548	18,765,562	9,909,484	28,675,046	381,697	103,063,779
2000	18,888,171	1,631,891	119,947,533	17,299,652	9,563,488	26,863,140	293,861	108,963,740
2001	21,622,339	1,556,930	135,436,741	20,285,785	8,747,186	29,032,971	324,939	112,133,033
2002	17,493,064	1,771,207	138,929,484	28,623,683	9,713,268	38,336,951	353,023	119,102,905
2003	16,663,865	1,674,183	140,269,475	30,522,301	9,852,345	40,374,646	370,125	129,671,763
2004	16,084,006	733,318	145,364,710	45,424,961	10,026,980	55,451,941	406,895	130,714,816
2005	15,529,107	786,366	151,207,195	47,840,684	9,616,214	57,456,898	575,339	146,779,023
2006	14,306,788	1,258,155	155,910,915	57,362,089	9,776,252	67,138,342	677,296	148,748,887
2007	15,702,736	2,027,701	173,415,074	65,836,943	10,568,475	76,405,418	578,356	142,937,164
2008	7,981,563	1,517,763	183,655,356	63,811,959	10,707,393	74,519,352	502,708	150,957,936
2009	11,970,100	761,682	206,535,073	55,108,130	9,377,879	64,486,009	696,953	147,770,807
2010	10,874,371	2,287,541	211,449,271	81,563,808	12,448,329	94,012,138	730,695	148,595,712
2011	9,456,338	2,232,618	211,204,803	90,452,986	11,026,398	101,479,384	820,533	154,723,107
1	1,894,751	385,776	20,356,791	10,853,572	1,710,094	12,563,666	83,092	12,489,488
2	782,549	166,000	16,455,025	7,242,035	1,133,707	8,375,742	69,917	11,880,871
3	1,131,160	300,761	17,615,108	8,659,194	1,221,270	9,880,464	80,747	13,089,307
4	487,376	245,112	15,244,342	7,630,811	923,375	8,554,186	66,158	12,755,770
5	246,263	36,241	15,234,639	6,649,700	631,052	7,280,752	70,438	13,578,061
6	751,583	199,511	16,479,702	7,207,382	606,910	7,814,292	47,389	12,260,303
7	425,432	129,764	18,543,012	6,465,274	637,875	7,103,150	63,800	13,982,548
8	444,141	70,161	18,439,432	6,209,692	633,250	6,842,942	67,084	14,445,934
9	797,576	185,328	17,349,977	6,826,569	659,901	7,486,470	59,933	12,056,994
10	563,498	141,252	18,132,625	6,062,690	659,790	6,722,480	63,815	12,793,369
11	665,818	73,973	17,758,166	7,157,850	776,631	7,934,481	69,701	12,503,594
12	1,266,191	298,739	19,595,985	9,488,216	1,432,542	10,920,758	78,459	12,886,867

1) 한전구입 : '04년 이후 집단, 대체 분리하여 계시

※ 'p'는 잠정수치임.

(Unit : MWh )

집단 & 대체 Group & Alternative energy	총 계 Total	상 용 자 가 Non-utility generation in common use			총 발전량 Total		Items During	
		한전구입 Purchased power	자가소비 Self consumption	계 Total	사 업 자 + 한 전 구 입	사 업 자 + 상 용 자 가		
	1,772,921	-	163,497	163,497	1,772,921	1,936,418	1961	
	203,786,212	1,707,342	20,352,165	22,059,507	205,493,554	225,845,719	1996	
	222,379,252	2,065,347	22,142,872	24,208,219	224,444,599	246,587,471	1997	
	211,909,923	3,390,496	21,896,987	25,287,483	215,300,419	237,197,406	1998	
	234,659,303	4,665,430	22,827,413	27,492,843	239,324,733	262,152,146	1999	
	261,678,095	4,721,413	24,043,440	28,764,853	266,399,508	290,442,948	2000	
	281,078,436	4,145,321	24,662,195	28,807,516	285,223,757	309,885,952	2001	
	302,033,408	4,440,656	25,546,883	29,987,539	306,474,064	332,020,947	2002	
	317,572,991	4,878,706	25,304,512	30,183,218	322,451,697	347,756,209	2003	
	3,902,721	341,702,514	445,453	25,885,585	26,331,038	342,147,967	368,033,552	2004
	3,162,645	364,369,990	269,341	24,840,181	25,109,522	364,639,331	389,479,512	2005
	3,107,954	380,802,016	378,693	21,808,234	22,186,927	381,180,709	402,988,943	2006
	3,915,964	402,294,438	830,063	22,282,788	23,112,851	403,124,501	425,407,289	2007
	6,427,847	421,625,849	729,277	20,255,832	20,985,109	422,355,126	442,610,958	2008
	7,617,606	432,747,610	856,135	18,843,716	19,699,851	433,603,745	452,447,461	2009
	12,558,291	473,818,009	842,196	20,368,158	21,210,354	474,660,205	495,028,363	2010
	20,021,454	496,079,932	813,434	21,217,163p	22,030,597p	496,893,366	518,110,529p	2011
	2,188,642	48,332,607	105,032	...	...	48,437,639	...	1
	1,901,722	39,166,649	68,968	...	...	39,235,617	...	2
	1,963,698	43,053,923	68,359	...	...	43,122,282	...	3
	1,688,916	38,667,294	42,715	...	...	38,710,009	...	4
	1,386,648	38,296,797	59,132	...	...	38,355,929	...	5
	1,447,863	38,837,018	64,267	...	...	38,901,284	...	6
	1,344,197	42,330,268	53,580	...	...	42,383,848	...	7
	1,302,725	42,343,545	54,040	...	...	42,397,585	...	8
	1,177,285	38,795,710	65,465	...	...	38,861,175	...	9
	1,660,947	39,769,813	56,485	...	...	39,826,298	...	10
	1,793,052	40,419,966	70,019	...	...	40,489,984	...	11
	2,165,757	46,066,344	105,371	...	...	46,171,715	...	12

## 2. 발전 실적 추이

Trends in power generating results

구 분 연도별	시 설 용 량 (kW) Generating facilities	발 전 량 (MWh) Gross generation	평 균 전 력 (kW) Average load	최 대 전 력 (kW) Peak load	부 하 율 <sup>1)</sup> (%) Load factor
1961	367,254	1,772,921	202,388	305,686	66.2
1996	35,715,433	205,493,554	23,394,075	32,282,000	72.5
1997	41,041,778	224,444,599	25,621,530	35,851,000	71.5
1998	43,405,841	215,300,419	24,577,673	32,996,000	74.5
1999	46,977,697	239,324,733	27,320,175	37,293,000	73.3
2000	48,450,717	266,399,508	30,327,813	41,007,000	74.0
2001	50,858,647	285,223,757	32,559,790	43,125,000	75.5
2002	53,800,847	306,474,064	34,985,624	45,773,000	76.4
2003	56,052,677	322,451,697	36,809,554	47,385,000	77.7
2004	59,961,131	342,147,967	39,057,987	51,264,000	76.2
2005	62,258,197	364,639,331	41,625,494	54,631,000	76.2
2006	65,514,242	381,180,709	43,513,780	58,994,000	73.8
2007	68,268,188	403,124,501	46,018,779	62,285,000	73.9
2008	72,490,691	422,355,126	48,082,323	62,794,000	76.6
2009	73,469,978	433,603,745	49,498,144	66,797,000	74.1
2010	76,078,188	474,660,205	54,184,955	71,308,000	76.0
2011	79,341,867	496,893,366	56,722,987	73,137,000	77.6
1	76,648,651	48,437,639	65,104,354	73,137,000	89.0
2	77,234,932	39,235,617	58,386,335	71,002,000	82.2
3	78,234,932	43,122,282	57,960,057	67,320,000	86.1
4	78,234,932	38,710,009	53,763,901	61,400,000	87.6
5	78,234,932	38,355,929	51,553,668	59,355,000	86.9
6	78,809,532	38,901,285	54,029,562	66,872,000	80.8
7	78,809,532	42,383,848	56,967,538	71,393,000	79.8
8	79,245,883	42,397,585	56,986,001	72,194,000	78.9
9	78,812,621	38,861,175	53,973,854	71,061,000	76.0
10	79,212,621	39,826,298	53,529,970	62,575,000	85.5
11	79,212,621	40,489,984	56,236,089	67,554,000	83.2
12	79,341,867	46,171,715	62,058,757	72,554,000	85.5

1) 부하율 = (평균전력 / 최대전력) × 100

1) Load factor = (Average load / Peak load) × 100

2) 이용율 = (평균전력 / 시설용량) × 100

2) Plant factor = (Average load / Generating facilities) × 100

3) 소내전력을 = (소내전력량 / 발전량) × 100

3) Aux.use factor = (Aux.use / Gross generation) × 100

- 발전량은 상용자가 구입전력량 제외분임.

- Gross generation excludes purchased generation

from non-use in common use

이 용 율 <sup>2)</sup> (%)	소내전력량 (MWh)	소내전력을 <sup>3)</sup> (%)	송전단전력량 (양수포함) (MWh) Net generation (include pumping)	양수용전력량 (MWh) Pumping storage	Items	
					Plant factor	Auxiliary use
55.1	89,337	5.04	1,683,584	-	1961	
67.2	8,868,900	4.32	196,624,654	3,741,694	1996	
64.7	9,694,011	4.36	214,750,588	3,721,850	1997	
55.7	9,444,705	4.46	205,855,714	2,425,411	1998	
57.3	10,997,862	4.69	228,326,872	2,524,850	1999	
62.2	12,328,447	4.71	254,071,061	2,117,786	2000	
64.4	12,980,240	4.62	272,243,517	2,401,471	2001	
65.7	13,728,064	4.55	292,746,001	2,687,557	2002	
65.9	14,225,808	4.48	308,225,887	2,581,202	2003	
66.5	15,268,295	4.52	326,879,672	1,994,428	2004	
67.5	16,451,551	4.56	348,187,780	1,980,383	2005	
66.9	15,811,741	4.19	365,368,969	2,315,002	2006	
67.9	16,614,307	4.17	386,510,193	1,816,953	2007	
67.7	17,374,100	4.19	404,969,110	3,242,816	2008	
67.8	18,258,121	4.30	415,345,624	3,712,816	2009	
73.3	19,371,717	4.20	455,288,488	3,662,630	2010	
73.9	19,689,178	4.14	477,204,188	4,256,763	2011	
85.8	1,759,922	3.81	46,677,717	555,521	1	
76.9	1,491,486	4.00	37,744,132	328,964	2	
75.4	1,619,212	3.94	41,503,070	227,598	3	
70.0	1,478,332	4.00	37,231,677	147,539	4	
67.3	1,514,315	4.10	36,841,615	239,467	5	
70.2	1,570,892	4.20	37,330,393	351,151	6	
74.4	1,766,296	4.31	40,617,553	475,309	7	
74.2	1,814,237	4.42	40,583,347	617,722	8	
70.6	1,653,218	4.40	37,207,957	547,098	9	
69.5	1,669,762	4.38	38,156,535	282,117	10	
72.6	1,610,680	4.17	38,879,304	240,638	11	
80.0	1,740,826	3.97	44,430,889	243,638	12	

※ 1985년부터는 년중 준공(폐지)된 발전소는 준공이후(폐지이전)의 실적만 산입하여 계산함

※ Including the results after construction (before shut down) only in case of a newly constructed  
(a newly shut down) plant every year since 1985.

### 3. 발전소별 발전실적 (1)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
화천	108,000	275,720	31,475	113,400	27.8
춘천	62,280	155,300	17,728	63,900	27.7
의암	45,000	162,276	18,525	44,800	41.3
청평	139,600	264,409	30,184	74,300	40.6
팔당	120,000	441,742	50,427	117,000	43.1
섬진강	34,800	139,486	15,923	31,100	51.2
강릉	82,000	-	-	-	-
안흥	480	1,882	215	435	49.4
보성강	4,500	22,226	2,537	4,500	56.4
괴산	2,600	10,664	1,217	2,600	46.8
추산(도서)	700	4,105	469	678	69.1
산청소수력	995	2,939	336	-	-
무주소수력	400	542	62	393	15.7
양양소수력	1,400	2,187	250	35,017	0.7
삼천포해양소수력	4,740	29,719	3,393	5,150	65.9
태안소수력	2,200	4,147	473	1,569	30.2
보령소수력	7,500	18,469	2,108	9,624	21.9
영흥해양소수력	7,599	15,780	1,801	6,897	26.1
당진화력소수력	4,998	30,271	3,456	9,762	35.4
행원소수력	60	104	12	32	37.1
무주양수 #1	300,000	251,100	28,664	304,000	9.4
#2	300,000	262,460	29,961	290,000	10.3
계	600,000	513,560	58,626	592,000	9.9
청평양수 #1	200,000	71,049	8,111	197,000	4.1
#2	200,000	79,103	9,030	198,000	4.6
계	400,000	150,152	17,141	391,000	4.4
삼랑진양수 #1	300,000	229,276	26,173	298,124	8.8
#2	300,000	187,811	21,440	300,521	7.1
계	600,000	417,087	47,613	594,960	8.0
산청양수 #1	350,000	320,139	36,546	352,697	10.4
#2	350,000	302,840	34,571	354,372	9.8
계	700,000	622,980	71,116	707,069	10.1
양양양수 #1	250,000	192,271	21,949	2,055,815	1.1
#2	250,000	101,656	11,605	1,847,334	0.6
#3	250,000	210,286	24,005	2,174,951	1.1
#4	250,000	228,990	26,140	2,165,103	1.2
계	1,000,000	733,202	83,699	7,881,127	1.1

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	
					Plants
29.1	2,583	0.94	273,137	Hwacheon	
28.5	1,639	1.06	153,661	Chuncheon	
41.2	1,782	1.10	160,494	Uiam	
21.6	4,313	1.63	260,096	Cheongpyeong	
42.0	4,523	1.02	437,219	Paldang	
45.8	2,211	1.59	137,275	Seomjingang	
-	-	-	-	Gangneung	
44.8	40	2.12	1,842	Anheung	
56.4	355	1.60	21,870	Boseonggang	
46.8	180	1.69	10,484	Goesan	
66.9	210	5.11	3,895	Chusan (Island)	
33.7	-	-	2,939	Sancheong	
15.5	1	0	542	Muju	
17.8	5	0	2,183	Yangyang	
71.6	0	0.00	29,719	Samcheonpo	
21.5	-	-	4,147	Taean	
28.1	4	0.02	18,465	Boryeong	
23.7	0	0	15,780	Yeongheung	
69.1	764	2.52	29,508	Dangjin	
19.9	0	0	104	Hangwon	
9.6	4,344	1.73	246,756	Muju pumping #1	
10.0	7,873	3.00	254,587	Muju pumping #2	
9.8	12,217	2.38	501,343	Muju pumping total	
4.1	285	0.40	70,764	Cheongpyeong pumping #1	
4.5	311	0	78,792	Ch'ongp'yeong pumping #2	
4.3	595	0.40	149,557	Ch'ongp'yeong pumping Total	
8.7	-	-	229,276	Samrangjin pumping #1	
7.1	-	-	187,811	Samnangjin pumping #2	
7.9	-	-	417,087	Samnangjin pumping Total	
10.4	314	0.10	319,825	Sanchong pumping #1	
9.9	1,239	0.41	301,602	Sanchong pumping #2	
10.2	1,553	0.25	621,426	Sanchong pumping Total	
8.8	335	0.17	191,936	Yangyang pumping #1	
4.6	700	0.69	100,955	Yangyang pumping #2	
9.6	471	0.22	209,815	Yangyang pumping #3	
10.5	895	0.39	228,095	Yangyang pumping #4	
8.4	2,402	0.33	730,800	Yangyang pumping Total	

### 3. 발전소별 발전실적 (2)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
청송양수 #1	300,000	340,542	38,875	294,955	13.2
#2	300,000	237,058	27,061	303,002	8.9
계	600,000	577,601	65,936	593,974	11.1
예천양수 #1	400,000	152,360	17,393	400,618	4.3
#2	400,000	66,044	7,539	-	-
계	800,000	218,404	24,932	397,635	6.3
한전, 자회사계	5,329,852	4,814,954	549,652	2,880,790	19.1
소양강(수자원)	200,000	658,647	75,188	215,460	34.9
대청( " )	90,000	219,350	25,040	92,232	27.1
충주( " )	412,000	1,137,783	129,884	456,960	28.4
합천( " )	100,000	212,566	24,266	106,560	22.8
주암( " )	22,500	87,042	9,936	22,918	43.4
임하( " )	50,000	62,751	7,163	58,212	12.3
남강( " )	14,000	44,611	5,093	12,833	39.7
안동( " )	90,000	168,623	19,249	83,440	23.1
용담( " )	22,100	148,561	16,959	22,200	76.4
광천(수자원소수력)	450	2,634	301	-	-
반변( " )	1,060	1,682	192	-	-
부안( " )	193	1,274	145	-	-
운문( " )	330	1,155	132	-	-
횡성( " )	1,000	5,547	633	-	-
영천( " )	1,000	2,682	306	-	-
안동( " )	1,500	6,694	764	-	-
용담( " )	4,100	30,818	3,518	-	-
합천( " )	1,200	7,915	904	-	-
밀양( " )	1,300	5,122	585	-	-
보령( " )	701	1,045	119	-	-
대곡( " )	300	1,295	148	-	-
장흥댐( " )	800	4,734	540	-	-
성남( " )	340	1,703	194	-	-
달방( " )	170	973	111	-	-
주암( " )	990	6,394	730	-	-
대청댐( " )	800	3,702	423	-	-
성남2( " )	360	1,420	162	-	-
고산( " )	560	3,788	432	-	-
군위( " )	500	1,347	154	-	-
횡성댐2( " )	300	931	106	-	-
판교( " )	400	1,496	171	-	-
금남보( " )	2,310	532	61	-	-
승촌보( " )	800	7	1	-	-
죽산보( " )	1,220	13	1	-	-

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	Plants
13.0	113	0.03	340,430	Cheongsong pumping #1	
9.0	382	0.16	236,677	Cheongsong pumping #2	
11.0	494	0.09	577,106	Cheongsong pumping Total	
4.3	1,038	0.68	151,322	Yeoicheon pumping #1	
1.9	281	0.42	65,763	Yeoicheon pumping #2	
3.1	1,319	0.60	217,085	Yeoicheon pumping Total	
10.3	37,189	0.77	4,777,765	Total of KEPCO,Subsidiaries hydro	
37.6	6,826	1.04	651,821	Soyanggang (kwater)	
27.8	2,912	1.33	216,438	Daecheong ( " )	
31.5	17,546	1.54	1,120,237	Chungju ( " )	
24.3	2,018	0.95	210,548	Hapcheon ( " )	
44.2	1,233	1.42	85,809	Juam ( " )	
14.3	995	1.58	61,757	Imha ( " )	
36.4	821	1.84	43,790	Namgang ( " )	
21.4	4,332	2.57	164,290	Andong ( " )	
76.7	2,359	1.59	146,203	Yongdam ( " )	
66.8	-	-	2,634	Gwangcheon (kwater s-hydro)	
18.1	-	-	1,682	Banbyeon ( " )	
75.3	-	-	1,274	Buan ( " )	
40.0	-	-	1,155	Unmun ( " )	
63.3	-	-	5,547	Hoengseong ( " )	
30.6	-	-	2,682	Yeongcheon ( " )	
50.9	-	-	6,694	Andong ( " )	
85.8	-	-	30,818	Yongdam ( " )	
0.8	-	-	7,915	Hapcheon ( " )	
45.0	-	-	5,122	Milyang ( " )	
17.0	-	-	1,045	Boryeong ( " )	
49.3	-	-	1,295	Daegok ( " )	
67.5	-	-	4,734	Janghengdaem ( " )	
57.2	-	-	1,703	Seongnam ( " )	
0.7	-	-	973	Dalbang ( " )	
0.7	-	-	6,394	Juam ( " )	
0.5	-	-	3,702	Daecheongdaem ( " )	
0.5	-	-	1,420	Seongnam 2 ( " )	
0.8	-	-	3,788	Gosan ( " )	
0	-	-	1,347	Gunwi ( " )	
-	-	-	931	Hoengseongdaem ( " )	
-	-	-	1,496	Pankyo ( " )	
2.6	-	-	532	Keumnambo ( " )	
0.1	-	-	7	Seungchonbo ( " )	
0.1	-	-	13	Juksanbo ( " )	

### 3. 발전소별 발전실적 (3)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
강정고령보 ( " )	3,000	-	-	-	-
백제보 ( " )	2,640	279	32	-	-
금강보 ( " )	3,000	-	-	-	-
이포보 ( " )	3,000	133	15	-	-
강천보 ( " )	4,950	179	20	-	-
구미보 ( " )	3,000	-	-	-	-
기타(수자원제외)	45,663	180,269	20,579	-	-
타사수력계	1,088,537	3,015,698	344,258	-	-
수력계	6,418,389	7,830,652	893,910	877,617	101.9
영동 #1	125,000	968,094	110,513	129,273	85.5
#2	200,000	1,546,683	176,562	227,225	77.7
계	325,000	2,514,777	287,075	356,301	80.6
동해 #1	200,000	1,435,189	163,834	210,352	77.9
#2	200,000	1,535,116	175,242	211,028	83.0
계	400,000	2,970,304	339,076	420,188	80.7
군산 #1	-	-	-	-	-
서천 #1	200,000	1,489,232	170,004	212,000	80.2
#2	200,000	1,529,669	174,620	246,000	71.0
계	400,000	3,018,901	344,623	454,000	75.9
무연탄계	1,125,000	8,503,983	970,774	1,122,448	86.5
호남 #1	250,000	2,096,833	239,364	265,604	90.1
#2	250,000	1,907,717	217,776	263,265	82.7
계	500,000	4,004,550	457,140	523,108	87.4
삼천포 #1	560,000	4,649,350	530,748	571,000	93.0
#2	560,000	4,736,815	540,732	577,000	93.7
#3	560,000	4,826,641	550,986	578,000	95.3
#4	560,000	4,084,386	466,254	578,000	80.7
#5	500,000	3,966,865	452,838	531,000	85.3
#6	500,000	4,001,766	456,823	527,000	86.7
계	3,240,000	26,265,823	2,998,382	3,341,000	89.7
영흥 #1	800,000	6,786,358	774,698	807,862	95.9
#2	800,000	6,783,427	774,364	839,346	92.3
#3	870,000	7,307,170	834,152	899,091	92.8
#4	870,000	6,296,388	718,766	892,530	80.5
계	3,340,000	27,173,343	3,101,980	3,416,411	90.8
보령 #1	500,000	3,902,587	445,501	542,000	82.2
#2	500,000	4,457,719	508,872	543,000	93.7
#3	500,000	4,399,842	502,265	530,000	94.8
#4	500,000	4,031,453	460,212	531,000	86.7
#5	500,000	4,118,148	470,108	535,000	87.9
#6	500,000	3,774,820	430,916	553,000	77.9
#7	500,000	4,192,767	478,626	561,000	85.3
#8	500,000	4,431,721	505,904	561,000	90.2
계	4,000,000	33,309,057	3,802,404	4,336,000	87.7

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력을 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	
				Plants	
-	-	-	-	Kangjeong	( " )
1.2	-	-	279	Baekjebo	( " )
-	-	-	-	Keumkangbo	( " )
0.5	-	-	133	Epobo	( " )
0.4	-	-	179	Kangcheonbo	( " )
-	-	-	-	Kumibo	( " )
23.9	-	-	180,269	Total of Other co. small hydro	
31.6	39,043	1.29	2,976,655	Total of Other co. hydro	
13.9	76,232	0.97	7,754,420	Total of hydro	
88.4	62,258	6.43	905,837	Yeongdong	#1
88.3	105,503	6.82	1,441,180		#2
88.3	167,761	6.67	2,347,017		Total
81.9	131,283	9.15	1,303,905	Donghae	#1
87.6	144,548	9.42	1,390,568		#2
84.8	275,831	9.29	2,694,473		Total
-	-	-	-	Kunsan	#1
85.0	133,622	8.97	1,355,610		#1
87.3	149,876	9.80	1,379,793		#2
86.2	283,498	9.39	2,735,403		Total
86.3	727,090	8.55	7,776,893	Total of anthracite coal	
95.7	190,867	9.10	1,905,966	Honam	#1
87.1	160,379	8.41	1,747,338		#2
91.4	351,246	8.77	3,653,304		Total
94.8	289,998	6.24	4,359,352	Samchonpo	#1
96.6	317,814	6.71	4,419,002		#2
98.4	252,855	5.24	4,573,786	Samchonpo	#3
83.3	219,265	5.37	3,865,121		#4
90.6	156,059	3.93	3,810,806		#5
91.4	165,951	4.15	3,835,815		#6
92.5	1,401,943	5.34	24,863,881		Total
96.8	352,886	5.20	6,433,472	Yeongheung	#1
96.8	357,034	5.26	6,426,393		#2
95.9	347,877	4.76	6,959,292		#3
82.6	303,120	4.81	5,993,268		#4
92.9	1,360,917	5.01	25,812,425		Total
89.1	244,397	6.26	3,658,190	Boryeong	#1
101.8	304,949	6.84	4,152,770		#2
100.5	204,599	4.65	4,195,243		#3
92.0	176,199	4.37	3,855,254		#4
94.0	188,637	4.58	3,929,511		#5
86.2	181,860	4.82	3,592,960		#6
95.7	207,371	4.95	3,985,396		#7
101.2	201,266	4.54	4,230,455		#8
95.1	1,709,279	5.13	31,599,779	Total	

### 3. 발전소별 발전실적 (4)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
태안	#1	500,000	4,266,558	487,050	533,000 91.4
	#2	500,000	4,182,930	477,503	534,000 89.4
	#3	500,000	4,291,485	489,896	532,000 92.1
	#4	500,000	3,916,249	447,060	534,000 83.7
	#5	500,000	4,251,058	485,281	531,799 91.3
	#6	500,000	4,251,341	485,313	566,063 85.7
	#7	500,000	4,334,551	494,812	554,049 89.3
	#8	500,000	4,230,977	482,988	549,479 87.9
	계	4,000,000	33,725,149	3,849,903	4,270,309 90.2
하동	#1	500,000	4,413,523	503,827	539,000 93.5
	#2	500,000	4,134,755	472,004	550,800 85.7
	#3	500,000	4,134,803	472,009	542,536 87.0
	#4	500,000	4,434,754	506,250	539,727 93.8
	#5	500,000	4,139,654	472,563	545,000 86.7
	#6	500,000	4,446,933	507,641	542,112 93.6
	#7	500,000	4,161,909	475,104	546,439 86.9
	#8	500,000	3,684,042	420,553	524,252 80.2
	계	4,000,000	33,550,373	3,829,951	4,293,912 89.2
당진	#1	500,000	3,921,237	447,630	541,296 82.7
	#2	500,000	3,895,105	444,647	543,320 81.8
	#3	500,000	4,458,974	509,015	539,997 94.3
	#4	500,000	4,480,197	511,438	539,256 94.8
	#5	500,000	4,005,999	457,306	522,415 87.5
	#6	500,000	3,984,225	454,820	523,881 86.8
	#7	500,000	4,180,830	477,264	526,119 90.7
	#8	500,000	4,056,999	463,128	525,736 88.1
	계	4,000,000	32,983,568	3,765,247	24,140,036 15.6
유연탄	계	23,080,000	191,011,864	21,805,007	23,720,670 91.9
석탄	계	24,205,000	199,515,847	22,775,782	24,831,399 91.7
영남	#1	200,000	277,447	31,672	206,000 15.4
	#2	200,000	234,453	26,764	204,000 13.1
	계	400,000	511,900	58,436	406,000 14.4
	#1	200,000	259,510	29,624	212,956 13.9
	#2	200,000	237,289	27,088	214,149 12.6
	#3	200,000	282,981	32,304	213,447 15.1
	#4	400,000	619,316	70,698	402,398 17.6
	#5	400,000	865,740	98,829	400,675 24.7
	#6	400,000	753,679	86,036	402,316 21.4
	계	1,800,000	3,018,516	344,579	1,837,581 18.8

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력을 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items	
				Plants	
97.4	185,547	4.35	4,081,011	Taean	#1
95.5	201,312	4.81	3,981,618		#2
98.0	195,728	4.56	4,095,757		#3
89.4	185,351	4.73	3,730,898		#4
97.1	206,164	4.85	4,044,894		#5
97.1	214,402	5.04	4,036,939		#6
99.0	190,902	4.40	4,143,649		#7
96.6	178,812	4.23	4,052,165		#8
96.2	1,558,218	4.62	32,166,931		Total
100.8	211,675	4.80	4,201,848	Hadong	#1
94.4	194,987	4.72	3,939,767		#2
94.4	186,175	4.50	3,948,628		#3
101.3	224,550	5.06	4,210,204		#4
94.5	183,962	4.44	3,955,693		#5
101.5	211,973	4.77	4,234,960		#6
95.0	172,019	4.13	3,989,890		#7
87.4	147,072	3.99	3,536,970		#8
95.7	1,532,414	4.57	32,017,960		Total
89.5	198,753	5.07	3,722,484	Dangjin	#1
88.9	192,073	4.93	3,703,032		#2
101.8	198,858	4.46	4,260,116		#3
102.3	205,109	4.58	4,275,089		#4
91.5	183,287	4.58	3,822,712		#5
91.0	184,254	4.62	3,799,971		#6
95.5	190,363	4.55	3,990,467		#7
92.6	171,745	4.23	3,885,254		#8
94.1	1,524,442	4.62	31,459,126		Total
94.5	9,438,459	4.94	181,573,405	Total of bituminous coal	
94.1	10,165,549	5.10	189,350,298	Total of coal	
15.8	19,618	7.07	257,829	Yeongnam	#1
13.4	16,146	6.89	218,307		#2
14.6	35,764	6.99	476,136		Total
14.8	18,305	7.05	241,206	Ulsan	#1
13.5	16,418	6.92	220,870		#2
16.2	19,263	6.81	263,718		#3
17.7	39,998	6.46	579,319		#4
24.7	54,031	6.24	811,709		#5
21.5	46,840	6.21	706,839		#6
19.1	194,855	6.46	2,823,661		Total

### 3. 발전소별 발전실적 (5)

('11.1.1~12.31) Power generating results by plant

구 분		시 설 용 량 (kW) Generating facilities	발 전 량 (MWh) Gross generation	평균 전력 (kW) Average load	최 대 전력 (kW) Peak load	부 하 율 (%) Load factor
발 전 소 별						
평 택	여 수	#1 #2 계	200,000 328,600 528,600	321,998 979,871 1,301,869	36,758 111,857 148,615	203,065 351,000 549,031
	#1 #2 #3 #4 계	350,000 350,000 350,000 350,000 1,400,000	729,995 689,576 625,473 564,169 2,609,213	83,333 78,719 71,401 64,403 297,855	359,000 357,000 357,000 359,000 1,428,000	23.2 22.1 20.0 17.9 20.9
	#1 #2 #3 #4 계	- - 100,000 100,000 200,000	- - 598,478 681,936 1,280,415	- - 68,319 77,847 146,166	- - 103,600 106,500 209,800	- - 65.9 73.1 69.7
	#1 #2 #3 계	- 75,000 75,000 150,000	- 328,752 405,674 734,426	- 37,529 46,310 83,839	- 80,000 80,000 160,000	- 46.9 57.9 52.4
	중 유 계	4,478,600	9,456,338	1,079,491	3,970,997	27.2
	서 울	#4 #5 계	137,500 250,000 387,500	335,027 737,965 1,072,992	38,245 84,243 122,488	143,000 260,000 402,000
인 천	#1 #2 #3 계	250,000 250,000 -	562,583 597,043 -	64,222 68,156 -	259,000 266,000 -	24.8 25.6 -
	500,000		1,159,626	132,377	525,000	25.2
가 스 계		887,500	2,232,618	254,865	897,000	28.4
기 력 계		29,571,100	211,204,803	24,110,137	29,293,104	82.3
제 주 G/T( 중 부 , 한 전 )		165,000	1,058	121	47,000	0.3
제 주 내 연 ( 중 부 )		80,000	493,957	56,388	81,200	69.4
남 제 주 D/P( 남 부 )		40,000	108,297	12,363	39,500	31.3
조 도 D/P		2,200	7,618	870	1,512	57.5
울 릉 도 D/P		9,500	49,260	5,623	9,870	57.0
울 릉 도 남 양 D/P		6,000	-	-	-	-
흑 산 도 D/P		3,500	14,637	1,671	2,358	70.9
추 자 도 D/P		4,400	16,712	1,908	2,742	69.6
거 문 도 D/P		3,500	10,993	1,255	2,208	56.8
덕 적 도 D/P		2,900	8,632	985	1,539	64.0
위 도 D/P		2,850	4,991	570	1,232	46.2
백 령 도 D/P		9,000	39,778	4,541	7,224	62.9
대 청 도 D/P		1,850	7,845	896	1,575	56.9
소 청 도 D/P		2,650	3,240	370	516	71.7
연 평 도 D/P		3,350	14,421	1,646	2,844	57.9
자 월 도 D/P		1,650	2,776	317	729	43.5
홍 도 D/P		2,350	3,765	430	1,026	41.9
비 양 도 D/P		240	303	35	60	57.7
덕 우 도 D/P		390	457	52	96	54.4
여 서 도 D/P		240	293	33	67	49.9

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	
					Plants
18.4	10,945	3.40	311,053	Yeosu	#1
34.0	106,196	10.84	873,675		#2
28.1	117,141	9.00	1,184,728		Total
23.8	29,539	4.05	700,456	Pyeongtaek	#1
22.5	24,013	3.48	665,563		#2
20.4	19,407	3.10	606,066		#3
18.4	20,712	3.67	543,457		#4
21.3	93,671	3.59	2,515,542		Total
-	-	-	-	Namjeju	#1
-	-	-	-		#2
68.3	47,300	7.90	551,178		#3
77.8	51,078	7.49	630,859		#4
73.1	98,378	7.68	1,182,037		Total
-	-	-	-	Jeju	#1
50.0	21,432	6.52	307,320		#2
61.7	28,900	7.12	376,774		#3
55.9	50,332	6.85	684,094		Total
24.1	590,141	6.24	8,866,197	Total of heavy oil	
27.8	21,111	6.30	313,916	Seoul	#4
33.7	32,412	4.39	705,553		#5
31.6	53,523	4.99	1,019,469		Total
25.7	20,146	3.58	542,437	Incheon	#1
27.3	16,000	2.68	581,043		#2
-	-	-	-		#3
26.5	36,146	3.12	1,123,480		Total
28.7	89,669	4.02	2,142,949	Total of L.N.G	
81.5	10,845,359	5.13	200,359,445	Total of steam	
0.1	37	3.48	1,021	Jeju	G/T
70.5	24,717	5.00	469,240	Jeju	D/P
30.9	5,063	4.67	103,234	Namjeju	D/P
39.5	355	4.66	7,263	Jodo	D/P
59.2	1,244	2.53	48,016	Ulleundo	D/P
-	-	-	-	Ulleundo namyang	D/P
47.7	754	5.15	13,884	Heuksando	D/P
43.4	970	5.80	15,742	Chujado	D/P
35.9	388	3.53	10,604	Geomundo	D/P
34.0	625	7.24	8,007	Duckjuckdo	D/P
20.0	321	6.44	4,669	Wido	D/P
50.5	1,397	3.51	38,381	Baekryeongdo	D/P
48.4	524	6.68	7,321	Daecheongdo	D/P
14.0	262	8.08	2,978	Socheongdo	D/P
49.1	937	6.50	13,484	Yeonpyeongdo	D/P
19.2	276	9.95	2,500	Gawoldo	D/P
18.3	291	7.74	3,474	Hongdo	D/P
14.4	30	9.87	273	Biyangdo	D/P
13.4	75	16.46	382	Deokwoodo	D/P
13.9	46	15.57	247	Yeoseodo	D/P

### 3. 발전소별 발전실적 (6)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
가파도 D/P	450	998	114	197	57.8
비안도 D/P	240	632	72	128	56.3
연도 D/P	240	355	41	114	35.6
어청도 D/P	900	3,313	378	537	70.4
개야도 D/P	1,500	3,087	352	675	52.2
외연도 D/P	750	1,244	142	259	54.8
삽시도 D/P	900	1,639	187	574	-
대모도 D/P	750	-	-	-	-
승봉도 D/P	950	4,096	468	1,016	46.0
풍도 D/P	240	737	84	128	65.7
가의도 D/P	240	219	25	48	52.1
가거도 D/P	750	2,423	277	531	52.1
여자도 D/P	450	562	64	122	52.6
추도 D/P	240	297	34	66	51.4
매물도 D/P	240	422	48	96	50.2
어의도 D/P	240	137	16	41	38.3
수우도 D/P	240	118	13	26	51.7
장고도 D/P	240	866	99	230	43.0
고대도 D/P	300	604	69	167	41.3
문감도 D/P	240	265	30	60	50.3
성남도 D/P	240	183	21	43	48.6
독거도 D/P	240	110	13	32	39.1
호도 D/P	300	540	62	193	31.9
녹도 D/P	240	308	35	63	55.8
나월도 D/P	750	754	86	149	57.8
송이도 D/P	240	310	35	84	42.1
구자도 D/P	240	169	19	47	41.0
슬기도 D/P	240	111	13	78	16.2
시도 D/P	750	308	35	61	57.5
득산도 D/P	300	903	103	181	56.9
어룡도 D/P	240	129	15	28	52.7
왕등도 D/P	-	128	15	33	44.4
울도 D/P	-	192	22	39	56.3
순죽도 D/P	-	573	65	118	55.5
평령도 D/P	-	86	10	26	37.6
초도 D/P	-	1,203	137	229	60.0
상화도 D/P	-	201	23	45	51.0
화장자도 D/P	-	213	24	-	-
내연력계	355,450	820,533	93,668	143,049	65.5
서인천 C/C	1,800,000	11,986,331	1,368,303	2,171,000	63.0
신인천 C/C	1,800,000	8,730,301	996,610	1,984,000	50.2
분당 C/C	922,064	3,821,264	436,217	1,011,090	43.1
일산 C/C	900,000	3,477,254	396,947	925,546	42.9
평택 C/C	480,000	1,473,711	168,232	532,000	31.6
보령 C/C	1,350,000	6,599,084	753,320	1,856,000	40.6
울산 C/C	1,200,000	7,118,606	812,626	1,382,531	58.8
한림 C/C	105,000	44,827	5,117	112,500	4.5
부산 C/C	1,800,000	11,797,246	1,346,718	2,194,000	61.4
인천 C/C	1,012,447	7,398,011	844,522	2,316,600	36.5
군산 C/C	718,400	5,012,388	572,190	846,762	67.6
영월 C/C	848,000	4,209,061	480,486	916,000	52.5

('11.1.1~12.31)

이 용 율 (%)	소내전력량 (MWh)	소내전력률 (%)	송전단전력량 (양수포함) (MWh)	Items	
				Net generation	Plants
Plant factor	Auxiliary use	Aux. use factor			
25.3	113	11.34	885	Gapado	D/P
30.0	71	11.28	560	Biando	D/P
16.9	74	20.73	282	Yeondo	D/P
42.0	286	8.65	3,026	Eocheongdo	D/P
23.5	376	12.19	2,711	Gaeyado	D/P
18.9	203	16.32	1,041	Yoiyeondo	D/P
20.8	197	-	1,442	Sabsido	D/P
-	-	-	-	Daemodo	D/P
49.2	429	10.48	3,667	Seungbongdo	D/P
35.1	78	10.56	659	Pungdo	D/P
10.4	46	20.87	173	Guido	D/P
36.9	275	11.36	2,148	Gageodo	D/P
14.3	85	15.12	477	Yeojado	D/P
14.1	47	15.76	251	Chudo	D/P
20.1	50	11.89	372	Maemuldo	D/P
6.5	43	30.98	95	Eoeudo	D/P
5.6	33	27.72	85	Suwoodo	D/P
41.2	69	7.97	797	Janggodo	D/P
23.0	116	19.20	488	Godaedo	D/P
12.6	39	14.87	225	Mungabdo	D/P
8.7	48	26.27	135	Seongnamdo	D/P
5.2	46	41.90	64	Dokgeodo	D/P
20.5	51	9.53	488	Hodo	D/P
14.6	62	20.16	246	Nokdo	D/P
11.5	136	17.98	618	Nakwoldo	D/P
14.7	43	13.83	267	Songido	D/P
8.0	51	30.20	118	Gujado	D/P
5.3	37	33.23	74	Seuldo	D/P
4.7	82	26.54	226	Sisando	D/P
34.4	161	17.79	742	Deukryangdo	D/P
6.2	39	30.43	90	Eoryongdo	D/P
-	44	33.99	85	Wangdeungdo	D/P
-	46	24.15	146	Wooldo	D/P
-	113	19.73	460	Sonjukdo	D/P
-	36	42.57	49	Pyeongdo	D/P
-	136	11.33	1,067	Chodo	D/P
-	44	21.66	157	Sanghwado	D/P
-	31	14.77	181	Whado	D/P
-	278	9.07	2,789	Jangjado	D/P
36.4	42,426	5.17	778,107	Total of internal combustion	
76.0	158,254	1.32	11,828,077	Seoincheon	C/C
55.4	259,661	2.97	8,470,640	Shinicheon	C/C
47.3	59,028	1.54	3,762,236	Bundang	C/C
44.1	61,730	1.78	3,415,525	Ilsan	C/C
35.0	15,441	1.05	1,458,270	Pyeongtaek	C/C
55.8	135,549	2.05	6,463,535	Boryeong	C/C
67.7	106,659	1.50	7,011,947	Ulsan	C/C
4.9	999	2.23	43,828	Hallim	C/C
74.8	213,525	1.81	11,583,721	Busan	C/C
83.4	167,156	2.26	7,230,855	Incheon	C/C
79.6	86,109	1.72	4,926,279	Gunsan	C/C
56.7	101,690	2.42	4,107,372	Yeongwol	C/C

### 3. 발전소별 발전실적 (7)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
* 포스코파워(타사)	2,949,200	10,864,470	1,240,236	2,993,934	41.4
* GS 안양( " )	450,000	1,912,012	218,266	530,000	41.2
* GS 부천( " )	450,000	1,815,867	207,291	415,000	49.9
* GS EPS 부곡( " )	1,033,750	5,878,503	671,062	1,141,289	58.8
울촌 C/C	525,500	2,733,347	312,026	585,235	53.3
광양 C/C	989,200	6,439,416	735,093	-	-
현대대산	465,800	167,685	19,142	-	-
복합화력계	19,799,361	101,479,384	11,584,405	20,136,828	57.5
양양양수풍력	3,000	4,958	566	2,897	19.5
한경풍력	21,000	46,658	5,326	20,314	26.2
성산풍력	20,000	49,704	5,674	19,436	29.2
고리풍력	750	596	68	616	11.0
영흥풍력	22,000	15,423	1,761	20,127	8.7
삼천포태양광	1,090	1,481	169	-	-
영흥태양광	1,000	1,212	138	812	17.0
서천태양광	1,230	1,513	173	1,053	16.4
보령태양광	571	654	75	-	-
제주화력태양광	50	57	7	-	-
태안태양광	120	130	15	99	15.0
삼랑진태양광	3,000	3,730	426	3,385	12.6
부산복합태양광	392	401	46	322	14.2
하동화력태양광	3,500	4,176	477	11,913	4.0
영월태양광	55	57	7	292	2.2
동해태양광	1,000	922	105	719	14.6
영광쏠라파크	3,000	3,529	403	2,801	14.4
예천양수태양광	2,000	2,839	324	1,850	17.5
당진태양광	1,003	1,329	152	-	-
행원소수력태양광	5.6	3	0	4	9.4
울산태양광	509	511	58	443	13.2
호남화력태양광	97	11	1	-	-
탕정공장태양광	1,200	738	84	949	8.9
부산신항태양광	116	60	7	93	7.4
서울태양광	1,301	552	63	1,098	5.7
하동변전소태양광	48	23	3	40	6.4
케이씨수산태양광	998	168	19	1,009	1.9
광양항태양광	2,293	-	-	-	-
분당연료전지	300	2,134	244	321	75.9
보령화력연료전지	300	2,087	238	276	86.3
일산연료전지	5,200	31,477	3,593	5,258	68.3
내병도태양(한전도서)	60	52	6	20	29.6
눌옥도태양(한전도서)	45	38	4	22	19.9

\* GS (구 LG) / POSCO POWER (구 한국종합에너지)

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력을 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	
				Plants	
42.1	183,317	1.69	10,681,153	* POSCO POWER	(Other co.)C/C
48.5	23,686	1.24	1,888,326	* Anyang	( " )C/C
46.1	39,991	2.20	1,775,876	* Bucheon	( " )C/C
64.9	84,112	1.43	5,794,391	* G S Bugog	( " )C/C
59.4	65,939	2.41	2,667,408	Yulchon	( " )C/C
74.3	-	-	6,439,416	Kwangyang	( " )C/C
4.1	-	-	167,685	Hyundai-Daesan	( " )C/C
58.5	1,762,846	1.74	99,716,538	Total of combined cycle	
18.9	22	0	4,935	Yangyang pumping-wind power	
25.4	459	0.98	46,198	Hankyeong-wind power	
28.4	494	0.99	49,210	Seongsan-wind	
9.1	47	8	548	Kori-wind power	
8.0	0	0	15,423	Seongsan-wind	
15.5	-	0	1,481	Samcheonpo solar	
13.8	154	13	1,058	Yeongheung solar	
14.0	0	0	1,513	Seocheon solar	
13.1	-	-	654	Boryeong solar	
13.1	-	-	57	Jeju solar	
12.4	-	-	130	Taean solar	
14.2	-	-	3,730	Samlangjin solar	
11.7	0	0	401	Busan C/C solar	
13.6	1	0	4,175	Hadong solar	
11.9	-	-	57	Yeongwol solar	
10.5	0	0	922	Donghae solar	
13.4	257	7.30	3,272	Yeonggwang solar	
16.2	-	0	2,839	Yeoicheon solar	
15.1	0	0	1,329	Dangjin solar	
7	0	-	3	haengwon solar	
-	0	-	511	Ulsan solar	
-	11	-		Honam thermal solar	
-	25	-	713	Tangjeong solar	
-	-	-	60	Busan sinhang solar	
-	0	-	552	Seoul solar	
-	0	-	23	Hadong S/S solar	
-	1	-	167	KC susan solar	
-	-	-	-	Kwangyanghang solar	
81.2	103	4.83	2,031	Bundang fuel cell	
79.4	-	-	2,087	Boryeong fuel cell	
69.1	1,009	3.21	30,468	Ilsan fuel cell	
9.9	15	29.17	37	Naebyeong solar	
9.7	15	40.39	23	Nulokdo solar	

\* GS (ex - LG) / POSCO POWER (ex - KIECO)

### 3. 발전소별 발전실적 (8)

('11.1.1~12.31) Power generating results by plant

구 분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
당사도태양(한전도서)	60	94	11	26	41.1
황제도태양(한전도서)	60	57	7	14	46.6
육도태양(한전도서)	95	186	21	48	44.1
고사도태양(한전도서)	45	33	4	9	41.6
을도태양(한전도서)	35	19	2	7	31.2
평사도태양(한전도서)	45	35	4	11	36.8
하화도태양(한전도서)	-	105	12	26	46.3
한전대체계	97,574	177,754	20,292	91,423	22.2
고리 #1	587,000	4,644,468	530,190	611,000	86.8
#2	650,000	5,844,296	667,157	686,000	97.3
#3	950,000	8,277,031	944,867	1,056,000	89.5
#4	950,000	8,476,737	967,664	1,050,000	92.2
계	3,137,000	27,242,532	3,109,878	3,394,000	91.6
신고리 #1	1,000,000	8,279,687	945,170	1,061,000	89.1
계	1,000,000	8,279,687	945,170	1,061,000	89.1
월성 #1	678,683	2,927,603	334,201	742,101	-
#2	700,000	6,368,099	726,952	742,102	98.0
#3	700,000	6,223,819	710,482	741,650	95.8
#4	700,000	6,031,004	688,471	740,447	93.0
계	2,778,683	21,550,526	2,460,106	2,920,267	84.2
영광 #1	950,000	8,719,488	995,375	1,003,231	99.2
#2	950,000	7,882,236	899,799	1,043,031	86.3
#3	1,000,000	8,342,676	952,360	1,058,000	90.0
#4	1,000,000	8,311,138	948,760	1,059,000	89.6
#5	1,000,000	8,671,547	989,903	1,062,608	93.2
#6	1,000,000	8,570,380	978,354	1,060,166	92.3
계	5,900,000	50,497,465	5,764,551	6,273,508	91.9
울진 #1	950,000	8,599,546	981,683	991,000	99.1
#2	950,000	6,898,105	787,455	1,012,000	77.8
#3	1,000,000	8,292,364	946,617	1,055,000	89.7
#4	1,000,000	6,348,472	724,711	1,060,000	68.4
#5	1,000,000	8,484,593	968,561	1,058,000	91.5
#6	1,000,000	8,529,817	973,723	1,057,000	92.1
계	5,900,000	47,152,897	5,382,751	6,211,000	86.7
원자력계	18,715,683	154,723,107	17,662,455	19,567,957	90.3
한전, 자회사계	67,005,570	443,409,235	50,617,493	66,729,000	75.9
타사계	7,951,987	32,826,997	3,747,374	16,940,000	22.1
합계	74,957,557	476,236,231	54,364,867	73,137,000	74.3
상용자발전사업자	집단에너지계	2,623,224	12,429,067	1,418,843	-
종태양광	력	339,793	740,715	84,557	-
폐기물소각	기계	529,614	1,323,542	151,089	-
바이오	생가스	60,147	62,605	7,147	-
매립가스	연료전지	3,288	10,008	1,143	-
부생가스	대체소계	692,300	4,640,630	529,752	-
매립가스	기타상용자	85,644	400,193	45,684	-
연료전지	총계	50,300	236,951	27,049	-
대체소계		1,761,086	7,414,645	846,421	-
기타상용자		-	813,434	92,858	-
총계		79,341,867	496,893,377	56,722,988	73,137,000
					77.6

1) 상용자가 발전사업자 한전의 구입전력량만으로 산출(집단 및 대체에너지, 기타)

('11.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력을 (%) Aux. use factor	송전단전력량 (양수포함) (MWh) Net generation	Items	Plants
17.8	8	8.57	86	Dangsado solar	
10.9	15	26.92	42	Hwangjedo solar	
22.3	4	2.21	181	Yukdo solar	
8.3	7	21.99	26	Gosado solar	
6.2	10	53.19	9	Yuldo solar	
9.0	3	7.63	33	Pyeongsado solar	
-	17	16.47	88	Hahwado solar	
20.8	2,680	1.51	175,073	Alternative energy sub-total	
87.9	248,210	5.34	4,396,258	Kori	#1
98.8	346,506	5.93	5,497,790		#2
90.7	251,903	3.04	8,025,128		#3
92.9	265,838	3.14	8,210,899		#4
92.5	1,112,457	4.08	26,130,075		Total
109	412,657	5	7,867,030	Sinkori	#1
109	412,657	5	7,867,030		Total
53.7	106,411	4	2,821,193	Wolsong	#1
99.6	243,379	3.82	6,124,720		#2
97.5	209,448	3.37	6,014,371		#3
94.3	202,154	3.35	5,828,850		#4
87.5	761,391	3.53	20,789,134		Total
101.1	301,790	3.46	8,417,698	Yeonggwang	#1
92.0	281,616	3.57	7,600,620		#2
91.6	398,572	4.78	7,944,104		#3
91.2	387,934	4.67	7,923,204		#4
94.6	487,797	5.63	8,183,750		#5
93.2	479,743	5.60	8,090,637		#6
93.9	2,337,452	4.63	48,160,012		Total
99.7	393,447	4.58	8,206,099	Ulchin	#1
80.0	327,038	4.74	6,571,067		#2
90.4	419,322	5.06	7,873,042		#3
69.4	324,760	5.12	6,023,712		#4
92.4	431,870	5.09	8,052,723		#5
92.9	439,250	5.15	8,090,567		#6
87.4	2,335,687	4.95	44,817,210		Total
90.7	6,959,645	4.50	147,763,461	Total of nuclear	
76.6	19,253,099	4.34	424,156,136	Total of KEPCO & Subsidiaries	
53.8	436,089	1.33	32,390,908	Total of Other Co.	
73.9	19,689,187	4.13	456,547,044	Sub-total	
-	-	-	12,429,067	Group energy total	
-	-	-	740,715	Wind power	
-	-	-	1,323,542	Solar	
-	-	-	62,605	Waste-burnup	
-	-	-	10,008	Bio	
-	-	-	4,640,630	Product-gas	
-	-	-	400,193	Landfill-gas	
-	-	-	236,951	Fuel cell	
-	-	-	7,414,645	Sub-total	
-	-	-	813,434	Other	
73.9	19,689,188	3.96	477,204,188	Total	

1) Computed based on the purchased power only(Non-utility generation in common use)

## 4. 회사별 설비 및 발전 현황

(단위:kW,MWh) Generating facilities & results by Company

구 분 Items	수 력 Hydro			석 탄 화 력 Coal			유류 및 가스 Heavy Oil &	
	발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity
남동발전 KOSEP	삼천포소수 영흥소수력	4,740 7,599	29,719 15,780	영동 #1,2 삼천포#1~6 영 흥#1,2 영 흥#3,4	325,000 3,240,000 1,600,000 1,740,000	2,514,777 26,265,823 13,569,785 13,603,558	여 수 #1,2	528,600
중부발전 KOMIPO	보령소수력	7,500	18,469	서 천 #1,2 보 령 #1~8	400,000 4,000,000	3,018,901 33,309,057	제 주 #2~3 서 울 #4~5 인 천 #1~2	150,000 387,500 500,000
서부발전 KOWEPO	태안소수력	2,200	4,147	태 안 #1~8	4,000,000	33,725,149	평 택 #1~4	1,400,000
남부발전 KOSPO	행원소수력	60	104	하 동 #1~8	4,000,000	33,550,373	영 남 #1,2 남제주	400,000 200,000
동서발전 KEWESPO	수력	4,998	30,271	동 해 #1,2 호 남 #1,2 당 진 #1~8	400,000 500,000 4,000,000	2,970,304 4,004,550 32,983,568	울 산 #1~6	1,800,000
수력원자력 KHNP	화 천 춘 천 의 암 청 평 팔 당 괴 산 섬 진 강 보 성 강 안 흥 강 릉	108,000 62,280 45,000 139,600 120,000 2,600 34,800 4,500 480 82,000	275,720 155,300 162,276 264,409 441,742 10,664 139,486 22,226 1,882 -	무주양수 양양양수 삼랑진양수 청송양수 청평양수 신청양수 예천양수 산청소수력 무주소수력 양양소수력	600,000 1,000,000 600,000 600,000 400,000 700,000 800,000 995 400 1,400	513,560 733,202 417,087 577,601 150,152 622,980 218,404 2,939 542 2,187		
한국전력 KEPCO (음영부분)	추산(수력)	700	4,105					
한전 및 자회사 계 Sub total	일반수력 양 수	629,852 4,700,000	1,581,969 3,232,985	무 연 탄 유 연 탄	1,125,000 23,080,000	8,503,983 191,011,864	유류 & L N G	4,478,600 887,500
	계	5,329,852	4,814,954	계	24,205,000	199,515,847	계	5,366,100
타사 Others	수자원 수자원소수력 기타소수력	1,000,600 42,274 45,663	2,739,934 95,495 180,269				집단에너지 기타상용자가	2,623,224 -
	계	1,088,537	3,015,698				계	2,623,224
발전원별 계 Total		6,418,389	7,830,652		24,205,000	199,515,847		7,989,324

\* 2001. 4. 2 발전부문 분리

\* 상용 자가발전 제외분임. Excludes non-utility & non-utility generation in common use.

화력 LNG	내연 및 복합 C/C & Internal Combustion			원자력 및 대체 Nuclear & Alternative			발전량 계 Total	
	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation	(용량 계) (Capacity Total)
1,301,869	(복합) 분당 C/C	922,064	3,821,264	삼천포태양광 영흥태양광 분당연료전지 영흥풍력 예천양수태양 탕정공장태양	1,090 1,000 300 22,000 2,000 1,200	1,481 1,212 2,134 15,423 2,839 738	61,146,402 (8,395,593)	12.3 (10.6)
734,426 1,072,992 1,159,626	제주 G/T#3 제주 내연 (복합) 보령 C/C 인천 C/C	55,000 80,000 1,350,000 1,012,447	1,058 493,957 6,599,084 7,398,011	양양풍력 서천태양광 보령태양광 제주태양광 보령연료전지 서울태양광	3,000 1,230 571 50 300 1,301	4,958 1,513 654 57 2,087 552	53,815,402 (7,948,899)	10.8 (10.0)
2,609,213	(복합)군산C/C 평택 C/C 서인천 C/C	718,400 480,000 1,800,000	5,012,388 1,473,711 11,986,331	태안태양광 삼랑진태양광	120 3,000	130 3,730	54,814,801 (8,403,720)	11.0 (10.6)
511,900 1,280,415	남제주 D/P (복합)영월C/C 신인천 C/C 한림 C/C 부산 C/C	40,000 848,000 1,800,000 105,000 1,800,000	108,297 4,209,061 8,730,301 44,827 11,797,246	영월태양 한경, 성산풍력 부산복합태양 하동화력태양 행원소수력태 부산신항태양 하동변전소태 계이씨수산태	55 41,000 392 3,500 6 116 48 998	57 96,362 401 4,176 3 60 23 168	60,333,776 (9,239,175)	12.1 (11.6)
3,018,516	(복합) 일산 C/C 울산 C/C	900,000 1,200,000	3,477,254 7,118,606	당진태양 동해태양광 울산태양광 호남화력태양 광양항태양광 일산연료	1,003 1,000 509 97 2,293 5,200	1,329 922 511 11 0 31,477	53,637,320 (8,815,100)	10.8 (11.1)
				(원자력) 고리#1~4 신고리#1,2 월성#1~4 영광#1~6 울진#1~6 (대체)고리풍력 영광솔라파크	3,137,000 1,000,000 2,778,683 5,900,000 5,900,000 750 3,000	27,242,532 8,279,687 21,550,526 50,497,465 47,152,897 596 3,529	159,439,590 (24,021,488)	32.1 (30.3)
	한전도서내연	180,450	217,221	한전태양광	445	619	(181,595)	(0.2)
9,456,338 2,232,618	내연력 복합	355,450 12,935,911	820,533 71,668,085	원자력 대체에너지	18,715,683 97,574	154,723,107 7,592,399	443,409,236	89.2
11,688,956	계	13,291,361	72,488,618	계	18,813,257	162,315,506	(67,005,570)	(84.5)
12,429,067 813,434	POSCO파워 GS EPS GS안양C/C GS부천C/C 울촌G/T 광양C/C 현대대산	2,949,200 1,033,750 450,000 450,000 525,500 989,200 465,800	10,864,470 5,878,503 1,912,012 1,815,867 2,733,347 6,439,416 167,685	대체에너지	1,761,086	7,414,645		
13,242,500	계	6,863,450	29,811,298	계	1,761,086	7,414,644	53,484,140 (12,336,297)	10.8 (15.5)
24,931,457		20,154,811	102,299,916		20,574,343	169,730,150	496,893,377 (79,341,867)	100.0 (100.0)

\* On Apr. 2, 2001, KEPCO's power generation division was divided into 6 generation subsidiary companies and a Power Exchange.

## 5. 발전연료 사용량 추이

Trends in fuel Consumption

구 분 연도별	중 유 Heavy oil				경 유 Diesel oil	
	B.C 유 (kl) Bunker C	기타중유 (kl) Others	사 용 량 계 (kl) Total consumption	발열량 (kcal/l) Caloric-value	사 용 량 (kl) Consumption	발열량 (kcal/l) Caloric-value
1961	37,382	-	37,382	9,493	746	9,059
1996	6,095,098	1,447,450 (653,260)	7,542,549 (653,260)	9,701	1,303,167 (308,934)	9,784
1997	5,513,752	2,795,692 (1,390,490)	8,309,444 (1,390,490)	9,834	1,571,032 (235,078)	9,121
1998	2,276,328	822,384 (465,409)	3,098,713 (465,409)	9,818	305,507 (22,501)	9,101
1999	2,730,231	292,767 (2,194)	3,022,998 (2,194)	9,833	325,424 (220)	9,078
2000	4,297,082	597,913	4,894,994	9,846	191,073 (6,095)	9,045
2001	4,926,551	570,701	5,497,251	9,899	107,130 (4,905)	9,033
2002	4,455,276	72,649	4,527,925	9,940	277,032 (57,977)	9,029
2003	4,267,870	148,614	4,416,484	9,816	638,305 (170,330)	9,042
2004	3,681,635	518,815	4,200,449	9,610	139,386 (596)	8,982
2005	3,578,026	472,999	4,051,023	9,629	116,558	8,994
2006	3,547,138	86,265	3,633,402	9,897	156,075 (215)	8,907
2007	3,899,079	0	3,899,079	9,972	119,848	8,908
2008	2,034,572	28	2,034,600	9,965	106,928	8,828
2009	2,943,672	0	2,943,672	9,940	112,178	8,743
2010	2,693,701	16,958	2,710,659	9,975	113,687	8,782
2011	2,050,365	0	2,050,365	9,996	123,832	8,770
1	436,388	0	436,388	9,989	11,438	8,934
2	196,186	0	196,186	9,997	10,595	8,584
3	276,848	0	276,848	10,047	10,896	8,858
4	103,492	0	103,492	9,990	8,760	8,783
5	64,492	0	64,492	9,913	12,513	8,305
6	154,619	0	154,619	9,977	12,464	8,762
7	98,829	0	98,829	9,943	10,434	8,710
8	92,638	0	92,638	9,943	8,107	8,939
9	170,884	0	170,884	10,009	9,891	8,716
10	83,595	0	83,595	9,971	8,078	9,130
11	117,146	0	117,146	9,993	11,391	8,906
12	255,250	0	255,250	10,028	9,264	8,993

\* ( ) 내는 타사 사용량임 Figures in ( ) are included the above line as other co. consumption.

무연탄 Anthracite coal		유연탄 Bituminous coal		L N G		사용열량 합계 (10 <sup>9</sup> kcal) Total of Caloric- value	Items	During
사용량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value	사용량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value	사용량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value			
803,124	4,641	24,680	6,700					1961
2,513,738	4,593	18,947,701	6,117	4,622,368		13,043	283,020	1996
2,304,699	4,625	22,707,042	6,127	5,376,576		13,047	315,991	1997
2,527,301	4,644	25,679,481	6,065	4,189,314		13,057	255,376	1998
2,596,945	4,627	28,215,579	5,985	4,766,708		13,056	275,801	1999
2,848,015	4,541	33,368,518	6,057	4,491,013 (417,523)		13,031	323,482	2000
2,875,286	4,562	37,919,366	6,065	4,790,808 (919,630)		13,027	360,894	2001
2,750,542	4,583	40,311,221	6,127	5,983,120 (1,232,627)		13,023	385,027	2002
2,879,676	4,621	41,577,715	6,068	5,995,742 (1,094,504)		13,012	392,784	2003
2,411,721	4,688	45,514,971	5,897	8,220,852 (1,264,779)		13,012	428,316	2004
2,359,492	4,629	47,937,342	5,904	8,537,926 (1,460,670)		13,026	445,224	2005
2,345,136	4,560	50,258,470	5,868	9,466,086 (1,569,643)		13,011	466,474	2006
2,392,411	4,545	55,949,781	5,871	10,828,751 (1,883,402)		13,034	520,452	2007
2,534,021	4,755	63,238,083	5,817	10,515,372 (2,239,872)		13,043	538,041	2008
2,690,328	4,591	71,092,318	5,761	8,596,732 (1,660,494)		13,220	565,830	2009
2,404,050	4,456	76,402,994	5,555	12,914,479 (2,601,449)		13,052	631,699	2010
1,658,801	4,723	79,854,167	5,433	13,609,052 (3,063,301)		13,221	645,743	2011
151,290	4,608	7,139,974	5,448	1,759,973 (382,946)		13,057	67,034	1
146,259	4,753	6,111,181	5,449	1,149,623 (259,513)		13,041	51,036	2
163,364	4,930	6,383,030	5,456	1,382,452 (299,780)		13,059	56,563	3
134,392	4,940	5,775,809	5,415	1,197,185 (265,684)		13,169	48,818	4
107,875	4,858	5,974,989	5,434	925,620 (226,350)		13,372	46,113	5
149,388	4,774	6,213,147	5,435	1,039,323 (207,758)		13,493	50,159	6
174,542	4,675	7,254,994	5,450	927,774 (195,689)		13,527	53,978	7
150,288	4,603	7,298,436	5,453	1,060,707 (385,051)		10,893	53,037	8
116,507	4,563	6,618,911	5,463	940,662 (166,421)		16,633	54,131	9
122,976	4,661	7,019,348	5,514	832,528 (172,680)		13,053	51,050	10
80,222	4,598	6,914,643	5,484	975,127 (200,434)		13,050	52,287	11
161,698	4,662	7,149,705	5,543	1,418,080 (300,997)		13,051	61,537	12

## 6. 발전소별 연료 사용 실적 (1)

('11.1.1~12.31) Fuel consumption by plant

구 분 발전소별	사 용 량 consumption				발 열 량 Caloric value		
	석 탄 (t) Coal	중 유 (kl) Heavy oil	경 유 (kl) Diesel oil	L. N. G (t)	석 탄 (kcal/kg) Coal	중 유 (kcal/l) Heavy oil	경 유 (kcal/l) Diesel oil
영 동 #1	117,132	1,146	114	-	4,749	10,015	8,892
	199,556	5,075	123	-	4,865	9,999	8,966
동 해 #1	383,123	-	1,151	-	4,746	-	8,846
	398,234	-	772	-	4,779	-	8,853
군 산 #1	-	-	-	-	-	-	-
서 천 #1	265,001	22,169	42	-	4,596	10,051	8,847
	295,755	23,388	42	-	4,625	10,049	8,847
국 내 탄 계	1,658,801	51,778	2,243	-	4,723	10,044	8,857
호 남 #1	953,215	177	112	-	5,524	9,810	8,860
	879,567	1,210	214	-	5,525	9,810	8,849
동 해 #1	278,769	-	1,151	-	5,501	-	-
	304,209	-	772	-	5,508	-	-
영 동 #1	361,175	-	-	-	5,226	-	-
	539,843	-	-	-	5,152	-	-
서 천 #1	368,515	-	-	-	5,928	-	-
	358,012	-	-	-	5,917	-	-
삼 천 포 #1	1,948,868	-	475	-	5,480	-	8,178
	1,970,242	-	262	-	5,465	-	8,898
	1,986,001	-	105	-	5,464	-	10,576
	1,690,312	-	1,035	-	5,451	-	9,178
	1,838,960	-	560	-	4,807	-	8,898
	1,846,398	-	251	-	4,815	-	8,898
영 흥 #1	2,699,097	-	1,340	-	5,500	-	8,851
	2,683,956	-	1,759	-	5,502	-	9,296
	2,880,873	-	651	-	5,506	-	8,853
	2,543,874	-	2,002	-	5,467	-	9,105
보 령 #1	1,631,824	-	683	-	5,400	-	8,755
	1,862,926	-	514	-	5,399	-	8,876
	1,773,564	-	244	-	5,408	-	8,740
	1,622,205	-	537	-	5,409	-	8,740
	1,671,582	-	1,308	-	5,405	-	8,745
	1,514,320	-	3,349	-	5,428	-	8,749
	1,595,059	-	703	-	5,460	-	8,743
	1,684,495	-	608	-	5,466	-	8,786

('11. 1. 1 ~ 12.31)

L. N. G (kcal/kg)	사 용 열 량 Caloric Consumption ( $10^6$ kcal)					Items	Plants
	석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total		
-	556,285	11,476	1,010	-	568,771	Yeongdong	#1
-	970,882	50,741	1,104	-	1,022,727		#2
-	1,818,203	-	10,182	-	1,828,385	Donghae	#1
-	1,903,299	-	6,833	-	1,910,132		#2
-	-	-	-	-	-	Kunsan	#1
-	1,217,898	222,817	367	-	1,441,083	Seocheon	#1
-	1,367,804	235,019	368	-	1,603,192		#2
-	7,834,371	520,054	19,864	-	8,374,289		
-	5,265,851	1,739	995	-	5,268,585	Honam	#1
-	4,859,561	11,872	1,891	-	4,873,324		#2
-	1,533,535	-	-	-	1,533,535	Donghae	#1
-	1,675,569	-	-	-	1,675,569		#2
-	1,887,469	-	-	-	1,887,469	Yeongdong	#1
-	2,781,150	-	-	-	2,781,150		#2
-	2,184,682	-	-	-	2,184,682	Seocheon	#1
-	2,118,419	-	-	-	2,118,419		#2
-	10,679,748	-	3,885	-	10,683,633	Samchonpo	#1
-	10,767,867	-	2,336	-	10,770,203		#2
-	10,852,435	-	1,108	-	10,853,543		#3
-	9,214,480	-	9,497	-	9,223,977		#4
-	8,839,976	-	4,981	-	8,844,958		#5
-	8,891,223	-	2,231	-	8,893,454		#6
-	14,843,943	-	11,862	-	14,855,805	Yeonghung	#1
-	14,768,043	-	16,353	-	14,784,396		#2
-	15,861,516	-	5,761	-	15,867,278		#3
-	13,908,317	-	18,231	-	13,926,548		#4
-	8,811,553	-	5,982	-	8,817,535	Boryeong	#1
-	10,057,616	-	4,561	-	10,062,177		#2
-	9,590,663	-	2,131	-	9,592,794		#3
-	8,775,043	-	4,689	-	8,779,732		#4
-	9,034,648	-	11,436	-	9,046,084		#5
-	8,219,561	-	29,301	-	8,248,862		#6
-	8,709,818	-	6,143	-	8,715,961		#7
-	9,207,971	-	5,342	-	9,213,313		#8

## 6. 발전소별 연료 사용 실적 (2)

('11.1.1~12.31) Fuel consumption by plant

구 분 발전소별	사 용 량 consumption				발 열 량 Caloric value			
	석 탄 (t) Coal	중 유 (kl) Heavy oil	경 유 (kl) Diesel oil	L. N. G (t)	석 탄 (kcal/kg) Coal	중 유 (kcal/l) Heavy oil	경 유 (kcal/l) Diesel oil	
태 안	#1	1,718,777	-	1,054	-	5,494	-	8,874
	#2	1,686,651	-	968	-	5,490	-	8,874
	#3	1,732,630	-	917	-	5,484	-	8,874
	#4	1,579,296	-	1,132	-	5,493	-	8,874
	#5	1,659,427	-	804	-	5,670	-	8,874
	#6	1,660,393	-	766	-	5,669	-	8,874
	#7	1,714,300	-	423	-	5,500	-	8,874
	#8	1,676,411	-	620	-	5,493	-	8,874
하 동	#1	1,800,151	-	193	-	5,441	-	8,903
	#2	1,697,458	-	372	-	5,435	-	9,463
	#3	1,690,815	-	267	-	5,440	-	8,744
	#4	1,819,283	-	132	-	5,436	-	8,784
	#5	1,679,060	-	522	-	5,444	-	8,817
	#6	1,801,037	-	156	-	5,444	-	8,864
	#7	1,547,047	-	583	-	5,736	-	8,784
	#8	1,361,806	2,010	-	5,740	-	8,908	
당 진	#1	1,656,563	-	953	-	5,311	-	8,779
	#2	1,644,619	-	704	-	5,318	-	8,744
	#3	1,874,479	-	-	-	5,316	-	-
	#4	1,880,478	-	71	-	5,318	-	8,785
	#5	1,601,149	-	337	-	5,388	-	8,747
	#6	1,590,289	-	861	-	5,371	-	8,797
	#7	1,683,155	-	545	-	5,379	-	8,993
	#8	1,611,032	-	699	-	5,375	-	8,948
유 연 탄 계	79,854,167	1,388	33,722	-	5,433	9,810	8,380	
석 탄 계	81,512,968	53,165	35,965	-	5,418	10,038	8,410	
영 남	#1	-	66,130	903	-	-	10,203	8,806
	#2	-	57,618	481	-	-	10,216	8,808
여 수	#1	-	76,903	452	-	-	10,253	8,774
	#2	-	-	6,167	-	-	-	8,751
평 택	#1	-	139,046	85	26,800	-	10,035	8,975
	#2	-	119,917	75	34,935	-	10,022	8,981
	#3	-	125,416	39	17,618	-	10,075	8,987
	#4	-	108,044	47	20,060	-	10,008	8,976

('11. 1. 1 ~ 12.31)

L. N. G (kcal/kg)	사 용 열 량 Caloric Consumption ( $10^6$ kcal)					Items	Plants
	석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total		
-	9,442,267	-	9,354	-	9,451,621	Taean	#1
-	9,260,210	-	8,587	-	9,268,797		#2
-	9,502,464	-	8,134	-	9,510,598		#3
-	8,675,303	-	10,042	-	8,685,345		#4
-	9,408,626	-	7,135	-	9,415,761		#5
-	9,412,577	-	6,796	-	9,419,373		#6
-	9,427,830	-	3,754	-	9,431,584		#7
-	9,208,545	-	5,504	-	9,214,049		#8
-	9,793,754	-	1,715	-	9,795,469	Hadong	#1
-	9,225,269	-	3,524	-	9,228,793		#2
-	9,198,713	-	2,339	-	9,201,052		#3
-	9,890,045	-	1,159	-	9,891,203		#4
-	9,141,599	-	4,605	-	9,146,204		#5
-	9,805,731	-	1,380	-	9,807,111		#6
-	8,874,127	-	5,122	-	8,879,249		#7
-	7,816,139	-	17,903	-	7,834,042		#8
-	8,798,751	-	8,364	-	8,807,115	Dangjin	#1
-	8,745,451	-	6,153	-	8,751,604		#2
-	9,964,262	-	-	-	9,964,262		#3
-	10,001,258	-	624	-	10,001,882		#4
-	8,627,771	-	2,948	-	8,630,720		#5
-	8,541,287	-	7,576	-	8,548,862		#6
-	9,053,865	-	4,904	-	9,058,769		#7
-	8,658,811	-	6,255	-	8,665,066		#8
-	433,815,313	13,612	282,591	-	434,111,516		
-	441,649,684	533,665	302,455	-	442,485,805	Total of coal	
-	-	674,732	7,952	-	682,683	Yeongnam	#1
-	-	588,631	4,240	-	592,871		#2
-	-	788,469	3,967	-	792,436	Yeosu	#1
-	-	-	53,968	-	53,968		#2
13,831	-	1,395,358	762	370,671	1,766,791	Pyongtaek	#1
12,773	-	1,201,839	675	446,223	1,648,736		#2
13,077	-	1,263,550	349	230,402	1,494,301		#3
13,305	-	1,081,333	418	266,887	1,348,638		#4

## 6. 발전소별 연료 사용 실적 (3)

('11.1.1~12.31) Fuel consumption by plant

구 분 발전소별	사 용 량 consumption				발 열 량 Caloric value		
	석 탄 (t) Coal	중 유 (kl) Heavy oil	경 유 (kl) Diesel oil	L. N. G (t)	석 탄 (kcal/kg) Coal	중 유 (kcal/l) Heavy oil	경 유 (kcal/l) Diesel oil
남제주 #1	-	-	-	-	-	-	-
#2	-	-	-	-	-	-	-
#3	-	141,259	116	-	-	9,887	8,880
#4	-	161,171	52	-	-	9,884	8,949
울산 #1	-	65,421	320	-	-	9,894	8,794
#2	-	60,052	271	-	-	9,905	8,795
#3	-	71,455	231	-	-	9,904	8,795
#4	-	141,246	2,447	-	-	10,028	8,790
#5	-	195,802	3,498	-	-	10,028	8,800
#6	-	172,458	1,274	-	-	10,034	8,790
제주 #1	-	-	-	-	-	-	-
#2	-	78,003	128	-	-	9,885	3,391
#3	-	96,861	75	-	-	9,886	7,633
중유계	-	1,876,803	16,662	99,412	-	10,002	8,736
*서울 #4	-	-	-	67,400	-	-	-
#5	-	-	0	145,131	-	-	9,070
인천 #1	-	-	-	105,615	-	-	-
#2	-	-	-	112,296	-	-	-
#3	-	-	-	-	-	-	-
#4	-	-	-	-	-	-	-
가스계	-	-	0	430,443	-	-	9,070
기력계	81,512,968	1,929,968	52,627	529,855	-	10,003	8,513
남제주 D/P	-	22,894	381	-	-	9,849	9,005
울릉도 D/P	-	-	12,595	-	-	-	8,944
제주 G/T	-	-	552	-	-	-	8,950
제주내연	-	97,504	-	-	-	9,890	-
흑산도 D/P	-	-	3,803	-	-	-	8,942
추자도 D/P	-	-	4,195	-	-	-	8,960
거문도 D/P	-	-	2,931	-	-	-	8,960
덕적도 D/P	-	-	2,288	-	-	-	8,983
위도 D/P	-	-	1,386	-	-	-	8,927
조도 D/P	-	-	1,958	-	-	-	8,927
백령도 D/P	-	-	10,145	-	-	-	8,977
대청도 D/P	-	-	2,033	-	-	-	9,008
소청도 D/P	-	-	899	-	-	-	8,968
연평도 D/P	-	-	3,736	-	-	-	8,969
자월도 D/P	-	-	723	-	-	-	8,988
흑도 D/P	-	-	1,012	-	-	-	8,981
비양도 D/P	-	-	116	-	-	-	8,939
여서도 D/P	-	-	109	-	-	-	8,915
가파도 D/P	-	-	289	-	-	-	8,939
덕우도 D/P	-	-	149	-	-	-	8,922
신시도 D/P	-	-	-	-	-	-	-
비안도 D/P	-	-	280	-	-	-	8,962
연도 D/P	-	-	129	-	-	-	8,964
어천도 D/P	-	-	901	-	-	-	8,995
장자도 D/P	-	-	837	-	-	-	8,974
개야도 D/P	-	-	831	-	-	-	8,999
외연도 D/P	-	-	357	-	-	-	8,978
삽시도 D/P	-	-	450	-	-	-	8,963
승봉도 D/P	-	-	1,080	-	-	-	8,990
풍도 D/P	-	-	251	-	-	-	8,978
가의도 D/P	-	-	94	-	-	-	8,965

('11. 1. 1 ~ 12.31)

L. N. G (kcal/kg)	사 용 열 량 Caloric Consumption ( $10^6$ kcal)					Items Plants
	석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
-	-	-	-	-	-	Namjeju #1
-	-	-	-	-	-	#2
-	-	1,396,583	1,031	-	1,397,614	#3
-	-	1,592,967	469	-	1,593,436	#4
-	-	647,283	2,815	-	650,098	Ulsan #1
-	-	594,848	2,387	-	597,235	#2
-	-	707,708	2,034	-	709,741	#3
-	-	1,416,452	21,508	-	1,437,960	#4
-	-	1,963,463	30,783	-	1,994,246	#5
-	-	1,730,526	11,199	-	1,741,725	#6
-	-	-	-	-	-	Jeju #1
-	-	771,032	435	-	771,467	#2
-	-	957,535	570	-	958,105	#3
13,220	-	18,772,310	145,560	1,314,183	20,232,052	Total of heavy oil
13,053	-	-	-	879,751	879,751	Seoul #4
13,053	-	-	4	1,894,404	1,894,408	#5
13,051	-	-	-	1,378,385	1,378,385	Incheon #1
13,051	-	-	-	1,465,564	1,465,564	#2
-	-	-	-	-	-	#3
-	-	-	-	-	-	#4
13,052	-	-	4	5,618,104	5,618,108	Total of L N G
13,083	441,649,684	19,305,975	448,019	6,932,287	468,335,964	Total of steam
-	-	225,485	3,429	-	228,914	Namjeju D/P
-	-	-	112,655	-	112,655	Ulleungdo D/P
-	-	-	4,936	-	4,936	Jeju G/T
-	-	964,280	-	-	964,280	Jeju D/P
-	-	-	34,003	-	34,003	Heuksando D/P
-	-	-	37,589	-	37,589	Chujado D/P
-	-	-	26,263	-	26,263	Geomundo D/P
-	-	-	20,548	-	20,548	Deokjeokdo D/P
-	-	-	12,371	-	12,371	Wido D/P
-	-	-	17,478	-	17,478	Jodo D/P
-	-	-	91,066	-	91,066	Baekryeongdo D/P
-	-	-	18,317	-	18,317	Daecheongdo D/P
-	-	-	8,062	-	8,062	Socheongdo D/P
-	-	-	33,511	-	33,511	Yeonpyeongdo D/P
-	-	-	6,501	-	6,501	Jawoldo D/P
-	-	-	9,092	-	9,092	Hongdo D/P
-	-	-	1,036	-	1,036	Biyangdo D/P
-	-	-	970	-	970	Yeoseodo D/P
-	-	-	2,586	-	2,586	Gapado D/P
-	-	-	1,328	-	1,328	Deokwoodo D/P
-	-	-	-	-	-	Sinsido D/P
-	-	-	2,511	-	2,511	Biando D/P
-	-	-	1,157	-	1,157	yeondo D/P
-	-	-	8,100	-	8,100	Yeocheongdo D/P
-	-	-	7,508	-	7,508	Jangjado D/P
-	-	-	7,479	-	7,479	Gaeyado D/P
-	-	-	3,202	-	3,202	Yoiyeondo D/P
-	-	-	4,036	-	4,036	Sabsido D/P
-	-	-	9,710	-	9,710	Seungbongdo D/P
-	-	-	2,251	-	2,251	Pungdo D/P
-	-	-	840	-	840	Gauido D/P

## 6. 발전소별 연료 사용 실적 (4)

('11.1.1~12.31) Fuel consumption by plant

구 분 발전소별	사 용 량 consumption				발 열 량 Caloric value			
	석 탄 (t) Coal	중 유 (kl) Heavy oil	경 유 (kl) Diesel oil	L. N. G (t)	석 탄 (kcal/kg) Coal	중 유 (kcal/l) Heavy oil	경 유 (kcal/l) Diesel oil	
가 거 도 D/P	-	-	715	-	-	-	-	8,975
여 자 도 D/P	-	-	169	-	-	-	-	8,943
추 도 D/P	-	-	136	-	-	-	-	8,928
어 의 도 D/P	-	-	52	-	-	-	-	8,896
수 우 도 D/P	-	-	48	-	-	-	-	8,820
매 물 도 D/P	-	-	167	-	-	-	-	8,933
문 갑 도 D/P	-	-	103	-	-	-	-	8,907
장 고 도 D/P	-	-	269	-	-	-	-	8,985
고 대 도 D/P	-	-	189	-	-	-	-	8,928
성 남 도 D/P	-	-	64	-	-	-	-	8,924
독 거 도 D/P	-	-	47	-	-	-	-	8,910
구 자 도 D/P	-	-	83	-	-	-	-	8,906
슬 이 도 D/P	-	-	71	-	-	-	-	8,906
송 낙 월 도 D/P	-	-	112	-	-	-	-	8,944
호 월 도 D/P	-	-	255	-	-	-	-	8,919
녹 시 도 D/P	-	-	179	-	-	-	-	8,949
산 득 도 D/P	-	-	112	-	-	-	-	8,897
량 어 도 D/P	-	-	113	-	-	-	-	8,927
등 풍 도 D/P	-	-	284	-	-	-	-	8,921
왕 율 도 D/P	-	-	75	-	-	-	-	8,951
울 손 도 D/P	-	-	78	-	-	-	-	8,926
준 죽 도 D/P	-	-	79	-	-	-	-	8,991
평 죽 도 D/P	-	-	176	-	-	-	-	8,972
조 죽 도 D/P	-	-	70	-	-	-	-	8,903
상 죽 도 D/P	-	-	346	-	-	-	-	8,895
화 죽 도 D/P	-	-	88	-	-	-	-	8,867
내 연 력 계	-	120,397	58,589	-	-	9,882	8,961	
평 택 C/C	-	-	-	235,935	-	-	-	-
* 일 산 C/C	-	-	-	595,669	-	-	-	-
* 분 당 C/C	-	-	-	632,263	-	-	-	-
울 산 C/C	-	-	-	1,021,561	-	-	-	-
서 인 천 C/C	-	-	26	1,645,667	-	-	9,260	
신 인 천 C/C	-	-	-	1,225,449	-	-	-	-
보 인 천 C/C	-	-	-	925,348	-	-	-	-
인 부 산 C/C	-	-	-	965,530	-	-	-	-
부 림 C/C	-	-	32	1,554,837	-	-	8,962	
한 군 산 C/C	-	-	12,493	648,722	-	-	8,958	
영 월 C/C	-	-	-	564,915	-	-	8,928	
자 회 사 복 합 계	-	-	12,617	10,015,897	-	-	8,959	
*GS 안양 (타사)	-	-	-	322,478	-	-	-	-
*GS 부천 ( " )	-	-	-	513,362	-	-	-	-
포 스 코 파 워	-	-	-	1,088,204	-	-	-	-
GS EPS 부곡 #1	-	-	-	418,987	-	-	-	-
GS EPS 부곡 #2	-	-	-	351,802	-	-	-	-
울 촌 C/C	-	-	-	368,468	-	-	-	-
광 양 C/C	-	-	-	-	-	-	-	-
타 사 복 합 계	-	-	-	3,063,301	-	-	-	-
복 합 화 력 계	-	-	12,617	13,079,199	-	-	8,959	
한전, 자 회 사 계	81,512,968	2,050,365	123,832	10,545,752	5,418	9,996	8,770	
타 사 화 력 계	-	-	-	3,063,301	-	-	-	-
화 력 총 계	81,512,968	2,050,365	123,832	13,609,053	5,418	9,996	8,770	

\* 열공급 실적 포함 ( Including collective supply works of heating)

('11. 1. 1 ~ 12.31)

L. N. G (kcal/kg)	사 용 열 량 Caloric Consumption ( $10^6$ kcal)					Items Plants
	석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
-	-	-	6,416	-	6,416	Gageodo D/P
-	-	-	1,512	-	1,512	Yogado D/P
-	-	-	1,211	-	1,211	Chudo D/P
-	-	-	466	-	466	Eoeudo D/P
-	-	-	422	-	422	Suwodo D/P
-	-	-	1,489	-	1,489	Maemuldo D/P
-	-	-	919	-	919	Mungabdo D/P
-	-	-	2,418	-	2,418	Janggodo D/P
-	-	-	1,689	-	1,689	Godaedo D/P
-	-	-	575	-	575	Seongnamdo D/P
-	-	-	422	-	422	Doggeodo D/P
-	-	-	736	-	736	Gujado D/P
-	-	-	634	-	634	Seuldo D/P
-	-	-	1,005	-	1,005	Songido D/P
-	-	-	2,278	-	2,278	Nakwoldo D/P
-	-	-	1,604	-	1,604	Hodo D/P
-	-	-	994	-	994	Nokdo D/P
-	-	-	1,009	-	1,009	Sisando D/P
-	-	-	2,531	-	2,531	Deukryangdo D/P
-	-	-	673	-	673	Eoryongdo D/P
-	-	-	698	-	698	Yoangdeungdo D/P
-	-	-	706	-	706	Uldo D/P
-	-	-	1,583	-	1,583	Sonjukdo D/P
-	-	-	620	-	620	Pyungdo D/P
-	-	-	3,080	-	3,080	Chodo D/P
-	-	-	776	-	776	Sangwhado D/P
-	-	1,189,765	525,002	-	1,714,767	Internal combustion
13,175	-	-	-	3,108,463	3,108,463	Pyongtaek C/C
13,052	-	-	-	7,774,703	7,774,703	Ilsan C/C
13,061	-	-	-	8,258,010	8,258,010	Bundang C/C
12,941	-	-	-	13,219,795	13,219,795	Ulsan C/C
13,051	-	-	243	21,477,400	21,477,643	Seoincheon C/C
13,052	-	-	-	15,994,325	15,994,325	Shinicheon C/C
13,064	-	-	-	12,088,431	12,088,431	Boryeong C/C
13,052	-	-	-	12,602,578	12,602,578	Incheon C/C
13,059	-	-	288	20,304,906	20,305,194	Busan C/C
-	-	-	111,914	-	111,914	Hallim C/C
13,060	-	-	-	8,472,272	8,472,272	Kunsan C/C
13,063	-	-	584	7,379,348	7,379,933	Yungwol C/C
13,047	-	-	113,029	130,680,232	130,793,261	C/C of KEPCO
13,060	-	-	-	4,211,431	4,211,431	Anyang C/C
7,661	-	-	-	3,932,701	3,932,701	Bucheon C/C
14,636	-	-	-	15,926,756	15,926,755	POSCO POWER C/C
13,054	-	-	-	5,469,590	5,469,590	GS Bugog#1 C/C
22,637	-	-	-	7,963,751	7,963,751	GS Bugog#2 C/C
13,058	-	-	-	4,811,575	4,811,575	Yulchon C/C
13,814	-	-	-	42,315,804	42,315,803	Kwangyang C/C
13,227	-	-	113,029	172,996,037	173,109,065	Combined cycle
13,049	441,649,684	20,495,740	1,086,050	137,612,519	600,843,993	Total of KEPCO & Sub.
13,814	-	-	-	42,315,804	42,315,804	Total of Other co.
13,221	441,649,684	20,495,740	1,086,050	179,928,323	643,159,798	Gross total

## 7. 화력발전소 열효율 추이

(단위 : %) Trends in thermal plant efficiency

구분 연도별	기 력 Steam									
	무연탄 Anthracite coal		유연탄 Bituminous coal		중유 Heavy oil		가스 LNG		계 Total	
	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net
1961	22.64	-	-	-	-	-	-	-	22.64	19.50
1996	32.77	30.20	38.94	37.21	37.45	35.62	36.79	35.16	37.79	35.97
1997	33.18	30.50	38.99	37.25	37.73	35.90	36.12	34.43	38.05	36.23
1998	33.47	30.58	39.17	37.44	37.22	35.27	36.30	34.73	38.41	36.57
1999	33.99	30.33	39.06	37.21	37.35	35.32	36.07	34.48	38.40	36.39
2000	34.48	30.91	39.25	37.43	37.45	35.30	35.68	34.01	38.59	36.60
2001	33.93	30.37	39.30	37.51	37.71	35.64	35.42	33.68	38.67	36.73
2002	34.66	31.11	39.30	37.52	37.59	35.42	36.10	34.50	38.78	36.86
2003	34.51	30.93	39.16	37.40	37.58	35.36	36.37	34.67	38.67	36.76
2004	34.74	30.80	39.25	37.46	37.40	34.80	36.09	34.28	38.82	36.83
2005	34.94	30.89	39.26	37.41	37.55	35.22	36.45	34.56	38.87	36.88
2006	34.59	31.41	39.31	37.44	37.44	35.39	35.47	33.76	38.90	36.96
2007	34.86	31.64	39.36	37.49	37.25	35.16	35.55	33.91	38.93	36.99
2008	35.26	32.19	39.45	37.54	36.68	34.50	35.40	33.97	39.10	37.14
2009	37.24	34.07	39.46	37.56	37.60	35.77	35.27	33.99	39.24	37.29
2010	34.71	31.75	39.33	37.41	36.40	34.34	35.10	33.71	38.91	36.95
2011	35.58	32.54	38.96	37.04	35.83	33.59	34.92	33.55	38.62	36.63
1	34.92	31.91	39.43	37.55	37.03	35.09	36.58	35.40	38.95	37.04
2	34.71	31.77	39.40	37.51	36.34	34.26	35.07	33.57	38.98	37.04
3	35.24	32.30	39.22	37.35	36.53	34.47	35.63	34.26	38.80	36.88
4	34.66	31.83	39.25	37.36	36.00	34.20	35.33	34.00	38.84	36.92
5	34.52	31.55	39.08	37.18	36.35	34.09	35.02	33.72	38.84	36.89
6	34.93	31.97	38.87	36.91	35.99	33.89	34.57	33.13	38.48	36.46
7	34.86	31.81	38.62	36.65	34.86	32.20	34.03	32.54	38.31	36.28
8	34.99	31.88	38.50	36.49	33.37	30.71	33.79	32.23	38.18	36.10
9	35.08	32.05	38.73	36.72	35.49	33.10	34.02	32.50	38.36	36.29
10	34.89	31.89	38.92	36.96	34.98	32.11	33.31	31.89	38.55	36.52
11	37.09	33.88	38.81	36.91	34.34	31.86	33.73	32.53	38.52	36.55
12	41.21	37.78	38.87	37.04	35.59	33.25	34.15	32.75	38.65	36.72

\* 1987년부터 지역난방 열공급실적 포함

(Unit :%)

복합화력 Combined cycle		내연력 Internal combustion		한전, 자회사 계 Total of KEPCO & Subsidiaries		타사 Other co.		합계 Total		Items During
발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	발전단 Gross	송전단 Net	
-	-	-	-	22.64	19.50	-	-	22.64	19.50	1961
39.89	39.13	32.30	31.59	38.37	36.77	33.26	32.06	38.21	36.60	1996
41.39	40.50	33.67	32.87	38.73	37.11	31.73	31.14	38.38	36.82	1997
43.97	43.04	36.30	35.27	39.48	37.81	38.48	37.59	39.45	37.81	1998
44.09	43.19	34.60	33.57	39.52	37.73	38.69	37.53	39.51	37.73	1999
44.15	43.22	37.20	35.79	39.45	37.63	39.32	38.07	39.45	37.64	2000
45.07	44.15	39.87	38.33	39.52	37.72	41.01	40.14	39.57	37.80	2001
45.56	44.68	40.09	38.64	39.87	38.12	42.10	41.33	39.96	38.26	2002
45.71	44.80	39.74	38.19	39.86	38.12	41.75	40.96	39.94	38.23	2003
47.19	46.33	39.11	37.57	40.62	38.88	41.75	40.97	40.66	38.96	2004
47.13	46.26	40.03	38.19	40.62	38.86	42.44	41.55	40.70	38.98	2005
47.52	46.63	40.02	37.86	40.83	39.11	44.00	43.33	40.97	39.30	2006
46.45	45.47	40.67	38.31	40.79	39.06	43.01	42.11	40.90	39.21	2007
46.10	45.24	40.39	38.09	40.67	38.93	43.75	42.92	40.84	39.14	2008
46.74	45.63	41.08	38.78	40.46	38.67	42.49	41.67	40.55	38.79	2009
46.45	45.55	40.58	30.35	40.67	38.94	43.64	42.73	40.83	39.14	2010
47.30	46.40	41.14	39.01	40.51	38.76	39.43	38.68	40.44	38.75	2011
47.44	46.67	41.37	39.23	41.26	39.65	44.47	43.83	41.49	39.95	1
47.22	46.40	41.35	39.23	40.92	39.24	44.04	43.31	41.10	39.48	2
47.42	46.61	41.21	39.12	41.00	39.36	42.49	32.81	41.09	38.97	3
47.52	46.68	41.10	38.98	41.02	39.37	43.19	42.37	41.15	39.54	4
47.12	46.15	41.14	39.04	40.58	38.83	43.67	42.74	40.74	39.04	5
47.73	46.75	40.00	37.81	40.45	38.66	42.35	41.33	40.54	38.78	6
47.10	46.07	40.20	38.03	39.90	38.05	43.35	42.31	40.03	38.21	7
46.80	45.76	40.54	38.38	39.66	37.76	44.48	43.46	39.82	37.95	8
47.56	46.54	41.46	39.26	40.17	38.31	44.50	43.51	40.36	38.53	9
46.74	45.79	41.66	39.52	39.93	38.08	43.24	42.33	40.08	38.27	10
47.25	46.36	41.39	39.31	40.26	38.50	42.92	42.12	40.39	38.68	11
47.36	46.51	41.79	39.72	40.74	39.07	42.68	41.93	40.86	39.26	12

※ Including decreased power due to collective supply works of heating since 1987.

## 8. 발전설비 추이 (1)

(단위 : kW) Trends in generating facilities

구분 연도별	한전, 자회사						
	수력 Hydro			기력 Steam			
	일반 General	양수 Pumping	계 Total	무연탄 Anthracite coal	유연탄 Bituminous coal	중유 Heavy oil	LNG
1961	143,480	-	143,480	222,500	-	-	-
1996	495,950	1,600,000	2,095,950	1,020,000	6,800,000	4,340,000	1,537,500
1997	515,950	1,600,000	2,115,950	900,000	9,300,000	4,340,000	1,537,500
1998	515,950	1,600,000	2,115,950	1,091,000	10,240,000	4,340,000	1,537,500
1999	535,950	1,600,000	2,135,950	1,291,000	11,740,000	4,340,000	1,537,500
2000	535,950	1,600,000	2,135,950	1,291,000	12,740,000	4,490,000	1,537,500
2001	536,350	2,300,000	2,836,350	1,291,000	14,240,000	4,490,000	1,537,500
2002	536,350	2,300,000	2,836,350	1,191,000	14,740,000	4,280,000	1,537,500
2003	536,750	2,300,000	2,836,750	1,191,000	14,740,000	4,280,000	1,537,500
2004	536,780	2,300,000	2,836,780	1,125,000	16,340,000	4,308,600	1,537,500
2005	538,180	2,300,000	2,838,180	1,125,000	16,840,000	4,308,600	1,537,500
2006	538,180	3,900,000	4,438,180	1,125,000	17,340,000	4,388,600	1,537,500
2007	540,445	3,900,000	4,440,445	1,125,000	19,340,000	4,488,600	1,537,500
2008	550,485	3,900,000	4,450,485	1,125,000	22,580,000	4,488,600	1,537,500
2009	557,260	3,900,000	4,457,260	1,125,000	23,080,000	4,478,600	887,500
2010	562,318	3,900,000	4,462,318	1,125,000	23,080,000	4,478,600	887,500
2011	629,852	4,700,000	5,329,852	1,125,000	23,080,000	4,478,600	887,500
1	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
2	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
3	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
4	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
5	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
6	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
7	562,913	3,900,000	4,462,913	1,125,000	23,080,000	4,478,600	887,500
8	562,913	4,300,000	4,862,913	1,125,000	23,080,000	4,478,600	887,500
9	567,512	4,300,000	4,867,512	1,125,000	23,080,000	4,478,600	887,500
10	567,512	4,700,000	5,267,512	1,125,000	23,080,000	4,478,600	887,500
11	567,512	4,700,000	5,267,512	1,125,000	23,080,000	4,478,600	887,500
12	629,852	4,700,000	5,329,852	1,125,000	23,080,000	4,478,600	887,500

\* 2001. 4. 2 발전부문 분리

(Unit:kW)

KEPCO & Subsidiaries							Items During	
	복합화력 Combined cycle		내연력	대체	원자력	합계		
계 Total	일반 General	열공급 Heat&Electric	계 Total	Internal Combustion	Alternative energy	Total		
222,500	-	-	-	1,274	-	367,254	1961	
13,697,500	5,112,600	2,705,950	7,818,550	264,450	9,615,683	33,492,133	1996	
16,077,500	6,947,600	2,820,950	9,768,550	265,450	10,315,683	38,543,133	1997	
17,208,500	6,585,000	2,700,000	9,285,000	265,450	12,015,683	40,890,583	1998	
18,908,500	6,585,000	2,700,000	9,285,000	270,950	13,715,683	44,316,083	1999	
20,058,500	6,585,000	1,800,000	8,385,000	270,950	13,715,683	44,566,083	2000	
21,558,500	6,585,000	1,800,000	8,385,000	272,950	13,715,683	46,768,483	2001	
21,748,500	7,185,000	1,800,000	8,985,000	275,150	15,715,683	49,560,683	2002	
21,748,500	8,085,000	1,800,000	9,885,000	246,450	15,715,683	50,432,383	2003	
23,311,100	8,985,000	1,800,000	10,785,000	252,280	6,000	16,715,683	53,906,843	2004
23,811,100	9,488,539	1,800,000	11,288,539	296,690	6,220	17,715,683	55,956,412	2005
24,391,100	9,488,539	1,800,000	11,288,539	296,690	11,470	17,715,683	58,141,662	2006
26,491,100	9,488,539	1,800,000	11,288,539	303,170	29,720	17,715,683	60,268,657	2007
29,731,100	9,488,539	1,800,000	11,288,539	306,815	36,687	17,715,683	63,529,309	2008
29,571,100	9,997,447	1,822,064	11,819,511	347,100	51,663	17,715,683	63,962,317	2009
29,571,100	11,563,847	1,822,064	13,385,911	351,000	73,662	17,715,683	65,559,674	2010
29,571,100	11,113,847	1,822,064	12,935,911	355,450	97,574	18,715,683	67,005,570	2011
29,571,100	11,563,847	1,822,064	13,385,911	350,700	73,662	17,715,683	65,559,969	1
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	17,715,683	65,562,769	2
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	18,715,683	66,562,769	3
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	18,715,683	66,562,769	4
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	18,715,683	66,562,769	5
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	18,715,683	66,562,769	6
29,571,100	11,563,847	1,822,064	13,385,911	350,700	76,462	18,715,683	66,562,769	7
29,571,100	11,563,847	1,822,064	13,385,911	350,700	78,384	18,715,683	66,964,691	8
29,571,100	11,113,847	1,822,064	12,935,911	350,700	94,283	18,715,683	66,535,189	9
29,571,100	11,113,847	1,822,064	12,935,911	350,700	94,283	18,715,683	66,935,189	10
29,571,100	11,113,847	1,822,064	12,935,911	350,700	94,283	18,715,683	66,935,189	11
29,571,100	11,113,847	1,822,064	12,935,911	355,450	97,574	18,715,683	67,005,570	12

\* On Apr. 2, 2001, KEPCO's power generation division was divided into 6 generation subsidiary companies and a Power Exchange.

## 8. 발전설비 추이 (2)

(단위 : kW) Trends in generating facilities

구분 연도별	타사					Other co.	
	수력 Hydro		기력 (종유) Steam	복합화력 Combined cycle		집단 & 대체 Group & Alternative energy	
	일반 General	소수력 Micro hydro		일반 General	열공급 Heat&Electric		
1961	-	-	-	-	-	-	
1996	965,700	32,800	998,500	324,800	900,000	-	900,000
1997	965,700	32,945	998,645	-	1,500,000	-	1,500,000
1998	979,700	35,558	1,015,258	-	1,500,000	-	1,500,000
1999	979,700	31,914	1,011,614	-	1,650,000	-	1,650,000
2000	979,700	33,014	1,012,714	-	1,971,920	900,000	2,871,920
2001	1,004,100	35,314	1,039,414	-	2,150,750	900,000	3,050,750
2002	1,004,100	35,314	1,039,414	-	2,300,750	900,000	3,200,750
2003	1,004,100	35,929	1,040,029	-	2,300,750	900,000	3,200,750
2004	1,001,800	40,733	1,042,533	-	2,628,350	900,000	3,528,350
2005	1,001,800	42,833	1,044,633	-	2,826,250	900,000	3,726,250
2006	1,001,800	44,878	1,046,678	-	3,815,450	900,000	4,715,450
2007	1,000,600	51,042	1,051,642	-	4,322,450	900,000	5,222,450
2008	1,000,600	54,052	1,054,652	-	4,855,450	900,000	5,755,450
2009	1,000,600	56,712	1,057,312	-	4,855,450	900,000	5,755,450
2010	1,000,600	61,622	1,062,222	-	4,814,250	900,000	5,714,250
2011	1,000,600	87,937	1,088,537	-	5,963,450	900,000	6,863,450
1	1,000,600	62,022	1,062,622	-	4,814,250	900,000	5,714,250
2	1,000,600	62,022	1,062,622	-	5,388,850	900,000	6,288,850
3	1,000,600	62,022	1,062,622	-	5,388,850	900,000	6,288,850
4	1,000,600	62,022	1,062,622	-	5,388,850	900,000	6,288,850
5	1,000,600	62,022	1,062,622	-	5,388,850	900,000	6,288,850
6	1,000,600	62,022	1,062,622	-	5,963,450	900,000	6,863,450
7	1,000,600	62,022	1,062,622	-	5,963,450	900,000	6,863,450
8	1,000,600	67,432	1,068,032	-	5,963,450	900,000	6,863,450
9	1,000,600	67,432	1,068,032	-	5,963,450	900,000	6,863,450
10	1,000,600	67,432	1,068,032	-	5,963,450	900,000	6,863,450
11	1,000,600	67,432	1,068,032	-	5,963,450	900,000	6,863,450
12	1,000,600	87,937	1,088,537	-	5,963,450	900,000	6,863,450

(Unit:kW)

		사 업 자 Public utility						Items During	
합 계	수 력			Hydro		기 력			
	일 반 General	양 수 Pumping	소 수 력 Micro hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal			
-	143,480	-	-	143,480	222,500	-	1961		
2,223,300	1,461,650	1,600,000	32,800	3,094,450	1,020,000	6,800,000	1996		
2,498,645	1,481,650	1,600,000	32,945	3,114,595	900,000	9,300,000	1997		
2,515,258	1,495,650	1,600,000	35,558	3,131,208	1,091,000	10,240,000	1998		
2,661,614	1,515,650	1,600,000	31,914	3,147,564	1,291,000	11,740,000	1999		
3,884,634	1,515,650	1,600,000	33,014	3,148,664	1,291,000	12,740,000	2000		
4,090,164	1,540,450	2,300,000	35,314	3,875,764	1,291,000	14,240,000	2001		
4,240,164	1,540,450	2,300,000	35,314	3,875,764	1,191,000	14,740,000	2002		
5,620,294	1,540,850	2,300,000	35,929	3,876,779	1,191,000	14,740,000	2003		
6,054,288	1,538,580	2,300,000	40,733	3,879,313	1,125,000	16,340,000	2004		
6,301,785	1,539,980	2,300,000	42,833	3,882,813	1,125,000	16,840,000	2005		
7,372,580	1,539,980	3,900,000	44,878	5,484,858	1,125,000	17,340,000	2006		
7,999,531	1,541,045	3,900,000	51,042	5,492,087	1,125,000	19,340,000	2007		
8,961,382	1,551,085	3,900,000	54,052	5,505,137	1,125,000	22,580,000	2008		
9,507,661	1,557,860	3,900,000	56,712	5,514,572	1,125,000	23,080,000	2009		
10,518,514	1,562,918	3,900,000	61,622	5,524,540	1,125,000	23,080,000	2010		
12,336,297	1,630,452	4,700,000	87,937	6,418,389	1,125,000	23,080,000	2011		
11,088,682	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	1		
11,672,163	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	2		
11,672,163	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	3		
11,672,163	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	4		
11,672,163	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	5		
12,246,763	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	6		
12,246,763	1,563,513	3,900,000	62,022	5,525,535	1,125,000	23,080,000	7		
12,281,192	1,563,513	4,300,000	67,432	5,930,945	1,125,000	23,080,000	8		
12,277,432	1,568,112	4,300,000	67,432	5,935,544	1,125,000	23,080,000	9		
12,277,432	1,568,112	4,700,000	67,432	6,335,544	1,125,000	23,080,000	10		
12,277,432	1,568,112	4,700,000	67,432	6,335,544	1,125,000	23,080,000	11		
12,336,297	1,630,452	4,700,000	87,937	6,418,389	1,125,000	23,080,000	12		

## 8. 발전설비 추이 (3)

(단위 : kW) Trends in generating facilities

구분 연도별	사 업 자					
	기력 Steam		복합화력 Combined cycle			
	중유 Heavy oil	LNG	계 Total	일반 General	열공급 Heat&Electric	계 Total
1961	-	-	222,500	-	-	-
1996	4,664,800	1,537,500	14,022,300	6,012,600	2,705,950	8,718,550
1997	4,340,000	1,537,500	16,077,500	8,447,600	2,820,950	11,268,550
1998	4,340,000	1,537,500	17,208,500	8,085,000	2,700,000	10,785,000
1999	4,340,000	1,537,500	18,908,500	8,235,000	2,700,000	10,935,000
2000	4,490,000	1,537,500	20,058,500	8,556,920	2,700,000	11,256,920
2001	4,490,000	1,537,500	21,558,500	8,735,750	2,700,000	11,435,750
2002	4,280,000	1,537,500	21,748,500	9,485,750	2,700,000	12,185,750
2003	4,280,000	1,537,500	21,748,500	10,385,750	2,700,000	13,085,750
2004	4,308,600	1,537,500	23,311,100	11,613,350	2,700,000	14,313,350
2005	4,308,600	1,537,500	23,811,100	12,314,789	2,700,000	15,014,789
2006	4,388,600	1,537,500	24,391,100	13,303,989	2,700,000	16,003,989
2007	4,488,600	1,537,500	26,491,100	13,810,989	2,700,000	16,510,989
2008	4,488,600	1,537,500	29,731,100	14,343,989	2,700,000	17,043,989
2009	4,478,600	887,500	29,571,100	14,852,897	2,722,064	17,574,961
2010	4,478,600	887,500	29,571,100	16,378,097	2,722,064	19,100,161
2011	4,478,600	887,500	29,571,100	17,077,297	2,722,064	19,799,361
1	4,478,600	887,500	29,571,100	16,378,097	2,722,064	19,100,161
2	4,478,600	887,500	29,571,100	16,952,697	2,722,064	19,674,761
3	4,478,600	887,500	29,571,100	16,952,697	2,722,064	19,674,761
4	4,478,600	887,500	29,571,100	16,952,697	2,722,064	19,674,761
5	4,478,600	887,500	29,571,100	16,952,697	2,722,064	19,674,761
6	4,478,600	887,500	29,571,100	17,527,297	2,722,064	20,249,361
7	4,478,600	887,500	29,571,100	17,527,297	2,722,064	20,249,361
8	4,478,600	887,500	29,571,100	17,527,297	2,722,064	20,249,361
9	4,478,600	887,500	29,571,100	17,077,297	2,722,064	19,799,361
10	4,478,600	887,500	29,571,100	17,077,297	2,722,064	19,799,361
11	4,478,600	887,500	29,571,100	17,077,297	2,722,064	19,799,361
12	4,478,600	887,500	29,571,100	17,077,297	2,722,064	19,799,361

\* 'p'는 잠정수치임.

(Unit : kW)

내연력 Internal Combustion	원자력 Nuclear	Public utility			상용자 가 Non-utility in common use	총 발전설비 Total	Items During
		집단 Group energy	대체 Alternative energy	총계 Total			
1,274	-	...	...	367,254	59,033	426,287	1961
264,450	9,615,683	...	...	35,715,433	3,523,902	39,239,335	1996
265,450	10,315,683	...	...	41,041,778	4,290,812	45,332,590	1997
265,450	12,015,683	...	...	43,405,841	4,577,401	47,983,242	1998
270,950	13,715,683	...	...	46,977,697	4,609,687	51,587,384	1999
270,950	13,715,683	...	...	48,450,717	5,234,196	53,684,913	2000
272,950	13,715,683	...	...	50,858,647	5,857,395	56,716,042	2001
275,150	15,715,683	...	...	53,800,847	5,813,255	59,614,102	2002
246,450	15,715,683	1,296,200	83,315	56,052,677	4,667,043	60,719,720	2003
252,280	16,715,683	1,381,500	107,905	59,961,131	4,591,443	64,552,574	2004
296,690	17,715,683	1,381,500	155,622	62,258,197	4,817,043	67,075,240	2005
296,690	17,715,683	1,381,500	240,422	65,514,242	4,319,500	69,833,742	2006
303,170	17,715,683	892,750	862,409	68,268,188	4,855,762	73,123,950	2007
306,815	17,715,683	1,459,630	728,337	72,490,692	4,089,658	76,580,350	2008
347,100	17,715,683	1,610,210	1,136,352	73,469,978	4,222,771	77,692,749	2009
351,000	17,715,683	2,066,724	1,748,980	76,078,188	3,905,605	79,983,793	2010
355,450	18,715,683	2,623,224	1,858,660	79,341,867	3,968,605p	83,310,472p	2011
350,700	17,715,683	2,617,224	1,768,248	76,648,651	...	...	1
350,700	17,715,683	2,617,224	1,779,929	77,234,932	...	...	2
350,700	18,715,683	2,617,224	1,779,929	78,234,932	...	...	3
350,700	18,715,683	2,617,224	1,779,929	78,234,932	...	...	4
350,700	18,715,683	2,617,224	1,779,929	78,234,932	...	...	5
350,700	18,715,683	2,617,224	1,779,929	78,809,532	...	...	6
350,700	18,715,683	2,617,224	1,779,929	78,809,532	...	...	7
350,700	18,715,683	2,623,224	1,804,870	79,245,883	...	...	8
350,700	18,715,683	2,623,224	1,817,009	78,812,621	...	...	9
350,700	18,715,683	2,623,224	1,817,009	79,212,621	...	...	10
350,700	18,715,683	2,623,224	1,817,009	79,212,621	...	...	11
355,450	18,715,683	2,623,224	1,858,660	79,341,867	...	...	12

※ 'p' is a preliminary figures

## 9. 발전소별 설비 추이 (1)

(단위 : kW) Trends in generation facilities by plant

연도별 발전소별	1961	2001	2002	2003	2004	2005
화 천	81,000	108,000	108,000	108,000	108,000	108,000
춘 천	-	57,600	57,600	57,600	57,600	57,600
의 암	-	45,000	45,000	45,000	45,000	45,000
청 평	39,600	79,600	79,600	79,600	79,600	79,600
팔 당	-	120,000	120,000	120,000	120,000	120,000
섬 진 강	14,400	34,800	34,800	34,800	34,800	34,800
강 릉	-	82,000	82,000	82,000	82,000	82,000
청 평 양 수	-	400,000	400,000	400,000	400,000	400,000
삼 랑 진 양 수	-	600,000	600,000	600,000	600,000	600,000
무 주 양 수	-	600,000	600,000	600,000	600,000	600,000
산 청 양 수	-	700,000	700,000	700,000	700,000	700,000
양 양 양 수	-	-	-	-	-	-
청 송 양 수	-	-	-	-	-	-
예 천 양 수	-	-	-	-	-	-
괴 산 (소수력)	2,600	2,600	2,600	2,600	2,600	2,600
보 성 강 ( " )	3,120	4,500	4,500	4,500	4,500	4,500
안 흥 ( " )	-	450	450	450	480	480
추 산 ( 도 서 )	-	1,400	1,400	1,400	1,400	1,400
산 청 (소수력)	-	400	400	400	400	400
무 주 ( " )	-	-	-	400	400	400
양 양 ( " )	-	-	-	-	-	1,400
삼 천 포 해 양 ( " )	-	-	-	-	-	-
섬 진 강 ( " )	-	-	-	-	-	-
운 암 ( " )	2,560	-	-	-	-	-
서 귀 포 ( 도 서 )	200	-	-	-	-	-
태 안 (소수력)	-	-	-	-	-	-
보 령 ( " )	-	-	-	-	-	-
영 흥 해 양 ( " )	-	-	-	-	-	-
당 진 화 력 ( " )	-	-	-	-	-	-
행 원 ( " )	-	-	-	-	-	-
한전 자회 사수력 계	143,480	2,836,350	2,836,350	2,836,750	2,836,780	2,838,180
소 양 강 ( 수자원 )	-	200,000	200,000	200,000	200,000	200,000
안 동 ( " )	-	90,000	90,000	90,000	90,000	90,000
대 청 ( " )	-	90,000	90,000	90,000	90,000	90,000
충 주 ( " )	-	412,000	412,000	412,000	412,000	412,000
합 천 ( " )	-	101,200	101,200	101,200	101,200	101,200
주 암 ( " )	-	22,500	22,500	22,500	22,500	22,500
임 하 ( " )	-	50,000	50,000	50,000	50,000	50,000
남 강 ( " )	-	14,000	14,000	14,000	14,000	14,000
용 담 ( " )	-	24,400	24,400	24,400	22,100	22,100

(Unit : kW)

2006	2007	2008	2009	2010	2011	End of Plants
108,000	108,000	108,000	108,000	108,000	108,000	Hwacheon
57,600	57,600	59,940	59,940	59,940	62,280	Chuncheon
45,000	45,000	45,000	45,000	45,000	45,000	Uiam
79,600	79,600	79,600	79,600	79,600	139,600	Cheongpyong
120,000	120,000	120,000	120,000	120,000	120,000	Paldang
34,800	28,800	28,800	28,800	28,800	28,800	Seomjingang
82,000	82,000	82,000	82,000	82,000	82,000	Gangneung
400,000	400,000	400,000	400,000	400,000	400,000	Cheongpyong (Pumping)
600,000	600,000	600,000	600,000	600,000	600,000	Samrangjin ( " )
600,000	600,000	600,000	600,000	600,000	600,000	Muju ( " )
700,000	700,000	700,000	700,000	700,000	700,000	Sanchong ( " )
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Yangyang ( " )
600,000	600,000	600,000	600,000	600,000	600,000	Cheongsong ( " )
-	-	-	-	-	800,000	Yeoicheon ( " )
2,600	2,600	2,600	2,600	2,600	2,600	Goesan (small hydro)
4,500	4,500	4,500	4,500	4,500	4,500	Boseonggang ( " )
480	480	480	480	480	480	Anheung ( " )
1,400	700	700	700	700	700	Chusan (Island small hydro)
400	400	400	400	400	995	Sanchong (small hydro)
400	400	400	400	400	400	Muju ( " )
1,400	1,400	1,400	1,400	1,400	1,400	Yangyang ( " )
-	2,965	2,965	4,740	4,740	4,740	samcheonpo ( " )
-	6,000	6,000	6,000	6,000	6,000	Seomjingang ( " )
-	-	-	-	-	-	Unam ( " )
-	-	-	-	-	-	Seogwipo (Island small hydro)
-	-	2,200	2,200	2,200	2,200	Taean (small hydro)
-	-	2,500	7,500	7,500	7,500	Boryeong ( " )
-	-	3,000	3,000	3,000	7,599	Yeongheung ( " )
-	-	-	-	4,998	4,998	Dangjin ( " )
-	-	-	-	60	60	Hangwon ( " )
4,438,180	4,440,445	4,450,485	4,457,260	4,462,318	5,329,852	Total of KEPCO Sub.hydro
200,000	200,000	200,000	200,000	200,000	200,000	Soyanggang(kwater)
90,000	90,000	90,000	90,000	90,000	90,000	Andong ( " )
90,000	90,000	90,000	90,000	90,000	90,000	Daecheong ( " )
412,000	412,000	412,000	412,000	412,000	412,000	Chungju ( " )
101,200	100,000	100,000	100,000	100,000	100,000	Hapcheon ( " )
22,500	22,500	22,500	22,500	22,500	22,500	Juam ( " )
50,000	50,000	50,000	50,000	50,000	50,000	Imha ( " )
14,000	14,000	14,000	14,000	14,000	14,000	Namgang ( " )
22,100	22,100	22,100	22,100	22,100	22,100	Yongdam ( " )

## 9. 발전소별 설비 추이 (2)

(단위 : kW) Trends in generation facilities by plant

연도별 발전소별	1961	2001	2002	2003	2004	2005
광천(수자원소수력)	-	450	450	450	450	450
반변( " )	-	1,060	1,060	1,060	1,060	1,060
부안( " )	-	193	193	193	193	193
운문( " )	-	330	330	330	330	330
횡성( " )	-	1,000	1,000	1,000	1,000	1,000
영천( " )	-	1,000	1,000	1,000	1,000	1,000
안동( " )	-	-	-	1,500	1,500	1,500
용담( " )	-	-	-	-	4,100	4,100
합천( " )	-	-	-	-	-	-
밀양( " )	-	1,300	1,300	1,300	1,300	1,300
보령( " )	-	701	701	701	701	701
대곡( " )	-	-	-	-	-	300
장흥댐( " )	-	-	-	-	-	800
성남( " )	-	-	-	-	340	340
달방( " )	-	-	-	-	-	-
주암( " )	-	-	-	-	-	-
대청댐( " )	-	-	-	-	-	-
성남2( " )	-	-	-	-	-	-
고산( " )	-	-	-	-	-	-
군위( " )	-	-	-	-	-	-
판교( " )	-	-	-	-	-	-
금남보( " )	-	-	-	-	-	-
승촌보( " )	-	-	-	-	-	-
죽산보( " )	-	-	-	-	-	-
강정고령보( " )	-	-	-	-	-	-
백제보( " )	-	-	-	-	-	-
금강보( " )	-	-	-	-	-	-
이포보( " )	-	-	-	-	-	-
강천보( " )	-	-	-	-	-	-
구미보( " )	-	-	-	-	-	-
기타(수자원제외)	-	29,280	29,280	28,395	28,759	29,759
타사수력계	-	1,041,415	1,041,416	1,042,032	1,044,537	1,046,638
수력계	143,480	3,877,765	3,877,766	3,878,782	3,881,317	3,884,818

(Unit : kW)

2006	2007	2008	2009	2010	2011	End of Plants
450	450	450	450	450	450	Gwangcheon (small)
1,060	1,060	1,060	1,060	1,060	1,060	Banbyeun ( " )
193	193	193	193	193	193	Buan ( " )
330	330	330	330	330	330	Unmun ( " )
1,000	1,000	1,000	1,000	1,000	1,300	Hoengseong ( " )
1,000	1,000	1,000	1,000	1,000	1,000	Yeongcheon ( " )
1,500	1,500	1,500	1,500	1,500	1,500	Andong ( " )
4,100	4,100	4,100	4,100	4,100	4,100	Yongdam ( " )
-	1,200	1,200	1,200	1,200	1,200	hapcheon ( " )
1,300	1,300	1,300	1,300	1,300	1,300	Milyang ( " )
701	701	701	701	701	701	Boryeong ( " )
300	300	300	300	300	300	Daegok ( " )
800	800	800	800	800	800	Janghengdam ( " )
340	340	340	340	340	340	Sungnam ( " )
-	170	170	170	170	170	dalbang ( " )
-	990	990	990	990	990	Juam ( " )
-	-	800	800	800	800	Daecheongdaen ( " )
-	-	360	360	360	360	Seongnam ( " )
-	-	-	560	560	560	Gosan ( " )
-	-	-	-	500	500	Gunwi ( " )
-	-	-	-	-	400	Pankyo ( " )
-	-	-	-	-	2310	Keumnambo ( " )
-	-	-	-	-	800	Seungchonbo ( " )
-	-	-	-	-	1220	Juksanbo ( " )
-	-	-	-	-	3000	Kangjeong ( " )
-	-	-	-	-	2640	Baekjebo ( " )
-	-	-	-	-	3000	Keumkangbo ( " )
-	-	-	-	-	3000	Epobo ( " )
-	-	-	-	-	4950	Kangcheonbo ( " )
-	-	-	-	-	3000	Kumibo ( " )
31,804	35,608	37,458	39,558	43,968	45,663	Total of Other co. small hydro
1,048,684	1,053,649	1,056,660	1,059,321	1,064,232	1,088,537	Total of Other co. hydro
5,486,864	5,494,094	5,507,145	5,516,581	5,526,550	6,418,389	Total of hydro

## 9. 발전소별 설비 추이 (3)

(단위 : kW) Trends in generation facilities by plant

연도별 발전소별	1961	2001	2002	2003	2004	2005
영월	100,000	-	-	-	-	-
영월 #1,2	-	100,000	-	-	-	-
영동 #1,2	-	325,000	325,000	325,000	325,000	325,000
군산 #1,2	-	66,000	66,000	66,000	-	-
서천 #1,2	-	400,000	400,000	400,000	400,000	400,000
동해 #1	-	200,000	200,000	200,000	200,000	200,000
동해 #2	-	200,000	200,000	200,000	200,000	200,000
삼천포 #1~4	-	2,240,000	2,240,000	2,240,000	2,240,000	2,240,000
삼천포 #5,6	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
보령 #1~8	-	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
호남 #1,2	-	500,000	500,000	500,000	500,000	500,000
태안 #1~8	-	2,500,000	3,000,000	3,000,000	3,000,000	3,000,000
하동 #1~3	-	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
하동 #4~8	-	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
당진 #1~8	-	2,000,000	2,000,000	2,000,000	2,000,000	2,500,000
영흥 #1,2	-	-	-	-	1,600,000	1,600,000
영흥 #3,4	-	-	-	-	-	-
평택 #1~4	-	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000
여수 #1,2	-	500,000	500,000	500,000	528,600	528,600
영남 #1,2	-	400,000	400,000	400,000	400,000	400,000
울산 #1~6	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
남제주 #3,4(도서)	-	20,000	20,000	20,000	20,000	20,000
제주 #1 ("")	-	10,000	10,000	10,000	10,000	10,000
제주 #2,3 ("")	-	150,000	150,000	150,000	150,000	150,000
부산 #3,4	-	210,000	-	-	-	-
삼척 #1	25,000	-	-	-	-	-
마산 #1	50,000	-	-	-	-	-
서울 #1,2	22,500	-	-	-	-	-
	#3	25,000	-	-	-	-
	#4,5	-	387,500	387,500	387,500	387,500
인천 #1~2	-	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000
기력계	222,500	21,558,500	21,748,500	21,748,500	23,311,100	23,811,100
한림 D/P	160	-	-	-	-	-
거제 (완도) D/P	64	-	-	-	-	-
모슬포 D/P	200	-	-	-	-	-
서귀포 D/P	100	-	-	-	-	-
제주 D/P	750	-	-	-	-	-
제주 D/P	-	40,000	40,000	-	-	-
제주 G/T	-	165,000	165,000	165,000	165,000	165,000
제주내연	-	-	-	-	-	40,000
남제주 D/P	-	40,000	40,000	40,000	40,000	40,000
조도 D/P	-	2,200	2,200	2,200	2,200	2,200
울릉도 D/P	-	8,000	9,500	9,500	9,500	9,500
울릉도남양 D/P	-	-	-	-	-	-
흑산도 D/P	-	3,500	3,500	3,500	3,500	3,500
추자도 D/P	-	2,700	2,700	2,700	2,700	2,700
거문도 D/P	-	2,300	2,500	2,500	2,500	2,500
덕적도 D/P	-	1,900	1,900	1,900	1,900	2,900
위도 D/P	-	1,350	1,850	3,850	3,850	3,850

(Unit : kW)

2006	2007	2008	2009	2010	2011	End of Plants
-	-	-	-	-	-	Yeongwol
-	-	-	-	-	-	Yeongwol #1, 2
325,000	325,000	325,000	325,000	325,000	325,000	Yeongdong #1, 2
-	-	-	-	-	-	Kunsan #1, 2
400,000	400,000	400,000	400,000	400,000	400,000	Seocheon #1, 2
200,000	200,000	200,000	200,000	200,000	200,000	Donghae #1
200,000	200,000	200,000	200,000	200,000	200,000	Donghae #2
2,240,000	2,240,000	2,240,000	2,240,000	2,240,000	2,240,000	Samcheonpo #1~4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Samcheonpo #5, 6
3,000,000	3,000,000	4,000,000	4,000,000	4,000,000	4,000,000	Boryeong #1~6
500,000	500,000	500,000	500,000	500,000	500,000	Honam #1, 2
3,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	Taean #1~8
1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	Hadong #1~3
1,500,000	1,500,000	2,000,000	2,500,000	2,500,000	2,500,000	Hadong #4~7
3,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	Dangjin #1~8
1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	Yeongheung #1, 2
-	-	1,740,000	1,740,000	1,740,000	1,740,000	Yeongheung #3, 4
1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	Pyeongtaek #1~4
528,600	528,600	528,600	528,600	528,600	528,600	Yeosu #1, 2
400,000	400,000	400,000	400,000	400,000	400,000	Yeongnam #1, 2
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	Ulsan #1~6
100,000	200,000	200,000	200,000	200,000	200,000	Namjeju#3, 4 (Island)
10,000	10,000	10,000	-	-	-	Jeju #1 ( " )
150,000	150,000	150,000	150,000	150,000	150,000	Jeju #2, 3 ( " )
-	-	-	-	-	-	busan #3 #3, 4
-	-	-	-	-	-	Samcheok #1
-	-	-	-	-	-	Masan #1
-	-	-	-	-	-	Seoul #1, 2
-	-	-	-	-	-	Seoul #3
387,500	387,500	387,500	387,500	387,500	387,500	Seoul #4, 5
1,150,000	1,150,000	1,150,000	500,000	500,000	500,000	Incheon #1~4
24,391,100	26,491,100	29,731,100	29,571,100	29,571,100	29,571,100	Total of steam
-	-	-	-	-	-	Hallim D/P
-	-	-	-	-	-	Gejae D/P
-	-	-	-	-	-	Mosipo D/P
-	-	-	-	-	-	Seogwipo D/P
-	-	-	-	-	-	Jeju D/P
-	-	-	-	-	-	Jeju D/P
165,000	165,000	165,000	165,000	165,000	165,000	Jeju G/T
40,000	40,000	40,000	80,000	80,000	80,000	Jeju D/P
40,000	40,000	40,000	40,000	40,000	40,000	Namjeju D/P
2,200	2,200	2,200	2,200	2,200	2,200	Jodo D/P
9,500	9,500	9,500	9,500	9,500	9,500	Ulleungdo D/P
-	-	-	-	-	6,000	Ulleungdo namyang D/P
3,500	3,500	3,500	3,500	3,500	3,500	Heuksando D/P
2,700	4,400	4,400	4,400	4,400	4,400	Chujado D/P
2,500	3,500	3,500	3,500	3,500	3,500	Geomundo D/P
2,900	2,900	2,900	2,900	2,900	2,900	Duckjuckdo D/P
3,850	2,850	2,850	2,850	2,850	2,850	Wido D/P

## 9. 발전소별 설비 추이 (4)

(단위 : kW) Trends in generation facilities by plant

발전소별 연도별	1961	2001	2002	2003	2004	2005
백령도 D/P	-	6,000	6,000	9,000	9,000	9,000
대청도 D/P	-	-	-	1,350	1,350	1,350
소청도 D/P	-	-	-	300	300	300
연평도 D/P	-	-	-	1,350	1,350	3,350
자월도 D/P	-	-	-	450	950	950
홍도 D/P	-	-	-	750	750	750
비양도 D/P	-	-	-	240	240	240
덕우도 D/P	-	-	-	390	390	390
여서도 D/P	-	-	-	240	240	240
가파도 D/P	-	-	-	450	450	450
신시도 D/P	-	-	-	300	300	300
비안도 D/P	-	-	-	240	240	240
연도 D/P	-	-	-	240	240	240
어청도 D/P	-	-	-	-	450	450
장자도 D/P	-	-	-	-	750	750
개야도 D/P	-	-	-	-	750	750
외연도 D/P	-	-	-	-	300	300
삽시도 D/P	-	-	-	-	450	450
대모도 D/P	-	-	-	-	750	750
승봉도 D/P	-	-	-	-	950	950
풍도 D/P	-	-	-	-	240	240
가의도 D/P	-	-	-	-	240	240
가거도 D/P	-	-	-	-	450	450
여자도 D/P	-	-	-	-	-	450
주도 D/P	-	-	-	-	-	240
매물도 D/P	-	-	-	-	-	240
어의도 D/P	-	-	-	-	-	240
수우도 D/P	-	-	-	-	-	240
장고도 D/P	-	-	-	-	-	-
고대도 D/P	-	-	-	-	-	-
문갑도 D/P	-	-	-	-	-	-
성남도 D/P	-	-	-	-	-	-
독거도 D/P	-	-	-	-	-	-
호도 D/P	-	-	-	-	-	-
녹도 D/P	-	-	-	-	-	-
낙월도 D/P	-	-	-	-	-	-
송이도 D/P	-	-	-	-	-	-
구자도 D/P	-	-	-	-	-	-
슬도 D/P	-	-	-	-	-	-
시산도 D/P	-	-	-	-	-	-
득량도 D/P	-	-	-	-	-	-
어룡도 D/P	-	-	-	-	-	-
내연력계	1,274	272,950	275,150	246,450	252,280	296,690

(Unit : kW)

2006	2007	2008	2009	2010	2011	End of Plants
9,000	9,000	9,000	9,000	9,000	9,000	Baekryeongdo D/P
1,350	1,850	1,850	1,850	1,850	1,850	Daecheongdo D/P
300	550	550	700	2,650	2,650	Socheongdo D/P
3,350	3,350	3,350	3,350	3,350	3,350	Yeonpyeongdo D/P
950	950	950	950	1,650	1,650	Gawoldo D/P
750	1,250	1,250	1,250	2,350	2,350	Hongdo D/P
240	240	240	240	240	240	Biyangdo D/P
390	390	390	390	390	390	Deokwoodo D/P
240	240	240	240	240	240	Yeoseodo D/P
450	450	450	450	450	450	Gapado D/P
300	300	300	300	300	-	Sinsido D/P
240	240	240	240	240	240	Biando D/P
240	240	240	240	240	240	yeondo D/P
450	900	900	900	900	900	Yeocheongdo D/P
750	1,250	1,250	1,250	1,250	-	Jangjado D/P
750	1,500	1,500	1,500	1,500	1,500	Gaeyado D/P
300	600	600	600	750	750	Yoiyeondo D/P
450	900	900	900	900	900	Sabsido D/P
750	750	750	750	750	750	Daemodo D/P
950	950	950	950	950	950	Seungbongdo D/P
240	240	240	240	240	240	Pungdo D/P
240	240	240	240	240	240	Gauido D/P
450	750	750	750	750	750	Gageodo D/P
450	450	450	450	450	450	Yeogado D/P
240	240	240	240	240	240	Chudo D/P
240	240	240	240	240	240	Maemuldo D/P
240	240	240	240	240	240	Eoeudo D/P
240	240	240	240	240	240	Suwoodo D/P
-	240	240	240	240	240	Janggodo D/P
-	300	300	300	300	300	Godaedo D/P
-	240	240	240	240	240	Mungabdo D/P
-	-	240	240	240	240	Seongnamdo D/P
-	-	240	240	240	240	Doggeodo D/P
-	-	300	300	300	300	Hodo D/P
-	-	240	240	240	240	Nokdo D/P
-	-	750	750	750	750	Nakwoldo D/P
-	-	240	240	240	240	Songido D/P
-	-	240	240	240	240	Gujado D/P
-	-	240	240	240	240	Seuldo D/P
-	-	750	750	750	750	Sisando D/P
-	-	300	300	300	300	Deukryangdo D/P
-	-	-	240	240	240	Eoryongdo D/P
296,690	303,170	306,710	347,100	351,000	355,450	Total of internal combustion

## 9. 발전소별 설비 추이 (5)

(단위 : kW) Trends in generation facilities by plant

연도별 발전소별	1961	2001	2002	2003	2004	2005
서인천 C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
신인천 C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
분당 C/C	-	900,000	900,000	900,000	900,000	900,000
일산 C/C	-	900,000	900,000	900,000	900,000	900,000
평택 C/C	-	480,000	480,000	480,000	480,000	480,000
보령 C/C	-	1,200,000	1,800,000	1,800,000	1,800,000	1,800,000
울산 C/C	-	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
한림 C/C	-	105,000	105,000	105,000	105,000	105,000
부산 C/C	-	-	-	900,000	1,800,000	1,800,000
인천 C/C	-	-	-	-	-	503,539
군산 C/C	-	-	-	-	-	-
영월 C/C	-	-	-	-	-	-
포스코파워 (타사)	-	1,650,000	1,800,000	1,800,000	1,800,000	1,800,000
GS 안양 C/C ( " )	-	450,000	450,000	450,000	450,000	450,000
GS 부천 C/C ( " )	-	450,000	450,000	450,000	450,000	450,000
GS EPS 부곡 #1( " )	-	500,750	500,750	500,750	500,750	500,750
GS EPS 부곡 #2( " )	-	-	-	-	-	-
울촌 C/C ( " )	-	-	-	-	327,600	525,500
광양복합 ( " )	-	-	-	-	-	-
현대대산 ( " )	-	-	-	-	-	-
<b>복합화력계</b>	<b>-</b>	<b>11,435,750</b>	<b>12,185,750</b>	<b>13,085,750</b>	<b>14,313,350</b>	<b>15,014,789</b>
양양 풍력	-	-	-	-	-	-
한경 풍력	-	-	-	-	6,000	6,000
성산 풍력	-	-	-	-	-	-
고리 풍력	-	-	-	-	-	-
영흥 풍력	-	-	-	-	-	-
삼천포태양광	-	-	-	-	-	100
영흥태양광	-	-	-	-	-	-
서천태양광	-	-	-	-	-	-
보령태양광	-	-	-	-	-	-
제주화력태양광	-	-	-	-	-	-
태안태양광	-	-	-	-	-	120
삼랑진태양광 #1	-	-	-	-	-	-
삼랑진태양광 #2	-	-	-	-	-	-
부산복합태양광	-	-	-	-	-	-
하동화력태양광	-	-	-	-	-	-
영월태양광	-	-	-	-	-	-
동해화력태양광	-	-	-	-	-	-
영광쏠라파크 #1	-	-	-	-	-	-
영광쏠라파크 #2	-	-	-	-	-	-
예천양수태양광	-	-	-	-	-	-

(Unit : kW)

2006	2007	2008	2009	2010	2011	End of Plants
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	Seoincheon C/C
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	Shinincheon C/C
900,000	900,000	900,000	922,064	922,064	922,064	Bundang C/C
900,000	900,000	900,000	900,000	900,000	900,000	Ilsan C/C
480,000	480,000	480,000	480,000	480,000	480,000	Pyeongtaek C/C
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,350,000	Boryeong C/C
1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	Ulsan C/C
105,000	105,000	105,000	105,000	105,000	105,000	Hallim C/C
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	Busan C/C
503,539	503,539	503,539	1,012,447	1,012,447	1,012,447	Incheon C/C
-	-	-	-	718,400	718,400	Kunsan C/C
-	-	-	-	848,000	848,000	Yeongwol C/C
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	2,949,200	POSCO POWER(Other co.)
450,000	450,000	450,000	450,000	450,000	450,000	Anyang C/C ( " )
450,000	450,000	450,000	450,000	450,000	450,000	Bucheon C/C ( " )
500,750	500,750	500,750	500,750	500,750	500,750	G S Bugog#1 ( " )
-	-	533,000	533,000	533,000	533,000	G S Bugog#2 ( " )
525,500	525,500	525,500	525,500	525,500	525,500	Yulchon ( " )
989,200	989,200	989,200	989,200	989,200	989,200	Gwangyang ( " )
-	507,000	507,000	507,000	465,800	465,800	Hyundaedaesai ( " )
16,003,989	16,510,989	17,043,989	17,574,961	19,100,161	19,799,361	Total of combined cycle
3,000	3,000	3,000	3,000	3,000	3,000	Yangyang-wind power
6,000	21,000	21,000	21,000	21,000	21,000	Hankyeong-wind power
-	-	-	12,000	20,000	20,000	Seongsan-wind
-	-	750	750	750	750	Kori-wind power
-	-	-	-	7,500	22,000	Yeongheung-wind
100	100	100	100	1,090	1,090	Samcheonpo solar
1,000	1,000	1,000	1,000	1,000	1,000	Yeongheung solar
-	-	1,200	1,230	1,230	1,230	Seocheon solar
-	-	525	571	571	571	Boryeong solar
-	-	50	50	50	50	Jeju solar
120	120	120	120	120	120	Taean solar
-	2,000	2,000	2,000	2,000	2,000	Samlangjin solar#1
-	-	1,000	1,000	1,000	1,000	Samlangjin solar#2
-	-	392	392	392	392	Busan C/C solar
-	-	1,000	1,000	3,500	3,500	Hadong solar
-	-	-	55	55	55	Yeongwol solar
1,000	1,000	1,000	1,000	1,000	1,000	Donghae thermal solar
-	1,250	1,250	1,250	1,250	1,250	Yeonggwang solar park#1
-	-	1,750	1,750	1,750	1,750	Yeonggwang solar park#2
-	-	-	-	2,000	2,000	Yeoicheon solar

## 9. 발전소별 설비 추이 (6)

(단위 : kW) Trends in generation facilities by plant

연도별 발전소별	1961	2001	2002	2003	2004	2005
당진태양광	-	-	-	-	-	-
행원소수력태양광	-	-	-	-	-	-
울산태양광	-	-	-	-	-	-
호남화력태양광	-	-	-	-	-	-
탕정공장태양광	-	-	-	-	-	-
부산신항태양광	-	-	-	-	-	-
서울태양광	-	-	-	-	-	-
하동변전소태양광	-	-	-	-	-	-
케이씨수산태양광	-	-	-	-	-	-
광양항태양광	-	-	-	-	-	-
분당연료전지	-	-	-	-	-	-
보령화력연료전지	-	-	-	-	-	-
일산연료전지	-	-	-	-	-	-
내병도태양광	-	-	-	-	-	-
눌록도태양광	-	-	-	-	-	-
당사도태양광	-	-	-	-	-	-
황제도태양광	-	-	-	-	-	-
육도태양광	-	-	-	-	-	-
고사도태양광	-	-	-	-	-	-
을도태양광	-	-	-	-	-	-
평사도태양광	-	-	-	-	-	-
한전자회사대체계	-	4,002	4,004	4,006	10,008	10,350
고리 #1	-	587,000	587,000	587,000	587,000	587,000
#2	-	650,000	650,000	650,000	650,000	650,000
#3,4	-	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
신고리 #1	-	-	-	-	-	-
월성 #1	-	678,683	678,683	678,683	678,683	678,683
#2	-	700,000	700,000	700,000	700,000	700,000
#3	-	700,000	700,000	700,000	700,000	700,000
#4	-	700,000	700,000	700,000	700,000	700,000
영광 #1,2	-	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
#3	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
#4	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
#5,6	-	-	2,000,000	2,000,000	2,000,000	2,000,000
울진 #1,2	-	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
#3	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
#4	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
#5	-	-	-	-	1,000,000	1,000,000
#6	-	-	-	-	-	1,000,000
원자력계	-	13,715,683	15,715,683	15,715,683	16,715,683	17,715,683
집단 & 대체 에너지 (타사)	-	-	-	1,379,515	1,483,405	1,530,902
총계	367,254	50,864,650	53,806,853	56,058,686	59,967,143	62,264,332

2006	2007	2008	2009	2010	2011	End of Plants
-	-	-	-	1,003	1,003	Dangjin solar
-	-	-	-	6	6	haengwon solar
-	-	-	-	-	509	Ulsan solar
-	-	-	-	-	97	Honam solar
-	-	-	-	-	1200	Ulsan thermal solar
-	-	-	-	-	116	Busan sinhang solar
-	-	-	-	-	1301	Seoul solar
-	-	-	-	-	48	Hadong solar
-	-	-	-	-	998	KC susan solar
-	-	-	-	-	2293	Gwangyanghang solar
250	250	250	250	250	300	Bundang fuel cell
-	-	300	300	300	300	Boryeong fuel cell
-	-	-	2,400	2,400	5,200	Ilsan fuel cell
-	-	60	60	60	60	Naebyeong solar
-	-	45	45	45	45	Nulokdo solar
-	-	-	60	60	60	Dangsado solar
-	-	-	60	60	60	Hwangjedo solar
-	-	-	95	95	95	Yukdo solar
-	-	-	45	45	45	Gosado solar
-	-	-	35	35	35	Yuldo solar
-	-	-	45	45	45	Pyeongsado solar
13,852	35,354	47,145	62,119	89,628	97,574	Total of KEPCO Sub.
587,000	587,000	587,000	587,000	587,000	587,000	Kori #1
650,000	650,000	650,000	650,000	650,000	650,000	#2
1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	#3, 4
-	-	-	-	-	1,000,000	Sinkori #1
678,683	678,683	678,683	678,683	678,683	678,683	Wolseong #1
700,000	700,000	700,000	700,000	700,000	700,000	#2
700,000	700,000	700,000	700,000	700,000	700,000	#3
700,000	700,000	700,000	700,000	700,000	700,000	#4
1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	Yeonggwang #1, 2
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#3
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#4
2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	#5, 6
1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	Ulchin #1, 2
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#3
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#5
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	#6
17,715,683	17,715,683	17,715,683	17,715,683	17,715,683	18,715,683	Total of nuclear
1,610,452	1,725,439	2,151,280	2,694,899	3,742,042	4,384,310	Group&Alternative energy (other co.)
65,518,630	68,275,829	72,503,052	73,482,443	76,096,164	79,341,867	Total

## 10. 발전소별 설비 현황 (1)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기		Turbine		용량 Capacity (kW)
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)		
화천	108,000	30,000	4	120,000	27,000	
춘천	62,280	31,140	2	62,280	31,140	
의암	45,000	23,500	2	47,000	22,500	
청평	139,600	21,000	2	143,500	19,800	
		41,500	1		40,000	
		60,000	1		60,000	
팔당	120,000	30,790	4	123,160	30,000	
섬진강	28,800	14,500	2	29,000	14,400	
강릉	82,000	43,300	2	86,600	41,000	
무주양수	600,000	330,000	2	660,000	300,000	
청평양수	400,000	220,000	2	440,000	200,000	
삼랑진양수	600,000	340,000	2	680,000	300,000	
산청양수	700,000	360,800	2	721,600	350,000	
양양양수	1,000,000	258,300	4	1,033,200	250,000	
청송양수	600,000	306,100	2	612,200	300,000	
예천양수	800,000	408,200	2	816,400	400,000	
보성강	4,500	2,350	2	4,700	2,250	
안흥	480	171	3	513	160	
괴산	2,600	1,300	2	2,600	1,300	
추산(도서)	700	600	1	700	600	
		100	1		100	
산청소수력	995	649	1	1,063	595	
		414	1		400	
무주소수력	400	450	1	450	400	
양양소수력	1,400	700	2	1,400	700	
섬진강소수력	6,000	6,380	1	6,380	6,000	
삼천포해양소수력	4,740	790	6	4,740	790	
태안소수력	2,200	550	4	2,200	2,200	
보령소수력	7,500	1,250	6	7,500	1,250	
영흥해양소수력	7,599	1,070	3	3,210	3,000	
		1,533	3	4,599	1,533	
당진화력소수력	4,998	1,736	3	5,208	1,666	
행원소수력	60	43.1	2	86.2	30	

(As of Dec. 31. '11)

발전기 Generator				유효낙차 Effective head (m)	Plants
대수 Numbers (ea)	총용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M		
4	108,000	11,000	200	74.5	Hwacheon
2	62,280	11,000	150	28.8	Chuncheon
2	45,000	11,000	113	15.9	Uiam
2	139,600	11,000	164	26.0	Cheongpyeong
1			150	24.0	
1		13,800	103	22.3	
4	120,000	6,000	120	16.9	Paldang
2	28,800	11,000	514	151.7	Seomjingang
2	82,000	11,000	514	577.7	Kangneung
2	600,000	22,000	450	589.0	Muju (Pumping)
2	400,000	13,800	450	498.5	Cheongpyeong ( " )
2	600,000	18,000	300	347.9	Samrangjin ( " )
2	700,000	18,000	360	429.5	Sancheong ( " )
4	1,000,000	18,000	600	817.0	Yangyang ( " )
2	600,000	18,000	300	347.5	Cheongsong ( " )
2	800,000	18,000	400	484.2	
2	4,500	3,300	720	76.0	Boseonggang
3	480	6,600	720	12.0	Anheung
2	2,600	3,300	600	22.4	Goesan
1	700	3,300	1,200	143.6	Chusan (Island)
1		6,600	600	106.8	
1	995	3,300	1,208	56.7	Sanchong
1					
1	400	380	720	32.0	Muju
2	1,400	3,300	600	43.5	Yangyang
1	6,000	6,000	900	162.2	Seomjingang
6	4,740	3,300	724	5.7	Samchonpo
1	2,200				Taean
6	7,500	3,300	150		Boryeong
1	3,000			6.9	Yeongheung
3	4,599				
3	4,998	3,300	138	4.3	Dangjin
2	60	380	600	2.0	Hangwon

## 10. 발전소별 설비 현황 (2)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine	용량 Capacity (kW)
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)		
소양강 (수자원)	200,000	103,000	2	206,000	100,000	
안동 ( " )	90,000	50,000	2	100,000	45,000	
대청 ( " )	90,000	45,000	2	90,000	45,000	
충주 ( " )	412,000	103,100	4	427,000	100,000	
		7,300	2		6,000	
합천 ( " )	100,000	51,600	2	103,200	50,000	
주암 ( " )	22,500	11,700	2	23,400	11,250	
임하 ( " )	50,000	27,500	2	55,000	25,000	
남강 ( " )	14,000	7,000	2	14,000	7,000	
용담 ( " )	22,100	11,050	2	22,100	11,050	
광천(수자원소수력)	450	450	1	450	450	
반변 ( " )	1,060	530	2	1,060	530	
부안 ( " )	193	193	1	193	193	
운문 ( " )	330	330	1	330	330	
횡성 ( " )	1,000	500	2	1,000	500	
영천 ( " )	1,000	530	2	1,060	500	
안동 ( " )	1,500	500	3	1,500	500	
합천 ( " )	1,200	655	2	1,310	600	
용담 ( " )	4,100	1,150	2	2,300	1,150	
		1,800	1	1,800	1,800	
밀양 ( " )	1,300	710	2	1,420	650	
보령 ( " )	701	145	1	701	145	
		556	1		556	

(As of Dec. 31. '11)

발전기 Generator				유효낙차 Effective head (m)	Plants	
대수 Numbers (ea)	총용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M			
2	200,000	15,400	180	90.0	Soyanggang	(Other co.)
2	90,000	11,000	190	57.0	Andong	( " )
2	90,000	13,200	150	38.7	Daecheong	( " )
4	412,000	13,800	129	57.5	Chungju	( " )
2		6,600	172	9.2		
2	100,000	13,200	257	95.0	Hapcheon	( " )
2	22,500	6,600	400	69.2	Juam	( " )
2	50,000	11,000	400	48.4	Imha	( " )
2	14,000	3,450	190	16.0	Namgang	( " )
2	22,100	6,600	720	147.1	Yongdam	( " )
1	450	3,300	720	36.0	Gwangcheon	( " )
2	1,060	660	1,200	5.0	Banbyeon	( " )
1	193	380	1,200	19.6	Buan	( " )
1	330	3,300	1,200	33.9	Unmun	( " )
2	1,000	3,300	900	43.0	Hoengseong	( " )
2	1,000	380	400	22.5	Yeongcheon	( " )
3	1,500	3,300	225	5.2		
2	1,200	3,300	360	7.3	Hapcheon	( " )
2	2,300	3,300	734	41.7	Yongdam	( " )
1	1,800	3,300	514	-		
2	1,300	3,300	900	65.4	Milyang	( " )
1	701	600	1,200	32.6	Boryeong	( " )
1		380	908	20.6		

## 10. 발전소별 설비 현황 (3)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine	용량 Capacity (kW)
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)		
대곡(〃)	300	300	1	300	300	300
장흥댐(〃)	800	800	1	800	800	800
성남(〃)	340	340	1	340	340	340
달방(〃)	170	170	1	170	170	170
주암(〃)	990	990	1	990	990	990
대청댐(〃)	800	400	2	800	800	800
성남2(〃)	360	360	1	360	360	360
고산(〃)	560	580	1	580	560	560
군위(〃)	500	516	1	516	500	500
횡성댐2(〃)	300	300	1	300	300	300
판교(〃)	400	213	2	426	200	200
금남보(〃)	2,310	770	3	2,310	770	770
승촌보(〃)	800	439	2	878	400	400
죽산보(〃)	1,220	635	2	1,270	610	610
강정고령보(〃)	3,000	1,500	2	3,000	1,500	1,500
백제보(〃)	2,640	660	4	2,640	660	660
금강보(〃)	3,000	1,500	2	3,000	1,500	1,500
이포보(〃)	3,000	1,000	3	3,000	1,000	1,000
강천보(〃)	4,950	1,665	3	4,995	1,650	1,650
구미보(〃)	3,000	1,650	2	3,300	1,500	1,500
기타(수자원제외)	45,663					
수력계	6,418,389		157	6,494,776		

(As of Dec. 31. '11)

발전기 Generator				유효낙차 Effective head (m)	Plants	
대수 Numbers (ea)	총용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M			
1	300	380	720	43.6	Daegok	( " )
1	800	3,300	514	27.7	Janghengdaem	( " )
1	340	380	450	18.0	Sungnam	( " )
1	170	380	900	38.5	Dalbang	( " )
1	990	480	600	33.9	Juam	( " )
1	800	600	225	4.4	Daecheongdaem	( " )
1	360	380	412	12.9	Seongnam 2	( " )
1	560	3,300	900	29.4	Gosan	( " )
1	500	380	720	33.1	Gunwi	( " )
1	300	3,300	1,200	28.1	Hoengseongdae	( " )
2	400	380	910	13.5	Pankyo	( " )
3	2,310	6,600	720	2.5	Keumnambo	( " )
2	800	380	720	3.6	Seungchonbo	( " )
2	1,220	480	720	4.5	Juksanbo	( " )
2	3,000	3,300	900	5.1	Kangjeong	( " )
4	2,640	480	720	2.3	Baekjebo	( " )
2	3,000	6,600	720	4.2	Keumkangbo	( " )
3	3,000	3,300	900	2.3	Epobo	( " )
3	4,950	6,600	720	4.7	Kangcheonbo	( " )
2	3,000	6,600	720	6.6	Kumibo	( " )
83	45,663				Total of Other co. small hydro	
234	6,418,389				Total of hydro	

## 10. 발전소별 설비 현황 (4)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine	용량 Capacity (kW)
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)		
영동 #1	125,000	125,000	1	125,000	125,000	125,000
영동 #2	200,000	200,000	1	200,000	200,000	200,000
군산 #1,2						
서천 #1,2	400,000	200,000	2	400,000	200,000	200,000
동해 #1,2	400,000	200,000	2	400,000	200,000	200,000
호남 #1,2	500,000	250,000	2	500,000	250,000	250,000
삼천포 #1~6	3,240,000	560,000	4	3,240,000	560,000	
		500,000	2		500,000	
영흥 #1,2	1,600,000	800,000	2	1,600,000	800,000	800,000
영흥 #3,4	1,740,000	870,000	2	1,740,000	870,000	870,000
보령 #1~8	4,000,000	500,000	8	4,000,000	500,000	500,000
태안 #1~8	4,000,000	500,000	8	4,000,000	500,000	500,000
하동 #1~8	4,000,000	500,000	8	4,000,000	500,000	500,000
당진 #1~8	4,000,000	500,000	8	4,000,000	500,000	500,000
영남 #1,2	400,000	200,000	2	400,000	200,000	200,000
울산 #1~3	600,000	200,000	3	600,000	200,000	200,000
울산 #4~6	1,200,000	400,000	3	1,200,000	400,000	400,000
여수 #1	200,000	200,000	1	200,000	200,000	200,000
여수 #2	328,600	328,600	1	328,600	328,600	328,600
평택 #1~4	1,400,000	350,000	4	1,400,000	350,000	350,000
남제주 #3,4 (도서)	200,000	100,000	2	200,000	100,000	100,000
제주 #2,3 (도서)	150,000	75,000	2	150,000	75,000	75,000
서울 #4	137,500	137,500	1	137,500	137,500	137,500
서울 #5	250,000	250,000	1	250,000	250,000	250,000
인천 #1,2	500,000	250,000	2	500,000	250,000	250,000
기력계	29,571,100		72	29,571,100		

(As of Dec. 31. '11)

발전기 Generator				유효낙차 Effective head (m)	Plants	
대수 Numbers (ea)	총용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M			
1	125,000	15,000	3,600	석탄호소 Coal	Yeongdong	#1
1	200,000	21,000	3,600	석탄호소 Coal		#2
2	400,000	20,000	3,600	석탄호소 Coal	Kunsan	
2	400,000	20,000	3,600	유동층연소 Coal	Seocheon	#1, 2
2	500,000	24,000	3,600	유연탄전소 Coal	Donghae	#1, 2
4	3,240,000	22,000	3,600	유연탄전소 Coal	Honam	#1, 2
2		22,000	3,600	유연탄전소 Coal	Samcheonpo	#1~6
2	1,600,000	22,000	3,600	유연탄전소 Coal	Yeongheung	#1, 2
2	1,740,000	22,000	3,600	유연탄전소 Coal	Yeongheung	#3, 4
8	4,000,000	22,000	3,600	유연탄전소 Coal	Boryeong	#1~8
8	4,000,000	22,000	3,600	유연탄전소 Coal	Taean	#1~8
8	4,000,000	22,000	3,600	유연탄전소 Coal	Hadong	#1~8
8	4,000,000	22,000	3,600	유연탄전소 Coal	Dangjin	#1~8
2	400,000	21,000	3,600	중유전소 H.Oil	Yeongnam	#1, 2
3	600,000	21,000	3,600	중유전소 H.Oil	Ulsan	#1~3
3	1,200,000	19,000	3,600	중유전소 H.Oil	Ulsan	#4~6
1	200,000	20,000	3,600	중유전소 H.Oil	Yeosu	#1
1	328,600	18,500	3,600	중유전소 H.Oil	Yeosu	#2
4	1,400,000	19,000	3,600	중유, 가스 H.OIL L	Pyeongtaek	#1~4
2	200,000	18,300	3,600	중유전소 H.Oil	Namjeju	#3, 4
2	150,000	13,800	3,600	중유전소 H.Oil	Jeju	#2, 3
1	137,500	13,800	3,600	가스 LNG	Seoul	#4
1	250,000	19,000	3,600	가스 LNG	Seoul	#5
2	500,000	17,000	3,600	가스 LNG	Incheon	#1, 2
72	29,571,100				Total of steam	

## 10. 발전소별 설비 현황 (5)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)	
남제주 D/P	40,000	10,000	4	40,000	
제주 G/T	165,000	55,000	3	165,000	
제주내연	80,000	5,000	8	40,000	
울릉도 D/P	9,500	1,485	2	21,212	
		3,359	4		
울릉도남양	6,000	1,602	3		
흑산도 D/P	3,500	551	1	4,589	
		820	2		
		1,200	2		
추자도 D/P	4,400	331	3	5,045	
		551	3		
		1,200	2		
거문도 D/P	3,500	551	3	3,891	
		1,119	2		
덕적도 D/P	2,900	331	3	3,197	
		551	4		
위도 D/P	2,850	551	3	3,423	
		650	1		
		1,119	1		
조도 D/P	2,200	575	4	2,299	
백령도 D/P	9,000	1,602	6	9,614	
대청도 D/P	1,850	551	1	4,374	
		1,586	2		
		650	1		
소청도 D/P	2,650	820	3	2,753	
		294	1		
연평도 D/P	3,350	2,058	3	8,411	
		1,119	2		
자월도 D/P	1,650	176	1	2,128	
		650	3		
홍도 D/P	2,350	294	1	2,584	
		650	1		
		820	2		
비양도 D/P	240	152	3	456	
덕우도 D/P	390	125	3	578	
		204	1		
여서도 D/P	240	152	3	456	
가파도 D/P	450	184	3	551	
비안도 D/P	240	110	3	331	
연도 D/P	240	152	2	508	
		204	1		
승봉도 D/P	950	176	3	2,481	
		650	3		
풍도 D/P	240	152	3	456	
가의도 D/P	240	152	3	456	
삽시도 D/P	900	184	2	1,250	
		441	2		
외연도 D/P	750	184	3	992	
		441	1		

(As of Dec. 31. '11)

용량 Capacity (kW)	대수 Numbers (ea)	총 용량 Capacity (kW)	발전기 <sup>1)</sup> Generator		Plants
			전압 Voltage (V)	회전수 R.P.M	
10,000	4	40,000	6,600	139	Namjeju D/P
55,000	3	165,000	13,800	3,600	Jeju G/T
40,000	2	80,000	13,800	109	Jeju D/P
1,000	2	18,500	6,600	720	Ulleungdo D/P
3,000	4		6,600	750	
1,500	3		6,600	720	Namyang D/P
500	1	4,000	6,600	720	Heuksando D/P
750	2		6,600	720	
1,000	2		6,600	720	
300	3	4,400	6,600	900	Chujado D/P
500	3		6,600	720	
1,000	2		6,600	900	
500	3	3,500	6,600	720	Geomundo D/P
1,000	2		6,600	900	
300	3	2,900	6,600	1,200	Deokjeokdo D/P
500	4		6,600	720	
450	3	2,850	380	900	Wido D/P
500	1		6,600	720	
1,000	1		6,600	720	
500	4	2,000	6,600	720	Jodo D/P
1,500	6	9,000	6,600	720	Baekryeongdo D/P
450	1	3,550	380	900	Daecheongdo D/P
1,300	2		6,600	900	
500	1		6,600	720	
800	3	2,650	6,600	900	Socheongdo D/P
250	1		380	1,200	
1,900	3	7,700	6,600	900	Yeonpyeongdo D/P
1,000	2		6,600	720	
150	1	1,650	380	1,200	Jawoldo D/P
500	3		6,600	720	
250	1	2,350	380	1,200	Hongdo D/P
500	1		6,600	720	
800	2		6,600	900	
80	3	240	380	1,800	Biyangdo D/P
80	3	390	380	1,800	Deogudo D/P
150	1		380	1,800	
80	3	240	380	1,800	Yeoseodo D/P
150	3	450	380	1,200	Gapado D/P
80	3	240	380	1,800	Biando D/P
80	2	260	380	1,800	Yeondo D/P
100	1		380	1,800	
150	3	1,950	380	1,200	Seungbongdo D/P
500	3		6,600	720	
80	3	240	380	1,800	Pungdo D/P
80	3	240	380	1,800	Gauido D/P
150	2	900	380	1,200	Sabsido D/P
300	2		6,600	1,200	
150	3	750	380	1,200	Yoiyeondo D/P
300	1		6,600	1,200	

주1) 시설용량에 미반영된 도서발전기 증감포함

## 10. 발전소별 설비 현황 (6)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)	
어 청 도 D/P	900	184 441	2 2	1,250	
대 모 도 D/P	750	250	3	750	
개 야 도 D/P	1,500	294 650	2 2	1,889	
가 거 도 D/P	750	294 441	3 1	1,323	
여 자 도 D/P	450	184	3	551	
추 도 D/P	240	110	3	331	
어 의 도 D/P	240	55 103	2 1	213	
수 우 도 D/P	240	55 152	2 1	262	
매 물 도 D/P	240	110	3	331	
장 고 도 D/P	240	125	3	375	
고 대 도 D/P	300	184	3	551	
문 갑 도 D/P	240	551	3	1,654	
성 남 도 D/P	240	152 55	1 2	262	
독 거 도 D/P	240	152 55	1 2	262	
호 녹 도 D/P	300 240	204 125 204	3 2 1	611 453	
낙 월 도 D/P	750	294	3	882	
송 이 도 D/P	240	125 204	2 1	453	
구 자 도 D/P	240	152	3	456	
슬 도 D/P	240	152	3	456	
시 산 도 D/P	750	294	3	882	
득 량 도 D/P	300	184	3	551	
어 통 도 D/P	240	152	3	456	
내 연 력 계	355,450		196	342,239	
평 택 C/C	480,000	80,000 160,000	4 1	480,000	
일 산 C/C	900,000	100,000 200,000 100,000 100,000	4 1 2 1	900,000	
분 당 C/C	922,064	77,758 185,000 77,758 115,000	5 1 3 1	922,064	
서 인 천 C/C	1,800,000	150,000 75,000	8 8	1,800,000	
신 인 천 C/C	1,800,000	150,000 150,000	8 4	1,800,000	
울 산 C/C	1,200,000	105,000 100,000 150,000 150,000	2 1 4 2	1,210,000	

(As of Dec. 31. '11)

발전기 <sup>1)</sup> Generator					Plants	
용량 Capacity (kW)	대수 Numbers (ea)	총용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M		
150	2	900	380	1,200	Yeocheongado	D/P
300	2		6,600	1,200		
250	3	750	380	1,200	Daemodo	D/P
250	2	1,500	380	1,200	Gaeyado	D/P
500	2		6,600	720		
250	3	1,050	380	1,200	Gageodo	D/P
300	1		6,600	1,200		
150	3	450	380	1,200	Yeogado	D/P
80	3	240	380	1,800	Chudo	D/P
40	2	160	380	1,800	Eoeudo	D/P
80	1		380	1,800		
40	2	160	380	1,800	Suwoodo	D/P
80	1		380	1,800		
80	3	240	380	1,800	Maemuldo	D/P
80	3	240	380	1,800	Mungabdo	D/P
100	3	300	380	1,200	Janggodo	D/P
80	3	240	380	1,800	Godaedo	D/P
80	1	160	380	1,800	Seongnamdo	D/P
40	2		380	1,800		
80	1	160	380	1,800	Doggeodo	D/P
40	2		380	1,800		
100	3	300	380	1,800	Hodo	D/P
80	2	260	380	1,800	Nokdo	D/P
100	1		380	1,800		
250	3	750	380	1,200	Nakwoldo	D/P
80	2	260	380	1,800	Songido	D/P
100	1		380	1,800		
80	3	240	380	1,800	Gujado	D/P
80	3	240	380	1,800	Seuldo	D/P
250	3	750	380	1,200	Sisando	D/P
100	3	300	380	1,200	Deukryangdo	D/P
80	3	240	380	1,800	Eoryongdo	D/P
136,060	190	365,840			Total of internal combustion	
80,000	4	480,000	13,800	3,600	Pyongtaek	C/C
160,000	1		13,800	3,600		
100,000	4	900,000	13,800	3,600	Ilsan	C/C
200,000	1		20,000	3,600		
100,000	2		13,800	3,600		
100,000	1		13,800	3,600		
77,758	5	922,064	13,800	3,600	Bundang	C/C
185,000	1		17,000	3,600		
77,758	3		13,800	3,600		
115,000	1		13,800	3,600		
150,000	8	1,800,000	13,800	3,600	Seoincheon	C/C
75,000	8		18,000	3,600		
150,000	8	1,800,000	13,800	3,600	Shininchon	C/C
150,000	4		13,800	3,600		
100,000	2	1,200,000	13,800	3,600	Ulsan	C/C
100,000	1			3,600		
150,000	4			3,600		
150,000	2			3,600		

주1) 시설용량에 미반영된 도서발전기 증감포함

## 10. 발전소별 설비 현황 (7)

('11.12.31현재) Generating facilities by plant

발전소별	시설용량 Capacity of facilities (kW)	원동기			Turbine
		용량 Capacity (kW)	대수 Numbers (ea)	총용량 Total capacity (kW)	
보령 C/C	1,350,000	150,000	12	1,800,000	
부산 C/C	1,800,000	150,000	8	1,800,000	
한림 C/C	105,000	150,000 35,000 35,000	4 2 1	105,000	
인천 C/C	1,012,447	160,729 182,081 163,979 180,950	2 1 2 1	1,012,447	
군산 C/C	718,400	233,300 251,800	2 1	718,400	
영월 C/C	848,000	183,000 299,000	3 1	848,000	
GS 안양 C/C(타사)	450,000	75,000 150,000	4 1	450,000	
GS 부천 C/C(타사)	450,000	100,000 150,000	3 1	450,000	
포스코파워 (타사)	2,949,200	100,000 150,000 183,200 208,200	12 4 4 2	2,949,200	
GSEPS 부곡 #1(타사)	500,750	160,960 178,830	2 1	500,750	
GSEPS 부곡 #2(타사)	533,000	174,500 184,000	2 1	533,000	
울촌 C/C(타사)	525,500	163,800 197,900	2 1	327,600 197,900	
광양 C/C(타사)	989,200	153,100 188,400	4 2	989,200	
현대대산(타사)	465,800	93,700 91,000	4 1	465,800	
복합화력계	19,799,361		151	20,259,361	
고리 #1	587,000	587,000	1	587,000	
	650,000	650,000	1	650,000	
	950,000	950,000	1	950,000	
	950,000	950,000	1	950,000	
신고리 #1	1,000,000	1,000,000	1	1,000,000	
월성 #1	678,683	678,683	1	678,683	
	700,000	700,000	1	700,000	
	700,000	700,000	1	700,000	
	700,000	700,000	1	700,000	
영광 #1~2	1,900,000	950,000	2	1,900,000	
	1,000,000	1,000,000	1	1,000,000	
	1,000,000	1,000,000	1	1,000,000	
#5~6	2,000,000	1,000,000	2	2,000,000	
울진 #1	950,000	950,000	1	950,000	
	950,000	950,000	1	950,000	
	1,000,000	1,000,000	1	1,000,000	
	1,000,000	1,000,000	1	1,000,000	
	1,000,000	1,000,000	1	1,000,000	
원자력계	18,715,683		21	18,715,683	
집단에너지	2,623,224		37	2,623,224	
대체에너지	1,858,660		2,425	1,858,660	
합계	79,341,867		3,059	79,865,043	

(As of Dec. 31. '11)

발전기 Generator					Plants	
용량 Capacity (kW)	대수 Numbers (ea)	총 용량 Capacity (kW)	전압 Voltage (V)	회전수 R.P.M		
150,000	12	1,800,000	13,800	3,600	Borveona	C/C
150,000	8	1,800,000	13,800	3,600	Busan	C/C
150,000	4		13,800	3,600		
35,000	2	105,000	13,800	3,600	Hallim	C/C
35,000	1		13,800	3,600		
160,729	2	1,012,447	16,000	3,600	Incheon	C/C
182,081	1		16,000	3,600		
163,979	2		18,000	3,600		
180,950	1		18,000	3,600		
233,300	2	718,400	21,000	3,600	Gunsan	C/C
251,800	1					
183,000	3	848,000	18,000	3,600	Yeongwol	C/C
299,000	1		18,000	3,600		
75,000	4	450,000	13,800	3,600	Anvana	C/C (Other Co.)
150,000	1					
100,000	3	450,000	13,800	3,600	Bucheon	C/C (Other Co.)
150,000	1		18,000	3,600		
100,000	12	2,949,200	13,800	3,600	POSCO POWER	(Other Co.)
150,000	4					
183,200	4					
208,200	2					
160,960	2	500,750	16,000	3,600	G S Buaoa #1	(Other Co.)
178,830	1					
174,500	2	533,000	16,000	3,600	G S Buaoa #2	(Other Co.)
184,000	1					
163,800	2	525,500	16,500	3,600	Yulchon	(Other Co.)
197,900	1		18,000	3,600		
153,100	4	989,200	18,000	3,600	Gwangyang	(Other Co.)
188,400	2		18,000	3,600		
93,700	4	465,800	13,800	3,600	Hyundai-Daesang	(Other Co.)
91,000	1		13,800	3,600		
	151	20,249,361			Total of combined cycle	
587,000	1	587,000	22,000	1,800	Kori	#1
650,000	1	650,000	22,000	1,800		#2
950,000	1	950,000	22,000	1,800		#3
950,000	1	950,000	22,000	1,800		#4
1,000,000	1	1,000,000	22,000	1,800	Shin Kori	#1
678,683	1	678,683	26,000	1,800	Wolseona	#1
700,000	1	700,000	22,000	1,800		#2
700,000	1	700,000	22,000	1,800		#3
700,000	1	700,000	22,000	1,800		#4
950,000	2	1,900,000	22,000	1,800	Yeonawana	#1~2
1,000,000	1	1,000,000	22,000	1,800		#3
1,000,000	1	1,000,000	22,000	1,800		#4
1,000,000	2	2,000,000	22,000	1,800		#5~6
950,000	1	950,000	22,000	1,800	Ulchin	#1
950,000	1	950,000	22,000	1,800		#2
1,000,000	1	1,000,000	22,000	1,800		#3
1,000,000	1	1,000,000	22,000	1,800		#4
1,000,000	1	1,000,000	22,000	1,800		#5
1,000,000	1	1,000,000	22,000	1,800		#6
	21	18,715,683			Total of nuclear	
	42	2,623,224			Group energy sub-total	
	2,825	1,858,660			Alternative energy sub-total	
	3,535	79,802,257			Total	

## 11. 송전설비 추이

Trends in transmission facilities

구분 연월별	회선길이 <sup>1)</sup> Circuit length (c-m)								
	765 kV	345 kV	154 kV	66 kV	22 kV	180 kV (DC)	계 Total	765 kV	345 kV
1961	-	-	605,999	1,777,563	2,853,583	-	5,237,145	-	-
1989	-	4,936,128	9,830,945	4,118,026	12,304	-	18,897,403	-	49,590,660
1990	-	4,935,128	10,609,223	3,876,754	10,768	-	19,431,873	-	49,590,660
1991	-	4,941,380	11,189,287	3,720,763	-	-	19,851,430	-	49,655,688
1992	-	5,258,858	11,630,835	3,578,962	-	-	20,468,655	-	53,479,216
1993	-	5,560,020	12,083,398	3,551,119	-	-	21,194,537	-	57,013,548
1994	-	5,761,782	12,484,621	3,370,264	-	-	21,616,667	-	59,193,204
1995	-	5,951,622	13,529,595	3,192,373	-	-	22,673,590	-	61,456,968
1996	-	6,256,245	14,180,793	2,704,687	-	-	23,141,725	-	64,688,226
1997	-	6,441,663	15,097,438	2,513,044	-	202,000	24,254,145	-	66,070,227
1998	53,850	6,491,329	15,821,228	2,319,440	-	231,553	24,917,400	963,156	66,270,675
1999	285,798	6,664,916	16,064,559	2,090,286	-	231,553	25,337,112	5,144,364	66,287,472
2000	595,196	7,281,202	16,746,763	1,726,870	-	231,553	26,581,584	10,698,192	75,731,127
2001	661,878	7,344,766	17,575,929	1,540,882	-	231,553	27,355,008	11,907,048	76,599,384
2002	661,878	7,496,419	18,144,346	1,402,365	-	231,553	27,936,561	11,907,048	77,477,103
2003	661,208	7,740,764	18,595,493	1,031,024	-	231,759	28,260,248	11,901,744	79,934,550
2004	661,208	7,903,438	18,723,230	888,881	-	231,759	28,408,516	11,901,744	81,873,972
2005	661,532	7,990,140	19,190,912	567,371	-	231,759	28,641,714	11,907,576	82,799,862
2006	754,674	8,279,073	19,514,739	496,097	-	231,673	29,276,256	13,584,132	86,107,698
2007	754,674	8,284,356	19,917,411	338,459	-	231,673	29,526,573	13,584,132	86,146,236
2008	754,674	8,309,700	20,298,088	334,825	-	230,673	29,927,960	13,584,132	86,418,528
2009	754,674	8,551,624	20,469,446	249,532	-	231,372	30,256,648	13,584,132	87,884,604
2010	834,602	8,580,264	20,777,065	252,563	-	231,372	30,675,866	15,022,836	88,079,718
2011	834,602	8,652,503	21,279,577	250,769	-	231,372	31,248,823	15,022,836	88,798,185

1) 1961년은 선로길이임

전 선 전 체 길 이 Total length (m)					지 지 물 (기) Supporter (ea)					Items End of
154 kV	66 kV	22 kV	180 kV (DC)	계 Total	철 탑 Steel tower	철 주 Steel pole	콘크리트주 Concrete pole	목 주 Wooden pole	철관주 Panzer mast	
3,198,227	6,663,179	8,694,998	-	18,556,404	6,943	2,813	-	45,157	-	1961
36,995,483	12,367,507	36,912	-	98,990,562	28,297	1,094	11,544	1,946	158	1989
39,933,599	11,716,624	32,304	-	101,273,187	28,886	1,122	10,968	1,648	161	1990
42,560,400	11,168,354	-	-	103,384,442	29,690	1,019	10,403	1,540	170	1991
44,836,053	10,731,945	-	-	109,047,214	30,762	1,052	9,741	1,241	198	1992
47,155,156	10,654,028	-	-	114,822,732	31,816	1,029	9,418	1,196	221	1993
49,017,874	10,145,046	-	-	118,356,124	32,522	896	8,759	984	291	1994
53,747,944	9,577,109	-	-	124,782,021	33,663	838	8,006	927	307	1995
56,389,993	8,114,051	-	-	129,192,270	34,260	721	6,380	383	238	1996
60,913,699	7,534,182	-	202,000	134,720,108	35,283	611	5,436	313	254	1997
64,605,157	6,953,370	-	261,106	139,053,464	35,822	546	5,810	285	296	1998
66,260,238	6,315,691	-	261,106	144,268,871	36,102	426	5,269	249	301	1999
69,632,583	5,175,670	-	261,106	161,498,678	37,463	429	4,046	159	313	2000
73,414,332	4,617,706	-	261,106	166,799,576	37,965	420	3,962	138	341	2001
76,239,019	4,202,242	-	261,106	170,086,518	38,215	304	3,459	100	336	2002
77,378,339	3,088,132	-	261,312	172,564,077	38,173	183	2,345	79	280	2003
78,991,435	2,663,615	-	261,312	175,692,078	38,267	193	2,232	78	307	2004
79,815,516	1,702,113	-	261,312	176,486,379	37,793	192	1,504	45	310	2005
81,258,871	1,488,291	-	261,140	182,700,132	38,317	175	1,390	45	327	2006
83,214,489	1,015,377	-	261,140	184,221,374	38,411	113	1,048	41	323	2007
85,040,016	1,004,475	-	261,140	186,308,291	38,713	121	1,039	41	368	2008
85,813,881	748,596	-	260,839	188,292,052	38,885	116	828	39	393	2009
87,155,343	757,689	-	260,839	191,276,425	39,391	117	825	39	438	2010
89,419,047	752,307	-	260,839	194,253,214	39,702	120	823	39	466	2011

1) Indicates route length in 1961.

## 12. 송전설비 현황

('11.12.31 현재) Transmission facilities

항 목	전 압 별	765 kV	345 kV	154 kV	66 kV
선로길이 (m)	가 공	457,265	4,076,848	8,311,326	215,075
	지 중	-	88,175	1,528,586	1,399
	수 중	-	-	-	-
	계	457,265	4,165,023	9,839,912	216,474
회선길이 (c-m)	가 공	834,602	8,386,626	18,613,937	249,370
	지 중	-	265,877	2,665,640	1,399
	수 중	-	-	-	-
	계	834,602	8,652,503	21,279,577	250,769
전선연장 (m)	가 공	15,022,836	87,944,262	80,708,709	748,110
	지 중	-	853,923	8,710,338	4,197
	수 중	-	-	-	-
	계	15,022,836	88,798,185	89,419,047	752,307
지지물 (기)	철 탑(앵글)	10	11,033	26,950	603
	철 탑(강관)	892	198	15	1
	철 주	-	-	44	76
	강 관 주	-	15	390	35
	콘크리트 주	-	-	-	232
	목 전 주	-	-	-	39
	기 타	-	-	1	-
	계	902	11,246	27,400	986
애자류 (개)	볼소켓(일반형)	646,668	3,266,264	5,047,457	40,593
	볼소켓(내무형)	6,084	176,954	237,773	-
	폴리머(일반형)	-	-	4,584	-
	폴리머(내무형)	-	-	4,715	-
	기 타	-	-	38	-
	계	652,752	3,443,218	5,294,567	40,593

(As of Dec. 31. '11)

180 kV (DC)	계 Total	Voltage	Items	
29,467	13,089,981	Overhead power line	Route length ( m )	
4,531	1,622,691	Under ground power line		
96,422	96,422	Under water power line		
130,420	14,809,094	Total		
29,467	28,114,002	Overhead power line	Circuit length ( c-m )	
9,061	2,941,977	Under ground power line		
192,844	192,844	Under water power line		
231,372	31,248,823	Total		
58,934	184,482,851	Overhead power line	Total length ( m )	
9,061	9,577,519	Under ground power line		
192,844	192,844	Under water power line		
260,839	194,253,214	Total		
-	38,596	Angle steel tower	Supporter ( ea )	
-	1,106	Tubular steel tower		
-	120	Steel pole		
26	466	Tubular steel pole		
591	823	Concrete pole		
-	39	Wooden pole		
-	1			
617	41,151	Total		
5,431	9,006,413	Ball and socket insulator (standard type)	Insulator ( ea )	
-	420,811	Ball and socket insulator (anti-fog type)		
-	4,584	Polymer insulator (standard type)		
-	4,715	Polymer insulator (anti-fog type)		
-	38			
5,431	9,436,561	Total		

## 13. 변전설비 추이

Trends in substation facilities

구 분 연월별	변 전 소 수 (개) Number of substation (ea)						765 kV
	765 kV	345 kV	154 kV	66 kV	22 kV	계 Total	
1961	-	-	5	70	216	291	-
1990	-	18	195	87	19	319	-
1991	-	18	205	81	17	321	-
1992	-	20	223	74	14	331	-
1993	-	21	242	69	13	345	-
1994	-	23	261	65	12	361	-
1995	-	27	286	57	12	382	-
1996	-	29	305	54	12	400	-
1997	-	36	335	48	8	427	-
1998	-	38	358	46	7	449	-
1999	-	39	373	39	7	458	-
2000	-	44	399	32	8	483	-
2001 <sup>1)</sup>	1	65	449	25	9	549	1,111,000
2002	3	69	472	20	10	574	7,110,000
2003	3	71	500	19	10	603	7,110,000
2004	5	74	514	12	10	615	19,110,900
2005	5	77	537	9	9	637	21,111,300
2006	5	80	548	6	7	646	21,114,000
2007	5	81	571	6	6	669	23,114,400
2008	5	83	594	5	6	693	23,114,400
2009	6	86	613	4	6	715	24,114,600
2010	6	88	628	3	6	731	27,115,200
2011	6	91	644	3	5	749	29,115,600

1) 발전소 스위치야드(50개소, 9891.2MVA) 인수 (2001. 4)

변압기 용량 Capacity of transformer (kVA)					전력용콘덴서 Static-condenser (kVAR)	Items End of
345 kV	154 kV	66 kV	22 kV	계 Total		
-	372,800	519,407	316,801	1,209,008	92,950	1961
21,170,900	27,632,100	2,250,500	631,000	51,684,500	2,744,600	1990
24,171,500	29,767,100	2,235,400	589,000	56,763,000	3,559,600	1991
26,338,600	32,982,100	2,103,400	507,500	61,931,600	3,829,600	1992
28,339,000	36,834,100	2,019,400	477,500	67,670,000	3,984,600	1993
29,172,500	41,239,100	2,008,400	468,500	72,888,500	3,992,600	1994
36,507,300	47,059,100	1,939,400	455,500	85,961,300	4,222,600	1995
41,675,000	52,058,800	1,970,900	455,500	96,160,200	4,870,600	1996
46,009,200	58,705,800	1,812,500	307,500	106,835,000	5,365,600	1997
47,509,500	63,445,800	1,760,500	274,500	112,990,300	5,995,600	1998
51,510,300	66,928,800	1,528,500	289,500	120,257,100	6,785,600	1999
53,115,600	70,885,900	1,441,000	257,500	125,700,000	7,955,600	2000
63,577,200	78,118,600	1,225,000	248,200	144,279,000	9,100,600	2001
69,078,300	83,363,800	1,072,500	213,200	160,837,800	11,167,000	2002
75,659,600	89,228,200	831,000	237,200	173,066,000	12,393,000	2003
80,080,500	93,528,200	728,000	252,200	193,699,800	14,583,000	2004
84,381,200	102,168,200	590,000	254,200	208,504,900	15,993,000	2005
90,049,200	104,416,700	485,000	212,200	216,277,100	17,318,000	2006
95,278,600	109,268,200	454,000	134,200	228,249,400	18,642,000	2007
98,884,300	114,808,200	359,000	134,200	237,300,100	19,143,000	2008
104,595,400	118,643,200	354,000	79,200	247,786,400	20,008,000	2009
108,096,100	120,683,200	339,000	84,200	256,317,700	21,448,000	2010
111,596,800	123,226,400	356,000	78,200	264,373,000	20,778,000	2011

1) Switch Yard (50ea, 9891.2MVA) transferred from Power plants (2001. 4)

## 14. 변전설비 현황

('11.12.31 현재) Substation facilities

항 목 지역본부	변 전 소 수 (개) Number of substation ( ea )						변 압 기 용 량 Capacity of transformer ( kVA )					
	765 kV	345 kV	154 kV	66 kV	22 kV	계 Total	765 kV	345 kV	154 kV	66 kV	22 kV	계 Total
서 울	-	2	44	-	-	46	-	3,500,700	8,496,000	-	-	11,996,700
남 서 울	-	4	53	-	-	57	-	7,211,400	10,680,000	-	-	17,891,400
인 천	-	11	42	1	-	54	-	12,262,000	9,340,000	80,000	-	21,682,000
경기북부	1	6	35	1	-	43	6,001,200	10,107,000	7,440,000	67,000	-	23,615,200
경 기	1	9	69	-	-	79	8,001,600	14,502,900	15,300,000	-	-	37,804,500
강 원	1	3	40	-	1	45	6,001,200	2,500,500	5,600,000	70,000	-	14,171,700
충 북	-	4	27	-	1	32	-	6,501,300	5,540,000	20,000	-	12,061,300
대전충남	2	10	55	-	-	67	5,110,800	10,002,000	10,400,000	32,000	-	25,544,800
전 북	-	4	30	-	1	35	-	4,000,800	5,123,000	-	40,000	9,163,800
광주전남	-	8	54	1	-	63	-	8,001,600	8,910,800	67,000	-	16,979,400
대구경북	-	14	82	-	2	98	-	13,502,700	14,700,000	-	38,200	28,240,900
부 산	1	9	59	-	-	69	4,000,800	11,502,300	11,460,000	-	-	26,963,100
경 남	-	7	41	-	-	48	-	8,001,600	8,140,000	20,000	-	16,161,600
제 주	-	-	13	-	-	13	-	-	2,096,600	-	-	2,096,600
계	6	91	644	3	5	749	29,115,600	111,596,800	123,226,400	356,000	78,200	264,373,000

(As of Dec. 31.'11)

차 단 기 수 ( 개 ) Number of circuit breaker ( ea )							전력용 덴서 Static- condenser ( MVAR )	콘 분로리액터 Shunt reactor ( MVAR )	Items District Division
765 kV	345 kV	154 kV	66 kV	22 kV	기타	계 Total			
-	24	424	-	1,351	8	1,807	420	700	Seoul
-	60	572	-	1,759	4	2,395	915	1,310	Namseoul
-	169	549	12	1,506	-	2,236	665	1,890	Incheon
9	127	469	5	1,235	8	1,853	1,580	2,180	Gyeonggibukbu
11	170	881		2,668	-	3,730	3,535	1,210	Gyeonggi
8	47	364	21	741	-	1,181	1,125	550	Gangwon
-	53	361	3	806	-	1,223	1,560	60	Chungbuk
24	180	710	2	1,599	-	2,515	2,320	1,350	Daejonchungnam
-	50	329		818	3	1,200	1,120	60	Jeonbuk
-	119	620	7	1,305		2,051	1,528	390	Gwangjugyeongnam
-	205	922	-	2,536	10	3,673	3,410	680	Daegugyeongbuk
11	140	743	-	1,673	-	2,567	1,270	1,420	Busan
-	118	469	1	1,198	-	1,786	1,230	390	Gyeongnam
-	-	109	-	228	10	347	100	-	Jeju
63	1,462	7,522	51	19,423	43	28,564	20,778	12,190	Total

## 15. 배전설비 추이

Trends in distribution facilities

구 분 연월별	선로길이 Route length (c-m)			전선전체길이 Total length (m)		
	고 압 Over 600V	저 압 Under 600V	계 Total	고 압 Over 600V	저 압 Under 600V	계 Total
1961	5,477,695	3,693,705	9,171,400	25,104,692	11,862,898	36,967,590
1989	101,001,071	117,928,351	218,929,422	311,792,866	254,156,691	565,949,557
1990	105,868,921	125,394,452	231,263,373	330,928,204	268,639,541	599,567,745
1991	113,207,899	130,492,895	243,700,794	363,583,768	278,890,473	642,474,241
1992	118,745,194	136,595,225	255,340,419	389,416,227	291,376,746	680,792,973
1993	125,043,086	142,830,263	267,873,349	409,100,033	304,833,031	713,933,064
1994	131,586,863	149,208,411	280,795,274	432,875,274	318,625,109	751,500,383
1995	140,468,773	157,530,865	297,999,638	457,995,229	337,248,877	795,244,106
1996	151,454,809	163,276,972	314,731,781	482,525,164	349,618,709	832,143,873
1997	159,170,356	167,336,365	326,506,721	509,473,022	359,544,480	869,017,502
1998	163,631,824	173,069,789	336,701,613	522,211,090	373,039,085	895,250,175
1999	167,138,259	177,707,090	344,845,349	534,703,474	382,691,239	917,394,713
2000	170,691,038	180,573,197	351,264,235	545,167,333	390,679,674	935,847,007
2001	174,014,701	184,312,749	358,327,450	568,293,628	400,869,857	969,163,485
2002	177,639,356	189,343,785	366,983,141	578,792,921	413,490,966	992,283,887
2003	184,285,116	192,169,056	376,454,172	603,160,164	420,615,949	1,023,776,113
2004	186,501,995	193,861,872	380,363,867	611,006,502	425,863,049	1,036,869,551
2005	187,923,314	197,586,528	385,509,842	627,166,669	437,466,321	1,064,632,990
2006	192,157,443	201,147,528	393,304,971	640,751,661	444,962,242	1,085,713,903
2007	196,035,036	205,449,649	401,484,685	655,507,537	460,633,268	1,116,140,805
2008	200,165,500	209,849,145	410,014,645	671,777,372	473,764,437	1,145,541,809
2009	204,077,565	216,180,666	420,258,231	687,891,649	490,609,569	1,178,501,218
2010	207,028,386	221,231,069	428,259,455	700,476,298	504,456,667	1,204,932,965
2011	209,603,956	225,945,059	435,549,015	711,230,101	517,351,469	1,228,581,570

\* 2007년부터 강관주에 인입용 전주(6M) 포함

지 지 룰 (기) Supporter (ea)						변 압 기 Transformer		Items End of
철 탑 Steel tower	철 주 Steel pole	콘크리트 주 Concrete pole	목 주 Wooden pole	강관주 Tubular pole	계 Total	대 수 Number (ea)	용 량 Capacity (kVA)	
54	413	72	181,659	-	182,198	52,967	649,491	1961
1,249	3,735	3,633,862	11,549	18,517	3,668,912	544,879	15,996,949	1989
1,266	3,556	3,866,952	10,598	22,183	3,904,555	602,101	18,223,045	1990
1,287	3,582	4,159,386	8,746	25,151	4,198,152	669,175	21,522,863	1991
1,386	2,197	4,402,199	5,566	27,557	4,438,905	726,680	24,072,830	1992
1,397	5,739	4,639,560	3,972	30,819	4,681,487	781,700	26,708,503	1993
1,384	1,850	4,872,284	3,396	33,919	4,912,833	850,398	29,789,688	1994
1,384	1,648	5,189,093	3,447	40,173	5,235,745	927,462	33,677,491	1995
1,382	2,022	5,529,411	2,290	47,244	5,582,349	996,435	35,528,654	1996
1,343	2,108	5,767,283	2,127	54,572	5,827,433	1,064,334	39,596,721	1997
1,358	1,822	5,968,221	1,803	57,876	6,031,080	1,100,642	41,549,836	1998
1,346	1,853	6,154,646	1,505	65,088	6,224,438	1,187,263	47,875,809	1999
1,392	1,919	6,363,176	966	71,776	6,439,229	1,308,947	57,178,373	2000
1,359	1,614	6,608,173	931	82,822	6,694,899	1,428,510	65,035,173	2001
1,323	608	6,777,258	424	95,835	6,875,448	1,546,088	71,977,545	2002
1,386	507	7,064,665	417	103,982	7,170,957	1,618,889	76,355,515	2003
1,360	508	7,152,161	529	106,223	7,260,781	1,651,605	78,559,025	2004
1,327	445	7,275,193	452	134,913	7,412,330	1,715,164	83,352,474	2005
1,310	374	7,460,698	418	145,442	7,608,242	1,787,785	88,265,564	2006
1,293	373	7,638,546	382	253,983	7,894,577	1,859,245	92,963,765	2007
1,283	359	7,777,110	362	273,815	8,052,929	1,917,237	96,865,950	2008
1,275	353	7,924,738	328	292,064	8,218,758	1,961,059	99,630,090	2009
1,245	318	8,035,471	319	305,723	8,343,076	1,989,925	101,691,730	2010
1,245	290	8,144,023	305	317,893	8,463,756	2,005,113	102,582,045	2011

\* Tubular pole(6M) is included in Tubular pole line in 2007.

## 16. 배전설비 현황(1)

('11.12.31 현재) Distribution facilities

구 분			행정구역별	서 울 Seoul	부 산 Busan	대 구 Daegu	인 천 Incheon	광 주 Gwangju
선로길이 (c-km)	고 압	가 공 지 중 수 중 계	4,599 5,567 - 10,166	3,155 1,686 - 4,841	3,187 989 - 4,176	3,940 2,025 5 5,970	2,030 871 - 2,901	
		가 공 지 중 계	2,805 827 3,632	2,477 271 2,747	2,832 202 3,033	3,426 368 3,794	2,161 350 2,511	
		가 공 지 중 수 중 계	7,404 6,394 - 13,798	5,632 1,956 - 7,588	6,019 1,191 - 7,210	7,366 2,393 5 9,763	4,191 1,221 - 5,412	
		가 공 지 중 수 중 계	16,648 16,631 - 33,278	11,418 5,037 - 16,455	11,757 2,961 - 14,718	14,131 6,062 14 20,207	7,358 2,610 - 9,968	
	저 압	가 공 지 중 계	6,761 3,054 9,815	5,658 1,038 6,696	8,075 742 8,817	8,139 1,317 9,455	4,794 1,261 6,055	
		가 공 지 중 수 중 계	23,409 19,685 - 43,093	17,076 6,076 - 23,151	19,832 3,703 - 23,535	22,270 7,379 14 29,663	12,152 3,871 - 16,023	
		콘크리트 주 강관주 목주 철주 철탑 계	174,483 17,647 58 35 1 192,224	122,371 18,266 45 29 - 140,711	135,177 7,954 49 6 7 143,193	163,030 9,811 5 7 82 172,935	94,929 7,761 9 5 43 102,747	
		수량 (대) 계	157,571 6,724 164,295	73,313 2,336 75,649	55,182 1,161 56,343	72,881 2,540 75,421	32,742 1,812 34,554	
변압기	용량 (MVA) 계	가 공 지 중 계	10,406 1,746 12,153	4,278 600 4,878	3,323 269 3,591	3,624 534 4,158	1,736 425 2,161	
	가스절연부하 개폐기(대)	가 공 지 중 계	9,240 10,766 20,006	4,424 3,203 7,627	5,191 1,376 6,567	3,896 3,347 7,243	2,601 2,092 4,693	

(As of Dec. 31. '11)

대 전 Daejon	울 산 Ulsan	경 기 Gyeonggi	강 원 Gangwon	Province	Items	
1,563	2,397	30,337	15,787	Overhead power line	Over	Route length (c-km)
1,422	653	8,404	1,215	Under ground power line	600	
-	-	-	-	Under water power line	voltage	
2,986	3,051	38,741	17,002	Sub total		
1,736	2,092	29,962	15,017	Overhead power line	Under	Total
538	72	1,401	508	Under ground power line	600	
2,274	2,164	31,363	15,525	Sub total	voltage	
3,299	4,489	60,299	30,804	Overhead power line		Total length (km)
1,960	725	9,804	1,723	Under ground power line		
-	-	-	-	Under water power line		
5,259	5,214	70,104	32,527	Total		
5,600	8,470	108,715	52,291	Overhead power line	Over	Total length (km)
4,251	1,948	25,079	3,606	Under ground power line	600	
-	-	-	-	Under water power line	voltage	
9,850	10,417	133,794	55,897	Sub total		
3,688	4,627	71,244	32,021	Overhead power line	Under	Total
1,992	257	5,165	1,894	Under ground power line	600	
5,680	4,884	76,409	33,915	Sub total	voltage	
9,287	13,097	179,958	84,312	Overhead power line		
6,243	2,205	30,244	5,500	Under ground power line		Total
-	-	-	-	Under water power line		
15,530	15,302	210,202	89,812	Total		
70,925	96,631	1,250,012	580,393	Concrete pole		Supporter (ea)
7,375	4,861	15,026	22,680	Tubular pole		
7	5	24	15	Wooden pole		
9	-	107	28	Steel pole		
1	-	39	113	Steel tower		
78,317	101,497	1,265,208	603,229	Total		
27,886	33,360	406,915	123,027	Overhead power line	Number	Trans- former
2,132	583	9,672	1,383	Under ground power line	(ea)	
30,018	33,943	416,587	124,410	Total		
1,591	1,726	19,932	6,283	Overhead power line	Capacity	Gas Insulated Switch gear
481	139	1,931	408	Under ground power line	(MVA)	
2,072	1,865	21,863	6,691	Total		
1,723	1,732	19,749	5,965	Overhead power line		
3,301	976	13,290	1,446	Under ground power line		
5,024	2,708	33,039	7,411	Total		

## 16. 배전설비 현황 (2)

('11.12.31 현재) Distribution facilities

구 분			행정구역별	총 북 Chungbuk	총 남 Chungnam	전 북 Jeonbuk	전 남 Jeonnam	경 북 Gyeongbuk
선로 금장 (c-km)	고 압	가 공	11,176	19,557	14,110	21,821	24,849	
		지 중	926	1,205	1,214	1,114	1,255	
		수 중	1	6	-	57	1	
	저 압	계	12,102	20,768	15,324	22,992	26,105	
		가 공	15,134	28,412	22,951	33,295	33,261	
		지 중	390	359	362	226	177	
	계	계	15,523	28,771	23,313	33,521	33,438	
		가 공	26,309	47,969	37,061	55,116	58,110	
		지 중	1,315	1,564	1,576	1,339	1,432	
선로 연장 (km)	고 압	수 중	1	6	-	57	1	
		계	27,625	49,539	38,637	56,513	59,543	
		가 공	37,896	65,498	48,193	75,616	83,557	
	저 압	지 중	2,737	3,573	3,604	3,294	3,708	
		수 중	2	18	-	171	2	
		계	40,636	69,090	51,797	79,081	87,267	
	계	가 공	32,320	58,534	48,077	73,569	78,272	
		지 중	1,370	1,253	1,243	805	558	
		수 중	33,691	59,787	49,320	74,374	78,830	
지자재 (기)	콘크리트 주	콘크리트 주	502,101	983,194	769,251	1,150,355	1,163,498	
		강관 주	6,600	12,723	15,375	43,585	51,901	
		목주	12	4	6	1	22	
		철주	1	2	17	12	19	
		철탑	73	61	21	585	72	
	계	계	508,787	995,984	784,670	1,194,538	1,215,512	
		수량 (대)	가공 지중 계	95,094 1,220 96,314	169,559 1,363 170,922	125,347 1,730 127,077	176,529 1,038 177,567	204,818 771 205,589
		용량 (MVA)	가공 지중 계	4,751 346 5,097	7,238 351 7,589	5,368 417 5,784	5,951 245 6,196	8,323 157 8,480
가스절연부하 개폐기(대)		가공 지중 계	4,845 1,353 6,198	6,410 1,345 7,755	6,872 1,555 8,427	7,848 1,083 8,931	10,182 628 10,810	

(As of Dec. 31. '11)

경 남 Gyeongnam	제 주 Jeju	계 Total	Province		
				Items	Route length (c-km)
17,128	3,246	178,882	Overhead power line	Over	Route length (c-km)
1,487	571	30,604	Under ground power line	600	
42	6	117	Under water power line	voltage	
18,657	3,823	209,604	Sub total		
19,718	4,246	219,525	Overhead power line	Under	Total length (km)
139	233	6,420	Under ground power line	600	
19,857	4,479	225,945	Sub total	voltage	
36,846	7,492	398,407	Overhead power line	Total	Total length (km)
1,626	804	37,024	Under ground power line		
42	6	117	Under water power line		
38,515	8,302	435,549	Total		
59,901	12,592	619,639	Overhead power line	Over	Total length (km)
4,426	1,711	91,239	Under ground power line	600	
127	18	352	Under water power line	voltage	
64,454	14,321	711,230	Sub total		
45,828	12,484	494,091	Overhead power line	Under	Total length (km)
462	849	23,260	Under ground power line	600	
46,290	13,332	517,351	Sub total	voltage	
105,729	25,076	1,113,730	Overhead power line	Total	Total length (km)
4,888	2,560	114,499	Under ground power line		
127	18	352	Under water power line		
110,744	27,654	1,228,582	Total		
726,959	160,714	8,144,023	Concrete pole		Supporter (ea)
72,491	3,837	317,893	Tubular pole		
40	3	305	Wooden pole		
13	-	290	Steel pole		
147	-	1,245	Steel tower		
799,650	164,554	8,463,756	Total		
183,031	31,704	1,968,959	Overhead power line	Number	Trans-
986	703	36,154	Under ground power line	(ea)	
184,017	32,407	2,005,113	Total		
8,330	1,304	94,164	Overhead power line	Capacity	former
200	170	8,418	Under ground power line	(MVA)	
8,530	1,474	102,582	Total		
8,076	2,378	101,132	Overhead power line	Gas Insulated	Switch gear
1,633	840	48,234	Under ground power line	Switch gear	
9,709	3,218	149,366	Total		

## 17. 정보통신설비 추이 (1)

Trends in Information & communication facilities

구 분	정보통신설비 Information communication facilities				전 송 설 비 Data transmission facilities (set)				
	교환기 Switch board (ea)	T T X (set)	Email (set)	F A X (set)	광송수신기 Optical fiber transceiver	다 중 무 선 송 수 신 기 M / W	단 신 무 선 송 수 신 기 VHF UHF	주 파 수 공용통신 시 스 템 (중계/단말) Trunked radio system	반 송 설 비 Carrier telephone equipment
연 도 말									
1961	-	-	-	-	-	-	46	-	-
1989	490	126	-	288	103	42	4,436	-	1,017
1990	594	126	-	302	143	44	4,600	-	1,011
1991	624	130	-	380	174	65	4,785	-	911
1992	610	134	-	388	226	50	4,715	-	978
1993	756	139	-	426	302	54	4,844	-	795
1994	706	123	114	455	405	45	4,886	3/212	860
1995	734	123	429	537	511	54	5,012	8/498	713
1996	858	-	326	1,216	843	53	4,358	23/1,079	-
1997	889	-	393	1,385	2,508	50	3,845	45/2,502	1
1998	886	-	333	1,704	3,237	55	2,804	48/2,569	230
1999	887	-	336	1,827	3,492	54	2,171	63/3,226	114
2000	893	-	337	1,898	-	28	1,610	63/3,241	-
2001	726	-	-	1,457	81	14	1,089	87/3,512	-
2002	827	-	-	1,579	570	12	240	93/5,545	-
2003	879	-	-	1,690	1,226	10	137	95/7,527	-
2004	936	-	-	1,804	1,517	6	184	95/8,117	-
2005	723	-	-	1,970	1,720	4	240	120/7,529	-
2006	255	-	-	2,001	1,930	4	348	120/7,767	-
2007	253	-	-	2,049	2,059	4	280	120/4,140	-
2008	347	-	-	1,991	2,922	4	221	167/5,372	-
2009	405	-	-	1,732	3,024	4	222	222/5,696	-
2010	225	-	-	2,163	2,758	4	223	214/8,494	-
2011	250	-	-	1,979	2,865	4	250	208/7,041	-

1) 2001년도 이전 서버 통계자료는 중간전산기임

2) 2002년도 이후 서버 통계자료는 중간전산기 및 서버(NT서버 포함)가 포함된 수치임  
- 중간전산기가 서버로 대체됨에 따라 통계기준 조정

전 산 설 비 Computer facilities (set)			전 力 운 전 제 어 설 비 Power operation & control facilities (set)				Items
주전산기 Main computer	서 버 Server	P C 및 단말기 P / C & Terminal	급 전 종 합 자동화설비 (중앙/단말) Energy management system	원 방 감 시 제 어 설 비 (중앙/단말) Supervisory control & Data acquisition system	계 통 보 호 전 송 장 치 Power line carrier relay equipment	송 전 선 고 장 점 표정장치 Power line fault locator equipment	End of
-	-	-	-	-	-	-	1961
20	-	2,645	1/57	6/307	919	28	1989
21	-	3,585	1/56	9/354	955	27	1990
21	-	4,232	1/54	9/369	998	27	1991
23	-	5,414	1/68	10/388	1,114	27	1992
23	-	6,320	1/69	19/443	1,193	27	1993
22	-	12,022	1/75	21/467	1,268	24	1994
23	169	18,248	1/81	21/485	1,354	24	1995
25	172	24,753	1/85	25/523	1,476	24	1996
25	197	25,239	1/93	36/542	1,525	24	1997
17	201	27,047	1/98	40/561	1,589	23	1998
16	190	29,438	1/96	42/564	1,624	23	1999
16	175	29,700	1/103	41/588	1,635	22	2000
15	175	18,920	1/48	43/599	1,696	21	2001
15	189	20,058	-	43/540	1,939	15	2002
15	189	21,130	-	45/569	1,987	11	2003
15	368	21,890	-	51/597	2,163	8	2004
15	371	21,560	-	52/620	2,251	-	2005
15	373	22,740	-	53/620	2,317	-	2006
15	375	23,050	-	53/626	2,442	-	2007
20	2,446	30,614	-	54/666	2,442	-	2008
20	2,890	30,499	-	55/672	2,616	-	2009
20	3,029	34,130	-	0	2,797	-	2010
15	1,194	26,160	-	55/710	2,859	-	2011

1) Figures prior to year 2001 indicate number of intermediate computers.

2) Figures from year 2002 include number of both intermediate computers and servers.

- Statistics standard was revised as intermediate computers were replaced with servers.

## 17. 정보통신설비 추이 (2)

Trends in Information & communication facilities

구 분 Items	통 신 선 로 Communication cables & wires ( km )								
	금속케이블 Metalic cable		동 축 케이블 Coaxil cable	광 케 이 블 Optical fiber cable		광섬유복합가공지선 Composite over-head ground wire with optical fiber		계 Total	
	길 이 Route length	전체길이 Total length	길 이 Route length	길 이 Route length	전체길이 Total length	길 이 Route length	전체길이 Total length	길 이 Route length	전체길이 Total length
연 도 말 End of									
1961	-	-	-	-	-	-	-	-	-
1988	8,009	114,953	-	238	1,662	364	4,941	8,611	121,556
1989	7,736	118,579	-	275	1,943	888	6,822	8,899	127,344
1990	7,268	113,226	-	292	2,055	1,484	11,821	9,044	127,102
1991	8,147	130,628	-	327	2,834	1,940	14,386	10,414	147,848
1992	6,831	113,530	-	390	3,588	2,307	17,732	9,528	134,850
1993	7,716	100,141	-	538	1,948	2,652	23,602	10,906	125,691
1994	8,012	144,149	-	665	3,991	3,636	18,823	12,313	166,963
1995	6,624	136,413	23,064	2,924	40,640	5,015	30,090	37,627	207,143
1996	4,035	102,671	25,534	3,323	50,216	6,106	55,386	38,998	208,273
1997	3,516	100,819	27,788	11,951	329,322	6,908	94,633	50,163	524,774
1998	3,131	100,015	29,262	17,401	415,801	7,813	138,865	57,607	654,681
1999	2,618	105,746	38,073	34,838	635,756	7,973	154,611	83,502	896,113
2000 <sup>1)</sup>	-	-	-	-	-	9,796	209,544	9,796	209,544
2001	-	-	-	-	-	10,230	223,768	10,230	223,768
2002	-	-	-	162	3,222	11,712	293,430	11,874	296,652
2003	-	-	-	557	11,764	11,862	303,836	12,419	315,600
2004	-	-	-	840	18,528	12,627	341,180	13,467	359,708
2005	-	-	-	959	14,036	13,135	324,402	14,094	338,439
2006	-	-	-	1,243	23,790	13,317	349,080	14,560	338,439
2007	-	-	-	1,218	26,435	13,386	394,087	14,604	420,522
2008	-	-	-	1,233	26,756	13,805	385,874	15,038	412,630
2009	-	-	-	1,230	28,307	12,685	366,269	13,915	394,576
2010	-	-	-	1,986	50,518	13,972	413,739	15,958	464,257
2011	-	-	-	4,111	109,398	14,731	434,775	18,842	544,173

1) 케이블은 2000년도에 자회사 파워콤에 전량 현물출자됨

1) The cable was invested in Powercomm, a subsidiary company, in 2000.

## 18. 정보통신설비 현황 (1)

('11.12.31현재) Information & communication facilities (As of Dec.31.'11)

구 분 Items	종 류 Classification			단 위 Unit	수 량 Quantity	
정보통신 설비  Information communication facilities	교 환 기 Switch board	전 자 교 환 기 Electronics switching system		대 ea	250	
		기 타 교 환 기 Others		대 ea	-	
	F A X	Facsimile terminal		대 ea	1,979	
	망 관 리 시스 템 Network management system	L C S		식 set	1	
		원격 단말장치		식 set	16	
	근 거 리 통 신 망 Local area network	SW Hub		대 ea	4,668	
		Router		대 ea	1,065	
전 송 설비  Data transmission facilities	광 송 수 신 기			대 ea	2,871	
	무 선 송 수 신 기 Radio transceiver	다 종 무 선 송 수 신 기 M / W		대 ea	4	
		단 신 무 선 송 수 신 기 V H F		대 ea	250	
		주 파 수 공 용 통 신 T R S	중 계	식 set	208	
			단 말	식 set	7,041	
전 산 설비  Computer facilities	주 전 산 기 (Main computer)			대 ea	15	
	서 버 (Server)			대 ea	1,194	
	PC 및 단말기 (P/C&Terminal)			대 ea	26,160	

## 18. 정보통신설비 현황 (2)

('11.12.31현재) Information & communication facilities (As of Dec.31.'11)

	종 류 Classification	단 위 Unit	수 량 Quantity	
전자응용설비 Electronic application facilities	건물자동화시스템 Building automatic system  보안 & 운전감시카메라 Security system	BAS  Controller CCTV Camera	개소 site 개소 site 식 set 식 set	32 810 10,649
전력운전제어설비 Power operation & control facilities	원방감시제어설비 Supervisory control and data Aacquisition system	중앙 SCADA  Host SCADA RTU	식 set 식 set 식 set	1 54 710
	계통보호전송장치 Power line carrier relay equipment		식 set	2,859
통신선로 Communication cable & wires	광섬유복합가공지선 With optical fiber composite overhead ground wire(OPGW)	길이 Circuit length  전체전선길이 Total length	km km	14,731 434,775
전원설비 Electric power source facilities	총전기 축전지 무정전전원장치	Charger Battery Uninterruptable power supply system	대 ea 식 set 식 set	1,368 2,677 1,582

## 19. 전력 구입 실적 (1.종합)

('11.1.1~12.31) Power purchasing results

구 분 Items	전력시장 Electricity Market			PPA			합 계 Total		
	구입량 Volume (MWh)	구입금액 Payment (백만원, mil. won)	구입단가 Unit cost (won/kWh)	구입량 Volume (MWh)	구입금액 Payment (백만원, mil. won)	구입단가 Unit cost (won/kWh)	구입량 Volume (MWh)	구입금액 Payment (백만원, mil. won)	구입단가 Unit cost (won/kWh)
연월별 During									
2006	354,866,214	19,017,548	53.59	10,369,797	1,299,061	125.27	365,236,012	20,316,609	55.63
2007	374,566,736	21,237,180	56.70	11,802,728	1,487,345	126.02	386,369,464	22,724,525	58.82
2008	392,430,651	26,880,387	68.50	12,389,202	2,228,262	179.86	404,819,853	29,108,649	71.91
2009	405,689,921	26,965,019	66.47	9,476,411	1,507,741	159.10	415,166,332	28,472,760	68.58
2010	440,863,017	32,312,081	73.29	14,228,337	2,195,015	154.27	455,091,354	34,507,096	75.82
2011	462,356,727	36,843,704	79.69	14,638,439	2,529,232	172.78	476,995,166	39,372,936	82.54
1	44,483,317	3,937,048	88.51	2,175,355	304,280	139.88	46,658,672	4,241,328	90.90
2	36,403,050	2,773,145	76.18	1,325,182	202,935	153.14	37,728,231	2,976,080	78.88
3	39,911,121	3,204,437	80.29	1,574,082	253,539	161.07	41,485,203	3,457,976	83.35
4	35,916,336	2,707,045	75.37	1,298,820	214,698	165.30	37,215,158	2,921,742	78.51
5	35,780,884	2,656,626	74.25	1,044,077	184,542	176.75	36,824,961	2,841,168	77.15
6	36,467,336	2,886,569	79.15	847,333	173,142	204.34	37,314,670	3,059,711	82.00
7	39,784,854	3,110,049	78.17	815,069	161,638	198.31	40,599,923	3,271,688	80.58
8	39,746,136	3,047,140	76.67	818,697	159,479	194.80	40,564,832	3,206,619	79.05
9	36,278,465	2,900,418	79.95	913,146	172,153	188.52	37,191,611	3,072,571	82.61
10	37,142,398	2,707,543	72.90	996,962	196,460	197.06	38,139,360	2,904,003	76.14
11	37,774,834	3,053,384	80.83	1,086,753	201,770	185.66	38,861,587	3,255,155	83.76
12	42,667,997	3,860,299	90.47	1,742,960	304,595	174.76	44,410,957	4,164,895	93.78

\* 2001. 4. 2 전력시장 개설 Electricity Market was open on Apr. 2. 2001

\* PPA(Power Purchase Agreement) : 전력수급계약

\* '07. 2월 이후 여천NCC, 여수열병합 시장구입분 포함 ('11. 12월 누계 296,980MWh)

\* 2008년 부터 수수료 포함한 금액임(The amount which includes a commission from 2008)

## 19. 전력구입실적(2.전력시장구입)

('11.1.1~12.31) Purchase results from Electricity market

구 분 Items	구 입 량 Volume (MWh)	구 입 금 액 <sup>1)</sup> Payment		구 입 단 가 Unit cost (won/kWh)		
		점 유 율 (% of total)	점 유 율 (백만원, mil. won)			
발전회사별 Companies	한수원 KHNP	152,443,428	33.0	6,559,958	17.8	43.03
	남동 KOSEPCO	58,039,330	12.6	4,313,295	11.7	74.32
	중부 KOMIPO	51,354,997	11.1	4,999,255	13.6	97.35
	서부 KOWEPO	52,903,107	11.4	5,190,952	14.1	98.12
	남부 KOSPO	58,085,328	12.6	5,902,774	16.0	101.62
	동서 KEWESPO	51,120,773	11.1	4,702,005	12.8	91.98
	기타 Others	38,409,765	8.3	5,175,465	14.0	134.74
발전원별 Energy sources	원자력 Nuclear	147,763,461	32.0	5,792,964	15.7	39.20
	유연탄 Bituminous	185,778,207	40.2	12,487,529	33.9	67.22
	무연탄 Domestic Coal	7,776,893	1.7	767,090	2.1	98.64
	유류 Oil	9,568,808	2.1	2,161,590	5.9	225.90
	L N G	2,478,581	0.5	463,485	1.3	187.00
	복합 Combined Cycle	93,539,602	20.2	13,213,061	35.9	141.26
	수력 Hydro	4,122,774	0.9	561,484	1.5	136.19
	양수 Pumping	3,214,405	0.7	567,123	1.5	176.43
	기타 Others	8,113,996	1.8	829,378	2.3	102.22
부하별 Load	기저 Base Load	337,987,435	73.1	18,629,521	50.6	55.12
	일반 Non-Base Load	124,369,292	26.9	18,214,183	49.4	146.45
	합계 Total	462,356,727	100.0	36,843,704	100.0	79.69

1) 거래금액은 제약비양수 정산금(Pumping Cost)과 발전소 수전전력에 대한 기본요금이 반영된 금액임

1) Includes Pumping Cost and basic charge of the start-up power.

## 19. 전력구입실적(3. PPA 사업자 구입)

('11.1.1~12.31) Purchase results from Power Purchase Agreement

구 분 Items	구 입 량 Volume (MWh)	구 입 금 액 Payment (백만원, mil. won)		구 입 단 가 Unit cost (won/kWh)	
		점 유 율 (% of total)	점 유 율 (% of total)		
복 합 화 력	POSCO POWER (ex - KIECO)	4,224,953	28.9	858,752	34.0
	GS EPS (ex - LG Bugog)	3,166,890	21.6	451,379	142.53
	GS Power (ex - LG)	3,664,201	25.0	586,019	159.93
	메이야 Meiya	2,667,408	18.2	416,067	155.98
	소계	13,723,452	93.7	2,312,217	168.49
구역전기 Community Energy Service		634,440	4.3	85,743	3.4
소수력 small hydro		5,142	0.0	652	0.0
풍력 wind		1	0.0	0	0.0
바이오 Bio		904	0.0	115.12	0.0
폐기물 Waste		15	0.0	2	0.0
연료전지 Fuel cell		161	0.0	22	0.0
태양광에너지 Solar energy		274,324	1.9	130,481	5.2
합 계 Total		14,638,439	100	2,529,232	100
					172.78

## 20. 전력 손실 추이

(단위 : MWh, %) Trends in power losses

연도별	송전 단 전력량 <sup>1)</sup> Net generation A	송변전 손실 Transmission & Substation losses		
		배분전력량 <sup>2)</sup> Distribution B	손실량 Losses A - B	손실률 (%)
1961	1,683,584	1,495,254	188,330	11.19
1996	192,882,960	186,585,026	6,297,934	3.27
1997	211,028,738	204,637,553	6,391,185	3.03
1998	203,430,303	196,888,056	6,542,247	3.22
1999	225,802,022	218,519,533	7,282,489	3.23
2000	251,953,275	244,460,312	7,492,964	2.97
2001	269,842,046	262,296,172	7,545,874	2.80
2002	290,058,444	282,149,982	7,908,462	2.73
2003	305,644,685	297,326,501	8,318,184	2.72
2004	324,885,244	316,019,419	8,865,825	2.73
2005	346,207,398	336,548,986	9,658,412	2.79
2006	363,053,968	356,260,249	6,793,719	1.87
2007	384,693,240	378,009,889	6,683,351	1.74
2008	401,726,293	394,246,885	7,479,407	1.86
2009	411,631,123	404,757,943	6,873,181	1.67
2010	451,432,992	444,144,049	7,288,944	1.61
2011	472,650,336	465,440,440	7,209,896	1.53
1	46,095,106	45,312,926	782,180	1.70
2	37,405,017	36,784,206	620,811	1.66
3	41,266,316	40,587,961	678,355	1.64
4	37,064,625	36,572,624	492,001	1.33
5	36,580,861	35,989,822	591,039	1.62
6	36,924,363	36,316,791	607,572	1.65
7	40,082,494	39,538,509	543,985	1.36
8	39,920,307	39,212,634	707,673	1.77
9	36,614,928	36,167,462	447,466	1.22
10	37,870,803	37,293,564	577,239	1.52
11	38,638,501	38,113,532	524,969	1.36
12	44,187,015	43,550,409	636,606	1.44

1) 송전단전력량 (A)

- '61~'05년 : (발전량-소내전력량) - 양수전력량
- '06년부터 : (구입전력량 + 한전 도서발전 송전량) - 양수전력량

2) 배전량 (B) : 측정계량기 오차등급 개선

- '61~'05년 : 기계식(2.0%) 인력측정
- '06년부터 : 전자식 (0.5%) 자동측정

(unit : MWh, %)

배 전 손 실 <sup>2)</sup> Distribution losses			종 합 손 실 Total losses		During
판 매 량 Power sold	손 실 량 Losses	손 실 률 ( % )	손 실 량 Losses	손 실 률 ( % )	
1,189,386	305,868	18.17	494,198	29.35	1961
182,470,373	4,114,653	2.13	10,412,587	5.40	1996
200,783,627	3,853,926	1.83	10,245,111	4.85	1997
193,470,338	3,417,718	1.68	9,959,965	4.90	1998
214,521,910	3,997,622	1.83	11,280,111	5.00	1999
240,082,085	4,378,227	1.79	11,871,190	4.71	2000
257,701,607	4,594,565	1.75	12,140,439	4.50	2001
277,063,960	5,086,021	1.80	12,994,484	4.48	2002
292,105,448	5,221,053	1.76	13,539,237	4.43	2003
310,394,798	5,624,621	1.78	14,490,446	4.46	2004
330,592,630	5,956,356	1.77	15,614,768	4.51	2005
348,466,741	7,793,508	2.19	14,587,227	4.02	2006
369,348,078	8,661,810	2.29	15,345,161	3.99	2007
385,619,917	8,626,969	2.19	16,106,376	4.01	2008
394,861,383	9,896,559	2.45	16,769,740	4.07	2009
433,398,756	10,745,293	2.42	18,034,236	3.99	2010
455,219,953	10,220,487	2.20	17,430,383	3.69	2011
43,971,195	1,341,731	2.96	2,123,911	4.61	1
35,955,658	828,547	2.25	1,449,359	3.87	2
39,572,938	1,015,023	2.50	1,693,378	4.10	3
35,781,376	791,248	2.16	1,283,249	3.46	4
35,306,423	683,399	1.90	1,274,438	3.48	5
35,732,459	584,332	1.61	1,191,904	3.23	6
38,648,855	889,654	2.25	1,433,639	3.58	7
38,284,271	928,363	2.37	1,636,036	4.10	8
35,392,793	774,669	2.14	1,222,136	3.34	9
36,678,087	615,477	1.65	1,192,716	3.15	10
37,506,078	607,454	1.59	1,132,423	2.93	11
42,389,820	1,160,589	2.66	1,797,195	4.07	12

1) Net generation (A)

– 1961~2005 : (Gross generation – Auxiliary use) – Pumping storage

– from 2006 : (Power purchasing results + net generation in islands) – Pumping storage

2) Distribution amount (B) : improving the error class of meter

– 1961~2005 : measuring mechanical meter by human (2.0%)

– from 2006 : measuring electronic meter automatically (0.5%)

## 21. 고객 호수 추이

(단위 : Trends in number of customers (Unit : Households)

연·월말 End of	주택용 <sup>1)</sup> Resi- dential	일반용 Public & Service	교육용 <sup>2)</sup> Educ- ational	산업용 Indu- strial	농사용 Agri- cultural	가로등 Street- lighting	심야 Midnight Power	합 계 Total
1961	770,405		26,422		45	380		797,252
1998	10,916,576	1,640,294	15,074	248,014	611,102	427,212	243,891	14,102,163
1999	10,976,648	1,733,172	15,122	259,013	643,727	458,594	293,093	14,379,369
2000	11,084,153	1,837,192	15,396	275,120	854,564	482,790	426,578	14,975,793
2001	11,354,801	1,971,308	15,662	288,252	916,424	523,041	549,257	15,618,745
2002	11,800,049	2,097,012	15,898	301,411	1,097,075	551,238	627,343	16,490,026
2003	12,039,941	2,187,470	15,946	304,227	987,177	576,513	664,252	16,775,526
2004	12,156,544	2,259,099	16,063	306,175	1,015,001	612,218	696,491	17,061,591
2005	12,224,192	2,315,511	16,410	310,079	1,045,890	660,624	756,788	17,329,494
2006	12,280,190	2,366,333	30,745	315,743	1,087,426	712,278	832,121	17,624,836
2007	12,392,777	2,451,135	32,649	322,894	1,142,769	821,139	875,447	18,038,810
2008	12,553,340	2,503,422	33,703	329,458	1,195,544	883,533	920,048	18,419,048
2009	12,682,652	2,552,298	33,907	337,683	1,200,032	985,102	935,737	18,727,411
2010	12,904,238	2,632,860	34,376	348,096	1,260,276	1,117,657	931,947	19,229,450
2011	13,181,372	2,710,906	34,625	358,220	1,335,748	1,271,913	922,082	19,814,866
1	12,920,176	2,650,507	34,430	348,996	1,201,094	1,140,142	931,525	19,226,870
2	12,932,276	2,656,767	34,495	349,700	1,200,471	1,140,839	931,191	19,245,739
3	12,949,033	2,659,200	34,545	350,351	1,764,104	1,142,949	930,649	19,830,831
4	12,969,528	2,665,315	34,514	351,559	1,273,605	1,147,992	929,774	19,372,287
5	12,985,569	2,667,795	34,501	352,287	1,226,204	1,181,043	928,257	19,375,656
6	13,010,734	2,672,963	34,509	353,178	1,236,223	1,195,492	926,690	19,429,789
7	13,034,116	2,678,934	34,553	354,142	1,245,692	1,222,516	924,880	19,494,833
8	13,060,236	2,685,282	34,587	354,992	1,257,433	1,222,857	923,515	19,538,902
9	13,093,696	2,688,724	34,576	355,817	1,268,835	1,241,631	922,567	19,605,846
10	13,125,317	2,691,462	34,565	356,641	1,274,428	1,258,540	922,535	19,663,488
11	13,155,535	2,699,445	34,582	357,418	1,831,738	1,268,164	922,391	20,269,273
12	13,181,372	2,710,906	34,625	358,220	1,335,748	1,271,913	922,082	19,814,866

1) '61년은 농사용 전등 및 4kW미만 고객 포함

1) Includes agricultural lighting and all customers under 4kW in '61.

2) '61년은 동력전체 고객

2) Power total customers in '61.

## 22. 요금 적용 전력 추이

Trends in billing demand by tariff

(단위:kW)

(unit : kW)

연·월말 End of	주택용 <sup>1)</sup> Residential	일반용 Pub & Ser	교육용 <sup>2)</sup> Educational	산업용 Industrial	농사용 Agricultural	가로등 Street lighting	심야 Midnight	계 Total
1961			602,077		1,893	-		603,970
1998	2,030,474	20,599,827	772,881	29,172,157	2,968,917	395,730	123,294	56,063,280
1999	2,422,332	22,008,152	873,577	31,129,203	3,213,833	429,004	148,132	60,224,233
2000	2,665,975	23,749,070	1,008,004	33,100,766	3,790,987	469,111	177,240	64,961,153
2001	2,865,202	25,665,086	1,153,636	36,008,294	4,180,154	515,104	217,691	70,605,167
2002	3,384,863	27,781,892	1,375,732	37,906,188	4,717,908	446,262	261,384	75,874,229
2003	3,217,776	29,683,588	1,594,269	38,745,150	4,638,440	482,610	303,631	78,665,464
2004	4,368,673	31,858,253	1,831,674	40,847,796	4,875,653	546,455	347,136	84,675,640
2005	5,046,597	33,820,929	2,201,092	43,074,166	5,125,299	607,845	393,630	90,269,558
2006	5,330,718	35,498,748	2,558,579	44,759,344	5,515,867	660,008	429,558	94,752,822
2007	7,724,189	37,414,442	2,884,761	47,312,475	5,935,305	714,486	464,229	102,449,887
2008	6,368,866	39,154,931	3,253,213	49,385,457	6,496,024	757,549	496,717	105,912,757
2009	6,603,316	40,402,611	3,612,159	51,335,653	7,112,796	823,319	513,736	110,403,590
2010	8,285,618	36,733,244	3,915,254	54,946,898	7,746,197	873,766	551,735	113,052,712
2011	7,352,858	46,932,414	3,951,231	58,843,675	8,586,964	901,764	561,457	127,130,363
1	11,630,340	43,494,116	3,982,122	55,755,479	7,663,067	895,202	551,944	123,972,270
2	8,421,335	43,555,094	4,012,051	55,408,981	7,680,471	862,941	552,767	120,493,640
3	8,926,798	42,988,066	3,942,344	55,486,980	8,816,332	880,470	553,280	121,594,270
4	8,508,427	42,761,803	3,759,275	55,534,285	8,165,498	897,322	578,025	120,204,635
5	10,375,419	42,758,762	3,686,461	55,126,064	8,369,382	867,904	546,857	121,730,849
6	9,769,104	42,746,860	3,650,849	55,736,576	8,329,834	892,534	577,707	121,703,464
7	8,093,722	42,974,127	3,651,432	56,232,622	8,531,762	883,931	570,746	120,938,342
8	6,873,192	43,236,905	3,706,151	56,602,434	8,662,020	879,021	567,853	120,527,576
9	6,587,743	43,142,455	3,619,042	54,308,916	8,754,346	885,393	564,009	117,861,904
10	7,836,843	43,382,739	3,660,489	56,387,301	8,926,319	892,421	563,477	121,649,589
11	7,129,057	43,646,872	3,695,676	56,659,188	9,776,266	900,198	564,697	122,371,954
12	7,352,858	46,932,414	3,951,231	58,843,675	8,586,964	901,764	561,457	127,130,363

1) '95년부터 아파트 고객 주택용에 포함

1) Includes Apartment customers since 1995

2) '61년은 동력전체 고객

2) Power total customers in '61.

## 23. 판매 전력량 추이

(단위 : MWh) Trends in power sales

연·월 별	주택용 <sup>1)</sup> Residential	일반용 Public & Service	교육용 <sup>2)</sup> Educational	산업용 Industrial
1961	222,510		940,277	
1998	33,455,486	36,869,637	1,639,788	114,059,315
1999	35,140,014	41,478,046	1,956,771	126,074,683
2000	38,134,528	47,700,238	2,285,202	137,371,837
2001	40,269,734	52,622,435	2,639,687	142,160,215
2002	43,452,142	57,428,012	2,953,566	151,196,192
2003	46,505,348	61,626,421	3,351,320	157,844,517
2004	49,513,298	67,475,970	3,773,549	166,222,983
2005	52,044,462	73,715,517	4,308,748	174,945,373
2006	53,912,272	77,809,152	4,790,496	183,067,127
2007	55,680,846	82,207,586	5,304,104	194,936,409
2008	57,877,514	86,827,003	5,783,324	203,474,609
2009	59,427,255	89,619,316	6,465,449	207,215,867
2010	63,199,602	97,410,032	7,452,576	232,672,176
2011	63,523,655	99,504,065	7,568,016	251,490,648
1	5,895,592	10,059,592	815,086	21,767,295
2	5,824,530	9,453,230	738,342	19,223,044
3	4,994,488	8,041,397	713,057	21,103,404
4	5,235,981	7,767,138	659,104	20,867,706
5	4,936,372	7,065,080	503,845	20,669,083
6	4,946,399	7,502,139	530,530	20,972,734
7	5,091,343	8,443,310	601,700	21,580,953
8	5,738,985	9,492,396	573,314	20,911,838
9	5,394,242	8,684,881	612,317	20,471,407
10	4,892,273	7,222,200	502,417	21,097,711
11	5,195,241	7,352,923	563,706	21,054,874
12	5,378,209	8,419,778	754,598	21,770,598

1) '61년은 농사용 전등 및 4kW미만 고객 포함.

1) Includes agricultural lighting and all customers under 4kW in '61.

2) '61년은 동력전체 고객

2) Power total customers in '61.

(unit : MWh)

농 사용 Agricultural	가로등 Street lighting	심야 Midnight Power	합계 Total	During
20,851	5,748		1,189,386	1961
4,128,945	1,419,829	1,897,337	193,470,338	1998
4,709,490	1,563,323	3,292,565	214,214,891	1999
5,450,738	1,759,253	6,833,689	239,535,486	2000
6,142,090	1,877,624	12,019,568	257,731,354	2001
6,328,169	2,075,944	15,017,346	278,451,371	2002
6,147,364	2,197,210	15,927,049	293,599,230	2003
6,766,324	2,367,077	15,976,384	312,095,586	2004
7,317,815	2,570,006	17,510,908	332,412,828	2005
7,635,660	2,687,040	18,817,624	348,719,371	2006
8,215,174	2,793,943	19,467,371	368,605,433	2007
8,869,459	2,847,241	19,390,987	385,070,137	2008
9,671,357	2,954,231	19,121,163	394,474,637	2009
10,654,295	3,081,490	19,690,056	434,160,228	2010
11,231,538	3,145,498	18,606,840	455,070,261	2011
1,133,108	314,757	3,131,225	43,116,656	1
1,141,813	287,679	3,176,603	39,845,241	2
976,601	262,717	2,356,311	38,447,975	3
901,132	254,851	2,041,407	37,727,320	4
737,304	233,182	1,321,307	35,466,174	5
783,093	228,061	796,689	35,759,644	6
780,630	218,367	580,256	37,296,560	7
912,746	231,172	513,606	38,374,057	8
957,554	252,274	498,456	36,871,130	9
805,785	271,381	823,724	35,615,491	10
1,116,120	289,415	1,308,156	36,880,435	11
985,651	301,641	2,059,101	39,669,577	12

## 24. 용도별 판매 전력량 추이

(단위 : MWh) Trends in power sales by use and industry

연·월 별	가정용		공공용		서비스업		농림어업 Agri.,For. & Fishery
	Residential	점유율 (% of total)	Public	점유율 (% of total)	Service	점유율 (% of total)	
1965	251,936	10.2	273,655	11.1	403,456	16.4	37,281
1995	28,303,298	17.3	5,109,077	3.1	33,422,243	20.5	3,369,592
1996	30,642,477	16.8	5,981,591	3.3	39,109,190	21.4	3,856,941
1997	32,515,353	16.2	6,844,204	3.4	45,040,891	22.4	4,175,854
1998	32,912,601	17.0	7,049,781	3.6	44,679,883	23.1	4,023,752
1999	34,580,681	16.1	7,866,389	3.7	50,908,846	23.8	4,571,842
2000	37,102,311	15.5	8,663,193	3.6	61,510,202	25.7	5,305,632
2001	39,211,228	15.2	9,424,826	3.7	73,303,991	28.4	5,985,147
2002	42,278,299	15.2	10,533,620	3.8	81,185,694	29.2	6,155,730
2003	44,572,083	15.2	11,235,405	3.8	87,404,805	29.8	5,943,532
2004	48,615,320	15.6	12,416,799	4.0	92,726,374	29.7	6,510,546
2005	50,873,036	15.3	13,740,622	4.1	100,986,561	30.4	7,006,511
2006	52,521,897	15.1	14,588,557	4.2	106,947,764	30.7	7,295,692
2007	54,173,987	14.7	15,578,580	4.2	112,601,224	30.5	7,794,794
2008	56,227,938	14.6	16,577,299	4.3	117,635,066	30.5	8,388,827
2009	57,595,481	14.6	17,932,259	4.5	121,202,975	30.7	9,144,527
2010	61,194,167	14.1	19,871,542	4.6	129,923,068	29.9	10,041,853
2011	61,564,249	13.5	20,539,309	4.5	130,762,275	28.7	10,574,980
1	5,708,799	13.2	2,124,665	4.9	14,262,566	33.1	1,082,726
2	5,645,092	14.2	1,948,890	4.9	13,554,206	34.0	1,096,549
3	4,841,793	12.6	1,825,123	4.7	11,411,544	29.7	932,269
4	5,077,700	13.5	1,702,229	4.5	10,895,248	28.9	857,263
5	4,788,809	13.5	1,430,626	4.0	9,470,110	26.7	697,405
6	4,794,289	13.4	1,493,435	4.2	9,449,146	26.4	738,820
7	4,929,816	13.2	1,677,590	4.5	10,114,516	27.1	718,216
8	5,557,244	14.5	1,731,261	4.5	11,034,717	28.8	840,934
9	5,221,464	14.2	1,673,873	4.5	10,256,889	27.8	888,939
10	4,744,069	13.3	1,452,306	4.1	9,105,906	25.6	746,991
11	5,040,752	13.7	1,567,187	4.2	9,705,805	26.3	1,050,280
12	5,214,421	13.1	1,912,126	4.8	11,501,621	29.0	924,587

(unit : MWh)

점유율 (% of total)	광업		제조업		계 Total	점유율 (% of total)	During
	Mining	점유율 (% of total)	Manufacturing	점유율 (% of total)			
1.5	194,629	7.9	1,302,728	52.9	2,463,687	100	1965
2.1	1,020,094	0.6	92,045,990	56.4	163,270,294	100	1995
2.1	1,049,135	0.6	101,831,040	55.8	182,470,373	100	1996
2.1	1,000,118	0.5	111,207,207	55.4	200,783,627	100	1997
2.1	973,398	0.5	103,830,923	53.7	193,470,338	100	1998
2.1	951,721	0.4	115,335,412	53.8	214,214,891	100	1999
2.2	1,002,567	0.4	125,951,581	52.6	239,535,486	100	2000
2.3	1,074,284	0.4	128,731,878	49.9	257,731,351	100	2001
2.2	1,155,181	0.4	137,142,847	49.3	278,451,371	100	2002
2.0	1,205,059	0.4	143,238,346	48.8	293,599,230	100	2003
2.1	1,269,462	0.4	150,557,086	48.2	312,095,586	100	2004
2.1	1,317,119	0.4	158,488,980	47.7	332,412,828	100	2005
2.1	1,393,083	0.4	165,972,378	47.6	348,719,371	100	2006
2.1	1,484,165	0.4	176,972,684	48.0	368,605,433	100	2007
2.2	1,446,109	0.4	184,794,897	48.0	385,070,137	100	2008
2.3	1,350,156	0.3	187,249,239	47.5	394,474,637	100	2009
2.3	1,682,954	0.4	211,446,643	48.7	434,160,228	100	2010
2.3	1,928,241	0.4	229,701,207	50.5	455,070,261	100	2011
2.5	160,825	0.4	19,777,076	45.9	43,116,656	100	1
2.8	142,943	0.4	17,457,561	43.8	39,845,241	100	2
2.4	160,992	0.4	19,276,254	50.1	38,447,975	100	3
2.3	153,727	0.4	19,041,153	50.5	37,727,320	100	4
2.0	167,918	0.5	18,911,306	53.3	35,466,174	100	5
2.1	170,762	0.5	19,113,191	53.4	35,759,644	100	6
1.9	166,937	0.4	19,689,484	52.8	37,296,560	100	7
2.2	166,281	0.4	19,043,619	49.6	38,374,057	100	8
2.4	151,042	0.4	18,678,925	50.7	36,871,130	100	9
2.1	154,134	0.4	19,412,086	54.5	35,615,491	100	10
2.8	170,691	0.5	19,345,719	52.5	36,880,435	100	11
2.3	161,990	0.4	19,954,833	50.3	39,669,577	100	12

## 25. 제조업 종별 판매 전력량 추이 (1)

(단위:MWh) Trends in power sales by manufacturing

연·월 별	음식료품 및 담배 Food,beverage & tobacco	섬유의복 및 가죽 Textile,wearing apparel & leather	나무 및 나무제품 (가구 포함) Wood & wooden products(including furniture)	종이 및 종이제품 인쇄 및 출판 Paper & paper products, printing & publishing	화학물, 석유, 석탄 고무 및 플라스틱 Chemicals, petroleum,coal,rubber & plastic products
1970	433,687	814,258	153,379	367,322	1,351,745
1979	1,555,522	4,410,027	435,569	1,326,451	3,843,211
1980	1,520,693	4,553,612	335,677	1,531,135	4,276,553
1981	1,531,968	4,853,825	347,282	1,590,173	4,518,075
1982	1,573,105	5,204,379	316,084	1,597,515	4,566,714
1983	1,756,645	5,716,744	351,058	1,775,898	5,081,287
1984	1,911,330	6,273,679	357,291	1,888,797	5,452,201
1985	2,025,603	6,390,762	345,666	2,042,087	5,732,217
1986	2,185,835	6,892,352	372,457	2,387,440	6,353,037
1987	2,463,775	7,879,564	438,256	2,680,725	7,147,085
1988	2,826,517	8,649,512	513,797	3,068,494	8,320,269
1989	3,134,708	8,891,456	538,967	3,450,637	9,080,995
1990	3,539,655	9,505,113	622,812	3,877,085	10,922,408
1991	3,784,592	9,905,848	686,664	4,230,996	12,828,150
1992	4,035,891	10,410,124	753,998	4,661,622	14,469,765
1993	4,100,467	10,016,957	809,880	5,106,926	16,248,179
1994	4,553,894	11,090,139	960,004	5,792,410	17,615,372

## [구분류 기준]

### [old classification]

(unit : MWh)

비금속광물제품 Non-metallic mineral products	제 1 차 금 속 Basic metal	조립 금속제품 기 계 및 장 비 Fabricated metal products machi- nery & equipment	기 타 Others	계 Total	During
742,219	839,042	177,643	97,761	4,977,056	1970
2,597,915	4,143,927	2,308,823	251,760	20,873,175	1979
2,607,811	4,680,900	2,313,953	224,833	22,045,167	1980
2,641,846	4,945,044	2,665,788	231,318	23,325,319	1981
2,923,152	5,091,610	2,861,945	189,910	24,324,414	1982
3,321,350	5,509,494	3,421,532	193,134	27,127,142	1983
3,365,263	6,017,928	3,980,289	219,511	29,466,258	1984
3,498,929	6,085,253	4,819,069	247,962	31,187,547	1985
3,835,900	6,887,873	5,909,360	300,566	35,124,820	1986
4,236,626	7,892,103	7,465,012	359,216	40,562,362	1987
4,791,205	8,501,851	9,160,415	432,640	46,264,700	1988
5,117,531	9,333,566	10,031,198	470,356	50,049,413	1989
5,633,144	10,063,750	12,090,589	524,541	56,779,097	1990
6,544,445	10,439,866	13,390,549	589,035	62,400,145	1991
7,159,595	10,767,184	14,441,896	725,607	67,425,682	1992
7,935,553	12,596,481	15,994,686	627,811	73,436,940	1993
8,751,702	13,551,920	19,322,940	594,868	82,233,249	1994

## 25. 제조업 종별 판매 전력량 추이 (2)

(단위:MWh) Trends in power sales by manufacturing

연·월 별	식료품 제조 Food, beverage	섬유·의복 Textile, clothes	목재·나무 Lumber, wood	펄프·종이 Pulp, paper	출판·인쇄 Publication, printing
1997	5,710,779	13,309,827	1,006,820	7,119,673	833,704
1998	5,424,616	13,128,798	818,511	6,555,867	730,363
1999	5,756,031	14,413,906	1,024,712	7,490,895	841,981
2000	6,148,990	15,497,432	1,137,300	7,894,297	948,203
2001	6,386,844	15,137,437	1,255,804	7,916,946	1,040,941
2002	6,768,378	15,542,842	1,388,180	8,169,566	1,159,245
2003	7,060,943	14,654,362	1,444,906	8,178,016	1,173,991
2004	7,281,484	13,845,848	1,464,728	8,440,132	1,213,217
2005	7,473,445	13,018,717	1,499,433	8,403,936	1,277,103
2006	7,636,285	12,243,227	1,504,591	8,467,923	1,308,383
2007	7,821,553	12,016,707	1,557,690	8,452,601	1,349,713
2008	7,786,078	11,716,931	1,584,625	8,343,418	1,447,136
2009	7,990,424	11,543,200	1,588,816	8,144,813	1,465,849
2010	8,736,565	12,361,618	1,754,362	8,459,937	1,558,824
2011	9,268,032	12,779,016	1,779,596	8,758,811	1,542,613
1	767,000	1,124,460	168,245	775,999	157,669
2	674,666	1,013,533	149,489	666,040	140,508
3	710,394	1,073,720	156,485	765,477	134,216
4	717,258	1,093,879	153,129	736,102	126,983
5	732,478	1,054,615	145,026	737,004	113,015
6	795,019	1,054,812	140,311	715,314	118,757
7	827,862	1,086,135	139,086	743,758	128,078
8	864,427	1,056,123	136,782	706,382	128,522
9	818,286	1,026,324	137,959	673,662	123,687
10	780,648	1,051,725	143,630	732,723	112,643
11	793,876	1,063,997	148,915	710,788	122,336
12	786,118	1,079,693	160,539	795,562	136,199

## [신분류 기준]

[new classification]

(unit : MWh)

석유·화학 Petroleum, chemistry	요업 Ceramic industry	1차금속 Basic metal	조립금속 Fabricated metal	기타기계 Other Machinery	During
23,230,988	9,912,531	20,935,732	3,346,442	3,429,771	1997
23,033,777	7,738,202	20,146,786	2,823,861	3,172,880	1998
24,897,862	8,354,282	22,339,708	3,450,458	3,826,131	1999
26,898,539	8,981,204	23,751,388	3,948,631	4,354,834	2000
27,839,031	9,306,036	23,498,167	3,969,157	4,654,652	2001
29,266,635	9,923,310	24,982,275	4,399,023	5,288,244	2002
31,222,672	10,286,456	25,656,450	4,715,604	5,680,732	2003
32,924,506	10,119,403	26,340,061	5,060,143	6,228,447	2004
33,994,166	9,829,189	28,128,499	5,412,485	6,818,444	2005
34,937,407	10,319,173	29,657,199	5,750,380	7,641,812	2006
36,567,621	11,104,987	32,832,202	6,126,424	8,485,521	2007
38,990,325	11,407,989	33,841,622	6,575,676	8,506,116	2008
40,063,497	11,230,106	35,148,660	6,492,322	8,452,851	2009
43,213,196	11,619,995	41,833,962	7,650,775	10,903,461	2010
48,142,390	11,821,835	46,225,677	8,157,747	12,635,962	2011
3,879,889	914,818	4,104,448	771,941	1,149,173	1
3,433,843	810,306	3,523,083	692,978	1,052,088	2
3,951,734	1,053,545	3,938,520	716,570	1,065,709	3
3,935,647	1,063,611	3,939,937	698,458	1,043,841	4
3,977,822	1,047,572	3,910,743	640,110	988,463	5
4,006,111	1,029,256	3,824,387	652,940	1,024,401	6
4,231,711	945,783	3,739,566	657,796	1,078,767	7
4,172,544	931,802	3,559,876	626,193	1,022,924	8
4,097,460	960,765	3,610,639	626,377	996,693	9
4,156,006	1,060,402	4,069,881	646,604	1,022,577	10
4,141,521	1,029,539	3,949,585	686,395	1,054,800	11
4,158,102	974,436	4,055,012	741,385	1,136,526	12

## 25. 제조업 종별 판매 전력량 추이 (3)

(단위:MWh) Trends in power sales by manufacturing

연·월 별	사무기기 Office apparatus	전기기기 Electricity apparatus	영상·음향 Sound, image	의료·광학 Medical, optical	자동차 Motorcar
1997	122,659	2,201,233	10,042,431	495,077	6,462,569
1998	111,105	1,965,727	9,921,648	468,996	4,917,029
1999	134,893	2,299,414	10,285,048	528,848	6,332,990
2000	1,982,149	2,595,089	10,157,325	586,307	7,348,933
2001	2,616,511	2,684,540	10,263,931	622,167	7,547,503
2002	2,652,973	2,506,785	11,604,336	630,192	8,413,662
2003	2,511,211	2,575,738	13,359,986	695,367	9,244,455
2004	2,477,712	2,712,261	16,247,535	747,833	10,408,091
2005	2,265,074	2,811,252	19,916,586	795,610	11,431,291
2006	1,995,812	2,919,165	22,772,460	842,106	12,140,394
2007	2,051,186	3,200,455	25,112,282	894,139	12,942,168
2008	1,300,850	3,788,809	27,484,921	1,937,699	12,900,114
2009	708,750	3,993,565	28,512,262	2,593,208	11,959,143
2010	793,214	4,609,257	32,350,381	2,975,862	14,787,834
2011	910,946	5,051,560	35,155,336	2,732,166	16,471,822
1	71,909	460,503	2,903,236	273,566	1,460,301
2	66,047	397,619	2,651,804	248,604	1,265,729
3	71,616	433,192	2,826,577	250,330	1,407,972
4	72,059	413,009	2,792,438	241,993	1,344,696
5	73,637	402,221	2,900,735	245,218	1,296,617
6	80,017	416,697	2,958,464	258,058	1,367,778
7	86,934	441,505	3,160,689	282,198	1,433,097
8	85,115	417,025	3,154,306	202,600	1,303,065
9	78,419	405,737	2,980,871	189,007	1,308,482
10	76,564	406,670	2,961,001	175,790	1,370,698
11	73,731	420,054	2,877,135	179,504	1,413,138
12	74,898	437,328	2,988,080	185,298	1,500,249

## [신분류 기준]

[new classification]

(unit : MWh)

기 타 운 송 Other transport	가 구 및 기 타 Furniture, others	재 생 재 료 Recycling	계 Total	During
1,670,131	1,114,323	262,513	111,207,207	1997
1,663,145	973,496	236,115	103,830,923	1998
1,886,825	1,192,427	279,000	115,335,412	1999
2,023,949	1,349,166	347,847	125,951,581	2000
2,203,596	1,410,338	378,278	128,731,878	2001
2,472,271	1,570,428	404,504	137,142,847	2002
2,723,579	1,610,108	443,771	143,238,346	2003
2,976,173	1,590,766	478,744	150,557,086	2004
3,276,241	1,638,156	499,353	158,488,980	2005
3,632,194	1,698,360	505,507	165,972,378	2006
4,171,285	1,738,272	547,879	176,972,684	2007
4,881,640	1,759,633	541,316	184,794,897	2008
5,182,224	1,692,558	486,990	187,249,239	2009
5,419,180	1,873,793	544,423	211,446,643	2010
5,787,304	1,927,332	553,079	229,701,207	2011
543,012	201,615	49,288	19,777,076	1
440,399	185,942	44,882	17,457,561	2
499,002	174,376	46,812	19,276,254	3
452,132	169,461	46,532	19,041,153	4
454,628	145,525	45,879	18,911,306	5
480,317	144,355	46,197	19,113,191	6
515,665	145,374	45,480	19,689,484	7
489,395	142,333	44,212	19,043,619	8
456,727	144,505	43,318	18,678,925	9
458,874	140,517	45,132	19,412,086	10
479,271	154,153	46,989	19,345,719	11
517,882	179,176	48,358	19,954,833	12

## 26. 행정구역별 고객호수추이(1)

(단위 : 호) Trends in number of customers by province

연도별 시도별	서울 Seoul	부산 Busan	대구 Daegu	인천 Incheon
1961	219,134	-	-	-
1996	2,562,005	988,174	600,402	624,680
1997	2,644,613	1,009,857	619,317	644,983
1998	2,677,494	1,020,617	631,034	650,902
1999	2,698,014	1,033,138	641,417	659,611
2000	2,723,669	1,049,126	664,243	685,359
2001	2,786,735	1,073,085	698,785	724,411
2002	2,899,136	1,104,808	734,517	782,931
2003	2,956,773	1,125,135	757,085	791,760
2004	2,977,662	1,134,704	766,034	793,050
2005	2,991,797	1,142,226	762,324	795,639
2006	3,004,520	1,144,447	765,031	799,902
2007	3,032,471	1,146,331	775,419	810,596
2008	3,036,105	1,147,170	785,574	823,213
2009	3,061,319	1,152,245	791,320	834,374
2010	3,127,242	1,168,269	800,585	862,705
2011	3,213,280	1,192,817	820,940	884,924
1	3,140,978	1,170,626	809,097	860,195
2	3,144,127	1,172,155	807,956	861,217
3	3,147,651	1,174,048	809,178	869,379
4	3,151,645	1,177,564	809,917	868,168
5	3,154,359	1,178,969	810,487	865,614
6	3,158,214	1,180,930	811,666	867,504
7	3,162,758	1,186,136	812,825	869,593
8	3,166,360	1,184,440	813,985	871,210
9	3,190,579	1,186,727	815,528	873,758
10	3,195,923	1,188,969	817,000	877,202
11	3,208,002	1,191,699	819,406	885,357
12	3,213,280	1,192,817	820,940	884,924

\* 1961 부산 고객호수는 경남, 1961~1982 인천 고객호수는 경기, 대구 고객호수는 경북에 포함

\* Busan in 1961 was a part of Gyeongnam area. Until 1982 from 1961, Incheon was a part of Gyeonggi area. and Daegu was a part of Gyeongbuk area.

(unit:Households)

광 주 Gwangju	대 전 Daejeon	울 산 Ulsan	경 기 Gyeonggi	Province End of
-	-	-	65,480	1961
344,918	285,437	-	2,145,396	1996
370,228	315,592	-	2,259,588	1997
367,181	316,585	-	2,319,637	1998
371,943	322,702	-	2,386,211	1999
374,421	334,325	281,441	2,496,014	2000
385,354	357,073	294,629	2,669,017	2001
402,934	387,741	309,300	2,869,292	2002
414,184	402,889	318,989	2,959,312	2003
417,432	410,397	324,666	3,037,348	2004
423,395	417,087	330,779	3,092,956	2005
430,007	422,353	335,854	3,159,117	2006
436,176	426,486	344,838	3,266,588	2007
443,834	432,523	353,728	3,364,828	2008
451,057	443,519	360,482	3,448,837	2009
462,672	465,250	372,924	3,547,389	2010
471,124	483,447	385,869	3,666,846	2011
463,672	467,760	374,070	3,548,857	1
464,152	469,078	374,900	3,552,841	2
468,942	472,068	376,429	3,628,122	3
465,075	471,770	376,557	3,572,030	4
465,298	472,526	377,304	3,581,603	5
466,407	473,671	378,471	3,598,620	6
469,349	475,391	379,659	3,606,527	7
469,962	477,220	380,950	3,620,370	8
468,945	479,010	381,980	3,627,980	9
470,153	480,503	382,910	3,636,992	10
475,541	483,707	385,332	3,719,426	11
471,124	483,447	385,869	3,666,846	12

※ 1961~1986 광주 고객호수는 전남, 1961~1988 대전 고객호수는 충남, 1961~1999 울산 고객호수는 경남에 포함  
 ※ Until 1986, Gwangju was a part of Jeonnam area. Until 1988, Daejeon was a part of Chungnam area.

Until 1999, Ulsan was a part of Gyeongnam area.

## 26. 행정구역별 고객호수추이(2)

(단위 : 호) Trends in number of customers by province

연도별 시도별	강원 Gangwon	충북 Chungbuk	충남 Chungnam	전북 Jeonbuk	전남 Jeonnam
1961	24,626	30,418	58,205	58,015	70,043
1996	563,441	534,930	705,031	642,202	829,920
1997	585,745	599,950	740,094	670,079	858,186
1998	600,194	572,056	757,591	675,238	867,812
1999	615,947	588,106	778,604	689,342	884,312
2000	648,109	632,774	818,080	766,004	927,447
2001	679,612	672,851	864,016	765,857	961,552
2002	707,824	710,595	915,748	850,377	1,004,440
2003	722,536	720,825	918,493	841,139	986,405
2004	741,187	735,903	942,950	851,423	998,130
2005	762,530	754,380	974,323	865,105	1,020,908
2006	786,952	774,536	1,005,607	886,495	1,036,400
2007	808,944	795,998	1,044,357	905,310	1,077,482
2008	832,089	820,888	1,076,938	926,633	1,106,823
2009	850,629	838,126	1,103,222	903,752	1,135,861
2010	868,928	865,909	1,141,204	943,598	1,160,472
2011	886,990	890,383	1,184,303	973,340	1,201,817
1	869,825	867,581	1,144,449	921,302	1,139,504
2	870,078	868,243	1,145,935	922,133	1,140,579
3	893,626	906,839	1,257,049	1,017,494	1,259,212
4	872,059	871,356	1,150,845	949,612	1,167,737
5	873,574	872,827	1,165,590	929,067	1,151,451
6	875,612	875,611	1,161,617	932,254	1,155,188
7	877,789	878,457	1,165,473	935,237	1,173,033
8	881,525	881,038	1,170,718	938,819	1,169,653
9	883,053	883,386	1,174,803	942,388	1,172,174
10	884,149	885,895	1,179,784	944,349	1,174,880
11	908,367	925,406	1,291,981	1,035,818	1,294,077
12	886,990	890,383	1,184,303	973,340	1,201,817

(unit:Households)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	개 성 Gaeseong	계 Total	Province End of
103,507	161,063	6,761	-	797,252	1961
1,010,690	1,315,572	176,704	-	13,329,502	1996
1,046,942	1,363,077	185,100	-	13,913,351	1997
1,067,153	1,388,080	190,589	-	14,102,163	1998
1,092,578	1,419,395	198,049	-	14,379,369	1999
1,179,324	1,188,615	206,842	-	14,975,793	2000
1,234,125	1,234,759	216,884	-	15,618,745	2001
1,296,355	1,285,153	228,875	-	16,490,026	2002
1,313,240	1,306,492	240,269	-	16,775,526	2003
1,345,213	1,336,161	249,331	-	17,061,591	2004
1,375,853	1,365,303	254,889	-	17,329,494	2005
1,416,085	1,396,399	261,131	-	17,624,836	2006
1,471,397	1,430,566	265,851	-	18,038,810	2007
1,524,494	1,472,953	271,002	253	18,419,048	2008
1,566,729	1,508,845	276,850	244	18,727,411	2009
1,607,210	1,551,878	282,977	238	19,229,450	2010
1,662,139	1,599,848	296,567	232	19,814,866	2011
1,609,306	1,555,471	283,941	236	19,226,870	1
1,609,585	1,557,616	284,909	235	19,245,739	2
1,679,525	1,585,156	285,879	234	19,830,831	3
1,615,910	1,565,227	286,581	234	19,372,287	4
1,621,002	1,568,565	287,187	233	19,375,656	5
1,632,508	1,573,147	288,137	232	19,429,789	6
1,636,262	1,577,425	288,687	232	19,494,833	7
1,640,597	1,582,474	289,348	233	19,538,902	8
1,646,708	1,587,297	291,297	233	19,605,846	9
1,658,778	1,591,140	294,629	232	19,663,488	10
1,728,884	1,620,432	295,605	233	20,269,273	11
1,662,139	1,599,848	296,567	232	19,814,866	12

## 27. 행정구역별 판매전력량추이(1)

(단위 : MWh) Trends in power sales by province

연도별 시도별	서 울 Seoul	부 산 Busan	대 구 Daegu	인 천 Incheon
1961	384,492	-	-	-
1996	25,686,049	10,885,412	8,326,697	11,188,533
1997	27,314,635	11,450,156	8,629,456	12,118,886
1998	26,161,720	10,948,496	8,279,242	11,569,386
1999	28,447,269	11,296,855	9,215,520	12,921,985
2000	31,395,005	12,409,397	10,189,993	14,195,026
2001	33,321,290	13,423,022	10,544,475	14,963,884
2002	34,882,647	14,270,036	11,219,611	16,099,983
2003	36,163,797	14,764,341	11,471,668	16,921,206
2004	38,213,581	15,479,222	11,903,722	17,648,598
2005	40,523,741	16,588,954	12,363,357	18,165,058
2006	41,824,268	17,218,934	12,622,007	18,694,596
2007	42,972,816	17,905,735	12,925,891	19,446,553
2008	44,096,350	18,709,380	13,265,254	19,915,366
2009	44,984,457	18,689,437	13,133,729	20,032,122
2010	47,295,093	20,263,682	14,479,996	21,827,577
2011	46,902,989	20,561,979	14,821,948	22,241,136
1	4,562,631	1,976,058	1,418,812	2,160,417
2	4,264,449	1,837,732	1,336,667	1,883,872
3	3,736,363	1,704,632	1,234,508	1,925,528
4	3,682,652	1,709,301	1,216,587	1,859,020
5	3,425,702	1,560,039	1,126,411	1,748,863
6	3,713,716	1,613,266	1,163,369	1,753,741
7	4,049,593	1,695,590	1,243,303	1,783,543
8	4,433,091	1,793,743	1,286,641	1,849,159
9	4,149,016	1,698,380	1,211,617	1,752,984
10	3,458,469	1,596,238	1,125,749	1,769,221
11	3,527,459	1,625,212	1,176,821	1,792,105
12	3,899,849	1,751,789	1,281,464	1,962,684

※ 1961 부산 고객호수는 경남에 포함

※ Busan in 1961 was a part of Gyeongnam area

(unit : MWh)

광 주 Gwangju	대 전 Daejeon	울 산 Ulsan	경 기 Gyeonggi	Province End of
-	-	-	207,248	1961
3,103,707	3,792,028	-	31,898,222	1996
3,447,578	4,169,271	-	35,250,295	1997
3,371,966	4,139,120	-	33,612,776	1998
3,766,361	4,713,997	-	38,031,741	1999
4,279,226	5,289,144	17,236,182	43,885,163	2000
4,639,098	5,771,636	17,695,778	48,583,252	2001
5,090,958	6,210,506	18,825,229	53,908,880	2002
5,337,212	6,502,820	19,629,362	57,939,772	2003
5,761,794	6,896,446	20,576,404	62,758,836	2004
6,205,053	7,252,938	20,851,718	68,750,378	2005
6,441,161	7,505,662	21,556,369	73,309,874	2006
6,803,616	7,823,147	22,739,544	78,107,276	2007
7,044,868	8,087,633	24,132,175	81,848,570	2008
7,169,715	8,224,741	24,682,548	83,743,497	2009
7,860,057	8,867,405	26,515,702	93,074,875	2010
8,047,388	9,059,776	28,198,242	96,844,503	2011
757,197	877,248	2,424,032	9,555,284	1
717,292	825,822	2,121,380	8,918,913	2
672,952	757,165	2,302,130	8,206,231	3
669,154	739,750	2,326,726	7,992,730	4
615,841	685,170	2,330,603	7,414,136	5
626,418	710,217	2,370,676	7,452,140	6
674,555	764,456	2,462,804	7,828,197	7
712,047	816,200	2,382,527	8,077,681	8
673,056	749,634	2,370,648	7,742,435	9
618,930	673,069	2,361,751	7,370,839	10
635,723	698,819	2,338,561	7,768,995	11
674,224	762,226	2,406,404	8,516,922	12

※ 1961~1986 광주 고객호수는 전남, 1961~1988 대전 고객호수는 충남, 1961~1999 울산 고객호수는 경남에 포함

※ Until 1986, Gwangju was a part of Jeonnam area. Until 1988, Daejeon was a part of Chungnam area.

Until 1999, Ulsan was a part of Gyeongnam area.

## 27. 행정구역별 판매전력량추이(2)

(단위 : MWh) Trends in power sales by province

연도별 시도별	강원 Gangwon	충북 Chungbuk	충남 Chungnam	전북 Jeonbuk	전남 Jeonnam
1961	116,339	24,490	61,951	50,630	50,543
1996	7,558,856	8,585,639	9,226,106	7,994,501	8,864,129
1997	8,069,296	9,363,428	10,292,423	8,734,206	11,493,502
1998	7,427,165	8,544,449	9,311,632	8,516,306	11,746,234
1999	8,213,597	9,513,085	10,520,730	9,428,292	13,160,127
2000	9,145,542	10,722,434	12,235,851	10,592,299	14,410,926
2001	10,227,934	11,647,860	13,835,150	11,247,612	15,653,923
2002	11,105,285	12,685,134	15,447,796	12,019,475	16,076,907
2003	11,899,814	13,052,046	17,584,892	12,412,142	16,670,742
2004	12,051,844	13,865,584	19,419,620	13,128,881	17,829,501
2005	12,379,005	14,464,184	22,449,469	13,592,737	18,803,153
2006	12,993,255	15,350,674	25,003,743	14,407,656	19,500,753
2007	13,567,824	16,678,098	28,051,143	15,166,073	20,341,400
2008	13,895,753	17,375,035	30,427,966	15,927,799	21,868,193
2009	13,992,115	17,591,645	32,115,473	16,684,299	23,589,470
2010	14,848,027	19,444,836	38,809,312	18,949,073	25,059,934
2011	15,876,041	20,453,358	42,650,112	21,168,359	27,136,865
1	1,582,161	1,905,760	3,898,088	1,936,355	2,439,024
2	1,520,499	1,767,687	3,586,954	1,841,244	2,252,040
3	1,420,666	1,795,514	3,649,256	1,823,950	2,249,391
4	1,361,938	1,755,632	3,521,543	1,764,516	2,310,756
5	1,245,617	1,626,674	3,457,265	1,691,075	2,075,964
6	1,184,827	1,609,117	3,437,236	1,659,628	2,040,889
7	1,144,760	1,633,235	3,500,491	1,706,312	2,220,063
8	1,176,800	1,660,963	3,537,705	1,712,174	2,338,043
9	1,180,929	1,593,141	3,429,691	1,696,402	2,214,156
10	1,242,326	1,618,891	3,376,382	1,688,229	2,259,138
11	1,331,481	1,680,872	3,534,511	1,773,243	2,350,456
12	1,484,037	1,805,872	3,720,992	1,875,230	2,386,944

(unit : MWh)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	개 성 Gaeseong	계 Total	Province End of
119,169	173,192	1,332	-	1,189,386	1961
17,819,373	26,346,814	1,194,306	-	182,470,373	1996
20,361,452	28,769,138	1,319,901	-	200,783,627	1997
20,701,378	27,769,065	1,371,404	-	193,470,338	1998
22,537,413	30,976,108	1,471,811	-	214,214,891	1999
24,805,745	17,038,616	1,704,936	-	239,535,486	2000
25,925,964	18,295,403	1,955,071	-	257,731,354	2001
28,289,834	20,144,321	2,174,770	-	278,451,380	2002
29,582,443	21,302,733	2,364,241	-	293,599,230	2003
31,446,013	22,553,302	2,562,238	-	312,095,586	2004
33,161,128	24,093,883	2,768,073	-	332,412,828	2005
34,010,487	25,380,993	2,898,939	-	348,719,371	2006
36,249,730	26,788,262	3,038,325	-	368,605,433	2007
37,164,797	28,074,968	3,183,210	52,820	385,070,137	2008
37,983,313	28,393,041	3,352,343	112,692	394,474,637	2009
41,589,052	31,549,222	3,574,624	151,763	434,160,228	2010
44,167,300	33,071,206	3,710,080	158,975	455,070,261	2011
4,066,080	3,190,183	349,747	17,581	43,116,656	1
3,684,612	2,931,866	341,807	12,404	39,845,241	2
3,779,253	2,874,489	301,595	14,352	38,447,975	3
3,721,269	2,770,641	314,060	11,044	37,727,320	4
3,610,097	2,557,897	283,081	11,740	35,466,174	5
3,545,547	2,584,721	281,724	12,413	35,759,644	6
3,581,232	2,690,200	305,421	12,804	37,296,560	7
3,576,061	2,671,624	335,711	13,887	38,374,057	8
3,495,234	2,591,648	310,488	11,671	36,871,130	9
3,613,543	2,548,907	281,648	12,162	35,615,491	10
3,668,855	2,672,111	292,228	12,981	36,880,435	11
3,825,516	2,986,918	312,570	15,937	39,669,577	12

## 28. 행정구역별 용도별 판매전력량 (1)

('11.12.31 현재, 단위 : MWh) Power sales by province & usage

시 도 별 용 도 별	서 울 Seoul	부 산 Busan	대 구 Daegu	인 천 Incheon
1. 가 정 용	12,951,729	4,344,476	3,027,758	3,390,185
2. 공 공 용	3,539,259	1,244,280	639,385	855,575
3. 서 비 스 업	28,144,047	7,434,380	5,337,494	6,256,396
4. 농 립 어 업	15,661	92,913	61,529	84,511
5. 광 업	13,046	18,386	71,467	74,608
6. 제 조 업	2,239,249	7,427,545	5,684,316	11,579,860
식 료 품	246,041	523,123	184,407	565,625
섬유·의복	514,487	595,987	1,397,763	119,363
목재·나무	5,727	66,027	17,577	631,046
펄프·종이	39,246	26,393	439,393	58,401
출판·인쇄	387,244	49,999	39,264	61,669
석유·화학	251,833	448,434	333,436	1,394,719
요 업	36,920	97,892	62,290	217,907
1 차 금속	31,235	2,385,439	306,234	4,602,277
조립금속	73,424	697,620	480,935	774,528
기타기계	206,201	857,313	460,966	940,254
사무기기	5,803	1,165	27,411	20,747
전기기기	23,195	100,195	242,002	182,341
영상·음향	149,667	73,377	249,792	784,884
의료·광학	39,874	46,081	49,825	91,668
자 동 차	21,936	1,095,456	1,255,609	737,965
기타운송	29,005	296,822	79,052	110,791
가구및기타	174,276	56,376	38,495	237,072
재생재료	3,135	9,846	19,865	48,603
합 계	46,902,991	20,561,980	14,821,949	22,241,135

(As of Dec. 31. '11, unit : MWh)

광 주 Gwangju	대 전 Daejeon	울 산 Ulsan	경 기 Gyeonggi	Province End of
1,744,357	1,804,496	1,387,237	14,727,284	Residential
479,558	974,860	344,663	4,889,042	Public
2,997,554	3,720,508	2,927,722	29,712,961	Service
57,151	22,665	72,583	1,698,236	Agri., For. & Fishery
1,399	1,952	20,531	251,681	Mining
2,767,368	2,535,296	23,445,505	45,565,300	Manufacturing
153,427	151,908	181,579	2,015,433	Food, beverage
301,665	42,256	1,059,020	2,339,021	Textile, clothes
6,867	7,664	13,313	502,529	Lumber, wood
29,852	572,746	586,009	1,983,191	Pulp, paper
20,104	19,412	3,342	777,254	Publication, printing
414,187	626,013	12,551,470	5,664,134	Petroleum, chemistry
26,039	44,367	247,535	1,307,038	Ceramic industry
76,987	85,225	4,130,769	1,883,291	Basic metal
142,325	109,152	236,596	2,041,513	Fabricated metal
425,777	103,398	154,966	5,261,884	Other Machinery
4,032	12,296	456,110	261,664	Office apparatus
205,376	98,236	79,258	1,127,026	Electricity apparatus
477,741	337,596	52,898	15,267,864	Sound, image
13,891	86,286	17,002	878,837	Medical, optical
444,205	201,999	2,319,368	2,959,284	Motorcar
12,325	8,575	1,342,549	85,721	Other transport
4,041	25,113	12,241	1,081,269	Furniture, others
8,527	3,054	1,480	128,347	Recycling
8,047,387	9,059,777	28,198,241	96,844,504	Total

## 28. 행정구역별 용도별 판매전력량 (2)

('11.12.31 현재, 단위 : MWh) Power sales by province & usage

연도별 시도별	강원 Gangwon	충북 Chungbuk	충남 Chungnam	전북 Jeonbuk	전남 Jeonnam
1. 가정용	1,844,749	1,861,050	2,474,957	2,230,907	2,150,657
2. 공공용	1,186,992	1,090,487	1,033,217	853,924	772,159
3. 서비스업	5,950,310	4,507,819	6,349,167	4,630,623	5,032,637
4. 농림어업	361,158	482,659	1,329,584	900,120	2,005,879
5. 광업	331,799	102,894	681,164	57,588	60,584
6. 제조업	6,201,032	12,408,448	30,782,026	12,495,197	17,114,948
식료품제조	407,865	886,699	924,862	1,145,792	397,759
섬유·의복	9,755	422,571	465,132	684,573	98,751
목재·나무	15,886	31,864	80,360	246,139	22,178
펄프·종이	26,416	1,048,760	950,075	1,454,617	334,717
출판·인쇄	11,014	26,307	37,437	21,731	2,727
석유·화학	143,359	1,791,383	5,751,685	3,270,179	9,745,156
요업	3,464,361	1,970,373	1,781,722	591,506	530,084
1차금속	1,613,226	411,314	8,457,349	2,277,585	4,913,701
조립금속	40,427	512,725	402,797	93,317	112,435
기타기계	33,422	258,232	755,801	500,802	93,167
사무기기	803	72,419	15,821	7,108	550
전기기기	16,497	709,133	461,713	118,175	68,535
영상·음향	40,041	3,253,978	8,364,169	344,228	44,351
의료·광학	48,042	258,984	207,544	616,128	14,375
자동차	105,068	500,691	2,049,081	884,403	35,513
기타운송	203,028	80,482	26,537	145,466	649,879
가구및기타	14,230	110,702	27,592	13,005	8,777
재생재료	7,592	61,831	22,349	80,443	42,293
합계	15,876,040	20,453,357	42,650,115	21,168,359	27,136,864

(As of Dec. 31. '11, unit : MWh)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	개 성 Gaeseong	계 Total	Province End of
3,083,420	3,928,248	612,721	17	61,564,248	Residential
1,293,506	1,113,725	226,199	2,477	20,539,308	Public
7,951,228	8,125,612	1,674,354	9,464	130,762,276	Service
1,131,055	1,248,488	1,010,787	0	10,574,979	Agri., For. & Fishery
165,057	68,924	7,014	146	1,928,240	Mining
30,543,033	18,586,207	179,005	146,871	229,701,206	Manufacturing
479,018	880,667	122,914	914	9,268,033	Food, beverage
4,266,250	405,661	745	56,011	12,779,011	Textile, clothes
65,319	66,003	1,092	0	1,779,591	Lumber, wood
295,287	894,211	11,436	8,066	8,758,816	Pulp, paper
41,557	35,519	2,348	5,682	1,542,610	Publication, printing
3,346,854	2,391,931	12,731	4,888	48,142,392	Petroleum, chemistry
977,508	447,114	17,773	1,408	11,821,837	Ceramic industry
11,707,076	3,334,404	393	9,165	46,225,670	Basic metal
686,012	1,736,575	1,521	15,840	8,157,742	Fabricated metal
666,422	1,902,654	619	14,089	12,635,967	Other Machinery
18,987	4,859	0	1,167	910,942	Office apparatus
634,100	983,729	266	1,787	5,051,564	Electricity apparatus
5,089,386	610,468	858	14,037	35,155,335	Sound, image
162,243	198,106	3,281	0	2,732,167	Medical, optical
1,884,452	1,967,733	440	8,618	16,471,821	Motorcar
111,596	2,604,162	410	908	5,787,308	Other transport
40,884	77,544	1,422	4,291	1,927,330	Furniture, others
70,082	44,867	756	0	553,070	Recycling
44,167,299	33,071,204	3,710,080	158,975	455,070,261	Total

## 29. 전력 판매 수입 추이

(단위 : 천원) Trends in revenues from sales

연·월 별	주택용 <sup>1)</sup> Residential	일반용 Public & Service	교육용 <sup>2)</sup> Educational	산업용 Industrial
1961	1,354,665		2,433,469	
1998	3,366,301,295	3,840,404,739	141,862,601	6,274,861,948
1999	3,621,966,258	4,249,567,188	167,756,811	6,906,745,118
2000	4,091,828,987	5,057,981,418	206,040,237	8,008,200,803
2001	4,498,641,441	5,682,562,611	244,808,358	8,750,975,777
2002	4,793,300,235	5,996,351,593	268,118,671	9,084,046,914
2003	5,020,911,856	6,198,741,052	302,414,533	9,518,540,970
2004	5,466,721,140	6,535,016,625	336,037,327	10,011,334,566
2005	5,767,493,514	7,020,625,358	383,467,897	10,540,234,952
2006	6,163,640,653	7,618,539,340	371,156,624	11,335,905,205
2007	6,365,005,846	8,030,374,517	409,465,882	12,584,835,586
2008	6,654,217,289	8,274,672,801	454,427,465	13,477,191,102
2009	6,801,453,931	8,827,082,130	540,273,405	15,270,616,921
2010	7,574,768,788	9,637,137,528	650,061,294	17,830,665,027
2011	7,621,964,092	10,118,763,673	712,750,750	20,428,280,261
1	778,081,098	996,170,161	73,336,679	1,800,150,929
2	754,874,373	948,276,095	68,653,456	1,614,838,396
3	561,596,730	762,906,533	59,668,629	1,524,436,780
4	606,306,402	690,727,138	52,673,914	1,494,067,995
5	546,580,603	647,367,034	44,487,817	1,458,569,332
6	549,719,476	676,229,062	45,569,093	1,501,188,827
7	589,065,032	897,728,475	60,900,993	1,895,082,110
8	760,438,480	1,143,594,958	68,125,216	1,973,509,198
9	671,495,336	917,713,600	59,827,865	1,584,521,391
10	545,262,951	682,569,557	46,401,140	1,575,196,851
11	608,842,728	779,058,853	56,068,182	1,891,675,914
12	649,700,883	976,422,208	77,037,766	2,115,042,538

1) '61년은 농사용 전등 및 4kW미만 고객 포함.

1) Includes agricultural lighting and all customers under 4kW from in '61

2) '61년은 동력전체 고객

2) Power total customers in '61

(Unit :  
Thousand won)

농 사 용 Agricultural	가로등 Street lighting	심야 Midnight Power	합 계 Total	During
31,943	15,684		3,835,761	1961
182,953,372	89,472,284	48,936,822	13,944,793,061	1998
207,423,596	98,206,287	83,179,358	15,334,844,616	1999
234,581,320	115,971,626	167,579,750	17,882,184,141	2000
267,219,697	127,940,937	289,236,462	19,861,385,283	2001
273,119,653	137,459,416	390,930,589	20,943,327,071	2002
267,090,280	144,463,055	473,414,752	21,925,576,497	2003
283,879,821	154,649,377	489,014,415	23,276,653,272	2004
304,919,304	168,727,452	567,168,867	24,752,637,345	2005
327,995,997	184,370,077	651,095,341	26,652,703,238	2006
348,729,286	199,695,515	757,883,324	28,695,989,957	2007
375,930,913	206,418,500	885,900,130	30,328,758,201	2008
407,448,194	226,430,707	901,714,120	32,975,019,408	2009
453,201,035	250,009,506	994,227,831	37,390,071,008	2010
479,851,320	274,238,526	1,011,202,798	40,647,051,421	2011
47,842,891	24,728,856	187,928,424	3,908,239,039	1
48,435,900	23,751,239	190,596,958	3,649,426,417	2
41,841,144	22,025,334	124,963,196	3,097,438,346	3
39,091,660	22,472,671	89,272,905	2,994,612,684	4
32,585,377	21,133,388	58,188,655	2,808,912,206	5
33,047,282	21,133,948	36,022,091	2,862,909,777	6
34,015,130	20,396,507	27,445,110	3,524,633,358	7
39,657,041	21,266,572	26,003,374	4,032,594,840	8
41,150,460	22,982,719	25,482,321	3,323,173,691	9
36,151,876	23,902,115	39,772,359	2,949,256,849	10
43,938,596	24,738,662	71,971,929	3,476,294,864	11
42,093,963	25,706,517	133,555,476	4,019,559,350	12

## 30. 판매 단가 추이

(단위:원/kWh) Trends in average revenues per kWh sold (Unit : won/kWh)

연·월 별	주택용 <sup>1)</sup> Resi- dential	일반용 Public & Service	교육용 <sup>2)</sup> Edu- cational	산업용 Indu- strial	농사용 Agri- cultural	가로등 Street- lighting	심야 Mid- night	합 계 Total
1961	6.09		2.59		1.53	2.73		3.22
1998	100.62	104.16	86.51	55.01	44.31	63.02	25.79	72.08
1999	103.07	102.45	85.73	54.78	44.04	62.82	25.26	71.59
2000	107.30	106.04	90.16	58.30	43.04	65.92	24.52	74.65
2001	111.71	107.99	92.74	61.56	43.51	68.14	24.06	77.06
2002	110.31	104.42	90.78	60.08	43.16	66.22	26.03	75.21
2003	107.96	100.59	90.24	60.30	43.45	65.75	29.72	74.68
2004	110.41	96.85	89.05	60.23	41.95	65.33	30.61	74.58
2005	110.82	95.24	89.00	60.25	41.67	65.65	32.39	74.46
2006	114.33	97.91	77.48	61.92	42.96	68.61	34.60	76.43
2007	114.31	97.68	77.20	64.56	42.45	71.47	38.93	77.85
2008	114.97	95.30	78.58	66.24	42.38	72.50	45.69	78.76
2009	114.45	98.50	83.56	73.69	42.13	76.65	47.16	83.59
2010	119.85	98.93	87.23	76.63	42.54	81.13	50.49	86.12
2011	119.99	101.69	94.18	81.23	42.72	87.18	54.35	89.32
1	131.98	99.03	89.97	82.70	42.22	78.56	60.02	90.64
2	129.60	100.31	92.98	84.01	42.42	82.56	60.00	91.59
3	112.44	94.87	83.68	72.24	42.84	83.84	53.03	80.56
4	115.80	88.93	79.92	71.60	43.38	88.18	43.73	79.38
5	110.73	91.63	88.30	70.57	44.20	90.63	44.04	79.20
6	111.14	90.14	85.89	71.58	42.20	92.67	45.21	80.06
7	115.70	106.32	101.21	87.81	43.57	93.40	47.30	94.50
8	132.50	120.47	118.83	94.37	43.45	91.99	50.63	105.09
9	124.48	105.67	97.71	77.40	42.97	91.10	51.12	90.13
10	111.45	94.51	92.36	74.66	44.87	88.08	48.28	82.81
11	117.19	105.95	99.46	89.85	39.37	85.48	55.02	94.26
12	120.80	115.97	102.09	97.15	42.71	85.22	64.86	101.33

1) '61~'93년은 농사용 전등 및 4kW미만 고객 포함, '94년부터 농사용 전등 제외.

1) Includes agricultural lighting and all customers under 4kW from '61 to '93, Excludes agricultural lighting since '94.

2) '61~'93년은 동력전체 고객

2) Power total customers from '61 to '93.

## 31. 경영분석비율(1)

### Ratios of business analysis

연도별 During	자기자본비율 Stockholders' equity Ratio (%)	부채비율 Debt equity ratio (%)	비유동비율 Fixed assets to stockholders' equity (%)	비유동장기적합율 Fixed assets to stockholders' equity and long-term liabilities (%)	유동비율 Current ratio (%)
1988	49.4	102.3	188.6	106.5	80.0
1989	53.6	86.4	171.0	104.0	92.9
1990	54.7	82.9	167.4	105.0	60.8
1991	52.2	91.4	174.0	102.5	63.2
1992	48.8	104.9	188.5	102.5	63.0
1993	46.3	116.2	198.8	102.2	71.9
1994	47.3	111.6	195.2	107.8	52.2
1995	46.5	114.9	200.0	108.5	48.9
1996	47.4	111.0	197.8	107.1	50.3
1997	36.8	171.5	255.4	112.0	37.1
1998	36.4	174.8	260.2	110.6	36.9
1999	47.3	111.5	201.4	114.0	29.0
2000	49.3	101.7	193.9	110.7	31.9
2001	64.8	53.2	147.2	104.2	54.4
2002	66.7	50.0	143.1	106.3	44.8
2003	66.7	50.0	143.2	108.2	38.5
2004	68.4	46.3	139.7	105.6	47.1
2005	68.5	46.0	139.1	104.9	51.5
2006	67.6	47.9	139.3	105.6	53.5
2007	67.1	49.1	140.7	105.6	52.8
2008	61.2	63.3	153.0	106.2	53.7
2009	58.7	70.3	159.8	106.1	53.4
2010	55.2	81.3	169.5	105.6	56.6
2011(연결)	39.4	153.6	227.4	227.1	79.6



## 31. 경영분석비율(2)

### Ratios of business analysis

연도별	당좌비율 Quick ratio (%)	총자본순이익률 Net income to stockholders' equity and liabilities	자기자본순이익률 Net income to stockholders' equity (%)	매출액순이익률 Net income to net sales (%)	수지비율 Total expenses to total revenues (%)
1988	57.6	7.1	15.6	20.2	81.0
1989	71.0	6.0	11.6	16.8	84.3
1990	40.6	4.5	8.3	12.0	88.4
1991	43.8	4.8	9.0	12.6	87.9
1992	46.2	4.4	8.7	11.4	89.1
1993	52.9	2.1	4.4	5.6	94.6
1994	38.7	3.9	8.4	9.9	90.3
1995	34.8	3.6	7.6	9.1	91.2
1996	38.6	1.9	4.0	5.2	94.9
1997	28.7	1.4	3.3	4.3	95.8
1998	27.6	2.3	6.3	7.8	92.5
1999	23.9	2.6	6.1	9.5	91.1
2000	25.1	2.8	5.8	9.8	91.0
2001	52.8	3.1	5.5	9.0	91.9
2002	43.6	5.8	8.8	14.5	87.5
2003	37.4	4.2	6.3	10.3	90.7
2004	45.9	5.0	7.4	12.2	89.1
2005	49.8	4.1	5.9	9.8	91.2
2006	50.9	3.3	4.9	7.7	92.9
2007	49.6	2.4	3.6	5.4	95.0
2008	50.8	-4.5	-6.9	-9.4	108.9
2009	51.0	-0.1	-0.2	-0.2	100.2
2010	55.9	-0.1	-0.1	-0.2	100.1
2011(연결)	68.7	-2.4	-6.3	-7.6	107.3

총자본회전율 Stockholders' equity and lia- bilities turnover ratio (times)	자기자본회전 율 Net worth turnover ratio (times)	총자본투자효율 Productivity of capital (%)	노동장비율 Tangible fixed assets per employee (₩1,000)	자본집약도 Stockholders' equity and liabi- lities per emplo- yee (₩1,000)	During
0.4	0.8	22.0	418,035	545,115	1988
0.4	0.7	22.6	428,877	535,104	1989
0.4	0.7	21.1	414,767	532,239	1990
0.4	0.7	22.3	405,904	586,382	1991
0.4	0.8	22.1	404,758	670,792	1992
0.4	0.8	20.7	435,180	745,288	1993
0.4	0.8	21.6	465,007	828,387	1994
0.4	0.8	21.4	522,983	941,696	1995
0.4	0.8	18.1	692,333	1,174,475	1996
0.3	0.8	13.2	878,847	1,513,076	1997
0.3	0.8	15.7	1,052,985	1,716,789	1998
0.3	0.6	16.1	1,488,932	2,121,716	1999
0.3	0.6	15.5	1,761,605	2,384,714	2000
0.3	0.6	11.4	1,921,814	3,065,556	2001
0.4	0.6	14.2	1,560,730	3,231,808	2002
0.4	0.6	11.6	1,616,409	3,356,904	2003
0.4	0.6	13.0	1,593,468	3,353,103	2004
0.4	0.6	11.4	1,582,869	3,376,934	2005
0.4	0.6	10.3	1,614,256	3,477,717	2006
0.4	0.7	9.3	1,628,415	3,577,765	2007
0.5	0.7	0.0	1,697,565	3,646,617	2008
0.5	0.8	6.3	1,841,788	4,088,413	2009
0.5	1.0	6.6	1,890,423	4,359,936	2010
0.3	0.8	8.2	2,180,300	3,217,595	2011(연결)

## 32. 종업원 수

(단위 : 명) Employees of KEPCO (Unit : Persons)

연도 말 End of	경영 Administration	사무 Office clerk	기술 Engineer	기술 Skilled worker	계 Total
1961		3,116	5,775	1,204	10,095
1993		5,723	17,536	6,633	29,892
1994		5,721	18,053	6,406	30,180
1995		5,658	18,885	6,224	30,767
1996		5,797	19,904	5,953	31,654
1997		5,975	20,582	5,760	32,317
1998		5,643	19,751	4,755	30,149
1999		5,688	19,828	4,711	30,227
2000		5,592	19,224	4,712	29,528
2001 <sup>1)</sup>		4,533	8,110	3,998	16,641 (228)
2002		4,539	8,250	3,984	16,773 (209)
2003		4,583	8,608	3,931	17,122 (82)
2004		4,682	9,454	3,945	18,081
2005		4,697	9,676	3,888	18,261
2006		4,681	9,868	3,792	18,341
2007		4,782	10,086	3,731	18,599
2008		4,772	10,134	3,628	18,534
2009	335	4,388	9,728	3,434	17,885
2010	361	4,233	9,574	3,318	17,486
2011	409	4,181	9,258	3,247	17,095
전력거래소 (KPX)	2	63	220	-	285
한수원 (KHNP)	6	792	7,078	118	7,994
남동 (KOSEPCO)	4	218	1,454	47	1,723
중부 (KOMIPO)	4	221	1,699	74	1,998
서부 (KOWEPO)	4	208	1,367	44	1,623
남부 (KOSPO)	3	244	1,459	19	1,725
동서(KEWESPO)	4	225	1,614	36	1,879

\* 1) 2001. 4. 2 발전부문 6개자회사 및 전력거래소로 분리

1) On Apr. 2, 2001, KEPCO's power generation division was divided into 6 generation subsidiary companies and a Power Exchange.

\* 파견자 포함. ( ) 내는 파견자 재개시 인원임. \* Figures in ( ) indicate dispatched persons, and are included in the total.

### 33. 노동생산성

#### Labor productivity

연도별 During	발전량 <sup>1)</sup> Power generated (MWh)	판매량 Power sold (MWh)	경상평균인원 Average employees electric operating only (Persons)	1인당 생산성		Productivity	
				발전량 Power generated (MWh/인)	증가율 Increase over previous year (%)	판매량 Power sold (MWh/人)	증가율 Increase over previous year (%)
1961	1,772,921	1,189,386	7,542	235	-	158	-
1993	138,949,691	127,733,923	26,876	5,170	6.4	4,753	7.0
1994	160,134,127	146,540,499	27,070	5,916	14.4	5,413	13.9
1995	179,073,203	163,270,294	26,968	6,640	12.2	6,054	11.8
1996	198,893,315	182,470,374	26,748	7,436	12.0	6,822	12.7
1997	214,945,447	200,783,627	27,274	7,881	6.0	7,362	7.9
1998	206,811,020	193,470,338	28,032	7,378	-6.4	6,902	-6.2
1999	230,186,578	214,214,891	26,754	8,604	16.6	8,007	16.0
2000	256,841,584	239,535,486	26,980	9,520	10.6	8,878	10.9
2001	274,398,456	257,731,354	18,957	-	-	13,596	53.1
2002	292,182,776	278,451,371	18,934	-	-	14,706	8.2
2003	306,866,082	293,599,230	19,116	-	-	15,359	4.4
2004	327,191,191	312,095,586	19,754	-	-	15,799	2.9
2005	349,758,383	332,412,828	20,356	-	-	16,330	3.4
2006	362,446,663	348,719,371	20,480	-	-	17,027	4.3
2007	380,201,047	368,605,433	20,577	-	-	17,913	5.2
2008	394,929,871	385,070,137	20,976	-	-	18,358	2.5
2009	406,779,556	394,474,637	20,371	-	-	19,365	5.5
2010	435,384,166	434,160,228	19,790	-	-	21,938	13.3
2011	443,409,223	455,070,261	19,452	-	-	23,395	6.6

1) 타사 발전량 제외 Excludes generated power by Other co.

\* 2001년의 경상평균인원은 발전부문 분리('01. 4. 2) 후 한전의 총평균인원임.

In 2001, Average employees are KEPCO's total average manpower after power generation division was divided.

## 34. 재무상태표

(단위 : 백만원) Balance sheet

연도별 계정과목	2004	2005	2006	2007	2008	2009
1. 유동자산	2,651,579	2,925,671	3,668,715	3,689,652	4,230,413	4,317,000
가. 당좌자산	2,581,095	2,832,930	3,490,616	3,464,217	4,003,557	4,126,503
나. 재고자산	70,484	92,741	178,099	225,435	226,856	190,498
2. 비유동자산	56,265,745	58,701,170	59,867,486	61,952,938	62,637,763	65,668,451
가. 투자자산	26,087,181	27,679,091	28,101,848	29,227,800	28,818,568	30,831,701
나. 유형자산	29,944,528	30,787,030	31,551,355	31,018,141	31,941,153	33,346,531
다. 무형자산	233,016	235,040	214,283	208,295	195,951	105,134
라. 기타비유동자산	-	-	-	1,498,702	1,682,091	1,385,085
마. 리스자산	1,020	9	-	-	-	-
자산총계	58,917,324	61,626,841	63,536,201	65,642,590	66,868,176	69,985,451
1. 유동부채	5,626,638	5,683,188	6,857,138	6,983,873	7,875,532	8,087,524
2. 비유동부채	13,013,752	13,737,990	13,717,039	14,627,986	18,053,705	20,810,070
부채계	18,640,390	19,421,179	20,574,177	21,611,859	25,929,237	28,897,596
1. 자본금	3,203,743	3,207,839	3,207,838	3,207,838	3,207,838	3,207,838
2. 자본잉여금	14,372,895	14,422,727	14,518,843	14,555,890	14,556,185	14,666,232
3. 자본조정	-233,151	-78,646	-796,980	-741,825	-741,489	-741,489
4. 기타포괄손익누계액	-	-	38,892	79,664	406,673	523,256
5. 이익잉여금	22,933,447	24,653,743	25,993,431	26,929,164	23,509,732	23,432,019
자본계	40,276,934	42,205,662	42,962,024	44,030,731	40,938,939	41,087,856
부채 및 자본총계	58,917,324	61,626,841	63,536,201	65,642,590	66,868,176	69,985,451

\* 2010년부터 연결재무제표 적용

(Unit : Million won)

연도별 계정과목	2010	2011	End of Accounts
1. 유동자산	13,156,402	14,125,902	1. Current Assets
가. 현금 및 현금성 자산	2,090,051	1,387,921	a. Cash and cash equivalents
나. 유동금융자산	723,422	770,539	b. Current financial assets, net
다. 매출채권 및 기타채권	6,612,377	7,632,497	c. Accounts and other receivables, net
라. 재고 자산	3,483,415	3,851,751	d. Inventories, net
마. 기타 자산	247,137	483,194	e. Current non-financial and other assets
2. 비유동자산	116,361,392	122,341,949	2. Non-Current Assets
가. 비유동 금융자산	2,457,432	2,199,032	a. Non-current financial assets, net
나. 장기매출 채권 등	846,317	1,284,532	b. Non-current accounts and other receivables, net
다. 유형자산	107,406,466	112,384,881	c. Property, plant and equipment, net
라. 투자부동산	533,166	517,150	d. Investment properties, net
마. 무형자산	923,136	848,710	e. Intangible assets, net
바. 관계기업 투자지분	3,490,510	3,718,154	f. Investments in associates
사. 기타 자산	704,365	1,389,491	g. Investments in joint ventures and other assets
자 산 총 계	129,517,794	136,467,850	Total Assets
1. 유동부채	14,072,173	17,741,167	1. Current Liabilities
2. 비유동부채	58,169,084	64,922,732	2. Non-Current Liabilities
부 채 계	72,241,257	82,663,900	Total Liabilities
1. 납입자본	4,042,978	4,053,578	1. Contributed Capital
2. 이익 잉여금	39,296,232	35,769,094	2. Retained Earnings
3. 기타자본구성요소	13,478,768	13,447,624	3. Other Components of Equity
4. 지배기업 소유주에게 귀속되는 자본	56,817,978	53,270,297	4. Equity attributable to Owners of the company
5. 비 지배분	458,559	533,654	5. Non-controlling Interests
자 본 총 계	57,276,537	53,803,950	Total Equity
부 채 및 자 본 총 계	129,517,794	136,467,850	Total Liabilities and Equity

※ Consolidated Financial was applied since 2010

## 35. 손익계산서

(단위 : 백만원) Income statement

연도별 계정과목	2004	2005	2006	2007	2008	2009
1. 매출액	23,599,913	25,112,331	26,979,033	28,983,885	31,522,383	33,685,713
가. 상품및제품매출액	23,490,001	24,995,344	26,900,604	28,953,328	31,480,221	33,609,640
나. 부대사업수익	109,912	116,987	78,429	30,557	42,162	76,073
2. 매출원가	20,565,706	22,631,221	24,545,667	27,413,295	33,871,725	33,094,813
가. 상품및제품매출원가	20,453,337	22,508,541	24,460,056	27,369,638	33,812,365	33,038,765
나. 부대사업비	112,369	122,680	85,611	43,657	59,359	56,048
3. 매출총이익 (1 - 2)	3,034,207	2,481,111	2,433,366	1,570,590	-2,349,342	590,901
4. 판매비와 관리비	1,061,048	1,155,194	1,201,775	1,240,590	1,309,860	1,159,598
가. 인건비	392,200	426,084	427,260	437,770	495,111	403,337
(1) 급여	344,167	382,717	383,423	389,271	425,094	376,327
(2) 퇴직금	48,033	43,367	43,837	48,499	70,017	27,009
나. 경비	322,385	331,766	362,980	390,124	382,722	325,793
다. 판매비	346,463	397,344	411,535	412,696	432,026	430,468
5. 영업이익 (3 - 4)	1,973,159	1,325,917	1,231,591	330,000	-3,659,202	-568,697
6. 영업외수익	2,865,658	2,630,615	2,178,757	2,338,416	1,547,868	2,304,375
7. 영업외비용	850,054	775,491	786,410	784,641	2,394,897	1,856,118
8. 법인세차감전순이익 (5 + 6 - 7)	3,988,763	3,181,041	2,623,938	1,883,775	-4,506,231	-120,439
9. 법인세비용	1,107,993	732,430	553,395	326,960	-1,553,763	-42,727
10. 당기순이익 (8 - 9)	2,880,770	2,448,611	2,070,543	1,556,815	-2,952,468	-77,713

\* 2010년부터 연결재무제표 적용

(Unit : Million won)

계정과목	연도별	2010	2011	End of Accounts
1. 매출액		39,506,582	43,532,302	1. Sales
가. 재화의 판매로 인한 매출액		38,004,325	41,754,554	a. Sales of goods
나. 용역의 제공으로 인한 매출액		747,044	322,616	b. Sales of service
다. 건설계약으로 인한 매출액		755,213	1,455,132	c. Sales of construction contracts
2. 매출원가		36,187,237	43,081,979	2. Cost of Sales
가. 재화의 판매로 인한 매출원가		35,021,667	41,283,628	a. Cost of goods
나. 용역의 제공으로 인한 매출원가		414,672	393,049	b. Cost of service
다. 건설계약으로 인한 매출원가		750,897	1,405,302	c. Cost of construction contracts
3. 기타수익		536,915	598,303	3. Other operating income
4. 판매비와 관리비		1,644,760	1,751,697	4. Selling and administrative expenses
5. 기타비용		69,787	147,595	5. Other operating income
6. 기타이익		118,208	165,703	6. Other income
7. 영업이익 ( 1 - 2 + 3 - 4 - 5 + 6 )		2,259,920	-684,963	7. Operation income
8. 금융수익		591,491	607,592	8. Finance income
9. 금융원가		2,558,425	2,518,850	9. Finance expenses
10. 지분법 적용 관련 이익		76,626	123,095	10. Profits of associates and joint ventures using equity
11. 법인세 비용 차감전 순손익 ( 7 + 8 - 9 + 10 )		369,612	-2,473,126	11. Income before income tax
12. 법인세 비용		438,779	819,871	12. Income tax expense
13. 당기순이익 ( 11 - 12 )		-69,167	-3,292,997	13. Net income attributable to
가. 지배기업의 소유주에게 귀속되는 당기순손익		-119,931	-3,370,464	a. Owners of the company
나. 비지배 지분에 귀속되는 당기순손익		50,764	77,467	b. Non-controlling interests

※ Consolidated Financial was applied since 2010

## 36. 자본금 변천 (1)

(단위 : 천원) History of Capital equity

(Unit : Thousand won)

연도별 During	증자자본액 Increase in Capital equity	증자후자본액 After increase	비고 Remarks
1961	3,835,742	3,835,742	3사 통합 Merger of three electric companies
1963	3,835,742	7,671,484	무상증자 Stock dividends by transferring revaluation surplus
1964	3,835,742	11,507,226	"
1967	8,631,218	20,138,444	"
1968	30,052,698	50,191,142	포괄증자 Increase in capital equity by means of mixed capital increase method
1969	9,296,217	59,487,359	"
1970	4,180,335	63,667,694	"
1972	8,544,927	72,212,621	"
1973	5,119,989	77,332,610	"
1973	2,000,000	79,332,610	유상증자 Issue of common stock at par value
1974	9,136,200	88,468,810	포괄증자 Increase in capital equity by means of mixed capital increase method
1974	4,945,084	93,413,894	유상증자 Issue of common stock at par value
1975	55,506,366	148,920,260	포괄증자 Increase in capital equity by means of mixed capital increase method
1975	16,328,422	165,248,682	유상증자 Issue of common stock at par value
1976	91,436,892	256,685,732	"
1976	74,693,248	331,378,732	포괄증자 Increase in capital equity by means of mixed capital increase method
1977	68,000,000	399,378,732	유상증자 Issue of common stock at par value
1978	30,000,000	429,378,732	"
1979	38,700,000	468,078,732	"
1980	32,404,170	500,482,902	"
1981	125,000,000	625,482,902	유상증자 Issue of common stock at par value
1982	944,290,287	1,569,773,189	자본잉여금과 이익잉여금 자본전입 Capitalization of capital surplus and retained
1982	18,400,000	1,588,173,189	정부출자 Government investment

## 36. 자본금 변천 (2)

(단위 : 천원) History of Capital equity (Unit : Thousand won)

년도별 During	증자자본액 Increase in Capital equity	증자후자본액 After increase	비고 Remarks
1983	4,000,000	1,592,173,189	정부출자 Government investment
1983	6,000,000	1,598,173,189	"
1983	4,500,000	1,602,673,189	"
1985	390,000,000	1,992,673,189	자본잉여금 자본전입 Capitalization of capital surplus
1986	1,049,000,000	3,041,673,189	"
1989	△4	3,041,673,185	감자(주식공개에 따른 단수정리) Reduction of capital
1993	15,810	3,041,688,995	정부출자 Government investment
1994	37,267,080	3,078,956,075	DR 발행 DR Issuance
1995	39,400,670	3,118,356,745	DR 발행 (34,883,720) 및 CB 전환 (4,516,950) DR Issuance & Conversion of Convertible bond
1996	19,907,275	3,138,264,020	CB 전환 Conversion of Convertible bond
1997	2,822,300	3,141,086,320	"
1998	12,745	3,141,099,065	"
1999	58,357	3,199,455,725	"
2000	1,048,655	3,200,504,380	"
2003	3,238,485	3,203,742,865	정부출자 Government investment
2004	-	3,203,742,865	-
2005	4,095,695	3,207,838,560	정부출자 Government investment
2006	-	3,207,838,560	-
2007	-	3,207,838,560	-
2008	-	3,207,838,560	-
2009	-	3,207,838,560	-
2010	-	3,207,838,560	-
2011	1,981,825	3,209,820,385	정부출자 Government investment

## VI. 주 요 지 표 국 제 비 교

International comparison of major index

국가별 항 목	단위 Unit	한국 Korea ('10)	일본 Japan ('10)	대만 Taiwan ('10)	미국 United States ('09)	캐나다 Canada ('09)	중국 China ('09)
발전 설비 <sup>1)</sup>	MW	79,984	282,314	48,883	1,119,673	129,090	874,100
수력	"	5,525	48,110	4,909	98,567	75,095	196,290
화력 등	"	56,744	185,242	38,830	881,266	40,650	668,733
원자력	"	17,716	48,960	5,144	106,147	13,345	9,080
발전전력량 <sup>2)</sup>	GWh	495,028	1,156,921	233,538	3,949,694	592,346	3,681,200
수력	"	6,472	90,681	...	268,817	365,685	571,700
화력 등	"	339,960	778,010	...	2,882,023	141,669	3,039,460
원자력	"	148,596	288,230	40,028	798,855	84,992	70,100
설비 이용율	%	73.3	...	83.9	42.7	52.4	51.9
고객호수	1,000호	19,229	83,479	12,583	143,497	...	...
가정용	"	11,486	75,765	12,277	125,177	...	...
상공업용	"	257	7,714	306	18,319	...	...
기타	"	7,486	...	...	1	...	...
판매전력량	GWh	434,160	906,417	193,313	3,596,865	454,104	3,659,500 <sup>3)</sup>
가정용	"	61,194	304,229	59,178	1,364,474	160,182	457,500
상공업용	"	213,131	602,188	134,134	2,224,610	141,032	2,807,600
기타	"	159,835	...	...	7,781	152,890	394,400
최대전력	MW	71,308	177,752	33,022	725,958	90,444	580,970
부하율	%	76.0	62.5	71.7	63.3	66.0	...
송배전손실률	%	3.99	4.8	4.66	5.8	9.1	6.7
인구 1인당 전력소비량	kWh/인	8,883	6739('09)	8805('09)	12,884	15,071	2,589
노동생산성	MWh/인	11,521	6,994	8,548	...	5,974('08)	...

1) 2) 자가설비, 자가발전량 포함분임

3) 소비전력량 실적치임

호 주 Australia ('09)	프랑스 France ('09)	독 일 Germany ('09)	스웨덴 Sweden ('09)	영 국 United Kingdom ('09)	이탈리아 Italy ('09)	Nations Item
50,815	120,434	118,611	35,728	85,337	101,447	Generating facilities <sup>1)</sup>
7,469	25,357	10,348	16,764	4,270	21,371	Hydro
43,345	31,947	86,757	10,125	70,209	80,080	Thermal etc.
...	63,130	21,507	8,839	10,858	...	Nuclear
229,756	519,118	524,602	136,682	375,663	292,641	Power generation <sup>2)</sup>
11,480	61,882	21,810	65,610	8,947	53,442	Hydro
218,276	64,237	367,860	18,898	295,292	244,539	Thermal etc.
...	389,998	134,932	52,173	69,098	...	Nuclear
53.3('08)	49.2	50.5	44.3	48.0	31.0	Utilization Plant factor
10,011	31,758('98)	...	5,190	29,755	36,503	Customers
...	...	...	4,473	...	31,019	Residential
...	...	...	506	...	...	Commercial & Industrial
...	...	...	211	...	...	Others
204,301 <sup>3)</sup>	453,053 <sup>3)</sup>	491,100 <sup>3)</sup>	128,303 <sup>3)</sup>	313,819	282,384	Power sold
...	202,283	139,200	33,934	122,543	68,739	Residential
...	250,771	208,900	57,218	162,422	...	Commercial & Industrial
...	...	143,000	37,151	28,854	...	Others
...	92,400	73,000	24,500	60,231	51,873	Peak load
...	60.1	72.5	66.9	64.2	60.6	Load factor
...	6.9	5.4	6.9	7.8	6.4	Loss factor ( T & D )
9,303	7,020	5,844	14,484	5,349	4,982	Electricity consumption per capita
4,379('08)	...	...	...	...	...	Productivity

1) 2) includes non-utility & non-utility generation 3) Total consumption

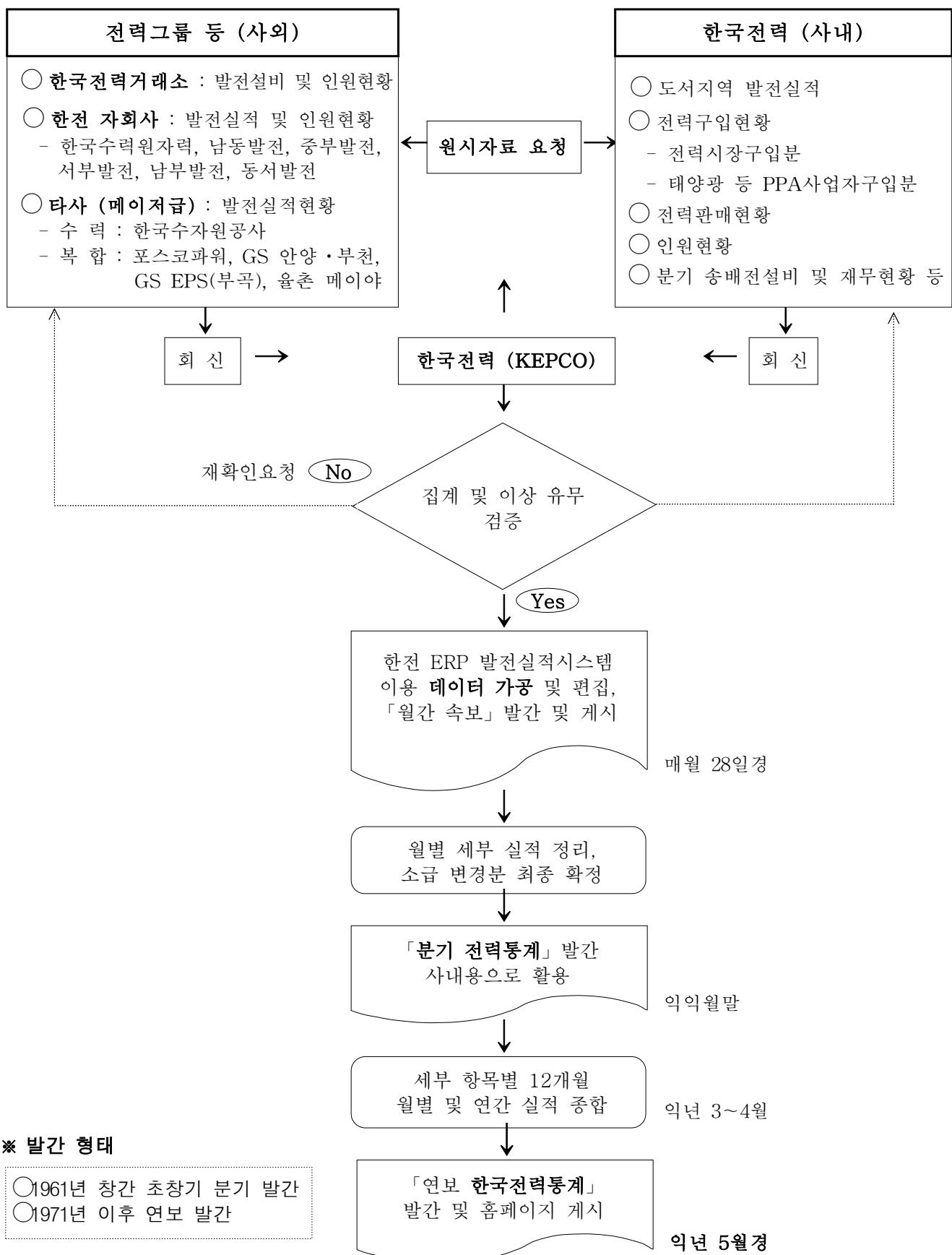
## VII. 광복후 창사전 주요통계

Major statistical indicator from 1945 to 1960

구 분	단위	1945	1946	1947	1948	1949	1950	1951	1952
발전설비	kW	199,159	199,159	199,159	226,059	230,059	231,059	264,559	281,559
총 발전량	MWh	711,327	676,124	828,760	696,999	654,969	420,651	336,629	639,676
소내전력량	MWh	...	10,335	20,183	27,821	47,924	38,332	23,559	40,995
소내전력을	%	...	1.5	2.4	4.0	7.3	9.1	7.0	6.4
양수용전력량	MWh	-	-	-	-	-	-	-	-
송전단전력량	MWh	...	565,911	747,734	460,249	519,992	380,119	291,024	593,131
송배전손실량	MWh	...	14,711	16,999	23,862	24,910	10,339	8,188	31,348
송배전손실율	%	...	2.6	2.3	5.2	4.8	2.7	2.8	5.3
판매전력량	MWh	...	...	...	...	...	...	...	...
수요성장을	%	...	...	...	...	...	...	...	...
최대전력	kW	115,000	119,000	146,000	122,000	115,000	74,000	59,000	117,000
평균전력	kW	81,202	77,183	94,607	79,007	74,763	48,019	38,428	72,823
부하율	%	70.6	64.9	64.8	64.8	65.0	64.9	65.1	62.2
이용율	%	...	...	...	...	...	...	...	...
판매단가	원/kWh	...	...	...	...	...	...	...	...
고객호수	호	...	...	...	...	...	...	...	...
종업원수 (경상평균)	명	...	...	...	...	...	...	...	...
자본금	백만원	422	425	425	425	425	425	425	425
총자산	백만원	980	742	1,375	1,515	1,721	1,919	2,012	3,648
인구1인당 소비전력량	kWh/명	...	...	...	...	...	...	...	...
종업원1인당 판매전력량	MWh/명	...	...	...	...	...	...	...	...

	1953	1954	1955	1956	1957	1958	1959	1960	Items
281,559	298,039	300,599	344,654	367,254	367,254	367,254	367,254	367,254	Generating facilities
736,065	899,096	879,272	1,118,308	1,323,013	1,511,674	1,686,237	1,696,951		Gross generation
39,556	41,748	44,263	59,135	76,699	74,789	75,384	87,830		Auxiliary use
5.4	4.6	5.0	5.3	5.8	5.0	4.5	5.2		Auxiliary use factor
-	-	-	-	-	-	-	-	-	Pumping storage
696,509	857,348	841,127	1,060,352	1,248,171	1,438,912	1,613,052	1,611,613		Net generation
33,745	37,918	277,766	387,250	475,368	484,667	492,103	457,275		T&D losses
4.8	4.4	33.0	36.5	38.1	33.7	30.5	28.4		Loss factor (T&D)
...	567,284	563,361	673,102	772,803	954,245	1,120,949	1,154,338		Power sold
...	...	-0.69	19.48	14.81	23.48	17.47	2.98		Growth rate
124,600	149,860	143,720	215,320	260,300	280,280	282,400	288,060		Peak load
84,025	102,637	100,374	127,312	151,029	172,565	192,493	193,187		Average load
67.4	68.5	69.8	59.1	50.0	61.6	68.2	67.1		Load factor
26.4	29.7	29.0	34.2	40.5	46.3	51.6	51.8		Plant factor
...	...	3.35	3.35	8.17	8.17	8.17	8.17		Average revenues per kWh sold
...	590,192	604,760	655,918	660,402	682,577	724,415	759,125		Customers
...	...	...	...	7,921	7,860	7,999	8,080		Employees
4,245	4,245	4,245	4,245	(5,631)	(5,609)	(5,591)	(5,783)		(Average employees electric operating only)
90,052	161,800	4,541	6,837	9,221	58,188	...	...		Capital equity (Million won)
...	...	...	...	35	42	49	46		Total assets (Million won)
...	...	...	...	139	173	140	141		Generation per capita
...	...	...	...						Consumption per capita

# I. 통계 작성 개요



## ※ 발간 형태

- 1961년 창간 초창기 분기 발간
- 1971년 이후 연보 발간

## II. 주요 용어해설

### 1. 발전 및 전력수급 부문

#### 가. 발전원별(발전설비별) 분류 체계

##### 1) 수력 水力 Hydro

- 정의 : 물의 낙차를 이용하여 물의 위치에너지가 운동에너지로 전환하는 과정에서 수차를 구동하여 발전하는 발전소
- 일반 一般 General
- 양수 揚水 Pumping
  - 양수발전소 Pumped Storage Power Station
  - 심야 경부하시 발전설비 가동능력의 여력을 이용하여 하부 저수지 물을 상부 저수지로 펌핑(양수), 주간 최대부하시 이 물로 첨두부하 전력을 공급하는 발전소

##### 2) 기력 汽力 Steam

- 정의 : 증기 터빈을 이용한 화력발전소
- 무연탄 無煙炭 Anthracite coal : 국내탄 발전소
  - 영동, 서천 및 동해화력 (군산화력 '04.1월 폐지)
- 유연탄 有煙炭 Bituminous coal : 수입 석탄 발전소
- 중유 重油 Heavy oil : 중유 발전소
- LNG : 서울화력(열공급), 인천화력

##### 3) 복합화력 複合火力 Combined cycle

- 정의 : 1차 가스터빈 2차 증기터빈(or 열공급) 발전형식
- 열공급 热供給 Heat & Electric : 일산, 분당 및 GS 파워 안양, 부천 CC
- 일반 一般 General : 나머지 CC
  - 한림복합은 등유 사용 나머지 LNG

##### 4) 내연력 內燃力 Internal combustion

- 정의 : 내연 기관으로 발전하는 발전소
  - 내연기관 : 연소실내에서 공기와 연료를 혼합 고온 고압의 동작가스를 만들어 기계적인 일로 변화하는 장치

##### 5) 원자력 原子力 Nuclear

- 정의 : 핵분열 에너지를 이용하는 발전방식으로 화력발전소의 보일러 부분이 원자로 계통으로 치환되어 포화 증기를 발생하고 그 이외의 Process는 화력발전소와 유사함.

## 6) 대체代替 Alternative energy

- 정의 : 화석에너지의 대체용으로 원칙적으로 수력 포함 (단, 양수발전 제외)
- 종류 : 풍력, 태양광, 태양광, 매립가스 및 부생가스 등
  - 폐기물 소각 : 청라, 백석, 명지소각장 등
  - 매립가스(LFG) : land fill gas (서희, 상원 ENC 등)
  - 부생(浮生)가스 : 제철 or 석유산업 공정중 발생하는 가스

## 나. 발전 연료

### 1) 사용량 Consumption

- 무연탄 無煙炭 (or 국내탄) Anthracite coal (ton)
- 유연탄 有煙炭 (or 석탄) Bituminous coal (ton)
- 석탄(Ton) : 무연탄+유연탄
- 중유 重油 Heavy oil (kl) = BC+저유황유+오리멀전
  - BC유 Bunker C : 등급 구분 없이 종합
  - 기타 중유 Other : 저유황유+오리멀전
- 경유 輕油 Diesel oil (kl) = 경유(DO)+등유
- LNG(Ton) : 가스
  - 복합화력의 경우 열공급분 포함

### 2) 사용열량 Caloric consumption ( $Gcal = 10^6 \text{ kcal} = 10^9 \text{ cal}$ )

- 공급된 연료에서 유용하게 사용되는 화학적 에너지 (=사용량×단위열량)

### 3) 발열량 (단위열량) Caloric value (kcal / kg or l)

- 연료별 연간 종합 발열량 = 열량 산술합 ÷ 연료 사용량 산술합

## 다. 발전 실적

### 1) 평균전력 平均電力 = 평균부하 平均負荷 Average load (kW)

- 일정기간내 부하전력의 평균값
- 기준 운전기간중 총발전량(MWh) × 1,000 / 역일시간 (일수 × 24)
  - 총계에는 대체 및 집단 상용자가 구입분 포함

### 2) 송전단전력량 送電端電力量 Net generation (MWh)

- 발전소측에서 한전 송전선로에 보내는 전력량
  - '61 ~ '05년 : 발전량 - 소내전력량
  - 2006년 이후 : 구입량 (거래용 계량값) + 한전 도서발전 송전량

### 3) 소내전력량 所內電力量 Auxiliary use (MWh)

- 발전소 구내 소비전력량
  - '61~'05년 : 소내전력량계 계량값  
발전기 운전중 소비전력과 유휴중 한전 전기 수전전력량(기동전력량)을 합산한 값
  - 2006년 이후 : 발전량-구입량(송전단전력량)

### 4) 부하율 負荷率 Load factor (%)

- 최대전력 분산 or 억제 결과를 나타내는 부하관리 지표
- 부하율 =  $(\text{평균전력} \div \text{최대전력}) \times 100$

### 5) 이용률 利用率 Utilization plant capacity (%)

- 어느 기간내에 발전설비의 이용률
- $(\text{발전량} - \text{시운전발전량}) / \text{역일가능발전량} \times 100$ 
  - 시운전발전량 : 산자부 등록 상업운전개시일 이전 발전량
  - 역일가능발전량 = 설비용량  $\times 1,000 \times \text{역일시간}$
  - 역일시간 = 일수  $\times 24$  (상업개시일 이후 실제 운전일수 적용)

### 6) 열효율 热效率 Thermal efficiency

- 터빈을 돌리는 열에너지가 일로 전환되는 에너지 비율

## 라. 전력수급 電力需給 Power Supply & Demand

### 1) 공급능력

- 발전설비 총용량에서 고장 또는 예방정비 등으로 발전이 불가능한 발전기를 제외한 용량
  - 발전기용량보다 실제 출력가능 용량을 공급능력으로 산정하며 총발전설비용량보다 공급능력이 큰 경우도 있음.

### 2) 최대전력

- 어떤 기간내의 전력수요중 최대값으로 소내전력량을 포함한 발전단 1시간 평균전력중 최대 값

### 3) 공급예비율

- 최대전력대비 공급가능한 발전설비용량 비율 =  $(\text{공급능력} - \text{최대전력}) / \text{최대전력} \times 100\%$

### 4) 설비용량 예비율

- 최대전력대비 잉여설비용량 비율 =  $(\text{총 설비용량} - \text{최대전력}) / \text{최대전력} \times 100\%$

## 2. 전력구입 및 송배전 손실부문

### 가. 전력구입

- SEP : Scheduled Energy Payment (계획발전 전력량 정산금)
- CP : Capacity Price (용량가격)
  - 거래전일 입찰에 참가한 모든 발전기에 대하여 지급
  - 일반발전기와 기저발전기 구분적용
- SMP : System Marginal Price (계통한계가격)
  - 가동발전기중 최고 변동비 : 일반발전기에 적용
- BLMP : Base Load Marginal Price (기저한계가격)
  - 기저발전기중 최고 변동비 : 기저발전기 (원자력과 석탄)에 적용
- PPA : Power Purchase Agreement (전력구매계약)
  - 발전회사가 단일 구매자인 전력회사(한전)에 전력을 판매하는 형태
  - 변동비는 실적보상, 고정비는 협상에 의하여 매년 일정수준 보상

### 나. 송배전 손실

(단위 : MWh, %)

구 분	항 목	산 식
송변전	손실량	송전단전력량-배전(분)량
	손실률	(송변전 손실량/송전량)×100
배 전	손실량	배전(분)량-(배전)판매량
	손실률	(배전손실량/배전(분)량)×100
	사업소별 손실	배전 1차 사업소별 손실량 합계
종 합 송배전	손실량	송전단전력량-(배전)판매량
	손실률	(종합 손실량/송전량)×100

#### 1) 송전단전력량 送電端 電力量 Net generation

- 발전소에서 송전선로에 보내는 전력량
  - '61~'05년 : 발전량-소내전력량
  - 2006년 이후 : 시장 구입량(발전소 기동전력량 포함) + PPA + 도서발전송전량

## 2) 배전량 配電量 Distribution

- 154kV 변전소(66kV 포함)의 주변압기 2차측 전력량과 직거래 고객에게 공급되는 전력량의 합(도서발전량, PPA구입량, 분산형 전원 발전량 포함)
  - 2006년 이후 : 발전소 기동전력량 포함

## 3) 송변전손실량 送變電損失量 Transmission & Substation Losses

- 발전소 송전단에서 154kV변전소 사이에서 발생하는 전력손실량

## 4) 배전손실량 配電損失量 Distribution losses

- 전력이 배전선로(발전소, 변전소 또는 송전선로에서 다른 발전소나 변전소를 거치지 않고 수급지점에 이르는 전선로와 이에 속하는 개폐장치, 변압기 등 한전 전기설비)를 통해 수급지점에 이르는 동안 발생하는 손실로 계량오차, 위약, 검침시차 등에 의해 발생하는 손실 포함.

## 5) 종합손실량 綜合損失量 Total losses

- 발전소 송전단과 고객측 계량기 사이에서 소비되는 전력량
  - 종합손실량 = 송전단전력량 - (배전)판매량 주)
  - 주) 송전단전력량은 매월1일~말일까지 실적을 나타내는 반면 영업판매량은 검침일에 따라 전월실적을 포함하고 있어,  
해당 월 1일~말일까지 판매량 산출을 위하여 일수계산한 배전판매량.

# 3. 송배전 및 판매부문

## 가. 송전선로

### 1) 선로길이 線路길이, Route length

- 선로의 두 2점 사이의 경간(지지물 사이의 수평거리)를 말하며 지중 선로에 있어서는 두 점 사이의 한 줄의 케이블 경간을 의미

### 2) 회선길이 回線길이 : Circuit length

- 회선길이, 보통 송전선로는 3상(A,B,C상) 3선식으로 구성된 1조를 1회선이라 하며, 선로의 길이를 1회선당 거리로 나타내는 것
- [예] 2회선 선로길이가 50km 인 경우 회선공장은 2회선 × 50km, 100c-km

### 3) 전선전체길이 電線全體길이 : Total [conductor] length

- 회선별, 선식별로 각각 다르게 구성된 전력선의 길이를 모두 합하여 한 선으로 연이은 전력선의 총길이
- [예] 2회선(1회선이 3선) 선로길이가 50km 인 경우, 전선연장으로 표시하면 선로길이 50km × 2회선 × 3선 = 300km이다

#### 4) 지지물 支持物 Supporter

- 송전선로 및 선로에 부착된 금구류 등을 버티기 위해 세워진 구조물

#### 5) 철탑 鐵塔 Steel tower

- 전기를 발전소로부터 변전소, 혹은 변전소에서 변전 지지물까지 전달시켜 주는 가교역할을 하는 철재 조립 구조물, 송전 철탑의 주요 재질로는 앵글(angle) 및 파이프(pipe) 등이 사용

#### 6) 콘크리트주 Concrete pole

- 철근 또는 철골 콘크리트의 재질로 된 전주. 공장에서 원심력을 응용하여 속이 빈 형태로 만든 철근 콘크리트주

#### 7) 애자 碓子 Insulator

- 전선을 철탑 또는 전주의 완금에 기계적으로 고정시키고 전기적으로 절연하기 위해서 사용하는 절연 지지체. 즉, 전선과 전주 등 과의 절연간격을 확보하여 주는 역할을 하며, 자기나 고분자 화합물 등으로 만든다. 핀 애자 (pin type insulator) 및 현수 애자(suspension insulator) 등이 있음.

### 나. 변전설비

#### 1) 변전소 變電所 Substation

- 발전소에서 생산된 전력을 전기사용자에게 효율적으로 공급하기 위하여 수전된 전력의 전압을 조정하여 구외로 전송하는 장소

#### 2) 변전용량 變電容量 Capacity of Transformer (MVA)

- 계통의 부하를 연속적으로 담당할 수 있는 변압기 용량

#### 3) 차단기 過斷器 Circuit Breaker

- 정상상태의 전류를 투입, 통전, 차단하며 또한 단락과 이상상태에 있어서 차단이 가능하도록 설계된 개폐장치

#### 4) 電力用 콘덴서 Static-Condenser (MVAR)

- 송전선로의 과부하 또는 장武功선로의 저전압보상을 위한 콘덴서

#### 5) 分路 리액터 Shunt-Reactor (MVAR)

- 송전선로의 경부하, 또는 무부하 운전시 수전단 전압이 송전단 전압 보다 높아지는 현상을 방지하기 위해 설치하는 리액터

## 다. 배전설비

### 1) 회선길이 ~~回線길이~~ : Circuit length (C-km)

- 배전선로 3상 1회선 길이 or 단상 1회선 길이로 통상 1회선의 경우 전주와 전주사이 길이

### 2) 선로전체길이 ~~線路全體길이~~ : Total length (km)

- 배전선로의 전력선의 길이를 모두 합하여 1선으로 연이은 총길이

### 3) 철탑 ~~鐵塔~~ Steel tower (其)

- 기초가 4개소로 각각의 기초를 시행하는 사각형 철골조 지지물

### 4) 철주 ~~鐵柱~~ Steel pole (其)

- 기초가 1개소인 사각형 철골조 지지물

### 5) 콘크리트주 Concrete pole (其)

- 철근 또는 철골 콘크리트의 재질로 된 가장 흔한 전선 지지물 일명 전봇대

### 6) 변압기 ~~變壓器~~ Transformer (kVA)

- 특고압을 저압으로 변환하기 위해 전주 또는 지상에 설치된 변압기

### 7) 가스절연 개폐기 ~~ガス絶縁開閉器~~ Gas Insulated Switch gear (臺)

- 배전선로에 설치되어 있는 선로 구분용으로 사용되는 부하개폐기

## 라. 전력판매

### 1) 고객호수 ~~顧客戶數~~ Number of Customers (호)

- 전기요금이 청구된 전기사용계약 구좌수
  - 종합계약아파트와 같이 고압 아파트 단지 전체를 1개의 전기사용계약으로 체결한 경우, 세대수와 관계없이 고객호수는 1호로 계상

### 2) 계약종별 ~~契約種別~~ Classification of Contract

- 전기사용계약단위의 경제활동에 따라 전기요금 및 공급조건을 달리하기 위하여 분류한 기준
- 전기공급약관의 기준에 따라 주택용전력, 일반용전력, 교육용전력, 산업용전력, 농사용전력, 가로등전력, 심야전력(주택용에서 분리계시, '12. 10. 9)으로 분류

### 3) 요금적용전력 料金適用電力 Billing Demand (kW)

- 기본요금 계산의 기준이 되는 전력
  - 주택용의 요금적용전력은 고압아파트 및 심야전력(을)의 요금적용 전력임

#### 4) 판매전력량 販賣電力量 Power Sold (kWh)

○ 고객에게 판매한 전력량

- 한전 사용량 및 발전소 기동전력은 포함되나, 양수발전소의 양수펌핑 사용량은 제외
- 월 기준 : 해당월 1검침일 ~ 말일 검침일 고객에게 검침일 전 한달 동안  
판매한 전력량 (전력량계를 검침한 검침일이 속한 월의 판매량)
- 검침일정 (검침일수 : 총 21일)

구 분	1차	2차	3차	4차	5차	6차	7차
검침일	1~5	8~12	15~17	18~19	22~24	25~26	말일

※ 1개월 계산기간 : 전월 검침일 ~ 당월 검침일 전일

#### 5) 용도별 用途別 By Use and Industry

○ 계약종별과 관계없이 용도 및 산업분류에 의한 분류

○ 통계청 한국표준산업분류에 따라 신규접수시 고객별로 부여한 용도코드에 의해 분류

구 分	분 류 기 준	
가정용	순수 주거용 고객(일반주택, 아파트, 연립주택)	
공공용	관공용(정부 및 지자체, 산하기관), 국군용, 유엔군용, 기타 공공용(교육서비스, 뉴스 공급업 등)	
서비스업	수도, 전철, 전기사업자(판매 · 송변전 · 건설용 · 발전소), 순수서비스업(가정용, 공공용, 생산부문, 수도, 전철, 전기사업자 이외 고객)	
생산부문	농림어업	표준산업분류 대분류 농업 및 임업, 어업
	광업	표준산업분류 대분류 광업
	제조업	표준산업분류 대분류 제조업

#### 6) 전력판매수입 電力販賣收入 Revenues from Electricity Sales

○ 전력판매에 따라 청구된 전기요금 (수금액과 별개)

○ 지침 : 전기요금 = 기본요금 + 사용량요금

- 전력산업기반기금 및 부가가치세 불포함

#### 7) 판매단가 販賣單價 Average Revenues per kWh sold

○ 정의 : 전력판매량 1kWh 당 평균판매단가

○ 지침 : 판매단가 = 전력판매수입(기본요금+사용량요금) / 전력판매량

### III. 국가별 배전전압 및 주파수 현황

국 가 명	전 압	주 파 수
Afghanistan	220V	50Hz
Albania	220V	50Hz
Algeria	230V	50Hz
American Samoa	120V	60Hz
Angola	220V	50Hz
Anguilla	110V	60Hz
Antigua	230V	60Hz
Argentina	220V	50Hz
Armenia	220V	50Hz
Aruba	127V	60Hz
Australia	230V	50Hz
Austria	230V	50Hz
Azores	220V	50Hz
Bahamas	120V	60Hz
Bahrain	230V	50Hz
Balearic Islands	220V	50Hz
Bangladesh	220V	50Hz
Barbados	115V	50Hz
Belgium	230V	50Hz
Belize	110/220V	60Hz
Benin	220V	50Hz
Bermuda	120V	60Hz
Bhutan	230V	50Hz
Bolivia	220/230V	50Hz
Bosnia	220V	50Hz
Botswana	231V	50Hz
Brazil	110/220V	60Hz
Brunei	240V	50Hz
Bulgaria	230V	50Hz
Burkina Faso	220V	50Hz
Burundi	220V	50Hz
Cambodia	230V	50Hz
Cameroon	220V	50Hz
Canada	120V	60Hz

국 가 명	전 압	주파수
Canary Islands	220V	50Hz
Cape Verde	220V	50Hz
Cayman Islands	120V	60Hz
Central African Republic	220V	50Hz
Chad	220V	50Hz
Channel Islands	240V	50Hz
Chile	220V	50Hz
China, People's Republic of	220V	50Hz
Colombia	110V	60Hz
Comoros	220V	50Hz
Congo, People's Rep. of	230V	50Hz
Congo, Dem. Rep. of(former Zaire)	220V	50Hz
Cook Islands	240V	50Hz
Costa Rica	120V	60Hz
Côte d'Ivoire(Ivory Coast)	220V	50Hz
Croatia	230V	50Hz
Cuba	110/220V	60Hz
Cyprus	240V	50Hz
Czech Republic	230V	50Hz
Denmark	220V	50Hz
Djibouti	220V	50Hz
Dominica	230V	50Hz
Dominican Republic	110V	60Hz
East Timor	220V	50Hz
Ecuador	120~127V	60Hz
Egypt	220V	50Hz
El Salvador	115V	60Hz
England	230V	50Hz
Equatorial Guinea	220V	50Hz
Eritrea	230V	50Hz
Estonia	230V	50Hz
Ethiopia	220V	50Hz
Faeroe Islands	220V	50Hz
Falkland Islands	240V	50Hz
Fiji	240V	50Hz
Finland	230V	50Hz

국 가 명	전 압	주파수
France	230V	50Hz
French Guiana	220V	50Hz
Gaza	230V	50Hz
Gabon	220V	50Hz
Gambia	230V	50Hz
Germany	230V	50Hz
Ghana	230V	50Hz
Gibraltar	240V	50Hz
Great Britain	230V	50Hz
Greece	220V	50Hz
Greenland	220V	50Hz
Grenada(Windward Is.)	230V	50Hz
Guadeloupe	230V	50Hz
Guam	110V	60Hz
Guatemala	120V	60Hz
Guinea	220V	50Hz
Guinea-Bissau	220V	50Hz
Guyana	240V	60Hz
Haiti	110V	60Hz
Honduras	110V	60Hz
Hong Kong	220V	50Hz
Hungary	230V	50Hz
Iceland	220V	50Hz
India	240V	50Hz
Indonesia	127/230V	50Hz
Iran	230V	50Hz
Iraq	230V	50Hz
Ireland(Eire)	230V	50Hz
Isle of Man	240V	50Hz
Israel	230V	50Hz
Italy	230V	50Hz
Ivory Coast	220V	50Hz
Jamaica	110V	50Hz
Japan	100V	50/60Hz
Jordan	230V	50Hz
Kenya	240V	50Hz

국 가 명	전 압	주파수
Kazakhstan	220V	50Hz
Kiribati	240V	50Hz
Korea, South	220V	60Hz
Kuwait	240V	50Hz
Laos	230V	50Hz
Latvia	220V	50Hz
Lebanon	230V	50Hz
Lesotho	220V	50Hz
Liberia	120V	60Hz
Libya	127V	50Hz
Lithuania	220V	50Hz
Liechtenstein	230V	50Hz
Luxembourg	220V	50Hz
Macau	220V	50Hz
Macedonia	220V	50Hz
Madagascar	127/220V	50Hz
Madeira	220V	50Hz
Malawi	230V	50Hz
Malaysia	240V	50Hz
Maldives	230V	50Hz
Mali	220V	50Hz
Malta	240V	50Hz
Martinique	220V	50Hz
Mauritania	220V	50Hz
Mauritius	230V	50Hz
Mexico	127V	60Hz
Micronesia(Federal States of)	120V	60Hz
Monaco	127/220V	50Hz
Mongolia	230V	50Hz
Montserrat(Leeward Is.)	230V	60Hz
Morocco	127/220V	50Hz
Mozambique	220V	50Hz
Myanmar(formerly Burma)	230V	50Hz
Namibia	220V	50Hz
Nauru	240V	50Hz
Nepal	230V	50Hz

국 가 명	전 압	주파수
Netherlands	230V	50Hz
Netherlands Antilles	127/220V	50Hz
New Caledonia	220V	50Hz
New Zealand	230V	50Hz
Nicaragua	120V	60Hz
Niger	220V	50Hz
Nigeria	240V	50Hz
Northern Ireland	230V	50Hz
Norway	220V	50Hz
Okinawa	100V	60Hz
Oman	240V	50Hz
Pakistan	230V	50Hz
Palmyra Atoll	120V	60Hz
Panama	110V	60Hz
Papua New Guinea	240V	50Hz
Paraguay	220V	50Hz
Peru	220V	60Hz
Philippines	220V	60Hz
Poland	220V	50Hz
Portugal	220V	50Hz
Puerto Rico	120V	60Hz
Qatar	240V	50Hz
Réunion Island	220V	50Hz
Romania	230V	50Hz
Russian Federation	220V	50Hz
Rwanda	230V	50Hz
St. Kitts and Nevis(Leeward Is.)	230V	60Hz
St. Lucia(Windward Is.)	240V	50Hz
St. Vincent(Windward Is.)	230V	50Hz
Saudi Arabia	127/220V	60Hz
Scotland	230V	50Hz
Senegal	230V	50Hz
Serbia-Montenegro	220V	50Hz
Seychelles	240V	50Hz
Sierra Leone	230V	50Hz
Singapore	230V	50Hz

국 가 명	전 압	주파수
Slovak Republic	230V	50Hz
Slovenia	220V	50Hz
Somailia	220V	50Hz
South Africa	220/230V	50Hz
Spain	230V	50Hz
Sri Lanka	230V	50Hz
Sudan	230V	50Hz
Suriname	127V	60Hz
Swaziland	230V	50Hz
Sweden	220V	50Hz
Switzerland	230V	50Hz
Syria	220V	50Hz
Tahiti	110/220V	60Hz
Tajikistan	220V	50Hz
Taiwan	110V	60Hz
Tanzania	230V	50Hz
Thailand	220V	50Hz
Togo	220V	50Hz
Tonga	240V	50Hz
Trinidad&Tobago	115V	60Hz
Tunisia	230V	50Hz
Turkey	230V	50Hz
Turkmenistan	220V	50Hz
Uganda	240V	50Hz
Ukraine	220V	50Hz
United Arab Emirates	220V	50Hz
United Kingdom	230V	50Hz
United States of America	120V	60Hz
Uruguay	220V	50Hz
Uzbekistan	220V	50Hz
Venezuela	120V	60Hz
Vietnam	127/220V	50Hz
Virgin Islands(British and U.S.)	110V	60Hz
Wales	230V	50Hz
Western Samoa	230V	50Hz
Yemen, Rep. of	220/230V	50Hz
Yugoslavia(Former)	220V	50Hz
Zambia	230V	50Hz
Zimbabwe	220V	50Hz

## IV. 단위

### 1. 주요 단위

구 분	단위	표시	구 분	단위	표시
힘	Newton(뉴톤)	N	주파수	Hertz(헤르츠)	Hz
일	Joule(주울)	J	광속	Lumen(루멘)	lm
피상전력	Volt Ampere	VA	조명도	Lux(룩스)	lx
유효전력	Watt(와트)	W	방사능	Curi(큐리)	Ci
무효전력	var(바)	var	자속	Weber(웨버)	Wb
전위(압)	Volt(볼트)	V	조사선량	Roentgen(뢴트겐)	R
전하	Coulomb(콜롱)	C	흡수선량	Rad(라드)	Rad
정전용량	Farad(파라드)	F	방사선량	Rem(렘)	REm
전류	Ampere(암페어)	A	전자볼트	Electron Volt	eV
전기저항	Ohm(옴)	$\Omega$	연소도	Megga Watt Day	MWD
				Per Metric Ton	/MTU
				Uranium	
콘덕턴스	Mho(모오)	$\mathcal{O}$			
도전율	Mho/meter	$\mathcal{O}/m$	핵반응단면적	barm( $10^{-24} \text{cm}^2$ )	Barn
저항률	ohm meter	$\Omega \cdot m$	분리작업량	Separative Work Unit	SWU
인덕턴스	Henry(헨리)	H	원자질량	Atomic Mass Unit	AMU

## 2. 단위 표기 기본원칙 (한국산업규격 기준)

### 가. 기본원칙

○ 단위기호는 복수일 경우에도 그 모양을 바꾸지 않고, 마침표도 찍지 않는다.

[예외] 광년 : 1.y.

○ 단위기호는 원칙적으로 소문자를 사용하나, 고유명사에서 유래된 단위기호는 최초의 문자만을 대문자로 표기한다.

어원(유래)	Watt	Joule	Ampere	Volta	Pascal	Hertz
단위표기	W	J	A	V	Pa	Hz

### 나. 접두어 표기

○ 단위의 10의 정수 제곱을 나타낼 때에는 아래의 접두어를 붙인다.

배수	접두어 명칭	접두어 기호	비 고	배수	접두어 명칭	접두어 기호	비 고
10	데카(deca)	da	소문자	$10^{-1}$	데시(deci)	d	소문자
$10^2$	헥토(hecto)	h	"	$10^{-2}$	센티(centi)	c	"
$10^3$	킬로(kilo)	k	"	$10^{-3}$	밀리(milli)	m	"
$10^6$	메가(mega)	M	대문자	$10^{-6}$	마이크로(micro)	$\mu$	"
$10^9$	기가(giga)	G	"	$10^{-9}$	나노(nano)	n	"
$10^{12}$	테라(tera)	T	"	$10^{-12}$	피코(pico)	p	"
$10^{15}$	페타(peta)	P	"	$10^{-15}$	펨토(femto)	f	"
$10^{18}$	엑사(exa)	E	"	$10^{-18}$	아토(atto)	a	"

[주] ① 배수표시 접두어중 Mega, Giga, Tera, Peta, exa 등은 다른 단위기호 또는 접두어 즉 milli, gram, ton 등과 혼동을 피하기 위하여 대문자로 표기한다.

② 접두어는 중복해서 사용하지 않는다.

③ 단위기호의 앞에 접두어의 기호를 붙인 것은 하나의 새로운 단위기호로 본다.  
따라서 여기에 제곱 지수를 붙인 대에 그 지수는 전체에 관계한다. [보기]  $cm^3$ 은  $(0.01m)^3$   
즉  $10^{-6}m^3$ 을 뜻하고  $0.01^3$ 을 뜻하지는 않는다.

## 나. 표준 단위

구 분	단위의 명칭	바로 쓰는 예		잘못 쓰는 예
		표준단위	응용단위	
길 이	미 터	m	$\mu\text{m}$ , $\text{mm}$ , $\text{cm}$ , $\text{km}$	MM, CM, KM, Km
주 파 수	헬 츠	Hz	kHz, MHz, GHz	KHz
질 량	킬 로 그 램	kg	g, $\mu\text{g}$ , mg	KG, Kg
압 力	파 스 칼	Pa	hPa, kPa, MPa	HPa, KPa
일	줄	J	kJ, MJ	KJ
동 력, 전 력	와 트	W	kW, MW	KW, Kw, kw, Mw
전 력 량	와 트 시	Wh	kWh, MWh, GWh	KWH, MW, MWH, GWH
전 류	암 폐 어	A	mA, kA	KA
전 하	쿨 롱	C	$\mu\text{C}$ , kC	KC
전 압	볼 트	V	mV, kV, mv	KV, kv, Mv
저 항	음	$\Omega$	$\text{k}\Omega$ , $\text{M}\Omega$	$\text{K}\Omega$
무 효 전 력	바	var	kvar	KVAR, Kvar
피 상 전 력	볼 트 암 폐 어	VA	kVA, MVA	KVA
조 도	룩 스	lx		LX, LUX
열	칼 로 리	cal	kcal	Kcal, KCAL
부 피	리 터	L, L(주)	L, kL	KL

[주] L은  $\bar{L}$ 이 다른 것과 혼동될 우려가 있을 때 사용

### □ 잘못 사용하는 사례 설명

- 대문자와 소문자 구분을 착오하는 경우
  - 전력량 단위기호 표기 : KWH 또는 KWh(×)  $\Rightarrow$  kWh(○)
- 용어와 병기된 단위기호가 일치하지 않는 경우
  - 계약전력, 요금적용전력, 평균전력의 단위기호 표기 : kWh(×)  $\Rightarrow$  kW(○)
- 접두어를 중복해서 사용하는 경우 : kMW(×)  $\Rightarrow$  GW(○)

### ※ 단위기호 관련 각종 규격

- KSA0102(量의 기호, 단위기호 및 화학기호)
- KSA0105(국제단위계 및 그 사용방법)
- KSC0101(전기용 量의 기호 및 단위기호)
- ISO1000(국제표준단위)