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# 한국전력통계

STATISTICS OF ELECTRIC POWER IN KOREA

2018. 6





## 머 리 말

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 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.

2018. 6

한국전력공사 경영개선처장



## 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, 2018

Vice President

Head of Business Management & Improvement Department

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.  
Symbols used in tables as follow.  

0	단위미만	0	Less than half of unit value
-	해당사항 없음	-	Data not applicable
...	해당숫자 미상	...	Data not available
p	잠정치	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 과거 년도의 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 경영개선처 출서관리실 (☎061-345-3326, 7)으로 문의하시기 바랍니다.  
Readers desiring further details are requested to contact the Affiliated Company Management Team of Business Management & Improvement Department (☎ 061-345-3326,7) in KEPCO.



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Statistics of Electric Power in Korea

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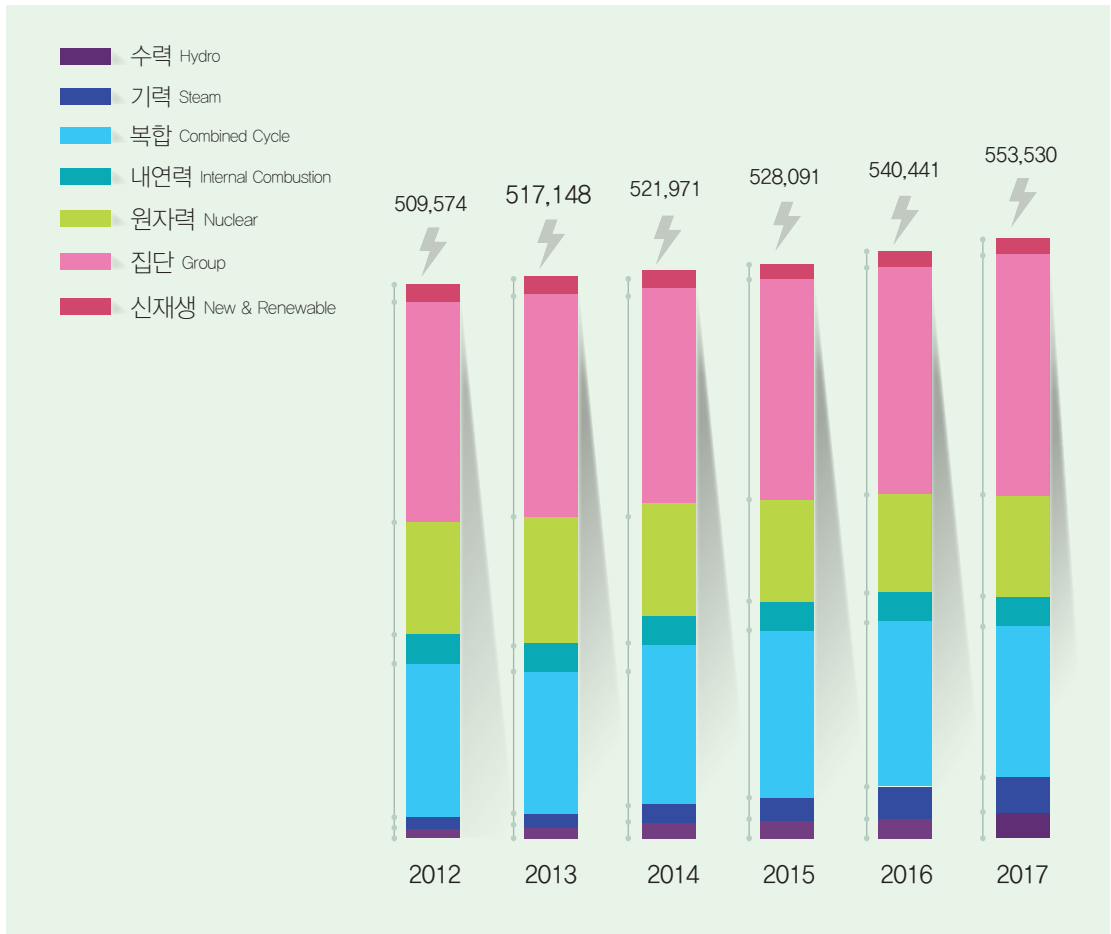


# 주요통계도표

Major statistical graphs



# 1. 발전전력량 추이 Trends in power generation

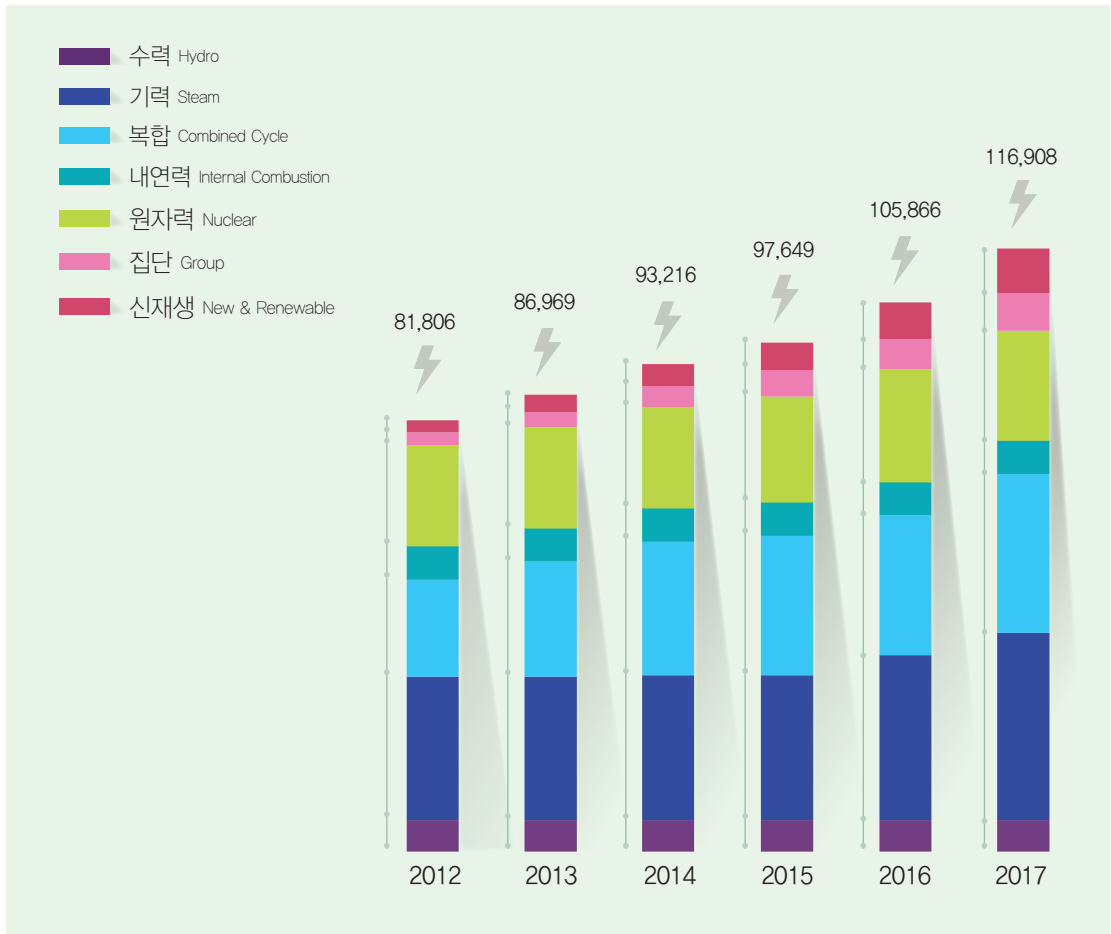


(단위 : GWh)

구분	2012	2013	2014	2015	2016	2017
수력 Hydro	7,695	8,394	7,820	5,796	6,634	6,995
기력 Steam	216,336	218,585	211,172	216,378	222,623	237,332
복합 Combined Cycle	110,882	124,400	111,711	100,598	96,922	99,619
내연력 Internal Combustion	752	741	656	643	573	513
원자력 Nuclear	150,327	138,784	156,407	164,762	161,995	148,427
집단 Group	12,913	14,403	18,948	22,019	32,537	36,194
신재생 New & Renewable	8,618	10,160	14,696	17,318	18,936	24,145
<b>사업자 Public Utility</b>	<b>509,574</b>	<b>517,148</b>	<b>521,971</b>	<b>528,091</b>	<b>540,441</b>	<b>553,530</b>
상용자가 Non-utility in common use	21,628	20,021	18,408	19,711	20,544	22,882
<b>합계</b>	<b>531,202</b>	<b>537,169</b>	<b>540,379</b>	<b>547,802</b>	<b>560,985</b>	<b>576,412</b>

※ 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



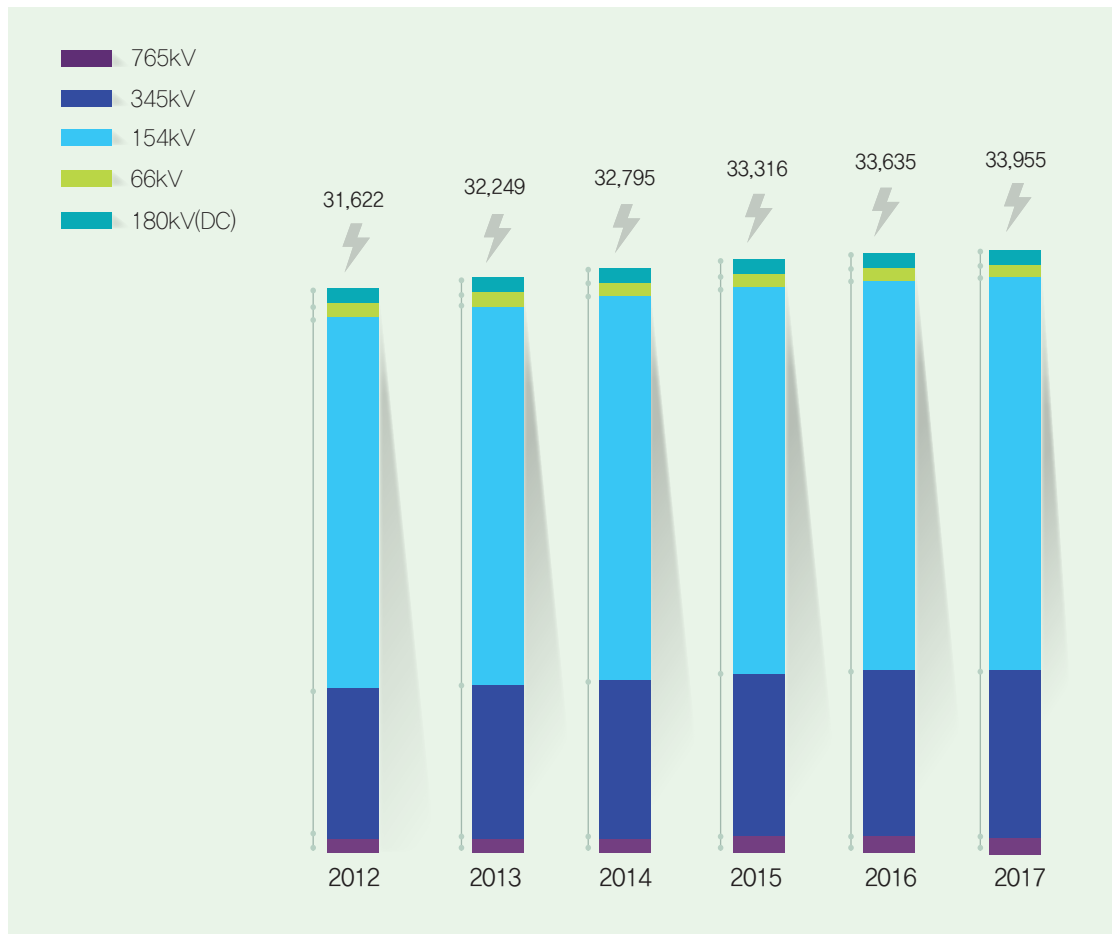
(단위 : MW)

구분	2012	2013	2014	2015	2016	2017
수력 Hydro	6,446	6,454	6,467	6,471	6,485	6,489
기력 Steam	29,371	29,371	29,611	29,611	33,746	38,265
복합 Combined Cycle	19,799	23,473	27,296	28,512	28,512	32,416
내연력 Internal Combustion	367	330	330	330	329	339
원자력 Nuclear	20,716	20,716	20,716	21,716	23,116	22,529
집단 Group	2,623	3,106	4,323	5,360	6,200	7,682
신재생 New & Renewable	2,483	3,519	4,474	5,649	7,477	9,187
<b>사업자 Public Utility</b>	<b>81,806</b>	<b>86,969</b>	<b>93,216</b>	<b>97,649</b>	<b>105,866</b>	<b>116,908</b>
상용자가 Non-utility in common use	4,044	4,109	3,709	3,941	3,924	3,941
<b>합계</b>	<b>85,849</b>	<b>91,077</b>	<b>96,925</b>	<b>101,590</b>	<b>109,789</b>	<b>120,848</b>

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



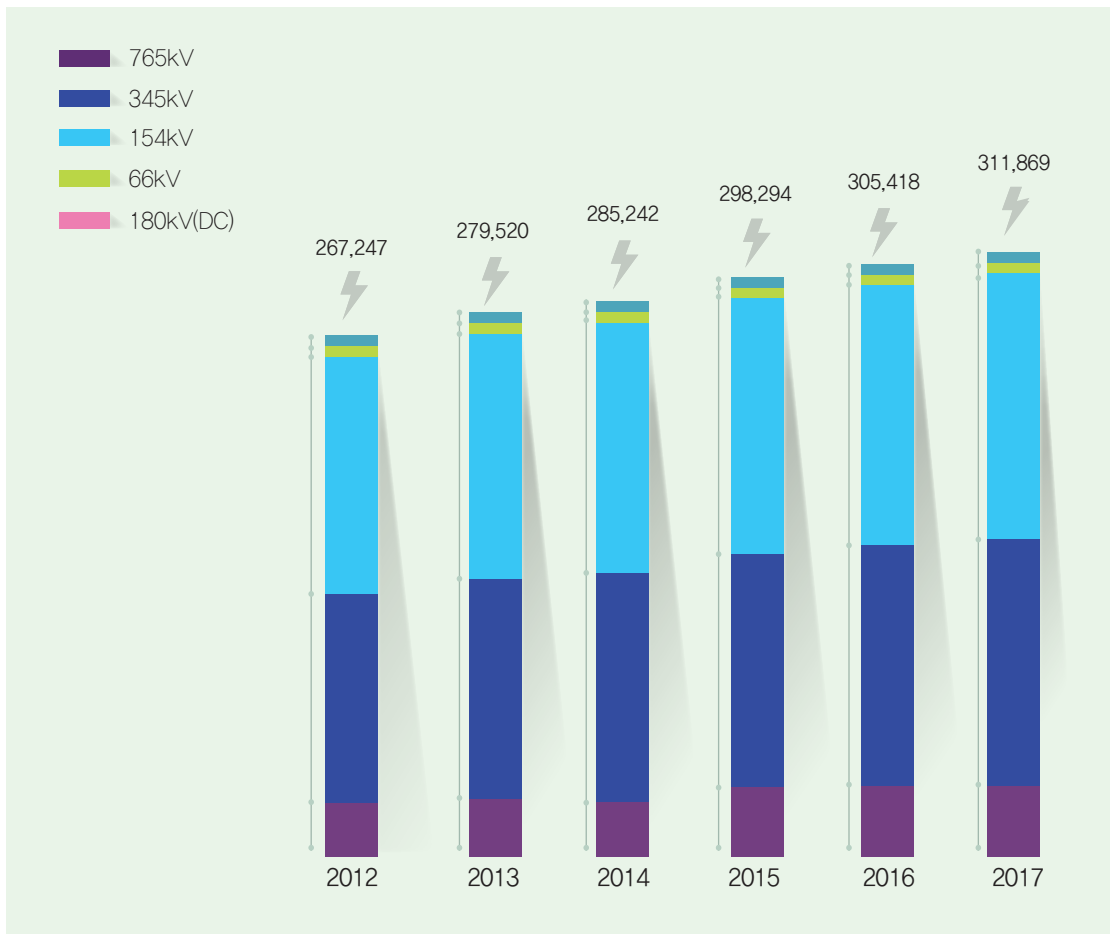
### 3. 송전회선길이 추이 Trends in transmission Circuit length



(단위 : C-km)

구분	2012	2013	2014	2015	2016	2017
765kV	835	835	835	1,014	1,016	1,019
345kV	8,770	9,005	9,228	9,403	9,673	9,746
154kV	21,578	21,976	22,357	22,524	22,588	22,831
66kV	208	201	144	144	128	128
180kV(DC)	231	231	231	231	231	230
<b>합계</b>	<b>31,622</b>	<b>32,249</b>	<b>32,795</b>	<b>33,316</b>	<b>33,635</b>	<b>33,955</b>

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



(단위 : MVA)

구분	2012	2013	2014	2015	2016	2017
765kV	29,116	31,116	29,116	37,117	38,116	38,116
345kV	111,598	117,098	122,379	124,879	128,380	131,880
154kV	126,149	130,931	133,387	135,967	138,588	141,539
66kV	312	297	297	297	240	240
220kV	78	78	64	64	64	94
<b>합계</b>	<b>267,247</b>	<b>279,520</b>	<b>285,242</b>	<b>298,294</b>	<b>305,418</b>	<b>311,869</b>

## 5. 배전선로 길이 추이 Trends in distribution line



(단위 : C-km)

구분	2012	2013	2014	2015	2016	2017
고압 Over 660V	211,924	214,479	217,422	220,910	224,186	228,116
저압 Under 660V	230,718	235,205	239,825	244,368	249,913	253,248
<b>합계</b>	<b>442,641</b>	<b>449,684</b>	<b>457,247</b>	<b>465,278</b>	<b>474,099</b>	<b>481,365</b>

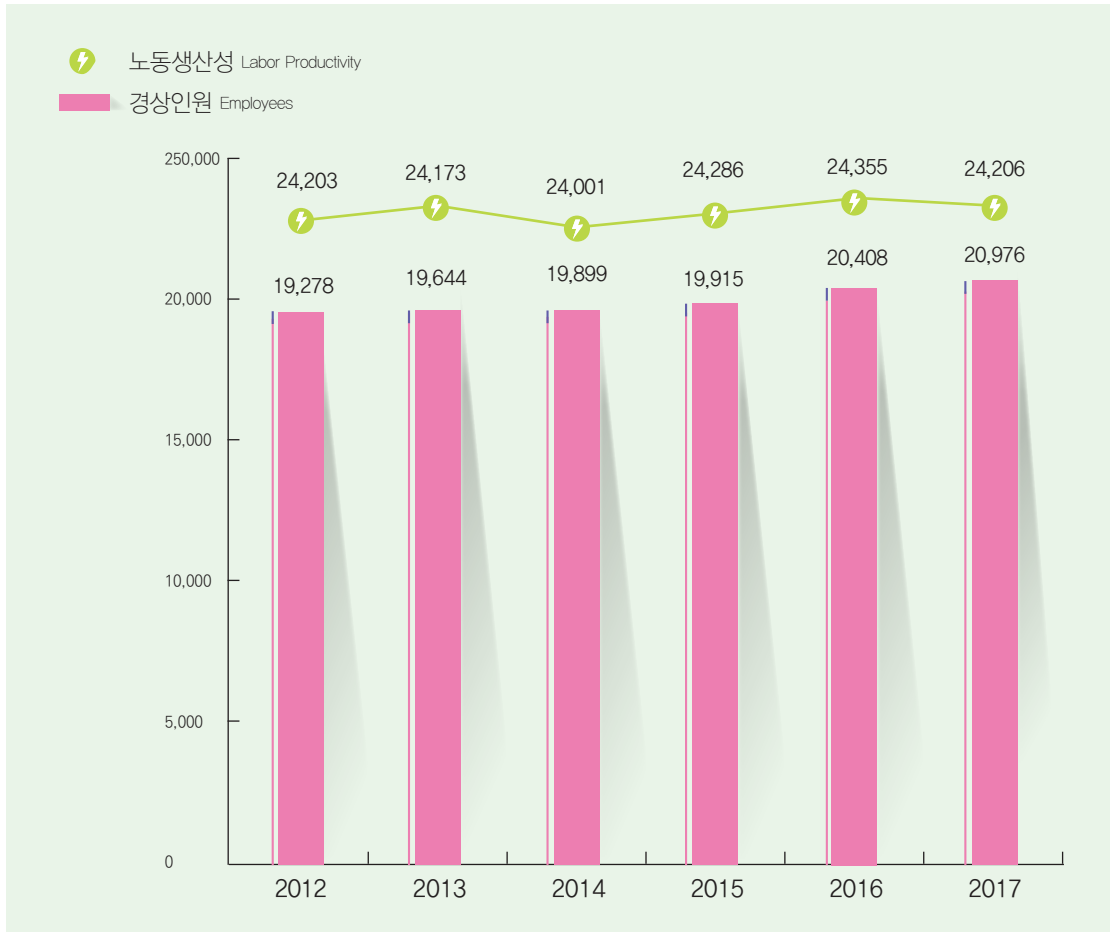
## 6. 판매전력량 추이 Trends in power sales



(단위 : Gwh)

구분	2012	2013	2014	2015	2016	2017
가정용 Residential	63,536	63,970	62,675	63,794	66,173	66,517
공공용 Public	21,422	21,982	21,669	22,179	22,908	23,605
서비스업 Service	132,499	132,055	128,630	132,049	137,982	140,952
농림어업 Agri, Fishery	12,074	13,062	13,556	14,645	15,397	15,981
광업 Mining	1,616	1,478	1,571	1,631	1,755	1,746
제조업 Manufacturing	235,445	242,301	249,490	249,357	252,824	258,945
<b>합계</b>	<b>466,593</b>	<b>474,849</b>	<b>477,592</b>	<b>483,655</b>	<b>497,039</b>	<b>507,746</b>

## 7. 노동생산성 추이 Trends in labor productivity



(단위 : Gwh, 명, MWh/인)

구분	2012	2013	2014	2015	2016	2017
판매전력량 Power Sold	466,593 (2.5)	474,849 (1.8)	477,591 (1.2)	483,655 (1.3)	497,039 (2.8)	507,746 (2.2)
경상인원 Employees	19,278 (-0.9)	19,644 (1.9)	19,899 (1.3)	19,915 (0.1)	20,408 (2.5)	20,976 (2.8)
노동생산성 Labor Productivity	24,203 (3.5)	24,173 (-0.1)	24,001 (-0.7)	24,286 (1.2)	24,355 (0.3)	24,206 (-0.6)

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

## 8. 자산 추이 Trends in assets

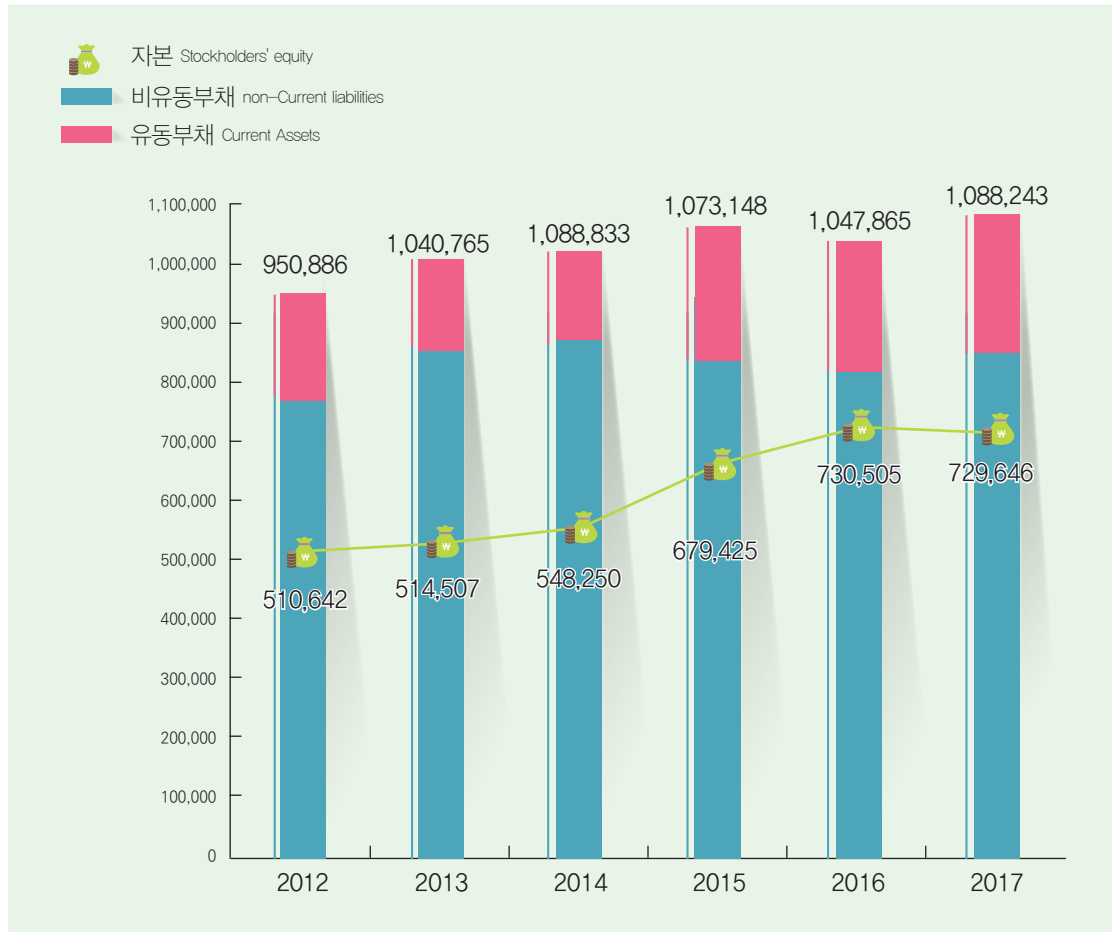


(단위 : 100Million Won)

구분	2012	2013	2014	2015	2016	2017
비유동자산 non-Current Assets	1,332,193	1,402,583	1,468,884	1,532,320	1,581,285	1,626,472
유동자산 Current Assets	139,335	152,691	168,199	220,253	197,085	191,417
<b>합계</b>	<b>1,461,528</b>	<b>1,555,273</b>	<b>1,637,083</b>	<b>1,752,574</b>	<b>1,778,370</b>	<b>1,817,889</b>

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

## 9. 부채 및 자본 Liabilities & capital

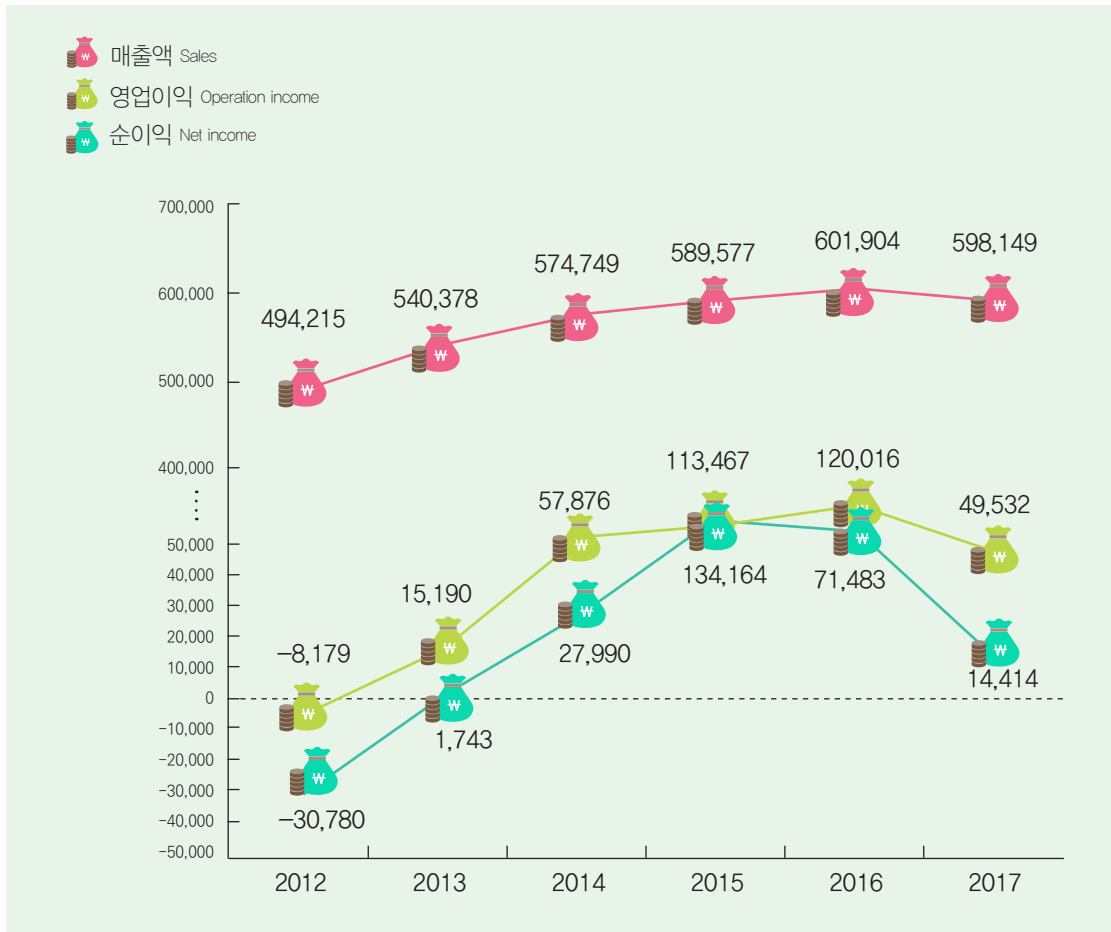


(단위 : 100Million Won)

구분	2012	2013	2014	2015	2016	2017
자본 Stockholders' equity	510,642	514,507	548,250	679,425	730,505	729,646
비유동부채 non-Current liabilities	762,715	838,627	872,832	846,040	800,473	854,000
유동부채 Current Assets	188,171	202,138	216,001	227,108	247,392	234,243
<b>합계</b>	<b>1,461,528</b>	<b>1,555,273</b>	<b>1,637,083</b>	<b>1,752,574</b>	<b>1,778,370</b>	<b>1,817,889</b>

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

## 10. 이익 추이 Trends in Income



(단위 : 100Million Won)

구분	2012	2013	2014	2015	2016	2017
매출액 Sales	494,215	540,378	574,749	589,577	601,904	598,149
영업이익 Operation Income	-8,179	15,190	57,876	113,467	120,016	49,532
순이익 Net income	-30,780	1,743	27,990	134,164	71,483	14,414

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



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# 전력통계표

Tables of electric statistics



## □ 주요 통계 지표 종합

### Indicators of major statistics

구 분	단 위 Unit	1961	2001	2005	2006	2007	2008	2009	2010
발 전 설 비	kW	426,287	56,716,042	67,075,240	69,833,742	73,123,950	76,580,350	77,692,749	79,983,793
한전,자회사	kW	367,254	46,768,483	55,956,412	58,141,662	60,268,657	63,529,309	63,962,317	65,559,674
타 사	kW	-	4,090,164	6,301,785	7,372,580	7,999,531	8,961,382	9,507,661	10,518,514
상용자가	kW	59,033	5,857,395	4,817,043	4,319,500	4,855,762	4,089,658	4,222,771	3,905,605
총 발 전 량	MWh	1,936,418	309,885,952	389,479,512	402,988,942	425,407,289	442,610,958	452,447,461	495,028,363
한전,자회사	MWh	1,772,921	274,398,456	349,758,383	362,446,663	380,201,047	394,929,871	406,779,556	435,384,166
타 사	MWh	-	6,679,980	14,611,607	18,355,353	22,093,391	26,695,978	25,968,054	38,433,844
상용자가 <sup>1)</sup>	MWh	163,497	28,807,516 (4,145,321)	25,109,522 (269,341)	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)
소 내 전력량	MWh	89,337	12,980,240	16,451,551	15,811,741	16,614,307	17,374,100	18,258,121	19,371,717
소내전력률	%	5.04	4.62	4.56	4.19	4.17	4.19	4.30	4.20
양수용전력량	MWh	-	2,401,471	1,980,383	2,315,002	1,816,953	3,242,816	3,712,816	3,662,630
송전단전력량 (양수제외)	MWh	1,683,584	269,842,046	346,207,397	363,053,966	384,693,240	401,726,293	411,631,123	451,432,992
송배전손실량	MWh	494,198	12,140,439	15,614,768	14,587,227	15,345,161	16,106,376	16,769,741	18,034,237
송배전손실률	%	29.35	4.50	4.51	4.02	3.99	4.01	4.07	3.99
판 매 전력량	MWh	1,189,386	257,731,354	332,412,828	348,719,371	368,605,433	385,070,137	394,474,637	434,160,228
수요성장률	%	-	7.6	6.5	4.9	5.7	4.5	2.4	10.1
최 대 전 력	kW	305,686	43,125,000	54,631,000	58,994,000	62,285,000	62,794,000	66,797,000	71,308,000
평 균 전 력	kW	202,388	32,559,790	41,625,494	43,513,780	46,018,779	48,082,323	49,498,144	54,184,955
부 하 율	%	66.2	75.5	76.2	73.8	73.9	76.6	74.1	75.9
이 용 율	%	55.1	64.4	67.5	66.9	67.9	67.7	67.8	73.3
판 매 단 가	원/kWh	3.22	77.06	74.46	76.43	77.85	78.76	83.59	86.12
고 객 호 수	호	797,252	15,618,745	17,329,494	17,624,836	18,038,810	18,419,048	18,727,411	19,229,450
종 업 원 수	명	10,095	16,641	18,261	18,341	18,599	18,534	17,885	17,486
납 입 자 본 금	백만원	3,836	3,200,504	3,207,839	3,207,839	3,207,839	3,207,839	3,207,839	3,207,839
총 자 산 <sup>2)</sup>	백만원	13,393	50,900,715	61,626,841	63,536,201	65,642,590	66,868,176	69,985,451	129,517,794 (74,398,204)
인구 1인당 전력생산량 <sup>3)</sup>	kWh/人	69	6,025 (6,546)	7,550 (8,065)	7,893 (8,317)	8,319 (8,779)	8,689 (9,106)	8,895 (9,282)	9,712 (10,129)
인구 1인당 전력소비량 <sup>4)</sup>	kWh/人	46	5,444 (5,965)	6,883 (7,397)	7,191 (7,647)	7,607 (8,067)	7,922 (8,339)	8,092 (8,479)	8,883 (9,300)

1) ( ) 내는 상용자가 발전량 중 한전의 구입전력량

2) ( ) 내는 별도재무제표 기준

3~4) ( ) 내는 상용발전 자체 소비량 포함분임

2011	2012	2013	2014	2015	2016	2017	Items
83,263,146	85,849,093	91,077,485	96,925,225	101,590,229	109,789,291	120,848,466	Generating facilities
67,005,570	68,848,108	70,845,294	72,305,204	73,282,111	79,216,544	82,132,490	KEPCO & Subsidiaries
12,336,297	12,957,468	16,123,643	20,910,550	24,366,649	26,649,013	34,775,150	Other co.
3,921,279	4,043,517	4,108,548	3,709,470	3,941,468	3,923,734	3,940,825	Non-utility in common use
517,569,729	531,201,866	537,169,276	540,378,799	547,801,803	560,984,590	576,412,127	Gross generation
443,409,223	448,516,180	448,756,663	442,914,458	432,758,183	436,314,042	426,484,068	KEPCO & Subsidiaries
52,670,709	58,964,028	66,710,267	78,494,632	94,756,654	103,906,393	126,741,534	Other co.
21,489,797 (813,434)	23,721,658 (2,094,121)	21,702,345 (1,680,942)	18,969,709 (561,813)	20,286,965 (576,355)	20,764,155 (220,419)	23,186,525 (304,506)	Non-utility generation in common use <sup>1)</sup>
19,689,178	20,154,366	20,463,269	20,257,068	23,782,283	21,504,884	21,707,139	Auxiliary use
4.14	3.96	3.96	3.88	4.50	3.98	3.92	Aux.use factor
4,256,763	4,789,137	5,408,107	6,644,037	4,823,507	4,716,403	5,476,612	Pumping storage
472,650,336	484,334,191	491,002,570	494,716,613	499,239,421	514,118,988	525,710,752	Net generation
17,430,383	17,291,504	18,310,889	18,270,412	17,979,210	18,474,842	18,790,097	T&D losses
3.69	3.57	3.73	3.69	3.60	3.59	3.27	Loss factor (T&D)
455,070,261	466,592,949	474,848,580	477,591,701	483,654,816	497,038,904	507,746,386	Power sold
4.8	2.5	1.8	0.6	1.3	2.8	2.2	Growth rate
73,137,000	75,987,000	76,522,000	80,154,000	78,790,000	85,183,000	85,133,000	Peak load
56,722,987	58,011,649	59,035,145	59,585,720	60,284,383	61,694,161	63,188,368	Average load
77.6	76.3	77.1	74.3	76.5	72.4	74.2	Load factor
73.9	70.2	68.0	63.9	61.7	58.3	54.0	Utilization plant factor
89.32	99.10	106.33	111.28	111.57	111.23	109.53	Average revenues per kWh sold
19,814,866	20,475,899	21,017,693	21,532,269	22,030,215	22,552,719	23,077,023	Customers
17,095	17,117	17,517	17,787	18,087	18,853	19,596	Employees
3,209,820	3,209,820	3,209,820	3,209,820	3,209,820	3,209,820	3,209,820	Paid-in capital (Million won)
136,467,850 (94,769,898)	146,152,820 (96,234,698)	155,527,334 (98,249,927)	163,708,289 (99,719,106)	175,257,359 (106,306,250)	177,837,042 (105,321,129)	181,788,915 (106,540,154)	Total assets (Million won) <sup>2)</sup>
9,982 (10,397)	10,191 (10,623)	10,112 (10,504)	10,169 (10,573)	10,433 (10,778)	10,546 (10,947)	10,759 (11,204)	Generation per capita <sup>3)</sup>
9,142 (9,557)	9,331 (9,764)	9,285 (9,676)	9,305 (9,698)	9,555 (9,953)	9,699 (10,104)	9,869 (10,320)	Consumption per capita <sup>4)</sup>

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

2) Figures in ( ) is separate financial statement

3~4) Figures in ( ) include non-utility generation self-consumption in common use.



Statistics of Electric Power in Korea

제87호 2017년 한국전력통계



# I. 발전부문

Electric power generation



# 1. 발전전력량 추이 (1)

(단위:MWh) Trends in power generation

구분 연월별	한 전 , 자 회 사							
	수 력 Hydro				기 력 Steam			
	일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal	중 유 Heavy oil	L N G
1961	652,611	-		652,611	1,118,279	-	-	-
2000	1,595,939	1,600,269		3,196,208	7,029,753	92,397,718	18,888,171	1,631,891
2001	1,094,114	1,820,814		2,914,929	7,007,385	105,250,087	21,622,339	1,556,930
2002	1,183,990	2,078,269		3,262,259	6,674,542	112,990,671	17,493,064	1,771,207
2003	1,478,060	2,001,406		3,479,466	6,959,937	114,971,490	16,663,865	1,674,183
2004	1,491,142	1,550,355		3,041,497	5,787,070	122,760,316	16,084,006	733,318
2005	1,351,427	1,515,588		2,867,016	5,789,778	129,101,944	15,529,107	786,366
2006	1,162,850	1,751,083		2,913,934	5,709,388	134,636,585	14,306,788	1,258,155
2007	1,368,478	1,410,813		2,779,290	6,061,545	149,623,092	15,702,736	2,027,701
2008	1,271,034	2,492,539	72,427	3,836,000	6,928,993	167,227,037	7,981,563	1,517,763
2009	1,170,991	2,827,991	91,728	4,090,711	7,977,658	185,825,633	11,970,100	761,682
2010	1,458,368	2,789,934	144,240	4,392,542	8,359,873	189,927,487	10,874,371	2,287,541
2011	1,438,933	3,232,985	143,036	4,814,954	8,503,983	191,011,864	9,456,338	2,232,618
2012	1,303,282	3,683,262	153,080	5,139,624	8,767,762	190,561,957	13,553,420	3,452,866
2013	1,983,951	3,540,141	155,236	5,679,329	8,054,488	193,064,345	13,940,534	3,525,889
2014	781,041	5,068,129	126,456	5,975,627	8,506,060	195,259,331	6,838,457	568,123
2015	608,281	3,650,320	168,447	4,427,049	7,438,271	199,895,424	8,822,006	222,472
2016	869,712	3,787,310	177,796	4,834,818	7,760,682	200,151,489	13,054,770	368,541
2017	917,300	4,186,353	158,855	5,262,507	4,426,611	222,759,888	5,224,768	220,183
1	37,613	365,932	14,408	417,953	636,666	19,795,166	939,839	93,912
2	37,701	352,201	12,366	402,267	590,463	17,626,862	867,864	83,564
3	49,148	328,292	11,984	389,424	465,244	18,499,247	173,914	42,707
4	50,537	314,478	13,074	378,089	462,381	16,452,195	191,346	0
5	78,128	367,704	11,474	457,306	405,831	17,024,443	144,951	0
6	67,851	360,569	9,140	437,561	256,351	16,334,113	294,694	0
7	156,030	311,432	14,969	482,430	274,802	20,409,147	556,319	0
8	217,315	435,068	14,637	667,020	369,087	21,147,470	333,320	0
9	70,093	419,742	14,761	504,595	215,171	19,462,697	237,250	0
10	50,664	362,831	15,287	428,783	280,495	18,054,688	159,972	0
11	50,198	279,294	13,451	342,942	221,807	17,742,441	320,982	0
12	52,023	288,810	13,304	354,137	248,312	20,211,420	1,004,318	0

※ 2001. 4. 2. 6개 발전자회사 및 전력거래소로 분리, 발전량은 자가용을 제외한 사업자용만 집계

(Unit:MWh)

K E P C O & Subsidiaries							Items During
계 Total	복 합 화 력 Combined cycle	원 자 력 Nuclear	신재생 New&Renewable energy	집 단 Group energy	내 연 력 Internal Combustion	합 계 Total	
1,118,279	-	-		-	2,031	1,772,921	1961
119,947,533	24,440,242	108,963,740		-	293,861	256,841,584	2000
135,436,741	23,588,815	112,133,033		-	324,939	274,398,456	2001
138,929,484	30,535,106	119,102,905		-	353,023	292,182,776	2002
140,269,475	33,075,254	129,671,763		-	370,125	306,866,082	2003
145,364,710	47,652,451	130,714,816	10,822	-	406,895	327,191,187	2004
151,207,195	48,310,945	146,779,023	18,863	-	575,339	349,758,383	2005
155,910,915	54,173,773	148,748,887	21,857	-	677,296	362,446,663	2006
173,415,074	60,464,207	142,937,164	26,955	-	578,356	380,201,047	2007
183,655,356	55,909,252	150,957,936	68,619	-	502,708	394,929,871	2008
206,535,073	47,579,909	147,770,807	106,104	-	696,953	406,779,556	2009
211,449,271	70,081,455	148,595,712	134,491	-	730,695	435,384,166	2010
211,204,803	71,668,085	154,723,107	177,742	-	820,533	443,409,223	2011
216,336,004	75,751,137	150,327,293	210,051	-	752,070	448,516,180	2012
218,585,257	84,560,767	138,783,973	406,403	-	740,935	448,756,663	2013
211,171,971	65,391,034	156,406,511	570,296	2,743,209	655,810	442,914,458	2014
216,378,173	43,084,104	164,762,416	624,515	2,838,763	643,164	432,758,183	2015
221,335,482	43,688,294	161,995,104	1,098,064	2,789,084	573,196	436,314,042	2016
232,631,450	33,955,125	148,426,725	2,693,481	3,001,433	513,347	426,484,068	2017
21,465,583	3,472,152	13,104,438	144,705	220,588	33,212	38,858,632	1
19,168,753	3,121,794	12,373,488	99,007	302,107	28,592	35,496,007	2
19,181,112	2,497,517	13,174,746	219,370	165,294	44,773	35,672,236	3
17,105,922	1,876,031	13,301,538	270,178	259,056	49,775	33,240,589	4
17,575,225	1,733,530	13,670,032	218,199	280,297	61,880	33,996,468	5
16,885,157	2,238,710	12,493,858	192,414	196,498	30,616	32,474,815	6
21,240,268	4,012,960	12,223,246	147,539	276,763	51,168	38,434,374	7
21,849,877	3,109,468	11,914,437	348,333	288,624	57,291	38,235,049	8
19,915,119	1,991,560	12,332,852	341,207	91,298	24,900	35,201,531	9
18,495,155	1,887,951	12,108,787	147,514	231,606	44,343	33,344,138	10
18,285,230	3,214,796	11,291,469	275,519	347,667	39,737	33,797,360	11
21,464,050	4,798,655	10,437,833	289,498	341,636	47,059	37,732,868	12

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

# 1. 발전전력량 추이 (2)

(단위:MWh) Trends in power generation

구분 연도별	타 사 Other co.						
	수 력 Hydro			기 력	복 합 화 력	신재생	집 단
	일 반 General	소 수 력 Small hydro	계 Total	유 연 탄 Bituminous coal	Combined cycle	New&Renewable energy	Group energy
1961	-	-	-		-		
2000	2,345,078	68,536	2,413,614		2,422,898		
2001	1,163,470	72,354	1,235,824		5,444,156		
2002	1,952,684	96,103	2,048,788		7,801,845		
2003	3,278,881	128,636	3,407,517		7,299,392		
2004	2,707,206	112,732	2,819,938		7,799,490	339,361	3,552,538
2005	2,184,144	137,729	2,321,873		9,145,953	385,238	2,758,544
2006	2,163,431	141,256	2,304,687		12,964,568	489,366	2,596,731
2007	2,106,791	156,381	2,263,172		15,941,211	803,869	3,085,140
2008	1,581,093	145,558	1,726,650		18,610,099	1,304,806	5,054,422
2009	1,425,109	125,343	1,550,452		16,906,100	1,684,504	5,826,998
2010	1,881,192	198,169	2,079,361		23,930,683	4,343,567	8,080,233
2011	2,739,934	275,763	3,015,698		29,811,299	7,414,645	12,429,067
2012	2,136,735	375,941	2,512,676		35,130,796	8,407,818	12,912,737
2013	2,223,572	491,028	2,714,600		39,839,244	9,753,255	14,403,169
2014	1,354,640	489,281	1,843,921		46,320,431	14,125,394	16,204,886
2015	931,016	437,975	1,368,991		57,514,281	16,693,434	19,179,948
2016	1,289,437	509,331	1,798,767	1,287,995	53,233,975	17,837,596	29,748,060
2017	1,346,205	386,461	1,732,666	4,700,090	65,663,865	21,451,881	33,193,031
1	84,490	35,341	119,830	278,686	5,385,878	1,746,043	3,112,418
2	79,599	26,235	105,834	230,130	5,075,544	1,668,128	2,876,742
3	81,833	29,843	111,676	407,561	6,030,517	1,778,832	3,011,274
4	89,553	43,492	133,045	64,326	4,490,241	1,777,330	2,304,252
5	114,853	34,268	149,121	252,005	4,671,241	1,899,834	1,845,958
6	96,760	29,704	126,464	475,799	6,105,599	1,775,433	2,466,756
7	118,466	38,128	156,594	667,268	6,054,032	1,720,131	2,610,945
8	258,287	42,963	301,250	611,934	5,455,721	1,817,936	2,523,376
9	131,965	37,051	169,016	300,899	4,468,738	1,809,573	2,233,110
10	108,496	29,563	138,060	319,809	4,282,120	1,802,445	2,480,987
11	87,958	20,446	108,404	348,245	6,528,453	1,791,146	3,447,041
12	93,944	19,427	113,371	743,429	7,115,780	1,865,050	4,280,172

※ 타사 유연탄 : 북평(GS동해)



(Unit:MWh)

합 계 Total	사 업 자 (종 합) Hydro				Public utility Steam		Items During
	일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	기 력	유 연 탄	
					무 연 탄 Anthracite coal	Bituminous coal	
-	652,611	-	-	652,611	1,118,279	-	1961
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
58,964,028	3,440,018	3,683,262	529,021	7,652,300	8,767,762	190,561,957	2012
66,710,267	3,798,240	4,104,661	491,028	8,393,928	8,054,488	193,064,345	2013
78,494,632	2,135,681	5,068,129	615,737	7,819,548	8,506,060	195,259,331	2014
94,756,654	1,539,298	3,650,320	606,422	5,796,040	7,438,271	199,895,424	2015
103,906,393	2,159,149	3,787,310	687,126	6,633,585	7,760,682	201,439,484	2016
126,741,534	2,263,505	4,186,353	545,316	6,995,173	4,426,611	227,459,979	2017
10,642,856	122,103	365,932	49,749	537,783	636,666	20,073,852	1
9,956,379	117,300	352,201	38,601	508,101	590,463	17,856,992	2
11,339,861	130,981	328,292	41,827	501,101	465,244	18,906,809	3
8,769,194	140,091	314,478	56,566	511,134	462,381	16,516,521	4
8,818,159	192,981	367,704	45,743	606,427	405,831	17,276,448	5
10,950,051	164,611	360,569	38,845	564,025	256,351	16,809,912	6
11,208,970	274,496	311,432	53,097	639,024	274,802	21,076,414	7
10,710,217	475,602	435,068	57,600	968,270	369,087	21,759,403	8
8,981,336	202,057	419,742	51,812	673,611	215,171	19,763,596	9
9,023,421	159,161	362,831	44,851	566,843	280,495	18,374,496	10
12,223,289	138,156	279,294	33,897	451,346	221,807	18,090,686	11
14,117,802	145,967	288,810	32,730	467,508	248,312	20,954,849	12

※ Other co. Coal : Bukpyeong(GS Donghae)

# 1. 발전전력량 추이 (3)

(단위:MWh) Trends in power generation

구분 연도별	사 업 자 (총 합)						
	기 력 Steam			복 합 화 력 Combined cycle	원 자 력 Nuclear	신재생 New& Renewable energy	집 단 Group energy
	중 유 Heavy oil	L N G	계 Total				
1961	-	-	1,118,279	-	-		
2000	18,888,171	1,631,891	119,947,533	26,863,140	108,963,740		
2001	21,622,339	1,556,930	135,436,741	29,032,971	112,133,033		
2002	17,493,064	1,771,207	138,929,484	38,336,951	119,102,905		
2003	16,663,865	1,674,183	140,269,475	40,374,646	129,671,763		
2004	16,084,006	733,318	145,364,710	55,451,941	130,714,816	350,183	3,552,538
2005	15,529,107	786,366	151,207,195	57,456,898	146,779,023	404,101	2,758,544
2006	14,306,788	1,258,155	155,910,915	67,138,342	148,748,887	511,223	2,596,731
2007	15,702,736	2,027,701	173,415,074	76,405,418	142,937,164	830,824	3,085,140
2008	7,981,563	1,517,763	183,655,356	74,519,352	150,957,936	1,373,425	5,054,422
2009	11,970,100	761,682	206,535,073	64,486,009	147,770,807	1,790,609	5,826,998
2010	10,874,371	2,287,541	211,449,271	94,012,138	148,595,712	4,478,058	8,080,233
2011	9,456,338	2,232,618	211,204,803	101,479,384	154,723,107	7,592,387	12,429,067
2012	13,553,420	3,452,866	216,336,004	110,881,933	150,327,293	8,617,869	12,912,737
2013	13,940,534	3,525,889	218,585,257	124,400,011	138,783,973	10,159,658	14,403,169
2014	6,838,457	568,123	211,171,971	111,711,465	156,406,511	14,695,690	18,948,095
2015	8,822,006	222,472	216,378,173	100,598,385	164,762,416	17,317,949	22,018,711
2016	13,054,770	368,541	222,623,477	96,922,270	161,995,104	18,935,660	32,537,144
2017	5,224,768	220,183	237,331,541	99,618,990	148,426,725	24,145,362	36,194,464
1	939,839	93,912	21,744,269	8,858,031	13,104,438	1,890,748	3,333,007
2	867,864	83,564	19,398,883	8,197,338	12,373,488	1,767,135	3,178,849
3	173,914	42,707	19,588,674	8,528,033	13,174,746	1,998,202	3,176,568
4	191,346	0	17,170,248	6,366,272	13,301,538	2,047,508	2,563,307
5	144,951	0	17,827,229	6,404,771	13,670,032	2,118,033	2,126,254
6	294,694	0	17,360,956	8,344,309	12,493,858	1,967,847	2,663,255
7	556,319	0	21,907,535	10,066,993	12,223,246	1,867,669	2,887,708
8	333,320	0	22,461,810	8,565,189	11,914,437	2,166,269	2,812,000
9	237,250	0	20,216,018	6,460,298	12,332,852	2,150,780	2,324,408
10	159,972	0	18,814,964	6,170,071	12,108,787	1,949,959	2,712,593
11	320,982	0	18,633,475	9,743,249	11,291,469	2,066,665	3,794,708
12	1,004,318	0	22,207,479	11,914,436	10,437,833	2,154,548	4,621,808

(Unit : MWh )

Public 내 연 력 Internal Combustion	utility 총 계 Total	상 용 자 가 Non-utility generation in common use			총 발전 량 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	
2,031	1,772,921	-	163,497	163,497	1,772,921	1,936,418	1961
293,861	261,678,095	4,721,413	24,043,440	28,764,853	266,399,508	290,442,948	2000
324,939	281,078,436	4,145,321	24,662,195	28,807,516	285,223,757	309,885,952	2001
353,023	302,033,408	4,440,656	25,546,883	29,987,539	306,474,064	332,020,947	2002
370,125	317,572,991	4,878,706	25,304,512	30,183,218	322,451,697	347,756,209	2003
406,895	341,702,514	445,453	25,885,585	26,331,038	342,147,967	368,033,552	2004
575,339	364,369,990	269,341	24,840,181	25,109,522	364,639,331	389,479,512	2005
677,296	380,802,016	378,693	21,808,234	22,186,927	381,180,709	402,988,943	2006
578,356	402,294,438	830,063	22,282,788	23,112,851	403,124,501	425,407,289	2007
502,708	421,625,849	729,277	20,255,832	20,985,109	422,355,126	442,610,958	2008
696,953	432,747,610	856,135	18,843,716	19,699,851	433,603,745	452,447,461	2009
730,695	473,818,009	842,196	20,368,158	21,210,354	474,660,205	495,028,363	2010
820,533	496,079,932	813,434	21,274,450	22,087,884	496,893,366	518,167,816	2011
752,070	507,480,208	2,094,121	21,627,537	23,721,658	509,574,329	531,201,866	2012
740,935	515,466,931	1,680,942	20,021,403	21,702,345	517,147,873	537,169,276	2013
655,810	521,409,090	561,813	18,407,896	18,969,709	521,970,903	540,378,799	2014
643,164	527,514,837	576,355	19,710,610	20,286,965	528,091,193	547,801,803	2015
573,196	540,220,436	220,419	20,543,736	20,764,155	540,440,854	560,984,590	2016
513,347	553,225,602	304,506	22,882,019	23,186,525	553,530,107	576,412,127	2017
33,212	49,501,488	41,160	...	41,160	49,542,649	...	1
28,592	45,452,386	46,173	...	46,173	45,498,559	...	2
44,773	47,012,097	37,487	...	37,487	47,049,584	...	3
49,775	42,009,783	11,829	...	11,829	42,021,612	...	4
61,880	42,814,627	5,436	...	5,436	42,820,063	...	5
30,616	43,424,866	5,520	...	5,520	43,430,386	...	6
51,168	49,643,344	7,751	...	7,751	49,651,095	...	7
57,291	48,945,266	5,855	...	5,855	48,951,121	...	8
24,900	44,182,867	13,050	...	13,050	44,195,917	...	9
44,343	42,367,559	18,967	...	18,967	42,386,526	...	10
39,737	46,020,649	60,114	...	60,114	46,080,764	...	11
47,059	51,850,670	51,164	...	51,164	51,901,834	...	12

# 1-1. 에너지원별 발전량(2017)

(단위:MWh)

발전원 에너지원	수력 Hydro				기력 Steam				
	일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal	중 유 Heavy oil	L N G	계 Total
양수	0	4,186,353	0	4,186,353	0	0	0	0	0
무연탄	0	0	0	0	2,294,116	83,530	0	0	2,377,646
유연탄	0	0	0	0	1,862,585	224,834,896	0	0	226,697,481
유류	0	0	0	0	128,445	483,367	3,641,474	0	4,253,286
LNG	0	0	0	0	0	0	54,722	220,183	274,905
원자력	0	0	0	0	0	0	0	0	0
<b>소계</b>	<b>0</b>	<b>4,186,353</b>	<b>0</b>	<b>4,186,353</b>	<b>4,285,146</b>	<b>225,401,793</b>	<b>3,696,196</b>	<b>220,183</b>	<b>233,603,318</b>
수력	2,263,505	0	545,316	2,808,821	0	0	0	0	0
태양 에너지	0	0	0	0	0	0	0	0	0
풍력	0	0	0	0	0	0	0	0	0
해양 에너지	0	0	0	0	0	0	0	0	0
바이오 에너지	0	0	0	0	141,466	1,611,958	1,519,837	0	3,273,261
폐기물 에너지	0	0	0	0	0	446,228	8,735	0	454,963
매립가스	0	0	0	0	0	0	0	0	0
부생가스	0	0	0	0	0	0	0	0	0
연료전지	0	0	0	0	0	0	0	0	0
석탄 액화가스	0	0	0	0	0	0	0	0	0
집단 (신재생)	0	0	0	0	0	0	0	0	0
<b>신재생 계</b>	<b>2,263,505</b>	<b>0</b>	<b>545,316</b>	<b>2,808,821</b>	<b>141,466</b>	<b>2,058,186</b>	<b>1,528,572</b>	<b>0</b>	<b>3,728,224</b>
<b>총 계</b>	<b>2,263,505</b>	<b>4,186,353</b>	<b>545,316</b>	<b>6,995,173</b>	<b>4,426,611</b>	<b>227,459,979</b>	<b>5,224,768</b>	<b>220,183</b>	<b>237,331,541</b>

※ 신재생 에너지 혼소발전량 분리

※ 발전량은 자가용을 제외한 사업자용만 집계

(단위:MWh)

복합화력 Combined cycle			원자력 Nuclear	신재생 New&Re newable energy	집단 Group energy	내연력 Internal Combustion	총계 Total	상용자가 발전중 한전 구입분	총발전량 (한전구입 분 포함)
L N G	유류 oil	계 Total							
0	0	0	0	0	0	0	4,186,353	0	4,186,353
0	0	0	0	0	0	0	2,377,646	0	2,377,646
0	0	0	0	0	9,723,863	0	236,421,343	0	236,421,343
3,096,128	104,256	3,200,384	0	0	391,057	513,347	8,358,074	0	8,358,074
96,418,441	0	96,418,441	0	0	26,079,544	0	122,772,889	170,319	122,943,208
0	0	0	148,426,725	0	0	0	148,426,725	0	148,426,725
<b>99,514,569</b>	<b>104,256</b>	<b>99,618,825</b>	<b>148,426,725</b>	<b>0</b>	<b>36,194,464</b>	<b>513,347</b>	<b>522,543,030</b>	<b>170,319</b>	<b>522,713,349</b>
0	0	0	0	0	0	0	2,808,821	0	2,808,821
0	0	0	0	6,238,695	0	0	6,238,695	0	6,238,695
0	0	0	0	2,158,949	0	0	2,158,949	0	2,158,949
0	0	0	0	489,466	0	0	489,466	0	489,466
0	1	1	0	2,242,545	0	0	5,515,807	0	5,515,807
165	0	165	0	686,673	0	0	1,141,801	0	1,141,801
0	0	0	0	252,921	0	0	252,921	0	252,921
0	0	0	0	8,714,951	0	0	8,714,951	134,186	8,849,137
0	0	0	0	1,447,768	0	0	1,447,768	0	1,447,768
0	0	0	0	1,285,733	0	0	1,285,733	0	1,285,733
0	0	0	0	0	627,661	0	627,661	0	627,661
<b>165</b>	<b>1</b>	<b>166</b>	<b>0</b>	<b>23,517,700</b>	<b>627,661</b>	<b>0</b>	<b>30,682,572</b>	<b>134,186</b>	<b>30,816,758</b>
<b>99,514,734</b>	<b>104,257</b>	<b>99,618,991</b>	<b>148,426,725</b>	<b>23,517,700</b>	<b>36,822,126</b>	<b>513,347</b>	<b>553,225,602</b>	<b>304,506</b>	<b>553,530,107</b>

## 2. 발전 실적 추이

Trends in power generating results

구분 연도별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 <sup>1)</sup> (%) Load factor
1961	367,254	1,772,921	202,388	305,686	66.2
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
2012	81,805,576	509,574,329	58,011,649	75,987,000	76.3
2013	86,968,937	517,147,873	59,035,145	76,522,000	77.1
2014	93,215,755	521,970,903	59,585,720	80,154,000	74.3
2015	97,648,761	528,091,193	60,284,383	78,790,000	76.5
2016	105,865,557	540,440,854	61,694,161	85,183,000	72.4
2017	116,907,641	553,530,107	63,188,368	85,133,000	74.2
1	106,237,646	49,542,649	66,589,581	83,660,000	79.6
2	107,097,787	45,498,559	67,706,189	81,268,000	83.3
3	109,493,315	47,049,584	63,238,688	76,756,000	82.4
4	110,671,481	42,021,612	58,363,350	69,129,000	84.4
5	111,291,593	42,820,063	57,553,848	69,887,000	82.4
6	113,705,136	43,430,386	60,319,980	75,413,000	80.0
7	113,350,972	49,651,095	66,735,342	84,586,000	78.9
8	114,205,740	48,951,121	65,794,517	84,489,000	77.9
9	115,248,920	44,195,917	61,383,218	73,115,000	84.0
10	115,899,791	42,386,526	56,971,137	70,113,000	81.3
11	116,278,171	46,080,764	64,001,061	77,605,000	82.5
12	116,907,641	51,901,834	69,760,529	85,133,000	81.9

1) 부하율 = (평균전력 / 최대전력) × 100

2) 이용율 = (평균전력 / 시설용량) × 100

3) 소내전력율 = (소내전력량 / 발전량) × 100

이 용 율 <sup>2)</sup> (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력을 <sup>3)</sup> (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation (include pumping)	양수용전력량 (MWh) Pumping storage	Items During
55.1	89,337	5.04	1,683,584	-	1961
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
70.2	20,154,366	3.96	489,419,963	4,789,137	2012
68.0	20,463,269	3.96	496,684,604	5,408,107	2013
63.9	20,257,068	3.88	501,713,835	6,644,037	2014
61.7	23,782,283	4.50	504,308,910	4,823,507	2015
58.3	21,504,884	3.98	518,935,970	4,716,403	2016
54.0	21,707,139	3.92	531,822,968	5,476,612	2017
62.7	1,929,612	3.89	47,613,037	484,085	1
63.2	1,737,356	3.82	43,761,203	457,746	2
57.8	1,742,527	3.70	45,307,057	431,473	3
52.7	1,662,140	3.96	40,359,473	422,632	4
51.7	1,724,558	4.03	41,095,505	485,392	5
53.0	1,649,056	3.80	41,781,330	466,445	6
58.9	1,989,545	4.01	47,661,549	413,396	7
57.6	2,095,102	4.28	46,856,019	556,373	8
53.3	1,914,054	4.33	42,281,863	530,796	9
49.2	1,743,361	4.11	40,643,165	482,136	10
55.0	1,695,000	3.68	44,385,764	362,704	11
59.7	1,824,828	3.52	50,077,006	383,434	12

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

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

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

### 3. 발전소별 발전실적 (1)

('17.1.1~12.31) Power generating results by plant

구분 발전소별	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
화천	108,000	166,601	19,018	114,700	16.6
춘천	62,280	100,672	11,492	63,200	18.2
의암	48,000	119,638	13,657	47,000	29.1
청평	140,100	237,513	27,113	134,200	20.2
팔당	120,000	238,011	27,170	101,400	26.8
강릉	82,000	0	0	0	0
섬진강	34,800	54,865	6,263	31,300	20.0
한전 사회사 일반수력 계	595,180	917,300	104,715	479,100	21.9
소양강(수자원공사)	200,000	398,148	45,451	172,620	26.3
충주(수자원공사)	412,000	549,021	62,674	397,439	15.8
대청(수자원공사)	90,000	97,413	11,120	46,440	23.9
안동(수자원공사)	90,000	72,407	8,266	49,020	16.9
합천(수자원공사)	100,000	88,297	10,080	84,840	11.9
임하(수자원공사)	50,000	26,049	2,974	22,400	13.3
주암(수자원공사)	22,500	39,045	4,457	15,764	28.3
용담(수자원공사)	22,100	75,826	8,656	10,900	79.4
타사 일반수력 계	986,600	1,346,205	153,676	620,863	24.8
일반수력계	1,581,780	2,263,505	258,391	1,099,963	23.5
무주양수	600,000	621,820	70,984	326,912	21.7
예천양수	800,000	948,258	108,249	771,563	14.0
삼랑진양수	600,000	483,390	55,182	498,335	11.1
청평양수	400,000	267,128	30,494	402,786	7.6
양양양수	1,000,000	775,138	88,486	717,076	12.3
산청양수	700,000	584,765	66,754	685,799	9.7
청송양수	600,000	505,853	57,746	302,527	19.1
양수수력계	4,700,000	4,186,353	477,894	3,202,991	14.9
괴산소수력	2,600	4,342	496	5,200	9.5
당진화력소수력	4,998	14,350	1,638	5,170	31.7
당진화력2소수력	3,200	9,122	1,041	2,801	37.2
무주양수 소수력	400	542	62	387	16.0
보령1소수력	5,000	13,432	1,533	5,403	28.4
보령2소수력	2,500	5,674	648	2,258	28.7
보성강소수력	4,500	9,941	1,135	4,400	25.8
산청양수 소수력	995	1,647	188	964	19.5
삼척그린파워 해양소수력	2,750	3,074	351	3,204	11.0
삼천포해양소수력	6,000	30,341	3,464	5,033	68.8
신보령소수력	5,000	12,127	1,384	5,183	26.7



('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items Plants
17.6	2,000	1.2	164,601	Hwacheon
18.5	1,032	1.0	99,640	Chuncheon
28.5	1,038	0.9	118,600	Uiam
19.4	2,557	1.1	234,956	Cheongpyeong
22.6	3,135	1.3	234,876	Paldang
0	0	0	0	Gangneung
18.0	126	0.2	54,739	Seomjingang
17.6	9,888	1.1	907,412	Total of KEPCO,Subsidiaries hydro
22.7	7,914	2.0	390,234	Soyanggang(K-Water)
15.2	10,128	1.8	538,893	Chungju(K-Water)
12.4	1,484	1.5	95,929	Daechung(K-Water)
9.2	1,829	2.5	70,578	Andong(K-Water)
10.1	701	0.8	87,597	Hapchun(K-Water)
5.9	370	1.4	25,679	Imha(K-Water)
19.8	723	1.9	38,321	Juam(K-Water)
39.2	969	1.3	74,856	Yongdam(K-Water)
15.6	24,118	1.8	1,322,087	Total of Other co. hydro
16.3	34,007	1.5	2,229,499	Total of hydro
11.8	1,092	0.2	620,728	Muju pumping
13.5	1,544	0.2	946,715	Yeoicheon pumping
9.2	0	0.0	483,390	Samnangjin pumping
7.6	0	0.0	267,128	Ch'ongp'yeong pumping
8.8	3,296	0.4	771,843	Yangyang pumping
9.5	1,012	0.2	583,753	Sancheong pumping
9.6	3,086	0.6	502,767	Cheongsong pumping
10.2	10,029	0.2	4,176,323	Total of pumping
19.1	75	1.7	4,267	Goesan
32.8	629	4.4	13,721	Dangjin1
32.5	67	0.7	9,055	Dangjin2
15.5	81	15.0	461	Muju
30.7	0	0.0	13,432	Boryeong1
25.9	0	0.0	5,674	Boryeong2
25.2	172	1.7	9,769	Boseong
18.9	0	0.0	1,647	Sancheong
12.8	0	0.0	3,074	Samcheok Greenpower
57.7	0	0.0	30,341	Samcheonpo
27.7	0	0.0	12,127	SinBoryeong

### 3. 발전소별 발전 실적 (2)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
	안흥소수력	450	849	97	2,600	3.7
	양양양소수력	1,400	1,407	161	1,314	12.2
	영흥해양소수력#1	3,000	11,031	1,259	2,998	42.0
	영흥해양소수력#2	4,599	15,853	1,810	4,065	44.5
	영흥해양소수력#3	5,000	17,348	1,980	4,972	39.8
	예천소수력	900	1,267	145	784	18.4
	태안소수력	2,200	3,445	393	1,390	28.3
	행원소수력	60	7	1	24	3.2
	추산소수력(도서)	700	3,036	347	596	58.2
	[PPA] 한수원	45	22	3	497	0.5
	한전 자회사 소수력 계	56,297	158,855	18,134	563,214	3.2
	타사 소수력 계	151,379	386,461	44,117	...	...
	소수력 계	207,676	545,316	62,251	...	...
	수력 계	6,489,456	6,995,173	798,536	...	...
	영동#2	200,000	792,037	90,415	215,520	42.0
	동해#1	200,000	1,382,933	157,869	202,259	78.1
	동해#2	200,000	1,157,017	132,080	202,944	65.1
	동해 계	400,000	2,539,950	289,949	405,203	71.6
	서천#1	-	537,600	61,370	201,000	30.5
	서천#2	-	557,025	63,587	200,000	31.8
	서천 계	-	1,094,624	124,957	401,000	31.2
	무연탄계	600,000	4,426,611	505,321	1,009,949	50.0
	당진#1	500,000	3,922,328	447,754	536,601	83.4
	당진#2	500,000	3,229,910	368,711	536,880	68.7
	당진#3	500,000	2,553,245	291,466	498,479	58.5
	당진#4	500,000	2,408,887	274,987	499,109	55.1
	당진#5	500,000	2,696,643	307,836	502,808	61.2
	당진#6	500,000	2,560,073	292,246	505,578	57.8
	당진#7	500,000	2,797,251	319,321	496,953	64.3
	당진#8	500,000	3,051,015	348,289	506,062	68.8
	당진#9	1,020,000	6,489,780	740,842	1,104,126	67.1
	당진#10	1,020,000	5,503,820	628,290	1,071,982	58.6
	당진 계	6,040,000	35,212,952	4,019,743	6,258,578	64.2
	보령#1	500,000	3,706,391	423,104	537,000	78.8
	보령#2	500,000	3,382,090	386,083	536,000	72.0
	보령#3	500,000	3,943,103	450,126	525,000	85.7
	보령#4	500,000	3,729,724	425,768	528,000	80.6
	보령#5	500,000	3,765,523	429,854	527,000	81.6

('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items Plants
21.5	68	8.1	781	Anheung
11.5	23	1.7	1,383	Yangyang
42.0	0	0.0	11,031	Yeongheung1
39.4	3	0.0	15,850	Yeongheung2
39.6	0	0.0	17,348	Yeongheung3
16.1	0	0.0	1,267	Yecheon
17.9	0	0.0	3,445	Taeon
1.3	0	0.0	7	Haengwon
49.5	855	28.2	2,181	Chusan (Island)
5.6	6	25.0	17	[PPA]KHNP
32.2	1,980	1.2	156,875	Total of KEPCO,Subsidiaries small hydro
29.1	...	...	386,138	Total of Other co. small hydro
30.0	...	...	543,014	Total of small hydro
12.3	...	...	6,948,836	Total of hydro
45.2	52,197	6.6	739,840	Yeongdong #2
78.9	134,984	9.8	1,247,949	Donghae #1
66.0	118,277	10.2	1,038,740	Donghae #2
72.5	253,260	10.0	2,286,690	Donghae Total
-	46,991	8.7	490,608	Seocheon #1
-	55,252	9.9	501,773	Seocheon #2
-	102,243	9.3	992,381	Seocheon Total
84.2	407,701	9.2	4,018,910	Total of anthracite coal
89.6	206,333	5.3	3,715,995	Dangjin #1
73.7	166,831	5.2	3,063,079	Dangjin #2
58.3	142,735	5.6	2,410,510	Dangjin #3
55.0	134,647	5.6	2,274,240	Dangjin #4
61.6	153,351	5.7	2,543,293	Dangjin #5
58.4	130,586	5.1	2,429,487	Dangjin #6
63.9	133,547	4.8	2,663,703	Dangjin #7
69.7	175,554	5.8	2,875,461	Dangjin #8
72.6	337,286	5.2	6,152,494	Dangjin #9
61.6	255,048	4.6	5,248,772	Dangjin #10
66.6	1,835,919	5.2	33,377,033	Total of Dangjin
84.6	234,197	6.3	3,472,194	Boryeong #1
77.2	226,637	6.7	3,155,453	Boryeong #2
90.0	199,617	5.1	3,743,486	Boryeong #3
85.2	174,102	4.7	3,555,622	Boryeong #4
86.0	190,007	5.0	3,575,516	Boryeong #5

### 3. 발전소별 발전 실적 (3)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
보령#6		500,000	3,639,290	415,444	524,000	79.3
보령#7		500,000	3,698,362	422,187	960,496	44.0
보령#8		500,000	4,095,150	467,483	970,981	48.1
보령 계		4,000,000	29,959,633	3,420,049	5,108,477	66.9
삼척그린파워#1		1,022,000	3,576,587	408,286	1,026,212	39.8
삼척그린파워#2		1,022,000	3,423,525	390,813	1,029,456	38.0
삼척그린파워 계		2,044,000	7,000,112	799,100	2,055,668	38.9
삼천포#1		560,000	3,317,187	378,674	568,000	66.7
삼천포#2		560,000	3,883,470	443,318	643,000	68.9
삼천포#3		560,000	3,596,801	410,594	576,000	71.3
삼천포#4		560,000	4,480,452	511,467	577,000	88.6
삼천포#5		500,000	4,110,063	469,185	527,000	89.0
삼천포#6		500,000	3,450,475	393,890	529,000	74.5
삼천포 계		3,240,000	22,838,448	2,607,129	3,420,000	76.2
신보령#1		925,989	6,118,747	698,487	1,007,518	69.3
신보령#2		925,989	4,638,994	529,566	1,011,052	52.4
신보령 계		1,851,978	10,757,741	1,228,053	2,018,570	60.8
여수#1		340,000	2,348,509	268,095	358,000	74.9
여수#2		328,600	2,200,400	251,187	336,000	74.8
여수 계		668,600	4,548,909	519,282	694,000	74.8
영흥#1		800,000	6,207,532	708,622	892,154	79.4
영흥#2		800,000	5,860,066	668,957	837,608	79.9
영흥#3		870,000	6,580,272	751,173	944,502	79.5
영흥#4		870,000	7,137,170	814,745	1,041,631	78.2
영흥#5		870,000	6,734,989	768,834	2,335,339	32.9
영흥#6		870,000	6,880,068	785,396	2,330,060	33.7
영흥 계		5,080,000	39,400,096	4,497,728	8,381,294	53.7
태안#1		500,000	2,990,168	341,343	509,000	67.1
태안#2		500,000	3,503,466	399,939	508,000	78.7
태안#3		500,000	2,651,291	302,659	506,843	59.7
태안#4		500,000	3,486,136	397,961	500,785	79.5
태안#5		500,000	3,541,942	404,331	505,127	80.0
태안#6		500,000	3,143,471	358,844	503,121	71.3
태안#7		500,000	3,474,089	396,585	500,163	79.3
태안#8		500,000	3,438,302	392,500	505,034	77.7
태안#9		1,050,000	7,170,971	818,604	1,109,050	73.8
태안#10		1,050,000	5,348,841	610,598	1,117,467	54.6
태안 계		6,100,000	38,748,676	4,423,365	6,264,590	70.6

※ 시설용량은 없으나 발전량이 있는 경우는 시운전 발전량 또는 당해연도 폐지된 발전기임

('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items Plants
83.1	178,959	4.9	3,460,331	Boryeong #6
84.4	192,925	5.2	3,505,437	Boryeong #7
93.5	190,705	4.7	3,904,445	Boryeong #8
85.5	1,587,149	5.3	28,372,484	Total of Boryeong
39.9	253,931	7.1	3,322,656	Samcheok Greenpower #1
38.2	234,903	6.9	3,188,621	Samcheok Greenpower #2
39.1	488,835	7.0	6,511,277	Total of Samcheok Greenpower
67.6	198,242	6.0	3,118,945	Samchonpo #1
79.2	256,029	6.6	3,627,441	Samchonpo #2
73.3	187,555	5.2	3,409,246	Samchonpo #3
91.3	244,577	5.5	4,235,875	Samchonpo #4
93.8	174,891	4.3	3,935,172	Samchonpo #5
78.8	145,400	4.2	3,305,075	Samchonpo #6
80.5	1,206,694	5.3	21,631,754	Total of Samchonpo
75.4	338,889	5.5	5,779,858	Sinboryeong #1
57.2	271,308	5.8	4,367,686	Sinboryeong #2
66.3	610,197	5.7	10,147,544	Total of Sinboryeong
78.9	246,601	10.5	2,101,908	Yeosu #1
76.4	236,574	10.8	1,963,827	Yeosu #2
77.7	483,175	10.6	4,065,735	Total of Yeosu
88.6	322,115	5.2	5,885,417	Yeongheung #1
83.6	298,947	5.1	5,561,119	Yeongheung #2
86.3	338,417	5.1	6,241,854	Yeongheung #3
93.6	351,037	4.9	6,786,133	Yeongheung #4
88.4	383,674	5.7	6,351,315	Yeongheung #5
90.3	392,579	5.7	6,487,489	Yeongheung #6
88.5	2,086,769	5.3	37,313,327	Total of Yeongheung
68.3	139,656	4.7	2,850,512	Taeon #1
80.0	189,552	5.4	3,313,914	Taeon #2
60.5	140,366	5.3	2,510,925	Taeon #3
79.6	166,718	4.8	3,319,418	Taeon #4
80.9	194,191	5.5	3,347,751	Taeon #5
71.8	157,408	5.0	2,986,062	Taeon #6
79.3	186,017	5.4	3,288,072	Taeon #7
78.5	157,837	4.6	3,280,465	Taeon #8
78.0	271,782	3.8	6,899,189	Taeon #9
58.2	276,123	5.2	5,072,719	Taeon #10
72.5	1,879,650	4.9	36,869,026	Total of Taeon

※ In case there is no facility capacity and there is generation, it is the generation of trial operation or abolished generator in the year

### 3. 발전소별 발전실적 (4)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설 용량 (kW) Generating facilities	발 전 량 (MWh) Gross generation	평균 전력 (kW) Average load	최대 전력 (kW) Peak load	부 하 율 (%) Load factor
하동#1		500,000	4,021,652	459,093	508,285	90.3
하동#2		500,000	3,509,106	400,583	506,000	79.2
하동#3		500,000	3,586,772	409,449	539,162	75.9
하동#4		500,000	4,089,488	466,836	539,119	86.6
하동#5		500,000	3,774,685	430,900	532,490	80.9
하동#6		500,000	3,998,950	456,501	536,093	85.2
하동#7		500,000	4,025,088	459,485	516,927	88.9
하동#8		500,000	3,851,319	439,648	504,313	87.2
하동 계		4,000,000	30,857,060	3,522,495	4,182,391	84.2
호남#1		250,000	1,736,403	198,220	253,646	78.1
호남#2		250,000	1,699,859	194,048	253,161	76.6
호남 계		500,000	3,436,262	392,267	506,807	77.4
한전 자회사 유연탄 계		33,524,578	222,759,888	25,429,211	37,467,977	67.9
북평#1		595,000	2,931,168	334,608	...	...
북평#2		595,000	1,768,922	201,932	...	...
북평 계		1,190,000	4,700,090	536,540	...	...
타회사 유연탄 계		1,190,000	4,700,090	536,540	...	...
유연탄 계		34,714,578	227,459,979	25,965,751	...	...
석탄 계		35,314,578	231,886,590	26,471,072	...	...
남제주#1		100,000	629,847	71,900	106,000	67.8
남제주#2		100,000	622,868	71,104	103,900	68.4
남제주 계		200,000	1,252,715	143,004	209,900	68.1
울산#4		400,000	647,392	73,903	400,845	18.4
울산#5		400,000	571,064	65,190	387,879	16.8
울산#6		400,000	867,723	99,055	388,554	25.5
울산 계		1,200,000	2,086,178	238,148	1,177,278	20.2
제주#2		75,000	428,081	48,868	81,000	60.3
제주#3		75,000	376,243	42,950	80,000	53.7
제주 계		150,000	804,324	91,818	161,000	57.0
평택#1		350,000	215,503	24,601	363,000	6.8
평택#2		350,000	256,905	29,327	360,000	8.1
평택#3		350,000	242,628	27,697	360,000	7.7
평택#4		350,000	366,515	41,840	362,000	11.6
평택 계		1,400,000	1,081,551	123,465	1,445,000	8.5
중유 계		2,950,000	5,224,768	596,435	2,943,735	20.3
서울#5		-	220,183	25,135	280,000	9.0
가스계		-	220,183	25,135	280,000	9.0
기력계		38,264,578	237,331,541	27,092,642	...	...

('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items Plants
91.8	191,675	4.8	3,829,976	Hadong #1
80.1	161,095	4.6	3,348,011	Hadong #2
81.9	172,039	4.8	3,414,733	Hadong #3
93.4	204,489	5.0	3,884,999	Hadong #4
86.2	168,682	4.5	3,606,004	Hadong #5
91.3	189,850	4.7	3,809,100	Hadong #6
91.9	182,623	4.5	3,842,465	Hadong #7
87.9	161,712	4.2	3,689,607	Hadong #7
88.1	1,432,165	4.6	29,424,894	Total of Hadong
79.3	166,725	9.6	1,569,678	Honam #1
77.6	151,717	8.9	1,548,142	Honam #2
78.5	318,442	9.3	3,117,820	Total of Honam
75.9	11,928,995	5.4	210,830,893	Total of KEPCO Subsidiaries bituminous coal
56.2	...	...	2,931,168	Bukpyeong #1
33.9	...	...	1,768,922	Bukpyeong #2
45.1	...	...	4,700,090	Total of Bukpyeong
45.1	...	...	4,700,090	Total of Other co. bituminous coal
74.8	...	...	215,530,984	Total of bituminous coal
75.0	...	...	219,549,894	Total of coal
71.9	43,916	7.0	585,931	Namjeju #1
71.1	47,753	7.7	575,115	Namjeju #2
71.5	91,668	7.3	1,161,046	Total of Namjeju
18.5	43,607	6.7	603,785	Ulsan #4
16.3	37,571	6.6	533,493	Ulsan #5
24.8	57,785	6.7	809,937	Ulsan #6
19.8	138,963	6.7	1,947,216	Total of Ulsan
65.2	32,069	7.5	396,012	Jeju #1
57.3	29,065	7.7	347,178	Jeju #2
61.2	61,135	7.6	743,189	Total of Jeju
7.0	9,186	4.3	206,317	Pyeongtaek #1
8.4	9,447	3.7	247,458	Pyeongtaek #2
7.9	9,859	4.1	232,769	Pyeongtaek #3
12.0	16,565	4.5	349,950	Pyeongtaek #4
8.8	45,058	4.2	1,036,493	Total of Pyeongtaek
20.2	336,823	6.4	4,887,945	Total of heavy oil
-	10,938	5.0	209,245	Seoul #5
-	10,938	5.0	209,245	Total of L.N.G
...	12,684,457	5.3	224,647,084	Total of steam

### 3. 발전소별 발전실적 (5)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
	군산C/C	718,400	1,137,305	129,829	810,375	16.0
	보령C/C	1,350,000	737,228	84,158	557,000	15.1
	부산C/C	1,800,000	5,347,326	610,425	2,277,000	26.8
	분당C/C	922,064	2,261,342	258,144	952,664	27.1
	서인천C/C	1,800,000	2,564,340	292,733	8,798,000	3.3
	신인천C/C	1,800,000	3,334,821	380,687	2,222,000	17.1
	안동C/C	361,600	1,437,434	164,091	445,794	36.8
	영월C/C	848,000	571,236	65,210	877,000	7.4
	울산C/C	2,071,900	6,456,758	737,073	2,305,698	32.0
	인천C/C	1,462,447	5,995,584	684,427	576,900	118.6
	일산C/C	900,000	1,072,761	122,461	815,289	15.0
	평택C/C	1,348,500	2,935,954	335,155	1,348,000	24.9
	한전 자회사 복합(LNG) 합	15,382,911	33,852,090	3,864,394	20,069,497	19.3
	한림C/C	105,000	103,035	11,762	130,100	9.0
	한전 자회사 복합(유류) 합	105,000	103,035	11,762	130,100	9.0
	한전 자회사 복합 계	15,487,911	33,955,125	3,876,156	20,158,397	19.2
	광양C/C	989,200	6,806,932	777,047	...	...
	당진C/C	2,261,750	7,405,996	845,433	2,466,870	34.3
	동두천C/C	1,716,800	7,337,793	837,648	...	...
	부산정관에너지	45,836	11,061	1,263	...	...
	부천C/C	450,000	986,439	112,607	...	...
	안산C/C	751,200	4,452,409	508,266	...	...
	안양C/C	450,000	1,459,312	166,588	...	...
	영남파워	442,800	885,601	101,096	...	...
	오성C/C	769,830	2,543,570	290,362	...	...
	울촌C/C	1,389,700	6,112,393	697,762	583,797	119.5
	파주문산C/C	1,695,200	10,255,511	1,170,720	...	...
	포스코에너지C/C	3,176,000	9,586,103	1,094,304	3,372,741	32.4
	포천C/C	1,450,000	4,138,765	472,462	...	...
	포천천연C/C	874,200	3,680,760	420,178	...	...
	타사 복합(LNG) 계	16,462,516	65,662,643	7,495,736	...	...
	대산C/C	465,800	1,222	140	...	...
	타사 복합(유류) 계	465,800	1,222	140	...	...
	타사 복합 계	16,928,316	65,663,865	7,495,875	...	...
	복합화력 계	32,416,227	99,618,990	11,372,031	...	...
	고리#1		2,439,380	278,468	610,000	45.7
	고리#2	650,000	5,976,474	682,246	685,000	99.6



('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items  Plants
18.1	27,356	2.4	1,109,949	Gunsan C/C
6.2	15,217	2.1	722,011	Boryeong C/C
33.9	107,515	2.0	5,239,811	Busan C/C
28.0	30,368	1.3	2,230,974	Bundang C/C
16.3	55,463	2.2	2,508,877	Seoincheon C/C
21.1	95,775	2.9	3,239,046	Shinincheon C/C
45.4	40,260	2.8	1,397,174	Andong C/C
7.7	14,279	2.5	556,957	Yeongwol C/C
35.6	156,868	2.4	6,299,890	Ulsan C/C
46.8	140,576	2.3	5,855,008	Incheon C/C
13.6	15,278	1.4	1,057,483	Ilsan C/C
24.9	71,425	2.4	2,864,529	Pyeongtaek C/C
25.1	770,382	2.3	33,081,709	Total of KEPCO Subsidiaries C/C(LNG)
11.2	-	0.0	100,042	Hanlim C/C
11.2	-	0.0	100,042	Total of KEPCO Subsidiaries C/C(Oil)
25.0	770,382	2.3	33,181,750	Total of KEPCO Subsidiaries C/C
78.6	...	...	6,806,932	Kwangyang C/C
37.4	149,470	2.0	7,256,526	Dangjin C/C
48.8	...	...	7,337,793	Dongducheon C/C
2.8	...	...	11,061	Busanjeonggwan energy
25.0	24,601	2.5	961,838	Bucheon C/C
67.7	...	...	4,452,409	Ansan C/C
37.0	17,437	1.2	1,441,875	Anyang C/C
22.8	...	...	885,601	Yeongnam power
37.7	...	...	2,543,570	Oseong C/C
50.2	51,854	0.8	6,060,540	Yulchon C/C
69.1	...	...	10,255,511	Pajumunsan C/C
34.5	193,958	2.0	9,392,145	POSCO energy C/C
32.6	...	...	4,138,764	Pocheon C/C
48.1	...	...	3,680,760	Pocheoncheonyeon C/C
45.5	...	...	65,225,324	Total of Other co. C/C(LNG)
	...	...	1,222	Daesan C/C
11.2	...	...	1,222	Total of Other co. C/C(Oil)
...	...	...	65,226,546	Total of Other co. C/C
35.1	...	...	98,408,296	Total of combined cycle
-	127,337	5.2	2,312,043	Kori #1
105.0	344,531	5.8	5,631,943	Kori #2

### 3. 발전소별 발전실적 (6)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설용량 (kW) Generating facilities	발전량 (MWh) Gross generation	평균전력 (kW) Average load	최대전력 (kW) Peak load	부하율 (%) Load factor
	고리#3		950,000	447,711	51,109	1,047,000
고리#4		950,000	2,160,446	246,626	1,047,000	23.6
고리 계		2,550,000	11,024,011	1,258,449	3,389,000	37.1
신고리#1		1,000,000	534,991	61,072	1,046,666	5.8
신고리#2		1,000,000	9,173,581	1,047,212	1,052,469	99.5
신고리#3		1,400,000	13,006,936	1,484,810	1,494,614	99.3
신고리 계		3,400,000	22,715,507	2,593,094	3,593,749	72.2
월성#1		678,683	2,422,668	276,560	691,745	40.0
월성#2		700,000	5,198,166	593,398	698,000	85.0
월성#3		700,000	1,926,976	219,974	687,921	32.0
월성#4		700,000	5,705,719	651,338	671,716	97.0
월성 계		2,778,683	15,253,529	1,741,270	2,749,382	63.3
신월성#1		1,000,000	9,015,002	1,029,110	1,059,120	97.2
신월성#2		1,000,000	6,591,483	752,452	1,055,301	71.3
신월성 계		2,000,000	15,606,486	1,781,562	2,114,421	84.3
한빛#1		950,000	6,623,651	756,125	1,040,003	72.7
한빛#2		950,000	6,944,742	792,779	1,304,241	60.8
한빛#3		1,000,000	9,087,418	1,037,376	1,045,000	99.3
한빛#4		1,000,000	3,355,207	383,014	1,024,000	37.4
한빛#5		1,000,000	7,062,521	806,224	1,065,199	75.7
한빛#6		1,000,000	4,851,580	553,833	1,058,666	52.3
한빛 계		5,900,000	37,925,119	4,329,352	6,537,109	66.2
한울#1		950,000	6,647,827	758,884	1,015,383	74.7
한울#2		950,000	7,887,905	900,446	1,015,761	88.6
한울#3		1,000,000	8,489,655	969,139	1,053,000	92.0
한울#4		1,000,000	8,654,014	987,901	1,059,000	93.3
한울#5		1,000,000	7,023,430	801,761	1,060,000	75.6
한울#6		1,000,000	7,199,241	821,831	1,055,000	77.9
한울 계		5,900,000	45,902,073	5,239,963	6,258,144	83.7
원자력 계		22,528,683	148,426,725	16,943,690	19,698,603	86.0
한전, 사회사	태양광	119,530	142,230	16,236	100,162	16.2
	풍력	137,550	208,947	23,852	132,238	18.0
	바이오매스(영동#1 포함)	160,000	743,825	84,912	162,981	52.1
	* 영동#1	125,000	543,979	62,098	132,863	46.7
	폐기물에너지(원주그린)	10,000	39,343	4,491	83,500	5.4
	연료전지	46,520	273,402	31,210	43,440	71.8
	석탄액화가스(태안GCC)	346,330	1,285,733	146,773	382,000	38.4
한전, 사회사 신재생 계		819,930	2,693,481	307,475	771,880	39.8

('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Plants	
				Items	
5.4	15,348	3.4	432,363	Kori #3	
26.0	72,271	3.3	2,088,175	Kori #4	
49.4	559,487	5.1	10,464,524	Total of Kori	
6.1	26,493	5.0	508,497	Sinkori #1	
104.7	474,100	5.2	8,699,481	Sinkori #2	
106.1	601,329	4.6	12,405,607	Sinkori #3	
76.3	1,101,922	4.9	21,613,585	Total of Sinkori	
40.7	86,023	3.6	2,336,645	Wolsong #1	
84.8	217,164	4.2	4,981,002	Wolsong #2	
31.4	69,511	3.6	1,857,466	Wolsong #3	
93.0	187,870	3.3	5,517,848	Wolsong #4	
62.7	560,568	3.7	14,692,961	Total of Wolsong	
102.9	461,473	5.1	8,553,529	Sinwolsong #1	
75.2	357,289	5.4	6,234,194	Sinwolsong #2	
89.1	818,762	5.2	14,787,723	Total of Sinwolsong	
79.6	249,408	3.8	6,374,243	Hanbit #1	
83.5	275,392	4.0	6,669,350	Hanbit #2	
103.7	458,957	5.1	8,628,461	Hanbit #3	
38.3	166,568	5.0	3,188,639	Hanbit #4	
80.6	407,412	5.8	6,655,109	Hanbit #5	
55.4	275,459	5.7	4,576,121	Hanbit #6	
73.4	1,833,195	4.8	36,091,924	Total of Hanbit	
79.9	296,566	4.5	6,351,261	Hanul #1	
94.8	352,044	4.5	7,535,862	Hanul #2	
96.9	442,206	5.2	8,047,448	Hanul #3	
98.8	455,335	5.3	8,198,679	Hanul #4	
80.2	359,697	5.1	6,663,733	Hanul #5	
82.2	368,658	5.1	6,830,583	Hanul #6	
88.8	2,274,507	5.0	43,627,566	Total of Hanul	
71.2	7,148,441	4.8	141,278,284	Total of nuclear	
13.6	1,979	1.4	140,251	Solar	
17.3	1,124	0.5	207,823	Wind power	
53.1	67,018	9.0	676,807	Bio	
49.7	41,233	7.6	502,745	Yeongdong #1	
44.9	7,418	18.9	31,925	Waste-burnup	
67.1	4,691	1.7	268,711	Fuel cell	
42.4	324,129	25.2	961,604	IGCC	
37.5	406,360	15.1	2,287,121	Total of KEPCO Sub.New&Renewable energy	

### 3. 발전소별 발전실적 (7)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설 용량 (kW) Generating facilities	발 전 량 (MWh) Gross generation	평균 전력 (kW) Average load	최대 전력 (kW) Peak load	부 하 율 (%) Load factor
	태양광	4,942,779	6,096,465	695,943	...	...
풍력	1,077,272	1,950,002	222,603	...	...	
해양에너지	255,110	489,466	55,875	...	...	
바이오매스	265,466	1,498,719	171,087	...	...	
매립가스	68,956	252,921	28,872	...	...	
폐기물에너지	201,529	647,331	73,896	...	...	
부생가스	1,355,500	8,714,951	994,857	...	...	
부생가스(집단)	...	627,661	71,651	...	...	
연료전지	200,380	1,174,365	134,060	...	...	
타사 신재생 계	8,366,992	21,451,881	2,448,845	...	...	
태양광 계	5,062,309	6,238,695	712,180	...	...	
풍력 계	1,214,822	2,158,949	246,455	...	...	
해양에너지 계	255,110	489,466	55,875	...	...	
바이오매스 계	425,466	2,242,545	255,998	...	...	
매립가스 계	68,956	252,921	28,872	...	...	
폐기물에너지 계	211,529	686,673	78,387	...	...	
부생가스 계	1,355,500	9,342,612	1,066,508	...	...	
연료전지 계	246,900	1,447,768	165,270	...	...	
석탄액화가스 계	346,330	1,285,733	146,773	...	...	
신재생 계	9,186,923	24,145,362	2,756,320	...	...	
세종열병합	530,441	3,001,433	342,629	247,800	...	
한전 차회사 집단(LNG) 계	530,441	3,001,433	342,629	247,800	...	
구미열병합	97,100	607,195	69,314	...	...	
군장에너지	423,569	3,920,189	447,510	...	...	
금호여수열병합	264,100	1,583,062	180,715	...	...	
김천열병합	59,000	327,795	37,420	...	...	
대구염색	72,900	4,729	540	...	...	
반월열병합	76,955	399,160	45,566	...	...	
부산염색	19,000	33,047	3,773	...	...	
상공에너지열병합	9,800	50,635	5,780	...	...	
새만금열병합	303,000	2,095,994	239,269	...	...	
여수열병합	48,400	586,589	66,962	...	...	
익산에너지	21,000	115,467	13,181	...	...	
타사 집단(석탄) 계	1,394,824	9,723,863	1,110,030	...	...	
대구열병합	43,500	65,549	7,483	...	...	
대전열병합	88,000	77,015	8,792	...	...	
무림열병합	42,600	54,664	6,240	...	...	
수원열병합	43,200	49,647	5,668	...	...	

※ 구미열병합은 석탄으로 집계

('17.1.1~12.31)

이 용 율 (%) Plant factor	소내전력량 (MWh) Auxiliary use	소내전력률 (%) Aux. use factor	송전단전력량 (양 수 포 함) (MWh) Net generation	Items Plants	
14.1	...	...	6,096,463	Solar	
20.7	...	...	1,950,002	Wind power	
21.9	...	...	489,466	Ocean energy	
64.4	...	...	1,439,800	Bio	
41.9	...	...	252,921	Landfill-gas	
36.7	...	...	647,331	Waste-burnup	
73.4	...	...	8,714,951	Product-gas	
...	...	...	627,661	Product-gas(Group energy)	
66.9	...	...	1,174,219	Fuel cell	
29.3	...	...	21,392,813	Total of Other Co. New&Renewable energy	
14.1	...	...	6,236,714	Total of Solar	
20.3	...	...	2,157,825	Total of Wind power	
21.9	...	...	489,466	Total of Ocean energy	
60.2	...	...	2,116,607	Total of Bio	
41.9	...	...	252,921	Total of Landfill-gas	
37.1	...	...	679,255	Total of Waste-burnup	
78.7	...	...	9,342,612	Total of Product-gas	
66.9	...	...	1,442,930	Total of Fuel cell	
42.4	...	...	961,604	Total of IGCC	
30.0	...	...	23,679,934	Total of New&Renewable energy	
64.6	82,928	2.8	2,918,505	Sejong	
64.6	82,928	2.8	2,918,505	Total of KEPCO Subsidiary Group energy	
71.4	...	...	607,195	Gumi	
105.7	...	...	3,920,189	Gunjang	
68.4	...	...	1,583,062	Gumhoyeosu	
63.4	...	...	327,795	Gimcheon	
0.7	...	...	4,729	Daegyeomsaek	
59.2	...	...	399,160	Banwol	
19.9	...	...	33,047	Busan	
59.0	...	...	50,635	Sanggong	
79.0	...	...	2,095,994	Saemangum	
138.4	...	...	586,589	Yeosu	
62.8	...	...	115,467	Iksan	
79.6	...	...	9,723,863	Total of Other co. Group energy(Coal)	
17.2	...	...	65,549	Daegu	
10.0	...	...	77,015	Daejeon	
14.6	...	...	54,664	Murim	
13.1	...	...	49,647	Suwon	

### 3. 발전소별 발전실적 (8)

('17.1.1~12.31) Power generating results by plant

발전소별	구분	시설 용량 (kW)	발 전 량 (MWh)	평균 전력 (kW)	최대 전력 (kW)	부 하 율 (%)
		Generating facilities	Gross generation	Average load	Peak load	Load factor
	청주열병합	61,400	144,181	16,459	...	...
	타사 집단(유류) 계	278,700	391,057	44,641	...	...
	광교열병합	144,788	781,335	89,193	...	...
	노원열병합	37,000	85,112	9,716	...	...
	논현열병합	24,000	3,872	442	...	...
	대구그린파워	370,700	2,492,333	284,513	...	...
	대전서남부열병합	48,300	85,510	9,761	...	...
	동탄열병합	756,760	944,019	107,765	...	...
	명품오산열병합	436,100	3,254,887	371,562	...	...
	목동열병합	21,000	42,874	4,894	...	...
	별내열병합	115,410	225,050	25,691	...	...
	송도복합	187,300	583,595	66,620	...	...
	수완에너지	115,246	350,505	40,012	...	...
	신정열병합	6,000	7	1	...	...
	아산배방열병합	101,700	148,392	16,940	...	...
	안산열병합	60,000	8,658	988	...	...
	양주열병합	524,300	1,120,032	127,858	...	...
	위례열병합	412,600	2,531,391	288,972	...	...
	인천공항열병합	127,000	422,970	48,284	...	...
	춘천열병합	431,200	1,925,299	219,783	...	...
	파주열병합	515,500	2,438,807	278,403	...	...
	판교열병합	146,314	893,557	102,004	...	...
	하남열병합	363,811	2,012,403	229,726	...	...
	화성복합	511,800	2,570,123	293,393	...	...
	기타 <sup>1)</sup>	21,510	157,380	17,966	...	...
	타사 집단(LNG) 계	5,478,339	23,078,111	2,634,488	...	...
	타사 집단 계	7,151,863	33,193,031	3,789,159	...	...
	집단 계	7,682,304	36,194,464	4,131,788	...	...
	제주G/T(한전, 중부)	165,000	2,486	284	-	-
	제주내연(중부)	80,000	242,764	27,713	82,300	33.7
	한전 도서 내연(D/P)	94,470	268,097	30,605	56,260	54.4
	내연력 계	339,470	513,347	58,601	129,108	45.4
	한전, 자회사계	82,132,490	426,484,068	48,685,396	83,096,217	58.6
	타사계	34,775,150	126,741,534	14,468,212	...	...
	기타 상용자가(LNG)		170,319	19,443	...	...
	기타 상용자가(부생가스)		134,186	15,318	...	...
	기타 상용자가 <sup>2)</sup> 계		304,506	34,761	...	...
	<b>총계</b>	<b>116,907,641</b>	<b>553,530,107</b>	<b>63,188,368</b>	<b>85,133,000</b>	<b>74.2</b>

1) 집단에너지 기타는 가스압터빈, 여열회수발전, 폐열활용 발전 등임

2) 상용자가 발전사업자 발전량은 한전의 구입전력량만 반영

('17.1.1~12.31)

이 용 율 (%)	소내전력량 (MWh)	소내전력률 (%)	송전단전력량 (양 수 포 함) (MWh)	Items  Plants
Plant factor	Auxiliary use	Aux. use factor	Net generation	
26.8	...	...	144,181	Cheongju
16.0	...	...	391,057	Total of Other co. Group energy(Oil)
61.6	...	...	781,335	Gwanggyo
26.3	...	...	85,112	Nowon
1.8	...	...	3,872	Nonhyeon
76.8	...	...	2,492,333	Daegugreenpower
20.2	...	...	85,510	Daejeonseonambu
14.2	...	...	944,019	Dongtan
85.2	...	...	3,254,887	Myeongpumosan
23.3	...	...	42,874	Mokdong
22.3	...	...	225,050	Byeolnae
35.6	...	...	583,595	Songdo
34.7	...	...	350,505	Suwan
0.0	...	...	7	Sinjeong
16.7	...	...	148,392	Asanbaebang
1.6	...	...	8,658	Ansan
24.4	...	...	1,120,032	Yangju
70.0	...	...	2,531,391	Wirye
38.0	...	...	422,970	Incheongonghang
51.0	...	...	1,925,299	Chuncheon
54.0	...	...	2,438,807	Paju
69.7	...	...	893,557	Pangyo
63.1	...	...	2,012,403	Hanam
57.3	...	...	2,570,123	Hwaseong
83.5	...	...	157,380	Others <sup>1)</sup>
48.1	...	...	23,078,111	Total of Other co. Group energy(LNG)
53.0	...	...	33,193,031	Total of Other co. Group energy
53.8	...	...	36,111,536	Total of Group energy
0.2	127	5.1	2,359	Jeju G/T
34.6	13,137	5.4	229,627	Jeju D/P
32.4	55,590	20.7	212,507	Internal combustion in island
17.3	68,854	13.4	444,493	Total of internal combustion
59.3	21,183,319	5.0	405,297,757	Total of KEPCO & Subsidiaries
41.6	...	...	126,220,706	Total of Other Co.
...	...	...	170,319	Non-utility generation(LNG)
...	...	...	134,186	Non-utility generation(Product-gas)
...	...	...	304,506	Total of Non-utility generation <sup>2)</sup>
<b>54.0</b>	<b>21,707,139</b>	<b>3.92</b>	<b>531,822,968</b>	<b>Total</b>

1) Others of Group energy are gas pressure turbine, residual heat recovery, waste heat generation etc.

2) Reflected non-utility generation only the amount of electricity purchased by KEPCO

## 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 화력 Heavy Oil & LNG		
	발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation
남동발전 KOSEP	삼천포소수력 영흥소수력	6,000 12,599	30,341 44,232	영 동 #2 삼천포#1~6 영 흥#1~6 여 수#1~2	200,000 3,240,000 5,080,000 668,600	792,037 22,838,448 39,400,096 4,548,909			
중부발전 KOMIPO	보령소수력 신보령소수력	7,500 5,000	19,106 12,127	보 령 #1~8 서 천 #1,2 신보령#1~2	4,000,000 0 1,851,978	29,959,633 1,094,624 10,757,741	제 주 #2~3 서 울 #5	150,000 0	804,324 220,183
서부발전 KOWEPO	태안소수력	2,200	3,445	태 안 #1~10	6,100,000	38,748,676	평 택 #1~4	1,400,000	1,081,551
남부발전 KOSPO	행원소수력 삼척그린파워 해양소수력	60 2,750	7 3,074	하 동 #1~8 삼척그린파워#1,2	4,000,000 2,044,000	30,857,060 7,000,112	남제주#1,2	200,000	1,252,715
동서발전 KEWESPO	당진화력소수력	8,198	23,472	동 해 #1,2 호 남 #1,2 당 진 #1~10	400,000 500,000 6,040,000	2,539,950 3,436,262 35,212,952	울 산 #4~6	1,200,000	2,086,178
수력원자력 KHNP	화천 춘천 의암 청평	108,000 62,280 48,000 140,100	166,601 100,672 119,638 237,513	무주양수 양양양수 삼랑진양수 청송양수	600,000 1,000,000 600,000 600,000	621,820 775,138 483,390 505,853			
한국전력 KEPCO (음영부분)	팔당 강릉 섬진강 괴산 소수력 보성강 소수력 기타 소수력 추산(수력)	120,000 82,000 34,800 2,600 4,500 4,190 700	238,011 0 54,865 4,342 9,941 5,734 3,036	청평양수 산청양수 예천양수	400,000 700,000 800,000	267,128 584,765 948,258			
한전 및 자회사 계 Sub total	수 력 양 수 계	651,477 4,700,000 5,351,477	1,076,155 4,186,353 5,262,507	무 연 탄 유 연 탄 계	600,000 33,524,578 34,124,578	4,426,611 222,759,888 227,186,499	유류 & L N G 계	2,950,000 0 2,950,000	5,224,768 220,183 5,444,951
타사 Others	수자원 수자원소수력 GS파워소수력 기타소수력	986,600 94,448 1,030 55,901	1,346,205 280,697 8,139 97,625	북평화력#1,2	1,190,000	4,700,090	집단에너지 기타상용자가 (집단, 상용자가는 복합/집단에 포함)	7,151,863 0	33,193,031 304,506
발전원별 계 Total	계	1,137,979	1,732,666	계	1,190,000	4,700,090	계		
발전원별 계 Total		6,489,456	6,995,173		35,314,578	231,886,590		2,950,000	5,444,951

※ 집단 신재생(부생가스)은 신재생으로 포함



내연 및 복합/집단 C/C & Internal Combustion/Group Energy			원자력 및 신재생 Nuclear & Alternative			발전량 계 Total	
발전소 Plants	용량 Capacity	발전량 Power Generation	발전소 Plants	용량 Capacity	발전량 Power Generation	(용량 계) (Capacity Total)	점유율 Ratio (%)
(복합) 분당 C/C	922,064	2,261,342	태양광 풍력 바이오 폐기물 연료전지	32,427 46,000 125,000 11,740	36,863 49,856 543,979 85,573	70,631,676 (10,344,430)	12.8 (8.8)
제주 G/T#3 제주 내연 (복합) 보령 C/C 인천 C/C (집단) 세종천연가스	55,000 80,000 1,350,000 1,462,447 530,441	2,486 242,764 737,228 5,995,584 3,001,433	태양광 풍력 바이오 폐기물 연료전지	12,045 30,800 10,000 7,780	14,914 44,524 39,343 8,256	52,954,269 (9,552,991)	9.6 (8.2)
(복합) 군산 C/C 평택 C/C 서인천 C/C	718,400 1,348,500 1,800,000	1,137,305 2,935,954 2,564,340	태양광 풍력 바이오 폐기물 연료전지 석탄액화가스	33,262 16,000 16,200 346,330	40,699 26,720 105,666 1,285,733	47,930,090 (11,780,892)	8.7 (10.1)
(복합) 영월 C/C 신인천 C/C 한림 C/C 부산 C/C 안동 C/C	848,000 1,800,000 105,000 1,800,000 361,600	571,236 3,334,821 103,035 5,347,326 1,437,434	태양광 풍력 바이오 폐기물 연료전지	6,260 41,000	7,576 84,508	49,998,901 (11,208,670)	9.0 (9.6)
(복합) 일산 C/C 울산 C/C	900,000 2,071,900	1,072,761 6,456,758	태양광 풍력 바이오 폐기물 연료전지	13,885 3,000 35,000 10,800	14,316 3,042 199,847 73,907	51,119,445 (11,182,783)	9.2 (9.6)
			(원자력) 고리#2~4 신고리#1~3 월성#1~4 한빛#1~6 한울#1~6 신월성#1~2 (신재생) 태양광 풍력 한전태양광				
한전도서내연	204,470	268,097	태양광 풍력 한전태양광	13,885 3,000 545	14,316 3,042 817	51,119,445 (205,715)	9.2 (0.2)
내연력 복합/집단	339,470 16,018,352	513,347 36,956,558	원자력 신재생에너지		148,426,725 2,693,481	426,484,068 (82,132,490)	77.0 (70.3)
계	16,357,822	37,469,905	계	23,348,613	151,120,206		
포스코복합 당진복합 울촌복합 광양복합 안양복합 부천복합 오성복합 동두천복합 안산복합 포천복합 포천천연복합 파주문산복합 기타 복합	3,176,000 2,261,750 1,389,700 989,200 450,000 450,000 769,830 1,716,800 751,200 1,450,000 874,200 1,695,200 954,436	9,586,103 7,405,996 6,112,393 6,806,932 1,459,312 986,439 2,543,570 7,337,793 4,452,409 4,138,765 3,680,760 10,255,511 897,884	태양광 풍력 해양에너지(조력) 바이오매스 매립가스 폐기물 에너지 부생가스 연료전지	4,942,779 1,077,272 255,110 265,466 68,956 201,529 1,355,500 200,380	6,096,465 1,950,002 489,466 1,498,719 252,921 647,331 9,342,612 1,174,365		
계	24,080,179	99,161,402	계	8,366,992	21,451,881	127,046,040 (34,775,150)	23.0 (29.7)
	40,438,001	136,631,307		31,715,606	172,572,087	553,530,107 (116,907,641)	100.0 (100.0)

## 5. 발전연료 사용량 추이

### Trends in fuel Consumption

구분 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
2000	4,297,082	597,913	4,894,994	9,846	191,073	9,045
2001	4,926,551	570,701	5,497,251	9,899	107,130	9,033
2002	4,455,276	72,649	4,527,925	9,940	277,032	9,029
2003	4,267,870	148,614	4,416,484	9,816	638,305	9,042
2004	3,681,635	518,815	4,200,449	9,610	139,386	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	8,907
2007	3,899,079	-	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	-	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	-	2,050,365	9,996	123,832	8,770
2012	3,272,119	-	3,272,119	9,766	140,700	8,903
2013	3,401,690	-	3,401,690	9,963	149,123	8,874
2014	1,581,186	-	1,581,186	9,928	110,897	8,781
2015	1,850,640	-	1,850,640	10,028	111,411	8,894
2016	2,783,521	-	2,783,521	9,768	155,203	9,452
2017	927,885	-	927,885	10,003	173,561	8,993
1	196,019	-	196,019	10,015	10,610	9,147
2	166,270	-	166,270	9,965	17,252	8,960
3	31,660	-	31,660	9,896	18,132	8,958
4	28,519	-	28,519	9,932	15,501	9,105
5	36,731	-	36,731	9,962	17,834	8,968
6	41,681	-	41,681	9,982	12,149	9,047
7	89,814	-	89,814	9,997	20,247	9,183
8	51,509	-	51,509	10,023	14,610	8,924
9	22,287	-	22,287	9,793	12,525	8,732
10	22,758	-	22,758	10,038	10,099	8,919
11	50,405	-	50,405	10,083	9,238	8,953
12	190,231	-	190,231	10,062	15,361	8,944

※ 한전, 발전 5개사, 민간 4개사(포스코에너지, GS EPS, GS POWER, 씨지엔올존) 화력발전 실적

무 연 탄 Anthracite coal		유 연 탄 Bituminous coal		L N G		사용열량 합 계 (10 <sup>9</sup> kcal) Total of Caloric- value	Items During
사 용 량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value	사 용 량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value	사 용 량 (t) Consu- mption	발열량 (kcal/kg) Caloric- value		
803,124	4,641	24,680	6,700				1961
2,848,015	4,541	33,368,518	6,057	4,491,013	13,031	323,482	2000
2,875,286	4,562	37,919,366	6,065	4,790,808	13,027	360,894	2001
2,750,542	4,583	40,311,221	6,127	5,983,120	13,023	385,027	2002
2,879,676	4,621	41,577,715	6,068	5,995,742	13,012	392,784	2003
2,411,721	4,688	45,514,971	5,897	8,220,852	13,012	428,316	2004
2,359,492	4,629	47,937,342	5,904	8,537,926	13,026	445,224	2005
2,345,136	4,560	50,258,470	5,868	9,466,086	13,011	466,474	2006
2,392,411	4,545	55,949,781	5,871	10,828,751	13,034	520,452	2007
2,534,021	4,755	63,238,083	5,817	10,515,372	13,043	538,041	2008
2,690,328	4,591	71,092,318	5,761	8,596,732	13,220	565,830	2009
2,404,050	4,456	76,402,994	5,555	12,914,479	13,052	631,699	2010
1,658,801	4,723	79,854,167	5,433	13,609,052	13,221	645,743	2011
1,796,721	4,750	78,804,624	5,057	15,320,734	13,273	643,652	2012
1,728,664	5,440	78,759,805	5,552	17,004,866	13,132	705,183	2013
2,043,992	5,549	77,687,852	5,617	12,497,193	12,659	622,574	2014
2,125,486	5,706	79,432,656	5,607	8,763,724	12,735	588,697	2015
2,528,364	5,563	78,044,996	5,575	8,283,596	13,468	589,366	2016
1,078,762	5,387	89,217,393	5,479	8,161,279	13,158	612,870	2017
174,375	5,569	7,891,436	5,504	865,990	11,670	56,575	1
142,940	5,780	6,925,600	5,667	787,997	11,709	51,109	2
124,588	5,703	6,887,588	5,867	664,826	16,557	52,606	3
122,922	5,413	6,785,697	5,077	481,631	18,151	44,281	4
137,448	5,180	6,040,213	5,543	491,718	11,605	40,425	5
48,421	4,945	6,660,281	5,452	573,655	11,646	43,757	6
36,567	5,026	8,363,553	5,480	824,873	13,084	57,892	7
43,903	5,491	8,779,342	5,438	688,860	13,101	57,658	8
58,404	5,314	8,038,532	5,407	464,575	13,097	50,184	9
84,027	4,444	7,408,077	5,433	469,438	13,159	47,120	10
53,858	5,384	7,201,401	5,452	774,540	12,607	49,907	11
51,309	5,617	8,235,672	5,458	1,073,176	13,110	61,358	12

※ KEPCO & Subsidiaries, other 4 companies thermal power generation

## 6. 발전소별 연료사용 실적 (1)

('171.1~12.31) Fuel consumption by plant

구 분 발전소별	사 용 량 consumption				발 열 량 Caloric value			L. N. G (kcal/kg)
	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	
영동#1	-		236	-	-	-	8,700	-
영동#2	372,854		1,669	-	5,731	-	8,700	-
동해#1	592,264		915	-	5,114	-	8,758	-
동해#2	497,546		616	-	5,065	-	8,747	-
서천#1	208,957	15,099	-	-	5,716	9,892		-
서천#2	219,533	14,546	-	-	5,685	9,886		-
무연탄 계	1,891,154	29,645	3,436	-	5,356	9,889	8,724	-
당진#1	1,585,298		502		5,593	-	8,772	-
당진#2	1,311,799	341	940		5,571	-	8,833	-
당진#3	1,047,890	109	989		5,565	-	8,768	-
당진#4	965,085		1,165		5,577	-	8,735	-
당진#5	1,084,705	31	741		5,534	-	8,743	-
당진#6	1,023,355	88	1,120		5,519	-	8,761	-
당진#7	1,146,298	85	839		5,522	-	8,776	-
당진#8	1,220,053		373		5,523	-	8,738	-
당진#9	2,444,331		926		5,524	-	8,720	-
당진#10	2,104,127		2,834		5,539	-	8,735	-
보령#1	1,496,051		-		5,676	-	-	-
보령#2	1,391,754		-		5,624	-	-	-
보령#3	1,536,383		-		5,685	-	-	-
보령#4	1,464,074		-		5,675	-	-	-
보령#5	1,456,859		-		5,686	-	-	-
보령#6	1,398,349		-		5,702	-	-	-
보령#7	1,410,211		-		5,658	-	-	-
보령#8	1,547,655		-		5,674	-	-	-
삼척그린파워#1	2,024,156		7,242		4,219	-	10,830	-
삼척그린파워#2	1,572,432		855		4,185	-	10,927	-
삼천포#1	1,333,205		2,012		5,581	-	8,715	-
삼천포#2	1,562,154		1,953		5,567	-	8,729	-

('17. 1. 1 ~ 12.31)

사 용 열 량 Caloric Consumption (10 <sup>6</sup> kcal)					Items Plants
석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
-	-	2,050		2,050	Yeongdong #1
2,136,992	-	14,523		2,151,514	Yeongdong #2
3,028,982	-	8,011		3,036,993	Donghae #1
2,520,000	-	5,388		2,525,389	Donghae #2
1,194,501	149,362	-		1,343,863	Seocheon #1
1,248,057	143,802	-		1,391,859	Seocheon #2
10,128,532	293,164	29,972	-	10,451,668	Total of anthracite coal
8,866,621	-	4,399		8,871,020	Dangjin #1
7,308,078	-	8,299		7,316,377	Dangjin #2
5,832,008	-	8,675		5,840,683	Dangjin #3
5,382,731	-	10,181		5,392,912	Dangjin #4
6,002,279	-	6,480		6,008,759	Dangjin #5
5,647,975	-	9,813		5,657,788	Dangjin #6
6,329,720	-	7,367		6,337,087	Dangjin #7
6,738,739	-	3,258		6,741,997	Dangjin #8
13,501,648	-	8,078		13,509,727	Dangjin #9
11,655,733	-	24,753		11,680,486	Dangjin #10
8,491,928	-	-		8,491,928	Boryeong #1
7,827,471	-	-		7,827,471	Boryeong #2
8,733,935	-	-		8,733,935	Boryeong #3
8,308,569	-	-		8,308,569	Boryeong #4
8,283,753	-	-		8,283,753	Boryeong #5
7,973,212	-	-		7,973,212	Boryeong #6
7,978,277	-	-		7,978,277	Boryeong #7
8,781,062	-	-		8,781,062	Boryeong #8
8,540,913	-	78,440		8,619,353	Samcheok Greenpower #1
6,581,099	-	9,340		6,590,439	Samcheok Greenpower #2
7,439,955	-	17,530		7,457,485	Samchonpo #1
8,697,094	-	17,048		8,714,142	Samchonpo #2

## 6. 발전소별 연료사용 실적 (2)

(\*171.1~12.31) 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	L. N. G (kcal/kg)
삼천포#3	1,429,991		1,936		5,617	-	8,713	-
삼천포#4	1,769,296		825		5,586	-	8,751	-
삼천포#5	1,851,566		1,012		4,844	-	8,741	-
삼천포#6	1,554,991		2,362		4,831	-	8,727	-
신보령#1	2,080,951		4,965		5,117	-	8,726	-
신보령#2	1,517,218		11,223		6,385	-	8,722	-
여수#1	1,268,346		1,911		4,310	-	8,727	-
여수#2	1,072,573		1,106		4,608	-	8,689	-
영흥#1	2,379,741		2,710		5,758	-	9,213	-
영흥#2	2,257,078		6,079		5,771	-	9,213	-
영흥#3	2,442,157		2,557		5,763	-	9,213	-
영흥#4	2,703,559		4,297		5,763	-	8,656	-
영흥#5	2,683,507		1,725		5,476	-	9,274	-
영흥#6	2,703,786		1,419		5,503	-	9,229	-
태안#1	1,170,093		-		5,606	-	-	-
태안#2	1,343,636		-		5,601	-	-	-
태안#3	1,015,440		-		5,604	-	-	-
태안#4	1,359,189		-		5,602	-	-	-
태안#5	1,417,800		-		5,744	-	-	-
태안#6	1,218,714		-		5,747	-	-	-
태안#7	1,375,439		-		5,608	-	-	-
태안#8	1,353,242		-		5,605	-	-	-
태안#9	2,826,068		714		5,304	-	9,021	-
태안#10	1,796,181		581		5,150	-	12,881	-
하동#1	1,592,923		193		5,566	-	8,785	-
하동#2	1,417,181		204		5,563	-	8,875	-
하동#3	1,431,715		242		5,573	-	8,784	-
하동#4	1,627,856		160		5,566	-	8,780	-
하동#5	1,502,410		312		5,559	-	9,347	-

(17. 1. 1 ~ 12.31)

사 용 열 량 Caloric Consumption (10 <sup>6</sup> kcal)					Items Plants
석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
8,032,468	-	16,865		8,049,333	Samchonpo #3
9,882,777	-	7,218		9,889,996	Samchonpo #4
8,969,620	-	8,846		8,978,466	Samchonpo #5
7,511,780	-	20,612		7,532,392	Samchonpo #6
10,648,367	-	43,323		10,691,690	Sinboryeong #1
9,687,376	-	97,879		9,785,255	Sinboryeong #2
5,466,699	-	16,678		5,483,377	Yeosu #1
4,942,220	-	9,612		4,951,831	Yeosu #2
13,703,581	-	24,968		13,728,550	Yeongheung #1
13,026,483	-	56,005		13,082,488	Yeongheung #2
14,075,128	-	23,554		14,098,683	Yeongheung #3
15,579,432	-	37,198		15,616,630	Yeongheung #4
14,695,227	-	15,998		14,711,225	Yeongheung #5
14,879,666	-	13,097		14,892,763	Yeongheung #6
6,559,303	-	-		6,559,303	Taeon #1
7,525,547	-	-		7,525,547	Taeon #2
5,690,543	-	-		5,690,543	Taeon #3
7,614,395	-	-		7,614,395	Taeon #4
8,144,141	-	-		8,144,141	Taeon #5
7,003,814	-	-		7,003,814	Taeon #6
7,713,660	-	-		7,713,660	Taeon #7
7,584,918	-	-		7,584,918	Taeon #8
14,990,495	-	6,441		14,996,936	Taeon #9
9,249,780	-	7,480		9,257,260	Taeon #10
8,865,612	-	1,695		8,867,306	Hadong #1
7,883,256	-	1,814		7,885,069	Hadong #2
7,978,600	-	2,126		7,980,726	Hadong #3
9,060,896	-	1,409		9,062,305	Hadong #4
8,351,619	-	2,919		8,354,537	Hadong #5

## 6. 발전소별 연료사용 실적 (3)

(\*17.1.1~12.31) 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	L. N. G (kcal/kg)
하동#6	1,567,058		462		5,563	-	9,067	-
하동#7	1,532,177		1		5,675	-	9,445	-
하동#8	1,457,792		1		5,674	-	8,765	-
호남#1	791,772	412	112		5,531	10,651	8,761	-
호남#2	767,332	707	146		5,517	10,651	8,762	-
유연탄계	88,405,001	1,772	69,747	-	5,481	6,726	9,117	-
석탄 계	90,296,155	31,417	73,183	-	5,478	9,711	9,098	-
남제주#1	-		128		-	-	8,695	-
남제주#2	-	146,940	69		-	10,047	8,683	-
울산#4	-	119,150	-		-	10,069	-	-
울산#5	-	127,953	-		-	10,083	-	-
울산#6	-	116,267	-		-	10,075	-	-
제주#2	-	30,566	32		-	9,823	-	-
제주#3	-	63,652	90		-	-	5,657	-
평택#1	-	48,820	49	3,112	-	9,941	9,532	-
평택#2	-	57,302	57	2,582	-	-	-	-
평택#3	-	54,956	68	2,062	-	-	-	-
평택#4	-	81,917	64	2,382	-	-	-	-
중유 계	-	847,523	557	10,139	44,477	10,019	8,054	13,063
서울 #2	-	-	-	51,224	-	-	-	13,074
가스 계	-	-	-	51,224	-	-	-	13,074
기력 계	90,296,155	878,940	73,739	61,362	5,478	10,008	9,090	13,072
군산C/C	-		-	171,917	-	-	-	13,105
보령C/C	-		-	114,348	-	-	-	13,114
부산C/C	-		65	725,084	-	-	8,738	13,091
분당C/C	-		-	390,249	-	-	-	13,086
서인천C/C	-		3	368,803	-	-	11,000	13,098



(17. 1. 1 ~ 12.31)

사 용 열 량 Caloric Consumption (10 <sup>6</sup> kcal)					Items Plants
석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
8,717,008	-	4,192		8,721,200	Hadong #6
8,695,704	-	10		8,695,714	Hadong #7
8,271,547	-	12		8,271,559	Hadong #8
4,379,169	4,390	982		4,384,541	Honam #1
4,233,172	7,528	1,279		4,241,980	Honam #2
484,516,803	11,918	635,871	-	485,164,593	Total of bituminous coal
494,645,335	305,082	665,843	-	495,616,261	Total of coal
-	-	1,112		1,112	Namjeju #1
-	1,476,334	596		1,476,930	Namjeju #2
-	1,199,677	-	-	1,199,677	Ulsan #4
-	1,290,146	-	-	1,290,146	Ulsan #5
-	1,171,437	-	-	1,171,437	Ulsan #6
-	300,265	-	-	300,265	Jeju #2
-	634,284	510	-	634,794	Jeju #3
-	485,304	468	40,640	526,412	Pyeongtaek #1
-	569,967	539	33,745	604,250	Pyeongtaek #2
-	547,436	652	26,944	575,032	Pyeongtaek #3
-	816,100	607	31,116	847,822	Pyeongtaek #4
-	8,490,949	4,483	132,445	8,627,877	Total of heavy oil
-	-	0	669,712	669,712	Seoul #2
-	-	0	669,712	669,712	Total of L N G
494,645,335	8,796,031	670,327	802,157	504,913,851	Total of steam
-	-	-	2,253,026	2,253,026	Gunsan C/C
-	-	-	1,499,585	1,499,585	Boryeong C/C
-	-	569	9,491,837	9,492,406	Busan C/C
-	-	-	5,106,741	5,106,741	Bundang C/C
-	-	34	4,830,724	4,830,758	Seoincheon C/C

## 6. 발전소별 연료사용 실적 (4)

(\*17.1.1~12.31) 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	L. N. G (kcal/kg)
신인천C/C	-	-	-	472,310	-	-	-	13,076
안동C/C	-	-	-	183,056	-	-	-	13,106
영월C/C	-	-	76	81,335	-	-	8,950	13,098
울산C/C	-	-	-	863,230	-	-	-	8,060
인천C/C	-	-	-	846,783	-	-	-	14,962
일산C/C	-	-	-	203,931	-	-	-	5,218
평택C/C	-	-	-	385,319	-	-	-	13,082
한림C/C	-	-	28,433	-	-	-	8,807	-
한전 자회사 복합 계	-	-	28,577	4,806,364	-	-	8,808	12,183
당진C/C	-	-	-	949,569	-	-	-	13,373
부천C/C	-	-	-	179,044	-	-	-	13,078
안양C/C	-	-	-	253,770	-	-	-	13,083
울촌C/C	-	-	-	253,122	-	-	-	11,548
포스코에너지C/C	-	-	-	1,239,922	-	-	-	15,839
타사 복합 계	-	-	-	2,875,427	-	-	-	14,232
복합 계	-	-	28,577	7,681,791	-	-	-	12,950
세종천연가스발전소	-	-	-	418,126	-	-	-	-
집단 계	-	-	-	418,126	-	-	-	-
제주GT	-	-	1,019	-	-	-	7,778	-
제주내연	-	48,946	-	-	-	9,922	-	-
한전 도서내연(D/P)	-	-	70,225	-	-	-	8,984	-
내연력 계	-	48,946	71,244	-	-	-	-	-
한전, 자회사 계	90,296,155	927,885	173,561	5,285,852	5,478	10,003	8,993	12,573
타사 화력 계	-	-	-	2,875,427	-	-	-	14,232
화력 총계	90,296,155	927,885	173,561	8,161,279	5,478	10,003	8,993	13,158

※ 한전, 발전 5개사, 민간 4개사(포스코에너지, GS EPS, GS POWER, 씨지엔울촌) 화력발전 실적

(17. 1. 1 ~ 12.31)

사 용 열 량 Caloric Consumption (10 <sup>6</sup> kcal)					Items Plants
석 탄 Coal	중 유 Heavy oil	경 유 Diesel oil	L. N. G	계 Total	
-	-	-	6,176,134	6,176,134	Shinincheon C/C
-	-	-	2,399,061	2,399,061	Andong C/C
-	-	680	1,065,363	1,066,043	Yeongwol C/C
-	-	-	6,957,870	6,957,870	Ulsan C/C
-	-	-	12,669,625	12,669,625	Incheon C/C
-	-	-	1,064,033	1,064,033	Ilsan C/C
-	-	-	5,040,585	5,040,585	Pyeongtaek C/C
-	-	250,417	-	250,417	Hanlim C/C
-	-	251,700	58,554,584	58,806,284	Total of KEPCO Subsidiaries C/C
-	-	-	12,698,702	12,698,702	Dangjin C/C
-	-	-	2,341,560	2,341,560	Bucheon C/C
-	-	-	3,320,023	3,320,023	Anyang C/C
-	-	-	2,923,098	2,923,098	Yulchon C/C
-	-	-	19,639,592	19,639,592	POSCO energy C/C
-	-	-	40,922,974	40,922,974	Total of Other co. C/C
-	-	251,700	99,477,558	99,729,258	Total of combined cycle
			7,102,368	7,102,368	Sejong
			7,102,368	7,102,368	Total of Group energy
-	-	7,928		7,928	Jeju G/T
	485,642			485,642	Jeju D/P
-	-	630,926		630,926	Internal combustion in island
-	485,642	638,854	-	1,124,495	Total of internal combustion
494,645,335	9,281,673	1,560,881	66,459,109	571,946,998	Total of KEPCO & Sub.
-	-	-	40,922,974	40,922,974	Total of Other co.
494,645,335	9,281,673	1,560,880	107,382,083	612,869,972	Gross total

※ KEPCO & Subsidiaries, other 4 companies thermal power generation

## 7. 화력발전소 열효율 추이

(단위 : %) Trends in thermal plant efficiency

구분 연도별	기 력 Steam									
	무 연 탄 Anthracite coal		유 연 탄 Bituminous coal		중 유 Heavy oil		가 스 L N G		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
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
2012	38.55	35.26	38.75	36.83	36.27	34.09	36.24	34.80	38.53	36.55
2013	34.93	31.97	38.64	36.72	36.26	34.06	36.06	34.83	38.29	36.32
2014	36.26	33.05	38.94	36.97	38.55	36.31	34.21	32.70	38.79	36.76
2015	34.99	31.91	38.55	36.54	38.94	36.86	35.27	33.70	38.39	36.37
2016	35.24	32.11	38.12	36.11	38.09	36.03	30.46	28.89	37.99	35.94
2017	35.32	32.06	38.79	36.72	36.55	34.20	35.32	33.91	38.66	36.56
1	35.22	32.09	39.22	37.21	36.73	34.53	35.50	34.13	38.95	36.90
2	35.28	32.17	38.53	36.58	36.24	34.15	35.35	33.94	38.29	36.30
3	35.23	32.01	38.57	36.68	35.97	33.50	34.83	33.35	38.45	36.52
4	35.80	32.43	41.06	38.97	49.13	45.74			40.97	38.83
5	36.24	32.79	39.75	37.68	36.03	33.43			39.63	37.52
6	37.09	33.40	38.60	36.56	36.06	33.69			38.53	36.46
7	37.04	33.25	38.38	36.22	36.11	33.70			38.30	36.11
8	34.33	31.09	38.27	36.02	35.96	33.39			38.16	35.89
9	32.28	29.20	38.31	36.11	35.88	33.06			38.20	35.98
10	34.10	30.90	38.40	36.24	35.36	32.46			38.29	36.11
11	35.26	32.23	38.62	36.57	35.10	32.59			38.51	36.44
12	35.75	32.87	38.47	36.46	36.49	34.31			38.34	36.31

※ 한전, 발전 5개사, 민간 4개사(포스코에너지, GS EPS, GS POWER, 씨지엔올촌) 화력발전 실적

(Unit :%)

복 합 화 력 Combined cycle		내 연 력 Internal combustion		한전, 자회사 계 Total of KEPCO & Subsidiaries		타 사 Other co.		합 계 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
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
47.73	46.81	41.11	39.01	40.57	38.82	42.94	42.10	40.48	38.86	2012
45.42	44.30	41.20	38.95	40.06	38.29	36.04	35.50	39.55	37.94	2013
48.24	47.13	43.40	41.19	40.71	38.87	47.66	46.91	41.25	39.50	2014
50.21	49.07	40.35	41.18	39.97	38.07	48.31	47.09	40.92	38.62	2015
47.53	46.38	39.41	36.70	39.33	37.40	48.15	47.18	39.79	37.92	2016
46.16	45.13	38.80	33.73	39.50	37.51	44.30	43.40	39.82	37.90	2017
46.68	45.74	38.08	13.26	39.90	37.95	46.03	45.15	40.31	38.44	1
46.89	45.91	34.95	9.92	39.34	37.44	45.85	45.03	39.77	37.95	2
47.23	46.24	37.23	35.19	39.33	37.50	24.57	24.12	37.44	35.78	3
32.48	31.72	39.95	37.67	39.92	37.95	48.78	47.90	40.41	38.51	4
47.30	46.23	40.53	38.15	40.26	38.24	48.90	47.87	40.86	38.90	5
47.30	46.19	38.10	35.76	39.38	37.41	49.74	48.62	40.09	38.17	6
48.13	46.93	38.84	36.45	39.58	37.52	49.39	48.24	40.12	38.10	7
47.75	46.52	38.87	36.50	39.14	36.97	49.69	48.52	39.67	37.56	8
48.21	46.97	36.96	34.51	38.93	36.79	49.43	48.27	39.42	37.32	9
48.00	46.79	39.80	37.52	39.03	36.92	48.54	47.46	39.51	37.45	10
47.45	46.45	39.52	37.44	39.66	37.72	48.98	48.04	40.24	38.37	11
46.61	45.74	39.67	37.69	39.66	37.82	47.93	47.07	40.23	38.46	12

※ KEPCO &amp; Subsidiaries, other 4 companies thermal power generation



Statistics of Electric Power in Korea

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## II. 전력설비

Electric power facilities



## 8. 발전설비 추이 (1)

(단위 : kW) Trends in generating facilities

구분 연도별	한 전 , 자 회 사							
	수 력 Hydro				기 력 Steam			
	일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal	중 유 Heavy oil	L N G
1961	143,480	-		143,480	222,500	-	-	-
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	527,000	3,900,000	23,485	4,450,485	1,125,000	22,580,000	4,488,600	1,537,500
2009	529,340	3,900,000	27,920	4,457,260	1,125,000	23,080,000	4,478,600	887,500
2010	523,340	3,900,000	38,978	4,462,318	1,125,000	23,080,000	4,478,600	887,500
2011	591,680	4,700,000	38,172	5,329,852	1,125,000	23,080,000	4,478,600	887,500
2012	591,680	4,700,000	39,117	5,330,797	1,125,000	23,408,600	3,950,000	887,500
2013	595,180	4,700,000	39,117	5,334,297	1,125,000	23,408,600	3,950,000	887,500
2014	595,180	4,700,000	48,317	5,343,497	1,125,000	25,148,600	2,950,000	387,500
2015	595,180	4,700,000	49,547	5,344,727	1,125,000	25,148,600	2,950,000	387,500
2016	595,180	4,700,000	54,547	5,349,727	1,125,000	29,420,800	2,950,000	250,000
2017	595,180	4,700,000	56,297	5,351,477	600,000	33,524,578	2,950,000	0
1	595,180	4,700,000	54,547	5,349,727	1,125,000	29,510,700	2,950,000	250,000
2	595,180	4,700,000	54,547	5,349,727	1,125,000	29,510,700	2,950,000	250,000
3	595,180	4,700,000	54,547	5,349,727	1,125,000	29,510,700	2,950,000	250,000
4	595,180	4,700,000	53,547	5,348,727	1,000,000	29,510,700	2,950,000	
5	595,180	4,700,000	53,547	5,348,727	1,000,000	29,600,600	2,950,000	
6	595,180	4,700,000	53,547	5,348,727	1,000,000	32,598,589	2,950,000	
7	595,180	4,700,000	53,547	5,348,727	600,000	32,598,589	2,950,000	
8	595,180	4,700,000	53,547	5,348,727	600,000	32,598,589	2,950,000	
9	595,180	4,700,000	56,297	5,351,477	600,000	33,524,578	2,950,000	
10	595,180	4,700,000	56,297	5,351,477	600,000	33,524,578	2,950,000	
11	595,180	4,700,000	56,297	5,351,477	600,000	33,524,578	2,950,000	
12	595,180	4,700,000	56,297	5,351,477	600,000	33,524,578	2,950,000	

※ 2001. 4. 2 발전부문 분리

※ 발전설비는 자가용을 제외한 사업자용만 집계



(Unit: kW)

K E P C O & Subsidiaries							Items During
계 Total	복 합 화 력 Combined cycle	원 자 력 Nuclear	신재생 New & Renewable energy	집 단 Group energy	내 연 력 Internal Combustion	합 계 Total	
222,500	-	-		-	1,274	367,254	1961
20,058,500	8,385,000	13,715,683		-	270,950	44,566,083	2000
21,558,500	8,385,000	13,715,683		-	272,950	46,768,483	2001
21,748,500	8,985,000	15,715,683		-	275,150	49,560,683	2002
21,748,500	9,885,000	15,715,683		-	246,450	50,432,383	2003
23,311,100	10,785,000	16,715,683	6,000	-	252,280	53,906,843	2004
23,811,100	11,288,539	17,715,683	6,220	-	296,690	55,956,412	2005
24,391,100	11,288,539	17,715,683	11,470	-	296,690	58,141,662	2006
26,491,100	11,288,539	17,715,683	29,720	-	303,170	60,268,657	2007
29,731,100	11,288,539	17,715,683	36,687	-	306,815	63,529,309	2008
29,571,100	11,819,511	17,715,683	51,663	-	347,100	63,962,317	2009
29,571,100	13,385,911	17,715,683	73,662	-	351,000	65,559,674	2010
29,571,100	12,935,911	18,715,683	97,574	-	355,450	67,005,570	2011
29,371,100	12,935,911	20,715,683	127,277	-	367,340	68,848,108	2012
29,371,100	14,886,352	20,715,683	208,172	-	329,690	70,845,294	2013
29,611,100	15,543,311	20,715,683	231,482	530,441	329,690	72,305,204	2014
29,611,100	15,487,911	21,715,683	262,559	530,441	329,690	73,282,111	2015
33,745,800	15,487,911	23,115,683	657,542	530,441	329,440	79,216,544	2016
36,474,578	15,487,911	22,528,683	819,930	530,441	339,470	82,132,490	2017
32,710,700	15,487,911	23,115,683	657,542	530,441	339,050	79,316,054	1
32,710,700	15,487,911	23,115,683	657,542	530,441	339,050	79,316,054	2
32,710,700	15,487,911	23,115,683	668,129	530,441	339,050	79,326,641	3
32,460,700	15,487,911	23,115,683	793,129	530,441	339,050	79,075,641	4
32,550,600	15,487,911	23,115,683	793,129	530,441	339,260	79,165,751	5
35,548,589	15,487,911	22,528,683	795,349	530,441	339,260	81,578,960	6
35,548,589	15,487,911	22,528,683	795,349	530,441	339,260	81,178,960	7
35,548,589	15,487,911	22,528,683	806,880	530,441	339,260	81,190,491	8
36,474,578	15,487,911	22,528,683	808,129	530,441	339,470	82,120,689	9
36,474,578	15,487,911	22,528,683	808,129	530,441	339,470	82,120,689	10
36,474,578	15,487,911	22,528,683	808,129	530,441	339,470	82,120,689	11
36,474,578	15,487,911	22,528,683	819,930	530,441	339,470	82,132,490	12

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

## 8. 발전설비 추이 (2)

(단 위 : kW) Trends in generating facilities

구 분 연도별	타		사		Other		co.	
	수 력 Hydro		기 력	복 합 화 력 Combined cycle	신재생 New & Renewable energy	집 단 Group energy	합 계 Total	
	일 반 General	소 수 력 Small hydro	계 Total					유 연 탄 Bituminous coal
1961	-	-	-	-	-	-	-	-
2000	979,700	33,014	1,012,714	-	2,871,920	-	-	3,884,634
2001	1,004,100	35,314	1,039,414	-	3,050,750	-	-	4,090,164
2002	1,004,100	35,314	1,039,414	-	3,200,750	-	-	4,240,164
2003	1,004,100	35,929	1,040,029	-	3,200,750	-	1,379,515	5,620,294
2004	1,001,800	40,733	1,042,533	-	3,528,350	101,905	1,483,405	6,054,288
2005	1,001,800	42,833	1,044,633	-	3,726,250	149,402	1,530,902	6,301,785
2006	1,001,800	44,878	1,046,678	-	4,715,450	228,952	1,610,452	7,372,580
2007	1,000,600	51,042	1,051,642	-	5,222,450	832,689	1,725,439	7,999,531
2008	1,000,600	54,052	1,054,652	-	5,755,450	691,650	2,151,280	8,961,382
2009	1,000,600	56,712	1,057,312	-	5,755,450	1,084,689	2,694,899	9,507,661
2010	1,000,600	61,622	1,062,222	-	5,714,250	1,675,318	3,742,042	10,518,514
2011	1,000,600	87,937	1,088,537	-	6,863,450	1,761,086	4,384,310	12,336,297
2012	1,000,600	114,633	1,115,233	-	6,863,450	2,355,561	4,978,785	12,957,468
2013	1,000,600	119,565	1,120,165	-	8,586,880	3,310,530	6,416,598	16,123,643
2014	1,000,600	122,839	1,123,439	-	11,752,580	4,242,463	8,034,531	20,910,550
2015	986,600	139,382	1,125,982	-	13,024,280	5,386,808	10,216,387	24,366,649
2016	986,600	148,884	1,135,484	-	13,024,280	6,819,546	5,669,703	26,649,013
2017	986,600	151,379	1,137,979	1,190,000	16,928,316	8,366,992	7,151,863	34,775,150
1	986,600	148,904	1,135,504	-	13,024,280	7,092,105	5,669,703	26,921,592
2	986,600	148,904	1,135,504	-	13,871,880	7,104,646	5,669,703	27,781,733
3	986,600	148,904	1,135,504	595,000	15,593,680	7,172,787	5,669,703	30,166,674
4	986,600	148,904	1,135,504	595,000	16,439,680	7,343,353	6,082,303	31,595,840
5	986,600	148,904	1,135,504	595,000	16,439,680	7,413,655	6,542,003	32,125,842
6	986,600	148,904	1,135,504	595,000	16,439,680	7,413,989	6,542,003	32,126,176
7	986,600	148,904	1,135,504	595,000	16,485,516	7,413,989	6,542,003	32,172,012
8	986,600	149,253	1,135,853	1,190,000	16,485,516	7,661,876	6,542,003	33,015,248
9	986,600	149,253	1,135,853	1,190,000	16,485,516	7,798,858	6,518,003	33,128,230
10	986,600	149,269	1,135,869	1,190,000	16,928,316	8,006,913	6,518,003	33,779,101
11	986,600	149,269	1,135,869	1,190,000	16,928,316	8,006,913	6,896,383	34,157,481
12	986,600	151,379	1,137,979	1,190,000	16,928,316	8,366,992	7,151,863	34,775,150

(Unit:KW)

사 업 자 Public utility						Items During
수 력 Hydro			기 력 Steam			
일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminous coal	
143,480	-	-	143,480	222,500	-	1961
1,515,650	1,600,000	33,014	3,148,664	1,291,000	12,740,000	2000
1,540,450	2,300,000	35,314	3,875,764	1,291,000	14,240,000	2001
1,540,450	2,300,000	35,314	3,875,764	1,191,000	14,740,000	2002
1,540,850	2,300,000	35,929	3,876,779	1,191,000	14,740,000	2003
1,538,580	2,300,000	40,733	3,879,313	1,125,000	16,340,000	2004
1,539,980	2,300,000	42,833	3,882,813	1,125,000	16,840,000	2005
1,539,980	3,900,000	44,878	5,484,858	1,125,000	17,340,000	2006
1,541,045	3,900,000	51,042	5,492,087	1,125,000	19,340,000	2007
1,527,600	3,900,000	77,537	5,505,137	1,125,000	22,580,000	2008
1,529,940	3,900,000	84,632	5,514,572	1,125,000	23,080,000	2009
1,523,940	3,900,000	100,600	5,524,540	1,125,000	23,080,000	2010
1,592,280	4,700,000	126,109	6,418,389	1,125,000	23,080,000	2011
1,592,280	4,700,000	153,750	6,446,030	1,125,000	23,408,600	2012
1,595,780	4,700,000	158,682	6,454,462	1,125,000	23,408,600	2013
1,595,780	4,700,000	171,156	6,466,936	1,125,000	25,148,600	2014
1,581,780	4,700,000	188,929	6,470,709	1,125,000	25,148,600	2015
1,581,780	4,700,000	203,431	6,485,211	1,125,000	29,420,800	2016
1,581,780	4,700,000	207,676	6,489,456	600,000	34,714,578	2017
1,581,780	4,700,000	203,451	6,485,231	1,125,000	29,510,700	1
1,581,780	4,700,000	203,451	6,485,231	1,125,000	29,510,700	2
1,581,780	4,700,000	203,451	6,485,231	1,125,000	30,105,700	3
1,581,780	4,700,000	202,451	6,484,231	1,000,000	30,105,700	4
1,581,780	4,700,000	202,451	6,484,231	1,000,000	30,195,600	5
1,581,780	4,700,000	202,451	6,484,231	1,000,000	33,193,589	6
1,581,780	4,700,000	202,451	6,484,231	600,000	33,193,589	7
1,581,780	4,700,000	202,800	6,484,580	600,000	33,788,589	8
1,581,780	4,700,000	205,550	6,487,330	600,000	34,714,578	9
1,581,780	4,700,000	205,566	6,487,346	600,000	34,714,578	10
1,581,780	4,700,000	205,566	6,487,346	600,000	34,714,578	11
1,581,780	4,700,000	207,676	6,489,456	600,000	34,714,578	12

## 8. 발전설비 추이 (3)

(단 위 : kW) Trends in generating facilities

구 분 연도별	사 업 자					
	기 력 Steam			복 합 화 력 Combined cycle	원 자 력 Nuclear	신재생 New & Renewable energy
	중 유 Heavy oil	L N G	계 Total			
1961	-	-	222,500	-	-	...
2000	4,490,000	1,537,500	20,058,500	11,256,920	13,715,683	...
2001	4,490,000	1,537,500	21,558,500	11,435,750	13,715,683	...
2002	4,280,000	1,537,500	21,748,500	12,185,750	15,715,683	...
2003	4,280,000	1,537,500	21,748,500	13,085,750	15,715,683	83,315
2004	4,308,600	1,537,500	23,311,100	14,313,350	16,715,683	107,905
2005	4,308,600	1,537,500	23,811,100	15,014,789	17,715,683	155,622
2006	4,388,600	1,537,500	24,391,100	16,003,989	17,715,683	240,422
2007	4,488,600	1,537,500	26,491,100	16,510,989	17,715,683	862,409
2008	4,488,600	1,537,500	29,731,100	17,043,989	17,715,683	728,337
2009	4,478,600	887,500	29,571,100	17,574,961	17,715,683	1,136,352
2010	4,478,600	887,500	29,571,100	19,100,161	17,715,683	1,748,980
2011	4,478,600	887,500	29,571,100	19,799,361	18,715,683	1,858,660
2012	3,950,000	887,500	29,371,100	19,799,361	20,715,683	2,482,838
2013	3,950,000	887,500	29,371,100	23,473,232	20,715,683	3,518,702
2014	2,950,000	387,500	29,611,100	27,295,891	20,715,683	4,473,945
2015	2,950,000	387,500	29,611,100	28,512,191	21,715,683	5,649,367
2016	2,950,000	250,000	33,745,800	28,512,191	23,115,683	7,477,088
2017	2,950,000	0	38,264,578	32,416,227	22,528,683	9,186,923
1	2,950,000	250,000	33,835,700	28,512,191	23,115,683	7,749,647
2	2,950,000	250,000	33,835,700	29,359,791	23,115,683	7,762,188
3	2,950,000	250,000	34,430,700	31,081,591	23,115,683	7,840,916
4	2,950,000	0	34,055,700	31,927,591	23,115,683	8,136,482
5	2,950,000	0	34,145,600	31,927,591	23,115,683	8,206,784
6	2,950,000	0	37,143,589	31,927,591	22,528,683	8,209,338
7	2,950,000	0	36,743,589	31,973,427	22,528,683	8,209,338
8	2,950,000	0	37,338,589	31,973,427	22,528,683	8,468,756
9	2,950,000	0	38,264,578	31,973,427	22,528,683	8,606,987
10	2,950,000	0	38,264,578	32,416,227	22,528,683	8,815,042
11	2,950,000	0	38,264,578	32,416,227	22,528,683	8,815,042
12	2,950,000	0	38,264,578	32,416,227	22,528,683	9,186,923

※ 'p' 는 잠정수치임.

(Unit : kW)

Public utility			상용자가 Non-utility in common use	총 발전 설비 Total	Items During
집 단 Group energy	내 연 력 Internal Combustion	총 계 Total			
...	1,274	367,254	59,033	426,287	1961
...	270,950	48,450,717	5,234,196	53,684,913	2000
...	272,950	50,858,647	5,857,395	56,716,042	2001
...	275,150	53,800,847	5,813,255	59,614,102	2002
1,296,200	246,450	56,052,677	4,667,043	60,719,720	2003
1,381,500	252,280	59,961,131	4,591,443	64,552,574	2004
1,381,500	296,690	62,258,197	4,817,043	67,075,240	2005
1,381,500	296,690	65,514,242	4,319,500	69,833,742	2006
892,750	303,170	68,268,188	4,855,762	73,123,950	2007
1,459,630	306,815	72,490,692	4,089,658	76,580,350	2008
1,610,210	347,100	73,469,978	4,222,771	77,692,749	2009
2,066,724	351,000	76,078,188	3,905,605	79,983,793	2010
2,623,224	355,450	79,341,867	3,921,279	83,263,146	2011
2,623,224	367,340	81,805,576	4,043,517	85,849,093	2012
3,106,068	329,690	86,968,937	4,108,548	91,077,485	2013
4,322,509	329,690	93,215,755	3,709,470	96,925,225	2014
5,360,020	329,690	97,648,761	3,941,468	101,590,229	2015
6,200,144	329,440	105,865,557	3,923,734	109,789,291	2016
7,682,304	339,470	116,907,641	3,940,825	120,848,466	2017
6,200,144	339,050	106,237,646	...	...	1
6,200,144	339,050	107,097,787	...	...	2
6,200,144	339,050	109,493,315	...	...	3
6,612,744	339,050	110,671,481	...	...	4
7,072,444	339,260	111,291,593	...	...	5
7,072,444	339,260	113,705,136	...	...	6
7,072,444	339,260	113,350,972	...	...	7
7,072,444	339,260	114,205,739	...	...	8
7,048,444	339,470	115,248,919	...	...	9
7,048,444	339,470	115,899,790	...	...	10
7,426,824	339,470	116,278,170	...	...	11
7,682,304	339,470	116,907,641	...	...	12

※ ' p ' is a preliminary figures

## 8-1. 에너지원별 발전설비(2017)

(단위: kW)

발전원 에너지원	수력 Hydro				기력 Steam				
	일 반 General	양 수 Pumping	소 수 력 Small hydro	계 Total	무 연 탄 Anthracite coal	유 연 탄 Bituminou s coal	중 유 Heavy oil	L N G	계 Total
양수	0	4,700,000	0	4,700,000	0	0	0	0	0
무연탄	0	0	0	0	600,000	0	0	0	600,000
유연탄	0	0	0	0	0	34,714,578	0	0	34,714,578
유류	0	0	0	0	0	0	2,950,000	0	2,950,000
LNG	0	0	0	0	0	0	0	0	0
원자력	0	0	0	0	0	0	0	0	0
<b>소계</b>	<b>0</b>	<b>4,700,000</b>	<b>0</b>	<b>4,700,000</b>	<b>600,000</b>	<b>34,714,578</b>	<b>2,950,000</b>	<b>0</b>	<b>38,264,578</b>
수력	1,581,780	0	207,676	1,789,456	0	0	0	0	0
태양 에너지	0	0	0	0	0	0	0	0	0
풍력	0	0	0	0	0	0	0	0	0
해양 에너지	0	0	0	0	0	0	0	0	0
바이오 에너지	0	0	0	0	0	0	0	0	0
폐기물 에너지	0	0	0	0	0	0	0	0	0
매립가스	0	0	0	0	0	0	0	0	0
부생가스	0	0	0	0	0	0	0	0	0
연료전지	0	0	0	0	0	0	0	0	0
석탄 액화가스	0	0	0	0	0	0	0	0	0
<b>신재생 계</b>	<b>1,581,780</b>	<b>0</b>	<b>207,676</b>	<b>1,789,456</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>총 계</b>	<b>1,581,780</b>	<b>4,700,000</b>	<b>207,676</b>	<b>6,489,456</b>	<b>600,000</b>	<b>34,714,578</b>	<b>2,950,000</b>	<b>0</b>	<b>38,264,578</b>

※ 발전설비는 자가용을 제외한 사업자용만 집계

(단위:kW)

복합화력 Cmbined cycle			원자력 Nuclear	신재생 New&Re newable energy	집단 Group energy	내연력 Internal Combus tion	총계 Total
L N G	유류 oil	계 Total					
0	0	0	0	0	0	0	4,700,000
0	0	0	0	0	0	0	600,000
0	0	0	0	0	1,394,824	0	36,109,402
0	570,800	570,800	0	0	278,700	339,470	4,138,970
31,845,427	0	31,845,427	0	0	6,008,780	0	37,854,207
0	0	0	22,528,683	0	0	0	22,528,683
<b>31,845,427</b>	<b>570,800</b>	<b>32,416,227</b>	<b>22,528,683</b>	<b>0</b>	<b>7,682,304</b>	<b>339,470</b>	<b>105,931,262</b>
0	0	0	0	0	0	0	1,789,456
0	0	0	0	5,062,309	0	0	5,062,309
0	0	0	0	1,214,822	0	0	1,214,822
0	0	0	0	255,110	0	0	255,110
0	0	0	0	425,466	0	0	425,466
0	0	0	0	211,529	0	0	211,529
0	0	0	0	68,956	0	0	68,956
0	0	0	0	1,355,500	0	0	1,355,500
0	0	0	0	246,900	0	0	246,900
0	0	0	0	346,330	0	0	346,330
<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,186,923</b>	<b>0</b>	<b>0</b>	<b>10,976,378</b>
<b>31,845,427</b>	<b>570,800</b>	<b>32,416,227</b>	<b>22,528,683</b>	<b>9,186,923</b>	<b>7,682,304</b>	<b>339,470</b>	<b>116,907,641</b>

## 9. 발전소별 설비 추이 (1)

(단 위 : kW) Trends in generation facilities by plant

발전소별 \ 연도별	1961	2005	2007	2008	2009	2010	2011
화천	81,000	108,000	108,000	108,000	108,000	108,000	108,000
춘천	-	57,600	57,600	59,940	59,940	59,940	62,280
의암	-	45,000	45,000	45,000	45,000	45,000	45,000
청평	39,600	79,600	79,600	79,600	79,600	79,600	139,600
팔당	-	120,000	120,000	120,000	120,000	120,000	120,000
강릉	-	82,000	82,000	82,000	82,000	82,000	82,000
섬진강	14,400	34,800	34,800	34,800	34,800	34,800	34,800
한전 자회사 일반수력 계	135,000	527,000	527,000	529,340	529,340	529,340	591,680
소양강	-	200,000	200,000	200,000	200,000	200,000	200,000
충주	-	412,000	412,000	412,000	412,000	412,000	412,000
대청	-	90,000	90,000	90,000	90,000	90,000	90,000
안동	-	90,000	90,000	90,000	90,000	90,000	90,000
합천	-	101,200	100,000	100,000	100,000	100,000	100,000
임하	-	50,000	50,000	50,000	50,000	50,000	50,000
주암	-	22,500	22,500	22,500	22,500	22,500	22,500
용담	-	22,100	22,100	22,100	22,100	22,100	22,100
타사 일반수력 계	-	987,800	986,600	986,600	986,600	986,600	986,600
일반수력계	135,000	1,514,800	1,513,600	1,515,940	1,515,940	1,515,940	1,578,280
무주양수	-	600,000	600,000	600,000	600,000	600,000	600,000
예천양수	-	-	-	-	-	-	800,000
삼랑진양수	-	600,000	600,000	600,000	600,000	600,000	600,000
청평양수	-	400,000	400,000	400,000	400,000	400,000	400,000
양양양수	-	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
산청양수	-	700,000	700,000	700,000	700,000	700,000	700,000
청송양수	-	-	600,000	600,000	600,000	600,000	600,000
양수수력계	-	2,300,000	3,900,000	3,900,000	3,900,000	3,900,000	4,700,000
소수력 계	-	42,833	51,042	77,537	84,632	100,600	126,109
수력 계	135,000	3,857,633	5,464,642	5,493,477	5,500,572	5,516,540	6,404,389
영동	-	325,000	325,000	325,000	325,000	325,000	325,000
동해	-	400,000	400,000	400,000	400,000	400,000	400,000
서천	-	400,000	400,000	400,000	400,000	400,000	400,000
삼척	25,000	-	-	-	-	-	-
무연탄	25,000	1,125,000	1,125,000	1,125,000	1,125,000	1,125,000	1,125,000
당진	-	2,500,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000



(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
108,000	108,000	108,000	108,000	108,000	108,000	Hwacheon
62,280	62,280	62,280	62,280	62,280	62,280	Chuncheon
45,000	48,000	48,000	48,000	48,000	48,000	Uiam
139,600	140,100	140,100	140,100	140,100	140,100	Cheongpyeong
120,000	120,000	120,000	120,000	120,000	120,000	Paldang
82,000	82,000	82,000	82,000	82,000	82,000	Gangneung
34,800	34,800	34,800	34,800	34,800	34,800	Seomjingang
591,680	595,180	595,180	595,180	595,180	595,180	Total of KEPCO,Subsidiaries hydro
200,000	200,000	200,000	200,000	200,000	200,000	Soyanggang(K-Water)
412,000	412,000	412,000	412,000	412,000	412,000	Chungju(K-Water)
90,000	90,000	90,000	90,000	90,000	90,000	Daechung(K-Water)
90,000	90,000	90,000	90,000	90,000	90,000	Andong(K-Water)
100,000	100,000	100,000	100,000	100,000	100,000	Hapchun(K-Water)
50,000	50,000	50,000	50,000	50,000	50,000	Imha(K-Water)
22,500	22,500	22,500	22,500	22,500	22,500	Juam(K-Water)
22,100	22,100	22,100	22,100	22,100	22,100	Yongdam(K-Water)
986,600	986,600	986,600	986,600	986,600	986,600	Total of Other co. hydro
1,578,280	1,581,780	1,581,780	1,581,780	1,581,780	1,581,780	Total of hydro
600,000	600,000	600,000	600,000	600,000	600,000	Muju pumping
800,000	800,000	800,000	800,000	800,000	800,000	Yeoicheon pumping
600,000	600,000	600,000	600,000	600,000	600,000	Samnangjin pumping
400,000	400,000	400,000	400,000	400,000	400,000	Ch'ongp'yeong pumping
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Yangyang pumping
700,000	700,000	700,000	700,000	700,000	700,000	Sanchong pumping
600,000	600,000	600,000	600,000	600,000	600,000	Cheongsong pumping
4,700,000	4,700,000	4,700,000	4,700,000	4,700,000	4,700,000	Total of pumping
153,750	158,682	171,156	188,929	203,431	207,676	Total of small hydro
6,432,030	6,440,462	6,452,936	6,470,709	6,485,211	6,489,456	Total of hydro
325,000	325,000	325,000	325,000	325,000	200,000	Yeongdong
400,000	400,000	400,000	400,000	400,000	400,000	Donghae Total
400,000	400,000	400,000	400,000	400,000	-	Seocheon Total
-	-	-	-	-	-	Samcheok
1,125,000	1,125,000	1,125,000	1,125,000	1,125,000	600,000	Total of anthracite coal
4,000,000	4,000,000	4,000,000	4,000,000	5,860,200	6,040,000	Dangin

## 9. 발전소별 설비 추이 (2)

(단 위 : kW) Trends in generation facilities by plant

발전소별 연도별	1961	2005	2007	2008	2009	2010	2011
보령	-	3,000,000	3,000,000	4,000,000	4,000,000	4,000,000	4,000,000
삼척그린파워	-	-	-	-	-	-	-
삼천포	-	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000
신보령	-	-	-	-	-	-	-
여수	-	528,600	528,600	528,600	528,600	528,600	528,600
영흥	-	1,600,000	1,600,000	3,340,000	3,340,000	3,340,000	3,340,000
태안	-	3,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
하동	-	3,000,000	3,000,000	3,500,000	4,000,000	4,000,000	4,000,000
호남	-	500,000	500,000	500,000	500,000	500,000	500,000
한전 자회사 유연탄 계	-	17,368,600	19,868,600	23,108,600	23,608,600	23,608,600	23,608,600
북평	-	-	-	-	-	-	-
타회사 유연탄 계	-	-	-	-	-	-	-
유연탄 계	-	17,368,600	19,868,600	23,108,600	23,608,600	23,608,600	23,608,600
석탄 계	25,000	18,493,600	20,993,600	24,233,600	24,733,600	24,733,600	24,733,600
남제주	-	20,000	200,000	200,000	200,000	200,000	200,000
울산	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
제주	-	150,000	150,000	150,000	150,000	150,000	150,000
평택	-	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000
영남	-	400,000	400,000	400,000	400,000	400,000	400,000
제주#1	-	10,000	10,000	10,000	-	-	-
마산	50,000	-	-	-	-	-	-
중유 계	50,000	3,780,000	3,960,000	3,960,000	3,950,000	3,950,000	3,950,000
서울	47,500	387,500	387,500	387,500	387,500	387,500	387,500
인천	-	1,150,000	1,150,000	1,150,000	500,000	500,000	500,000
가스 계	47,500	1,537,500	1,537,500	1,537,500	887,500	887,500	887,500
기력 계	122,500	23,811,100	26,491,100	29,731,100	29,571,100	29,571,100	29,571,100
군산C/C	-	-	-	-	-	718,400	718,400
보령C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,350,000
부산C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
분당C/C	-	900,000	900,000	900,000	922,064	922,064	922,064
서인천C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
신인천C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
안동C/C	-	-	-	-	-	-	-

(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	Boryeong
-	-	-	-	1,022,000	2,044,000	Samcheok Greenpower
3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	Samchonpo
-	-	-	-	-	1,851,978	Sinboryeong
328,600	328,600	328,600	328,600	668,600	668,600	Yeosu
3,340,000	3,340,000	5,080,000	5,080,000	5,080,000	5,080,000	Yeongheung
4,000,000	4,000,000	4,000,000	4,000,000	5,050,000	6,100,000	Taeon
4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	Hadong
500,000	500,000	500,000	500,000	500,000	500,000	Honam
23,408,600	23,408,600	25,148,600	25,148,600	29,420,800	33,524,578	Total of KEPCO Subsidiaries bituminous coal
-	-	-	-	-	1,190,000	Bukpyeong
-	-	-	-	-	1,190,000	Total of Other co. bituminous coal
23,408,600	23,408,600	25,148,600	25,148,600	29,420,800	34,714,578	Total of bituminous coal
24,533,600	24,533,600	26,273,600	26,273,600	30,545,800	35,314,578	Total of coal
200,000	200,000	200,000	200,000	200,000	200,000	Namjeju
1,800,000	1,800,000	1,200,000	1,200,000	1,200,000	1,200,000	Ulsan
150,000	150,000	150,000	150,000	150,000	150,000	Jeju
1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	Pyeongtaek
400,000	400,000	-	-	-	-	Yeongnam
-	-	-	-	-	-	Jeju #1
-	-	-	-	-	-	Masan
3,950,000	3,950,000	2,950,000	2,950,000	2,950,000	2,950,000	Total of heavy oil
387,500	387,500	387,500	387,500	250,000	-	Seoul
500,000	500,000	-	-	-	-	Incheon
887,500	887,500	387,500	387,500	250,000	-	Total of L.N.G
29,371,100	29,371,100	29,611,100	29,611,100	33,745,800	38,264,578	Total of steam
718,400	718,400	718,400	718,400	718,400	718,400	Gunsan C/C
1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	Boryeong C/C
1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	Busan C/C
922,064	922,064	922,064	922,064	922,064	922,064	Bundang C/C
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	Shincheon C/C
-	-	417,000	361,600	361,600	361,600	Andong C/C

## 9. 발전소별 설비 추이 (3)

(단 위 : kW) Trends in generation facilities by plant

발전소별 연도별	1961	2005	2007	2008	2009	2010	2011
영월C/C	-	-	-	-	-	848,000	848,000
울산C/C	-	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
인천C/C	-	503,539	503,539	503,539	1,012,447	1,012,447	1,012,447
일산C/C	-	900,000	900,000	900,000	900,000	900,000	900,000
평택C/C	-	480,000	480,000	480,000	480,000	480,000	480,000
한림C/C	-	105,000	105,000	105,000	105,000	105,000	105,000
한전 자회사 복합 계	-	11,288,539	11,288,539	11,288,539	11,819,511	13,385,911	12,935,911
광양C/C	-	-	989,200	989,200	989,200	989,200	989,200
당진C/C	-	500,750	500,750	1,033,750	1,033,750	1,033,750	1,033,750
동두천C/C	-	-	-	-	-	-	-
부산정관에너지	-	-	-	-	-	-	-
부천C/C	-	450,000	450,000	450,000	450,000	450,000	450,000
안산C/C	-	-	-	-	-	-	-
안양C/C	-	450,000	450,000	450,000	450,000	450,000	450,000
영남파워	-	-	-	-	-	-	-
오성C/C	-	-	-	-	-	-	-
울촌C/C	-	525,500	525,500	525,500	525,500	525,500	525,500
파주문산C/C	-	-	-	-	-	-	-
포스코에너지C/C	-	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	2,949,200
포천C/C	-	-	-	-	-	-	-
포천천연C/C	-	-	-	-	-	-	-
대산C/C	-	-	507,000	507,000	507,000	465,800	465,800
타사 복합 계	-	3,726,250	5,222,450	5,755,450	5,755,450	5,714,250	6,863,450
복합화력 계	-	15,014,789	16,510,989	17,043,989	17,574,961	19,100,161	19,799,361
고리#1	-	587,000	587,000	587,000	587,000	587,000	587,000
고리#2	-	650,000	650,000	650,000	650,000	650,000	650,000
고리#3	-	950,000	950,000	950,000	950,000	950,000	950,000
고리#4	-	950,000	950,000	950,000	950,000	950,000	950,000
신고리#1	-	-	-	-	-	-	1,000,000
신고리#2	-	-	-	-	-	-	-
신고리#3	-	-	-	-	-	-	-
월성#1	-	678,683	678,683	678,683	678,683	678,683	678,683
월성#2	-	700,000	700,000	700,000	700,000	700,000	700,000
월성#3	-	700,000	700,000	700,000	700,000	700,000	700,000

(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
848,000	848,000	848,000	848,000	848,000	848,000	Yeongwol C/C
1,200,000	1,686,000	2,071,900	2,071,900	2,071,900	2,071,900	Ulsan C/C
1,012,447	1,462,447	1,462,447	1,462,447	1,462,447	1,462,447	Incheon C/C
900,000	900,000	900,000	900,000	900,000	900,000	Ilsan C/C
480,000	964,000	1,348,500	1,348,500	1,348,500	1,348,500	Pyeongtaek C/C
105,000	105,000	105,000	105,000	105,000	105,000	Hanlim C/C
12,935,911	14,355,911	15,543,311	15,487,911	15,487,911	15,487,911	Total of KEPCO Subsidiaries C/C
989,200	989,200	989,200	989,200	989,200	989,200	Kwangyang C/C
1,033,750	1,415,750	1,415,750	1,415,750	1,415,750	2,261,750	Dangjin C/C
-	-	-	1,716,800	1,716,800	1,716,800	Dongducheon C/C
-	-	-	-	-	45,836	Busanjeonggwan energy
450,000	450,000	450,000	450,000	450,000	450,000	Bucheon C/C
-	-	751,200	751,200	751,200	751,200	Ansan C/C
450,000	450,000	450,000	450,000	450,000	450,000	Anyang C/C
-	-	-	-	-	442,800	Yeongnam power
-	-	769,830	769,830	769,830	769,830	Oseong C/C
525,500	1,097,100	1,389,700	1,389,700	1,389,700	1,389,700	Yulchon C/C
-	-	-	-	-	1,695,200	Pajumunsan C/C
2,949,200	2,949,200	3,250,400	3,176,000	3,176,000	3,176,000	POSCO energy C/C
-	-	1,450,000	1,450,000	1,450,000	1,450,000	Pocheon C/C
-	-	-	-	-	874,200	Pocheoncheonyeon C/C
465,800	465,800	465,800	465,800	465,800	465,800	Daesan C/C
6,863,450	7,817,050	11,381,880	13,024,280	13,024,280	16,928,316	Total of Other co. C/C
19,799,361	22,172,961	26,925,191	28,512,191	28,512,191	32,416,227	Total of combined cycle
587,000	587,000	587,000	587,000	587,000	-	Kori #1
650,000	650,000	650,000	650,000	650,000	650,000	Kori #2
950,000	950,000	950,000	950,000	950,000	950,000	Kori #3
950,000	950,000	950,000	950,000	950,000	950,000	Kori #4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Sinkori #1
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Sinkori #2
-	-	-	-	1,400,000	1,400,000	Sinkori #3
678,683	678,683	678,683	678,683	678,683	678,683	Wolsong #1
700,000	700,000	700,000	700,000	700,000	700,000	Wolsong #2
700,000	700,000	700,000	700,000	700,000	700,000	Wolsong #3

## 9. 발전소별 설비 추이 (4)

(단 위 : kW) Trends in generation facilities by plant

발전소별 연도별	1961	2005	2007	2008	2009	2010	2011
월성#4	-	700,000	700,000	700,000	700,000	700,000	700,000
신월성#1	-	-	-	-	-	-	-
신월성#2	-	-	-	-	-	-	-
한빛#1	-	950,000	950,000	950,000	950,000	950,000	950,000
한빛#2	-	950,000	950,000	950,000	950,000	950,000	950,000
한빛#3	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한빛#4	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한빛#5	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한빛#6	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한울#1	-	950,000	950,000	950,000	950,000	950,000	950,000
한울#2	-	950,000	950,000	950,000	950,000	950,000	950,000
한울#3	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한울#4	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한울#5	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
한울#6	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
원자력 계	-	17,715,683	17,715,683	17,715,683	17,715,683	17,715,683	18,715,683
태양광	-	-	-	-	-	-	-
풍력	-	-	-	-	-	-	-
해양에너지	-	-	-	-	-	-	-
바이오매스	-	-	-	-	-	-	-
매립가스	-	-	-	-	-	-	-
폐기물에너지	-	-	-	-	-	-	-
부생가스	-	-	-	-	-	-	-
연료전지	-	-	-	-	-	-	-
석탄액화가스	-	-	-	-	-	-	-
신재생 계	-	-	-	-	-	-	-
세종열병합C/C	-	-	-	-	-	-	-
타사집단계	-	1,530,902	892,750	1,459,630	1,610,210	2,066,724	2,623,224
집단 계	-	1,530,902	892,750	1,459,630	1,610,210	2,066,724	2,623,224
제주G/T	-	165,000	165,000	165,000	165,000	165,000	165,000
제주내연	-	40,000	40,000	40,000	80,000	80,000	80,000
가거도	-	450	750	750	750	750	750
가의도	-	240	240	240	240	240	240

※ 2016년 이후 신재생 세부분류 표기

(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
700,000	700,000	700,000	700,000	700,000	700,000	Wolsong #4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Sinwolsong #1
-	-	-	1,000,000	1,000,000	1,000,000	Sinwolsong #2
950,000	950,000	950,000	950,000	950,000	950,000	Hanbit #1
950,000	950,000	950,000	950,000	950,000	950,000	Hanbit #2
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanbit #3
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanbit #4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanbit #5
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanbit #6
950,000	950,000	950,000	950,000	950,000	950,000	Hanul #1
950,000	950,000	950,000	950,000	950,000	950,000	Hanul #2
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanul #3
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanul #4
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanul #5
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	Hanul #6
20,715,683	20,715,683	20,715,683	21,715,683	23,115,683	22,528,683	Total of nuclear
-	-	-	-	3,716,319	5,062,309	Solar
-	-	-	-	1,051,006	1,214,822	Wind power
-	-	-	-	255,110	255,110	Ocean energy
-	-	-	-	282,412	425,466	Bio
-	-	-	-	68,956	68,956	Landfill-gas
-	-	-	-	186,635	211,529	Waste-burnup
-	-	-	-	1,355,500	1,355,500	Product-gas
-	-	-	-	214,820	246,900	Fuel cell
-	-	-	-	346,330	346,330	IGCC
-	-	-	-	7,477,088	9,186,923	Total of New&Renewable energy
-	530,441	530,441	530,441	530,441	530,441	Sejong
2,623,224	3,875,898	3,792,068	4,829,579	5,669,703	7,151,863	Total of Other co. Group energy
2,623,224	4,406,339	4,322,509	5,360,020	6,200,144	7,682,304	Total of Group energy
165,000	165,000	165,000	165,000	165,000	165,000	Jeju G/T
80,000	80,000	80,000	80,000	80,000	80,000	Jeju D/P
1,050	1,050	1,050	1,050	1,050	1,050	Gageodo
240	240	240	240	240	240	Gauido

※ Detailed classification of new&renewable energy is notated since 2016

## 9. 발전소별 설비 추이 (5)

(단 위 : kW) Trends in generation facilities by plant

발전소별 / 연도별	1961	2005	2007	2008	2009	2010	2011
가파도	-	450	450	450	450	450	450
개야도	-	750	1,500	1,500	1,500	1,500	1,500
거문도	-	2,500	3,500	3,500	3,500	3,500	3,500
고대도	-	-	300	300	300	300	300
구자도	-	-	-	240	240	240	240
낙월도	-	-	-	750	750	750	750
녹도	-	-	-	240	240	240	240
대청도	-	1,350	1,850	1,850	1,850	1,850	1,850
덕우도	-	390	390	390	390	390	390
덕적도	-	2,900	2,900	2,900	2,900	2,900	2,900
독거도	-	-	-	240	240	240	240
득량도	-	-	-	300	300	300	300
매물도	-	240	240	240	240	240	240
문갑도	-	-	240	240	240	240	240
백령도	-	9,000	9,000	9,000	9,000	9,000	9,000
비안도	-	240	240	240	240	240	240
비양도	-	240	240	240	240	240	240
삼시도	-	450	900	900	900	900	900
상화도	-	-	-	-	-	-	-
성남도	-	-	-	240	240	240	240
소연평도	-	-	-	-	-	-	-
소청도	-	300	550	550	700	2,650	2,650
손죽도	-	-	-	-	-	-	-
송이도	-	-	-	240	240	240	240
수우도	-	240	240	240	240	240	240
슬도	-	-	-	240	240	240	240
승봉도	-	950	950	950	950	950	950
시산도	-	-	-	750	750	750	750
어룡도	-	-	-	-	240	240	240
어의도	-	240	240	240	240	240	240
어청도	-	450	900	900	900	900	900
여서도	-	240	240	240	240	240	240
여자도	-	450	450	450	450	450	450



(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
450	450	450	450	450	450	Gapado
1,500	1,500	1,500	1,500	1,500	1,500	Gaeyado
3,500	3,500	3,500	3,500	3,500	4,500	Geomundo
300	300	300	300	300	400	Godaedo
240	240	240	240	240	240	Gujado
750	750	750	750	750	750	Nakwoldo
260	260	260	260	260	260	Nokdo
3,550	3,550	3,550	3,550	3,550	3,550	Daecheongdo
390	390	390	390	390	390	Deokwoodo
2,900	2,900	2,900	2,900	2,900	2,900	Duckjuckdo
160	160	160	160	160	160	Doggeodo
300	300	300	300	300	300	Deukryangdo
240	240	240	240	240	450	Maemuldo
240	240	240	240	240	240	Mungabdo
9,000	9,600	9,600	9,600	9,600	15,000	Baekryeongdo
240	240	240	240	240	280	Biando
240	240	240	240	240	240	Biyangdo
900	900	900	900	900	1,600	Sabsido
240	240	240	240	240	240	Sanghwado
160	160	160	160	160	160	Seongnamdo
-	300	300	300	300	600	Yeonpyeongdo
2,650	2,650	2,650	2,650	2,400	2,400	Socheongdo
300	300	300	300	300	300	Sonjukdo
260	260	260	260	260	260	Songido
160	160	160	160	160	160	Suwoodo
240	240	240	240	240	240	Seuldo
1,950	1,950	1,950	1,950	1,950	1,950	Seungbongdo
750	750	750	750	750	750	Sisando
240	240	240	240	240	240	Eoryongdo
160	160	160	160	160	160	Eoedo
900	1,250	1,250	1,250	1,250	1,250	Yeoecheongdo
240	240	240	240	240	240	Yeoseodo
450	450	450	450	450	450	Yeogado

## 9. 발전소별 설비 추이 (6)

(단 위 : kW) Trends in generation facilities by plant

발전소별 / 연도별	1961	2005	2007	2008	2009	2010	2011
연도	-	240	240	240	240	240	240
연평도	-	3,350	3,350	3,350	3,350	3,350	3,350
영산도	-	-	-	-	-	-	-
왕등도	-	-	-	-	-	-	-
외도	-	-	-	-	-	-	-
외연도	-	300	600	600	600	750	750
울도	-	-	-	-	-	-	-
울릉도	-	9,500	9,500	9,500	9,500	9,500	9,500
위도	-	3,850	2,850	2,850	2,850	2,850	2,850
자월도	-	950	950	950	950	1,650	1,650
장고도	-	-	240	240	240	240	240
조도	-	2,200	2,200	2,200	2,200	2,200	2,200
초도	-	-	-	-	-	-	-
추도	-	240	240	240	240	240	240
추자도	-	2,700	4,400	4,400	4,400	4,400	4,400
평도	-	-	-	-	-	-	-
풍도	-	240	240	240	240	240	240
호도	-	-	-	300	300	300	300
홍도	-	750	1,250	1,250	1,250	2,350	2,350
화도	-	-	-	-	-	-	-
흑산도	-	3,500	3,500	3,500	3,500	3,500	3,500
한림	160	-	-	-	-	-	-
거제(완도)	64	-	-	-	-	-	-
모슬포	200	-	-	-	-	-	-
서귀포	100	-	-	-	-	-	-
제주	750	-	-	-	-	-	-
남제주	-	40,000	40,000	40,000	40,000	40,000	40,000
대모도	-	750	750	750	750	750	750
신시도	-	300	300	300	300	300	-
장자도	-	750	1,250	1,250	1,250	1,250	-
내연력 계	-	254,890	260,870	264,410	304,800	308,700	308,700
한전, 자회사계	267,254	44,661,653	60,249,212	63,502,059	63,928,397	65,520,696	66,961,398
타사계	-	1,530,902	7,999,531	8,961,382	9,507,661	10,518,514	12,336,297
<b>총계</b>	<b>267,254</b>	<b>62,264,332</b>	<b>68,248,743</b>	<b>72,463,441</b>	<b>73,436,058</b>	<b>76,039,210</b>	<b>79,297,695</b>

(Unit : kW)

2012	2013	2014	2015	2016	2017	End of Plants
260	260	260	260	260	260	yeondo
7,700	7,700	7,700	7,700	7,700	7,700	Yeonpyeongdo
-	-	-	-	-	240	Yeongsando
240	240	240	240	240	240	Wangdeungdo
-	-	-	-	-	220	Yoido
750	750	750	750	750	750	Yoiyeondo
240	240	240	240	240	240	Wooldo
12,500	12,500	12,500	12,500	12,500	18,500	Ulleungdo
2,850	2,850	2,850	2,850	2,850	2,850	Wido
1,650	1,650	1,650	1,650	1,650	1,650	Gawoldo
240	240	240	240	240	450	Janggodo
2,000	2,000	2,000	2,000	2,000	3,400	Jodo
750	750	750	750	750	750	Chodo
240	240	240	240	240	240	Chudo
4,400	5,500	5,500	5,500	5,500	5,500	Chujado
240	240	240	240	240	240	Pyeongdo
240	240	240	240	240	450	Pungdo
300	300	300	300	300	300	Hodo
2,350	2,350	2,350	2,350	2,350	2,350	Hongdo
240	240	240	240	240	240	Whado
4,000	4,000	4,000	4,000	4,000	4,000	Heuksando
-	-	-	-	-	-	Hanlim
-	-	-	-	-	-	Geoje
-	-	-	-	-	-	Moslpo
-	-	-	-	-	-	Seogwipo
-	-	-	-	-	-	Jeju
40,000	-	-	-	-	-	Namjeju
-	-	-	-	-	-	Daemodo
-	-	-	-	-	-	Sinsido
-	-	-	-	-	-	Jangjado
321,340	323,690	323,690	323,690	323,440	339,470	Total of internal combustion
68,802,991	70,800,177	72,250,887	73,226,564	79,216,544	82,132,490	Total of KEPCO & Subsidiaries
12,957,468	16,123,643	20,910,550	24,366,649	26,649,013	34,775,150	Total of Other Co.
<b>81,760,459</b>	<b>86,923,820</b>	<b>93,161,438</b>	<b>97,593,214</b>	<b>105,865,557</b>	<b>116,907,641</b>	<b>Total</b>

# 10. 발전소별 설비 현황 (1)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31. '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
한수원	화천	108,000	27,000	4	강원	Hwacheon
한수원	춘천	62,280	31,140	2	강원	Chuncheon
한수원	의암	48,000	24,000	2	강원	Uiam
한수원	청평	39,600	19,800	2	경기	Cheongpyeong
한수원	청평	40,500	40,500	1	경기	Cheongpyeong
한수원	청평	60,000	60,000	1	경기	Cheongpyeong
한수원	팔당	120,000	30,000	4	경기	Paldang
한수원	강릉	82,000	41,000	2	강원	Gangneung
한수원	섬진강	28,800	14,400	2	전북	Seomjingang
한수원	섬진강	6,000	6,000	1	전북	Seomjingang
수자원공사	소양강	200,000	100,000	2	강원	Soyanggang
수자원공사	충주	400,000	100,000	4	충북	Chungju
수자원공사	충주	12,000	6,000	2	충북	Chungju
수자원공사	대청	90,000	45,000	2	충북	Daechung
수자원공사	안동	90,000	45,000	2	경북	Andong
수자원공사	합천	100,000	50,000	2	경남	Hapchun
수자원공사	임하	50,000	25,000	2	경북	Imha
수자원공사	주암	22,500	11,250	2	전남	Juam
수자원공사	용담	22,100	11,050	2	전북	Yongdam
일반수력 계		1,581,780		41		Total of general hydro
한수원	무주양수	600,000	300,000	2	전북	Muju pumping
한수원	예천양수	800,000	400,000	2	경북	Yeoicheon pumping
한수원	삼랑진양수	600,000	300,000	2	경남	Samnangjin pumping
한수원	청평양수	400,000	200,000	2	경기	Cheongpyeong pumping
한수원	양양양수	1,000,000	250,000	4	강원	Yangyang pumping
한수원	청송양수	600,000	300,000	2	경북	Cheongsong pumping
한수원	산청양수	700,000	350,000	2	경남	Sanchong pumping
양수 계		4,700,000		16		Total of pumping
소수력계		207,676		251		Total of small hydro
수력 계		6,489,456		308		Total of hydro
남동	영동	200,000	200,000	1	강원	Yeongdong
동서	동해	400,000	200,000	2	강원	Donghae
무연탄 계		600,000		3		Total of anthracite coal
동서	당진	4,000,000	500,000	8	충남	Dangjin

## 10. 발전소별 설비 현황 (2)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31. '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
동서	당진	2,040,000	1,020,000	2	충남	Dangjin
중부	보령	4,000,000	500,000	8	충남	Boryeong
남부	삼척그린파워	2,044,000	1,022,000	2	강원	SamcheokGreenpower
남동	삼천포	2,240,000	560,000	4	경남	Samchonpo
남동	삼천포	1,000,000	500,000	2	경남	Samchonpo
중부	신보령	1,851,978	925,989	2	충남	Sinboryeong
남동	여수	328,600	328,600	1	전남	Yeosu
남동	여수	340,000	340,000	1	전남	Yeosu
남동	영흥	1,600,000	800,000	2	인천	Yeongheung
남동	영흥	3,480,000	870,000	4	인천	Yeongheung
서부	태안	4,000,000	500,000	8	충남	Taeon
서부	태안	2,100,000	1,050,000	2	충남	Taeon
남부	하동	4,000,000	500,000	8	경남	Hadong
동서	호남	500,000	250,000	2	전남	Honam
GS동해전력	북평	1,190,000	595,000	2	강원	Bukpyeong
유연탄 계		34,714,578		58		Total of bituminous coal
남부	남제주	200,000	100	2	제주	Namjeju
동서	울산	1,200,000	400	3	울산	Ulsan
중부	제주	150,000	75	2	제주	Jeju
서부	평택	1,400,000	350	4	경기	Pyeongtaek
유류 계		2,950,000		11		Total of heavy oil
기력 계		38,264,578		72		Total of steam
서부	군산C/C	466,600	233,300	2(GT복합)	전북	GunsanC/C
서부	군산C/C	251,800	251,800	1(ST복합)	전북	GunsanC/C
중부	보령C/C	900,000	150,000	6(GT복합)	충남	BoryeongC/C
중부	보령C/C	450,000	150,000	3(ST복합)	충남	BoryeongC/C
남부	부산C/C	1,200,000	150,000	8(GT복합)	부산	BusanC/C
남부	부산C/C	600,000	150,000	4(ST복합)	부산	BusanC/C
남동	분당C/C	622,064	77,758	8(GT복합)	경기	BundangC/C
남동	분당C/C	185,000	185,000	1(ST복합)	경기	BundangC/C
남동	분당C/C	115,000	115,000	1(ST복합)	경기	BundangC/C
서부	서인천C/C	1,200,000	150,000	8(GT복합)	인천	SeoincheonC/C
서부	서인천C/C	600,000	75,000	8(ST복합)	인천	SeoincheonC/C
남부	신인천C/C	1,200,000	150,000	8(GT복합)	인천	ShinincheonC/C
남부	신인천C/C	600,000	150,000	4(ST복합)	인천	ShinincheonC/C

# 10. 발전소별 설비 현황 (3)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31. '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
남부	안동C/C	234,500	234,500	1(GT복합)	경북	AndongC/C
남부	안동C/C	127,100	127,100	1(ST복합)	경북	AndongC/C
남부	영월C/C	549,000	183,000	3(GT복합)	강원	YeongwolC/C
남부	영월C/C	299,000	299,000	1(ST복합)	강원	YeongwolC/C
동서	울산C/C	200,000	100,000	2(GT복합)	울산	UlsanC/C
동서	울산C/C	100,000	100,000	1(ST복합)	울산	UlsanC/C
동서	울산C/C	600,000	150,000	4(GT복합)	울산	UlsanC/C
동서	울산C/C	300,000	150,000	2(ST복합)	울산	UlsanC/C
동서	울산C/C	573,200	286,600	2(GT복합)	울산	UlsanC/C
동서	울산C/C	298,700	298,700	1(ST복합)	울산	UlsanC/C
중부	인천C/C	321,458	160,729	2(GT복합)	인천	IncheonC/C
중부	인천C/C	182,081	182,081	1(ST복합)	인천	IncheonC/C
중부	인천C/C	327,958	163,979	2(GT복합)	인천	IncheonC/C
중부	인천C/C	180,950	180,950	1(ST복합)	인천	IncheonC/C
중부	인천C/C	300,000	150,000	2(GT복합)	인천	IncheonC/C
중부	인천C/C	150,000	150,000	1(ST복합)	인천	IncheonC/C
동서	일산C/C	600,000	100,000	6(GT복합)	경기	IlsanC/C
동서	일산C/C	200,000	200,000	1(ST복합)	경기	IlsanC/C
동서	일산C/C	100,000	100,000	1(ST복합)	경기	IlsanC/C
서부	평택C/C	320,000	80,000	4(GT복합)	경기	PyeongtaekC/C
서부	평택C/C	160,000	160,000	1(ST복합)	경기	PyeongtaekC/C
서부	평택C/C	572,600	286,300	2(GT복합)	경기	PyeongtaekC/C
서부	평택C/C	295,900	295,900	1(ST복합)	경기	PyeongtaekC/C
남부	한림C/C	70,000	35,000	2(GT유류)	제주	HanlimC/C
남부	한림C/C	35,000	35,000	1(ST유류)	제주	HanlimC/C
에스케이이엔에스(주)	광양C/C	612,400	153,100	4(GT복합)	전남	KwangyangC/C
에스케이이엔에스(주)	광양C/C	376,800	188,400	2(ST복합)	전남	KwangyangC/C
GS EPS	당진C/C	321,920	160,960	2(GT복합)	충남	DangjinC/C
GS EPS	당진C/C	178,830	178,830	1(ST복합)	충남	DangjinC/C
GS EPS	당진C/C	349,000	174,500	2(GT복합)	충남	DangjinC/C
GS EPS	당진C/C	184,000	184,000	1(ST복합)	충남	DangjinC/C
GS EPS	당진C/C	250,000	250,000	1(GT복합)	충남	DangjinC/C
GS EPS	당진C/C	132,000	132,000	1(ST복합)	충남	DangjinC/C
GS EPS	당진C/C	539,600	269,800	2(GT복합)	충남	DangjinC/C

# 10. 발전소별 설비 현황 (4)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31. '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
GS EPS	당진C/C	306,400	306,400	1(ST복합)	충남	DangjinC/C
동두천드림파워(주)	동두천C/C	1,145,200	286,300	4(GT복합)	경기	DongducheonC/C
동두천드림파워(주)	동두천C/C	571,600	285,800	2(ST복합)	경기	DongducheonC/C
부산정관에너지	부산정관에너지	26,650	26,650	1(GT복합)	부산	Busanjeonggwon energy
부산정관에너지	부산정관에너지	19,186	19,186	1(ST복합)	부산	Busanjeonggwon energy
GS POWER	부천C/C	300,000	100,000	3(GT복합)	경기	BucheonC/C
GS POWER	부천C/C	150,000	150,000	1(ST복합)	경기	BucheonC/C
(주)에스파워	안산C/C	485,800	242,900	2(GT복합)	경기	AnsanC/C
(주)에스파워	안산C/C	265,400	265,400	1(ST복합)	경기	AnsanC/C
GS POWER	안양C/C	300,000	75,000	4(GT복합)	경기	AnyangC/C
GS POWER	안양C/C	150,000	150,000	1(ST복합)	경기	AnyangC/C
코스포영남파워(주)	영남파워	292,000	292,000	1(GT복합)	울산	Yeongnampower
코스포영남파워(주)	영남파워	150,800	150,800	1(ST복합)	울산	Yeongnampower
평택에너지서비스(주)	오성C/C	497,040	165,680	3(GT복합)	경기	OseongC/C
평택에너지서비스(주)	오성C/C	272,790	272,790	1(ST복합)	경기	OseongC/C
씨지엔울촌전력(주)	울촌C/C	571,600	285,800	2(GT복합)	전남	YulchonC/C
씨지엔울촌전력(주)	울촌C/C	292,600	292,600	1(ST복합)	전남	YulchonC/C
씨지엔울촌전력(주)	울촌C/C	327,600	163,800	2(GT복합)	전남	YulchonC/C
씨지엔울촌전력(주)	울촌C/C	197,900	197,900	1(ST복합)	전남	YulchonC/C
파주에너지서비스(주)	파주문산C/C	1,102,000	275,500	4(GT복합)	경기	PajumunsanC/C
파주에너지서비스(주)	파주문산C/C	593,200	296,600	2(ST복합)	경기	PajumunsanC/C
포스코에너지	포스코에너지C/C	732,800	183,200	4(GT복합)	인천	POSCOenergyC/C
포스코에너지	포스코에너지C/C	416,400	208,200	2(ST복합)	인천	POSCOenergyC/C
포스코에너지	포스코에너지C/C	728,100	242,700	3(GT복합)	인천	POSCOenergyC/C
포스코에너지	포스코에너지C/C	398,700	132,900	3(ST복합)	인천	POSCOenergyC/C
포스코에너지	포스코에너지C/C	600,000	100,000	6(GT복합)	인천	POSCOenergyC/C
포스코에너지	포스코에너지C/C	300,000	150,000	2(ST복합)	인천	POSCOenergyC/C
포천파워(주)	포천C/C	962,000	240,500	4(GT복합)	경기	PocheonC/C
포천파워(주)	포천C/C	488,000	244,000	2(ST복합)	경기	PocheonC/C
포천민자발전(주)	포천천연C/C	575,400	287,700	2(GT복합)	경기	PocheoncheonyeonC/C
포천민자발전(주)	포천천연C/C	298,800	298,800	1(ST복합)	경기	PocheoncheonyeonC/C
씨지엔대산전력(주)	대산C/C	374,800	93,700	4(GT유류)	충남	DaesanC/C
씨지엔대산전력(주)	대산C/C	91,000	91,000	1(ST유류)	충남	DaesanC/C
복합 계		32,416,227		197		Total of combined cycle

# 10. 발전소별 설비 현황 (5)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31. '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
한수원	고리#2	650,000	650,000	1	부산	Kori#2
한수원	고리#3	950,000	950,000	1	부산	Kori#3
한수원	고리#4	950,000	950,000	1	부산	Kori#4
한수원	신고리#1	1,000,000	1,000,000	1	부산	Sinkori#1
한수원	신고리#2	1,000,000	1,000,000	1	부산	Sinkori#2
한수원	신고리#3	1,400,000	1,400,000	1	울산	Sinkori#3
한수원	월성#1	678,683	678,683	1	경북	Wolsong#1
한수원	월성#2	700,000	700,000	1	경북	Wolsong#2
한수원	월성#3	700,000	700,000	1	경북	Wolsong#3
한수원	월성#4	700,000	700,000	1	경북	Wolsong#4
한수원	신월성#1	1,000,000	1,000,000	1	경북	Sinwolsong#1
한수원	신월성#2	1,000,000	1,000,000	1	경북	Sinwolsong#2
한수원	한빛#1	950,000	950,000	1	전남	Hanbit#1
한수원	한빛#2	950,000	950,000	1	전남	Hanbit#2
한수원	한빛#3	1,000,000	1,000,000	1	전남	Hanbit#3
한수원	한빛#4	1,000,000	1,000,000	1	전남	Hanbit#4
한수원	한빛#5	1,000,000	1,000,000	1	전남	Hanbit#5
한수원	한빛#6	1,000,000	1,000,000	1	전남	Hanbit#6
한수원	한울#1	950,000	950,000	1	경북	Hanul#1
한수원	한울#2	950,000	950,000	1	경북	Hanul#2
한수원	한울#3	1,000,000	1,000,000	1	경북	Hanul#3
한수원	한울#4	1,000,000	1,000,000	1	경북	Hanul#4
한수원	한울#5	1,000,000	1,000,000	1	경북	Hanul#5
한수원	한울#6	1,000,000	1,000,000	1	경북	Hanul#6
원자력 계		22,528,683		24		Total of nuclear
신재생	태양광 계	5,062,309		28,252		Total of Solar
신재생	풍력 계	1,214,822		418		Total of Windpower
신재생	해양에너지 계	255,110		12		Total of Ocean energy
신재생	바이오매스 계	425,466		66		Total of Bio
신재생	매립가스 계	68,956		18		Total of Landfill-gas
신재생	폐기물에너지 계	211,529		54		Total of Waste-burnup
신재생	부생가스 계	1,355,500		15		Total of Product-gas
신재생	연료전지 계	246,900		66		Total of Fuelcell
신재생	석탄액화가스 계	346,330		2		Total of IGCC
신재생 계		9,186,923		28,903		Total of New&Renew. Energy



# 10. 발전소별 설비 현황 (6)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31, '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
중부	세종열병합	334,208	167,104	2	세종	Sejong
중부	세종열병합	196,233	196,233	1	세종	Sejong
(주)GS E&R	구미열병합	85,500	85,500	1	경북	Gumi
군장에너지(주)	군장에너지	250,000	250,000	1	전북	Gunjang
군장에너지(주)	군장에너지	28,500	28,500	1	전북	Gunjang
군장에너지(주)	군장에너지	54,529	54,529	1	전북	Gunjang
군장에너지(주)	군장에너지	30,540	30,540	1	전북	Gunjang
군장에너지(주)	군장에너지	60,000	60,000	1	전북	Gunjang
금호석유화학	금호여수열병합	119,130	119,130	1	전남	Gumhoyeosu
금호석유화학	금호여수열병합	144,970	144,970	1	전남	Gumhoyeosu
김천에너지(주)	김천열병합	59,000	59,000	1	경북	Gimcheon
대구염색관리공단	대구염색	39,400	39,400	1	대구	Daeguyeomsaek
대구염색관리공단	대구염색	13,500	13,500	1	대구	Daeguyeomsaek
대구염색관리공단	대구염색	20,000	20,000	1	대구	Daeguyeomsaek
(주)GS E&R	반월열병합	56,700	56,700	1	경기	Banwol
(주)GS E&R	반월열병합	6,000	6,000	1	경기	Banwol
(주)GS E&R	반월열병합	14,255	14,255	1	경기	Banwol
부산경남염색	부산염색	19,000	19,000	1	부산	Busan
(주)상공에너지	상공에너지열병합	9,800	9,800	1	전북	Sanggong
OCI SE(주)	새만금열병합	303,000	151,500	2	전북	Saemangum
현대에너지주식회사	여수열병합	48,400	24,200	2	전남	Yeosu
전북집단에너지(주)	익산에너지	21,000	21,000	1	전북	Iksan
(주)GS E&R	구미열병합	11,600	11,600	1	경북	Gumi
난방공사	대구열병합	43,500	43,500	1	대구	Daegu
대전열병합발전(주)	대전열병합	88,000	88,000	1	대전	Daejeon
무림파워텍	무림열병합	42,600	42,600	1	경남	Murim
난방공사	수원열병합	43,200	43,200	1	경기	Suwon
난방공사	청주열병합	61,400	61,400	1	충북	Cheongju
난방공사	광교열병합	102,588	102,588	1	경기	Gwanggyo
난방공사	광교열병합	42,200	42,200	1	경기	Gwanggyo
서울에너지공사	노원열병합	37,000	37,000	1	서울	Nowon
(주)미래엔인천에너지	논현열병합	24,000	24,000	1	인천	Nonhyeon
대구그린파워(주)	대구그린파워	239,900	239,900	1	대구	Daegugreenpower

# 10. 발전소별 설비 현황 (7)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31, '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
대구그린파워(주)	대구그린파워	130,800	130,800	1	대구	Daegugreenpower
토지주택공사	대전서남부열병합	48,300	48,300	1	대전	Daejeonseonambu
난방공사	동탄열병합	492,940	246,470	2	경기	Dongtan
난방공사	동탄열병합	263,820	131,910	2	경기	Dongtan
디에스파워(주)	명품오산열병합	289,300	289,300	1	경기	Myeongpumosan
디에스파워(주)	명품오산열병합	146,800	146,800	1	경기	Myeongpumosan
서울에너지공사	목동열병합	21,000	21,000	1	서울	Mokdong
별내에너지(주)	별내열병합	40,030	40,030	1	경기	Byeolnae
별내에너지(주)	별내열병합	40,030	40,030	1	경기	Byeolnae
별내에너지(주)	별내열병합	35,350	35,350	1	경기	Byeolnae
인천종합에너지	송도복합	134,900	67,450	2	인천	Songdo
인천종합에너지	송도복합	52,400	52,400	1	인천	Songdo
수완에너지주식회사	수완에너지	80,066	40,033	2	광주	Suwan
수완에너지주식회사	수완에너지	35,180	35,180	1	광주	Suwan
서울에너지공사	신정열병합	6,000	3,000	2	서울	Sinjeong
토지주택공사	아산배방열병합	79,300	39,650	2	충남	Asanbaebang
토지주택공사	아산배방열병합	22,400	22,400	1	충남	Asanbaebang
안산도시개발	안산열병합	60,000	60,000	1	경기	Ansan
대륜발전(주)	양주열병합	330,000	165,000	2	경기	Yangju
대륜발전(주)	양주열병합	194,300	194,300	1	경기	Yangju
위례에너지서비스(주)	위례열병합	270,400	270,400	1	경기	Wirye
위례에너지서비스(주)	위례열병합	142,200	142,200	1	경기	Wirye
인천공항에너지	인천공항열병합	94,000	47,000	2	인천	Incheongonghang
인천공항에너지	인천공항열병합	33,000	33,000	1	인천	Incheongonghang
춘천에너지(주)	춘천열병합	287,800	287,800	1	강원	Chuncheon
춘천에너지(주)	춘천열병합	143,400	143,400	1	강원	Chuncheon
난방공사	파주열병합	326,800	163,400	2	경기	Paju
난방공사	파주열병합	188,700	188,700	1	경기	Paju
난방공사	판교열병합	77,863	77,863	1	경기	Pangyo
난방공사	판교열병합	68,451	68,451	1	경기	Pangyo
나래에너지서비스(주)	하남열병합	240,750	240,750	1	경기	Hanam
나래에너지서비스(주)	하남열병합	123,061	123,061	1	경기	Hanam
난방공사	화성복합	321,600	160,800	2	경기	Hwaseong
난방공사	화성복합	190,200	190,200	1	경기	Hwaseong

# 10. 발전소별 설비 현황 (8)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31, '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
한국가스공사	김해천연가스압	300	300	1	경남	Kimhae
(주)삼양사	삼양사여열회수	1,720	1,720	1	인천	Samyangsa
코오롱플라스틱(주)	코오롱플라스틱	3,090	3,090	1	경북	KOLON
(주)케이디파워텍	증류탑폐열활용	16,400	16,400	1	울산	Jeungryutap
집단에너지 계		7,682,304		84		Total of Group energy
한전, 중부	제주GT	165,000	55,000	3	제주	JejuG/T
중부	제주내연	80,000	40,000	2	제주	JejuD/P
한국전력	가거도	750	250	3	전남	Gageodo
한국전력	가거도	300	300	1	전남	Gageodo
한국전력	가의도	240	80	3	충남	Gauido
한국전력	가파도	450	150	3	제주	Gapado
한국전력	개야도	500	250	2	전북	Gaeyado
한국전력	개야도	1,000	500	2	전북	Gaeyado
한국전력	거문도	4,000	1,000	4	전남	Geomundo
한국전력	거문도	500	500	1	전남	Geomundo
한국전력	고대도	100	100	1	충남	Godaedo
한국전력	고대도	300	150	2	충남	Godaedo
한국전력	대청도	2,600	1,300	2	인천	Daecheongdo
한국전력	대청도	450	450	1	인천	Daecheongdo
한국전력	대청도	500	500	1	인천	Daecheongdo
한국전력	덕우도	240	80	3	전남	Deokwoodo
한국전력	덕우도	150	150	1	전남	Deokwoodo
한국전력	덕적도	900	300	3	인천	Duckjuckdo
한국전력	덕적도	2,000	500	4	인천	Duckjuckdo
한국전력	매물도	450	150	3	경남	Maemuldo
한국전력	문갑도	240	80	3	인천	Mungabdo
한국전력	백령도	9,000	1,500	6	인천	Baekryeongdo
한국전력	비안도	200	100	2	전북	Biando
한국전력	비안도	80	80	1	전북	Biando
한국전력	비양도	240	80	3	제주	Biyangdo
한국전력	삽시도	1,000	500	2	충남	Sabsido
한국전력	삽시도	600	300	2	충남	Sabsido
한국전력	소청도	2,400	800	3	인천	Socheongdo
한국전력	수우도	80	40	2	경남	Suwoodo

# 10. 발전소별 설비 현황 (9)

('17.12.31 현재) Generating facilities by plant

(As of Dec. 31, '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
한국전력	수우도	80	80	1	경남	Suwoodo
한국전력	승봉도	450	150	3	인천	Seungbongdo
한국전력	승봉도	1,500	500	3	인천	Seungbongdo
한국전력	어의도	80	80	1	전남	Eoedo
한국전력	어의도	80	40	2	전남	Eoedo
한국전력	어청도	150	150	1	전북	Yeocheongdo
한국전력	어청도	500	500	1	전북	Yeocheongdo
한국전력	어청도	600	300	2	전북	Yeocheongdo
한국전력	여서도	240	80	3	전남	Yeoseodo
한국전력	여자도	450	150	3	전남	Yeogado
한국전력	연도	160	80	2	전북	yeondo
한국전력	연도	100	100	1	전북	yeondo
한국전력	연평도	5,700	1,900	3	인천	Yeonpyeongdo
한국전력	연평도	2,000	1,000	2	인천	Yeonpyeongdo
한국전력	외연도	450	150	3	충남	Yoiyeondo
한국전력	외연도	300	300	1	충남	Yoiyeondo
한국전력	위도	1,350	450	3	전북	Wido
한국전력	위도	500	500	1	전북	Wido
한국전력	위도	1,000	1,000	1	전북	Wido
한국전력	자월도	150	150	1	인천	Gawoldo
한국전력	자월도	1,500	500	3	인천	Gawoldo
한국전력	장고도	450	150	3	전북	Janggodo
한국전력	조도	1,000	500	2	전남	Jodo
한국전력	조도	1,600	800	2	전남	Jodo
한국전력	추도	240	80	3	경남	Chudo
한국전력	추자도	2,000	1,000	2	제주	Chujado
한국전력	추자도	1,500	500	3	제주	Chujado
한국전력	추자도	2,000	1,000	2	제주	Chujado
한국전력	풍도	450	150	3	경기	Pungdo
한국전력	홍도	250	250	1	전남	Hongdo
한국전력	홍도	1,600	800	2	전남	Hongdo
한국전력	홍도	500	500	1	전남	Hongdo
한국전력	흑산도	500	500	1	전남	Heuksando
한국전력	흑산도	2,000	1,000	2	전남	Heuksando
한국전력	흑산도	1,500	750	2	전남	Heuksando

# 10. 발전소별 설비 현황 (10)

(’17.12.31 현재) Generating facilities by plant

(As of Dec. 31, '17)

발전사명	발전소별	시설용량 Capacity of facilities (kW)	발전기 Generator		지역 (Province)	Plants
			용량 Capacity (kW)	대수 Numbers (ea)		
한국전력	구자도	240	80	3	전남	Gujado
한국전력	낙월도	750	250	3	전남	Nakwoldo
한국전력	녹도	100	100	1	충남	Nokdo
한국전력	녹도	160	80	2	충남	Nokdo
한국전력	독거도	80	80	1	전남	Doggeodo
한국전력	독거도	80	40	2	전남	Doggeodo
한국전력	득량도	300	100	3	전남	Deukryangdo
한국전력	백령도	6,000	3,000	2	인천	Baekryeongdo
한국전력	상화도	240	80	3	전남	Sanghwado
한국전력	성남도	80	80	1	전남	Seongnamdo
한국전력	성남도	80	40	2	전남	Seongnamdo
한국전력	소연평도	100	100	1	인천	Yeonpyeongdo
한국전력	소연평도	500	250	2	인천	Yeonpyeongdo
한국전력	손죽도	300	100	3	전남	Sonjukdo
한국전력	송이도	100	100	1	전남	Songido
한국전력	송이도	160	80	2	전남	Songido
한국전력	슬도	240	80	3	전남	Seuldo
한국전력	시산도	750	250	3	전남	Sisando
한국전력	어룡도	240	80	3	전남	Eoryongdo
한국전력	영산도	240	80	3	전남	Yeongsando
한국전력	왕등도	240	80	3	전북	Wangdeungdo
한국전력	외도	160	80	2	충남	Yoido
한국전력	외도	60	60	1	충남	Yoido
한국전력	울도	240	80	3	인천	Wooldo
한국전력	울릉도	12,000	3,000	4	경북	Ulleungdo
한국전력	울릉도	2,000	1,000	2	경북	Ulleungdo
한국전력	울릉도	4,500	1,500	3	경북	Ulleungdo
한국전력	조도	800	800	1	전남	Jodo
한국전력	초도	750	250	3	전남	Chodo
한국전력	평도	240	80	3	전남	Pyeongdo
한국전력	호도	300	100	3	충남	Hodo
한국전력	화도	240	80	3	전남	Whado
내연력 계		339,470		214		Total of internal combustion
총계		116,907,641		29,802		Total

# 11. 송전설비 추이

## Trends in transmission facilities

구분 연월별	회 선 길 이 Circuit length (c-m)							765 kV	345 kV
	765 kV	345 kV	154 kV	66 kV	22 kV	180 kV (DC)	계 Total		
1961	-	-	605,999	1,777,563	2,853,583	-	5,237,145	-	-
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
2012	834,602	8,770,268	21,577,528	208,342	-	231,372	31,622,112	15,022,836	89,666,707
2013	834,602	9,004,984	21,976,075	201,425	-	231,457	32,248,543	15,022,836	91,876,907
2014	834,602	9,228,368	22,356,521	144,303	-	231,005	32,794,799	15,022,836	94,496,885
2015	1,013,620	9,403,396	22,524,053	144,303	-	231,005	33,316,377	16,977,516	97,395,758
2016	1,015,722	9,673,260	22,587,654	127,513	-	231,005	33,635,154	17,005,608	99,912,266
2017	1,019,344	9,745,923	22,831,462	128,287	-	230,148	33,955,165	18,034,560	100,419,948

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
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
90,644,120	625,026	-	260,839	196,219,528	39,800	125	822	38	566	2012
92,526,566	604,275	-	261,009	200,291,593	40,114	127	834	38	610	2013
94,209,470	432,909	-	260,524	204,422,624	40,484	116	674	1	630	2014
95,095,944	432,909	-	262,252	210,164,379	40,948	120	673	1	641	2015
95,339,497	382,062	-	262,252	212,901,684	40,826	123	655	1	728	2016
96,317,522	381,582	-	259,962	215,413,573	40,836	124	638	-	797	2017

## 12. 송전설비 현황

('17.12.31 현재) Transmission facilities

항 목		전 압 별		765 kV	345 kV	154 kV	66 kV
		가 공	지 중				
선 로 길 이 ( m )	가 공	549,636	4,432,409	8,557,312	106,351		
	지 중	-	175,055	1,941,960	1,401		
	수 중	-	-	6,620	-		
	계	549,636	4,607,464	10,505,892	107,752		
회 선 길 이 ( c-m )	가 공	1,019,344	9,354,974	19,385,944	126,886		
	지 중	-	390,949	3,432,279	1,401		
	수 중	-	-	13,240	-		
	계	1,019,344	9,745,923	22,831,462	128,287		
전 선 연 장 ( m )	가 공	18,034,560	99,066,798	84,970,733	377,379		
	지 중	-	1,353,150	11,307,069	4,203		
	수 중	-	-	39,720	-		
	계	18,034,560	100,419,948	96,317,522	381,582		
지 지 물 ( 기 )	철 탐(앵글)	9	11,861	27,276	299		
	철 탐(강관)	1,059	312	19	1		
	철 주	-	-	55	69		
	강 관 주	-	69	677	27		
	콘 크 리 트 주	-	-	-	51		
	목 전 주	-	-	-	-		
	기 타	-	12	21	-		
	계	1,068	12,254	28,048	447		
애 자 류 ( 개 )	볼소켓(일반형)	858,194	3,719,832	5,328,245	20,578		
	볼소켓(내무형)	9,936	186,074	246,921	-		
	폴리머(일반형)	-	5,212	8,705	-		
	폴리머(내무형)	-	135	5,152	-		
	기 타	-	-	12	-		
	계	868,130	3,911,253	5,589,035	20,578		



( As of Dec. 31. '17)

180 kV (DC)	계 Total	Voltage Items	
28,662	13,674,370	Overhead power line	Route length ( m )
4,321	2,122,737	Under ground power line	
96,422	103,042	Under water power line	
129,405	15,900,149	Total	
28,662	29,915,810	Overhead power line	Circuit length ( c-m )
8,642	3,833,271	Under ground power line	
192,844	206,084	Under water power line	
230,148	33,955,165	Total	
58,476	202,507,946	Overhead power line	Total length ( m )
8,642	12,673,063	Under ground power line	
192,844	232,564	Under water power line	
259,962	215,413,573	Total	
-	39,445	Angle steel tower	Supporter ( ea )
-	1,391	Tubular steel tower	
-	124	Steel pole	
24	797	Tubular steel pole	
587	638	Concrete pole	
-	-	Wooden pole	
5	38		
616	42,433	Total	
3,684	9,930,533	Ball and socket insulator (standard type)	Insulator ( ea )
-	442,931	Ball and socket insulator (anti-fog type)	
-	13,917	Polymer insulator (standard type)	
-	5,287	Polymer insulator (anti-fog type)	
-	12		
3,684	10,392,680	Total	

### 13. 변전설비 추이

Trends in substation facilities

구 분 연월별	변 전 소 수 (개) Number of substation (ea)						계 Total	765 kV
	765 kV	345 kV	154 kV	66 kV	22 kV			
1961	-	-	5	70	216	291	-	
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	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	594	6	6	698	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	
2012	6	96	658	3	5	768	29,115,600	
2013	6	98	678	3	5	790	31,116,000	
2014	6	104	688	3	4	805	29,115,600	
2015	7	107	701	3	4	822	37,117,200	
2016	7	111	705	3	4	830	38,116,200	
2017	7	112	713	3	4	839	38,116,200	

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

2) 변전소+스위치야드 합계임

변압기용량 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
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
115,597,600	126,143,200	312,000	78,200	271,246,600	21,488,000	2012
117,097,800	130,931,200	297,000	78,200	279,520,200	22,177,000	2013
122,378,900	133,386,800	297,000	64,000	285,242,300	23,130,000	2014
124,879,400	135,966,800	267,000	64,000	298,294,400	23,554,800	2015
128,380,100	138,587,700	240,000	94,000	305,418,000	23,720,000	2016
131,880,200	141,538,800	240,000	94,000	311,869,200	23,327,800	2017

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

2) Substation+Switch Yard

# 14. 변전설비 현황

('17.12.31 현재) Substation facilities

항 목	변 전 소 수 ( 개 ) Number of substation ( ea )						변 압 기 용 량 Capacity of transformer ( MVA )					
	765 kV	345 kV	154 kV	66 kV	22 kV	계 Total	765 kV	345 kV	154 kV	66 kV	22 kV	계 Total
지역본부												
서울	-	2	47	-	-	49	-	3,501	8,976	-	-	12,477
남서울	-	4	56	-	-	60	-	7,211	11,520	-	-	18,731
인천	-	13	49	1	-	63	-	12,762	11,120	80	-	23,962
경기북부	1	10	43	1	-	55	7,000	11,387	8,460	40	30	26,917
경기	1	10	78	-	-	89	8,002	17,003	17,580	-	-	42,585
강원	1	5	45	-	1	52	6,001	4,501	6,620	40	-	17,162
충북	-	5	31	-	1	37	-	8,502	6,300	20	-	14,822
대전충남	2	11	59	-	-	72	5,111	11,502	12,320	-	-	28,933
전북	-	5	32	-	1	38	-	5,501	5,740	-	40	11,281
광주전남	-	11	58	1	-	70	-	8,002	10,900	40	-	18,942
대구경북	-	17	90	-	1	108	-	16,003	16,760	-	24	32,787
부산	1	11	66	-	-	78	6,001	16,503	12,960	-	-	35,465
경남	1	8	44	-	-	53	6,001	9,502	9,120	20	-	24,643
제주	-	-	15	-	-	15	-	-	3,162	-	-	3,162
계	7	112	713	3	4	839	38,116	131,880	141,539	240	94	311,869

주) 변전소+스위치야드 합계임

(As of Dec. 31. '17)

차 단 기 수 ( 개 ) Number of circuit breaker ( ea )							전력용 콘덴서 Static- condenser ( MVAR )	분로 리액터 Shunt reactor ( MVAR )	Items  District Division
765 kV	345 kV	154 kV	66 kV	22 Kv	기타	계 Total			
	24	452	-	1,410	8	1,894	310	700	Seoul
-	70	612	-	1,944	-	2,626	1,150	1,910	Namseoul
-	206	630	11	1,767	-	2,614	665	3,110	Incheon
11	198	550	2	1,348	8	2,117	2,223	3,080	Gyeonggibukbu
11	210	1,124		3,107	-	4,452	3,745	1,290	Gyeonggi
11	74	444	20	929	-	1,478	1,055	670	Gangwon
-	75	450	3	987		1,515	2,420	270	Chungbuk
27	208	778		1,915	-	2,928	2,670	990	Daejonchungnam
-	61	375		952	2	1,390	1,170	30	Jeonbuk
-	127	703	4	1,571		2,405	1,520	750	Gwangjuyeongnam
-	235	1,047	-	2,899	6	4,187	3,660	680	Daegugyeongbuk
16	201	866	-	1,905	-	2,988	1,300	1,890	Busan
8	157	537	1	1,392	-	2,095	1,300	1,140	Gyeongnam
-	-	137	-	311	10	458	140	60	Jeju
84	1,846	8,705	41	22,437	34	33,147	23,328	16,570	Total

1) Substation+Switch Yard

# 15. 배전설비 추이

## Trends in distribution facilities

구분 연월별	선로길이 Route length (c-m)			전선전체길이 Total length (m)		
	고압 Over 600V	저압 Under 600V	계 Total	고압 Over 600V	저압 Under 600V	계 Total
1961	5,477,695	3,693,705	9,171,400	25,104,692	11,862,898	36,967,590
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
2012	211,923,637	230,717,608	442,641,245	721,005,989	530,301,284	1,251,307,273
2013	214,478,638	235,205,367	449,684,005	731,276,246	542,800,602	1,274,076,848
2014	217,421,838	239,825,171	457,247,009	743,298,297	555,402,271	1,298,700,568
2015	220,910,123	244,368,150	465,278,273	756,599,603	567,652,714	1,324,252,317
2016	224,186,247	249,913,013	474,099,260	769,694,796	582,439,047	1,352,133,843
2017	228,116,380	253,248,446	481,364,826	783,968,915	591,744,409	1,375,713,324

※ 2007년부터 강관주에 인입용 전주(6M) 포함

지 지 물 (기) Supporter (ea)							변 압 기 Transformer		Items End of
철 탑 Steel tower	철 주 Steel pole	콘크리트주 Concrete pole	목 주 Wooden pole	강관주 Tubular pole	FRP	계 Total	대 수 Number (ea)	용 량 Capacity (kVA)	
54	413	72	181,659	-	-	182,198	52,967	649,491	1961
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
1,232	282	8,253,238	304	328,367	-	8,583,423	2,027,727	104,081,900	2012
1,226	269	8,360,209	284	336,788	-	8,698,776	2,054,022	105,740,500	2013
1,210	259	8,481,304	268	349,207	161	8,832,409	2,086,448	107,805,206	2014
1,198	238	8,599,819	260	359,143	160	8,960,818	2,118,289	110,082,629	2015
1,166	232	8,749,836	250	370,698	162	9,122,344	2,158,896	112,751,316	2016
1,134	232	8,812,470	231	367,970	162	9,182,199	2,168,825	114,236,801	2017

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

# 16. 배전설비 현황 (1)

(17.12.31 현재) Distribution facilities

구 분		행정구역별		서 울	부 산	대 구	인 천	광 주
				Seoul	Busan	Daegu	Incheon	Gwangju
선 로 길 이 (c-km)	고 압	가 공		4,352	3,197	3,151	4,050	2,001
		지 중		6,176	2,174	1,403	2,492	1,052
		수 중		-	-	-	5	-
		계		10,528	5,371	4,554	6,547	3,053
	저 압	가 공		2,889	2,711	3,087	3,935	2,275
		지 중		936	342	295	487	430
계			3,825	3,053	3,382	4,422	2,704	
	계	가 공	7,241	5,908	6,239	7,985	4,276	
		지 중	7,112	2,516	1,698	2,979	1,482	
		수 중	-	-	-	5	-	
		계	14,353	8,424	7,936	10,969	5,757	
전 선 전 체 길 이 (km)	고 압	가 공		16,031	11,713	11,722	14,656	7,349
		지 중		18,450	6,501	4,202	7,455	3,152
		수 중		-	-	-	14	-
		계		34,481	18,215	15,924	22,126	10,500
	저 압	가 공		6,542	6,039	8,439	9,248	5,137
		지 중		3,482	1,307	1,111	1,754	1,557
계			10,023	7,345	9,550	11,002	6,694	
	계	가 공	22,573	17,752	20,161	23,904	12,486	
		지 중	21,931	7,808	5,314	9,209	4,708	
		수 중	-	-	-	14	-	
		계	44,504	25,560	25,474	33,128	17,194	
지 지 물  (기)	콘 크 리 트 주 강 관 주 목 주 철 주 철 탑 계			167,101	124,970	139,149	175,573	97,424
				18,267	19,684	8,588	10,276	7,547
				44	38	38	4	4
				31	20	3	4	1
				1	-	5	72	18
				185,444	144,712	147,783	185,929	104,994
변 압 기	수 량 (대)	가 공		155,828	74,371	55,635	74,946	34,616
		지 중		7,724	2,737	1,603	3,457	2,106
		계		163,552	77,108	57,238	78,403	36,722
	용 량 (MVA)	가 공		10,514	4,461	3,400	3,813	1,880
		지 중		2,130	724	423	720	511
		계		12,644	5,185	3,822	4,534	2,391
가스절연부하 개폐기(대)		가 공		7,215	3,053	4,220	2,492	1,686
		지 중		12,622	4,485	2,207	4,434	2,559
		계		19,837	7,538	6,427	6,926	4,245



(As of Dec. 31. '17)

대 전 Daejon	울 산 Ulsan	경 기 Gyeonggi	강 원 Gangwon	Province		
				Items		
1,507	2,486	31,454	16,381	Overhead power line	Over 600 voltage	Route length (c-km)
1,798	785	11,099	1,496	Under ground power line		
-	-	-	-	Under water power line		
3,305	3,271	42,553	17,877	Sub total		
1,790	2,414	33,761	17,615	Overhead power line	Under 600 voltage	
739	108	2,215	701	Under ground power line		
2,529	2,522	35,976	18,316	Sub total		
3,297	4,900	65,215	33,996	Overhead power line	Total	
2,536	893	13,314	2,197	Under ground power line		
-	-	-	-	Under water power line		
5,833	5,793	78,529	36,193	Total		
5,475	8,942	114,292	54,967	Overhead power line	Over 600 voltage	Total length (km)
5,372	2,340	33,153	4,444	Under ground power line		
-	-	-	-	Under water power line		
10,847	11,282	147,445	59,411	Sub total		
3,703	5,323	81,667	37,525	Overhead power line	Under 600 voltage	
2,766	390	8,242	2,628	Under ground power line		
6,469	5,714	89,909	40,153	Sub total		
9,178	14,265	195,959	92,492	Overhead power line	Total	
8,138	2,730	41,395	7,072	Under ground power line		
-	-	-	-	Under water power line		
17,317	16,995	237,354	99,564	Total		
70,347	103,354	1,355,308	632,225	Concrete pole	Supporter (ea)	
7,906	5,287	18,459	27,655	Tubular pole		
6	4	20	13	Wooden pole		
9	-	94	20	Steel pole		
1	-	32	103	Steel tower		
78,269	108,645	1,373,913	660,016	Total		
27,683	35,245	436,357	131,869	Overhead power line	Number (ea)	Trans- former
2,631	778	13,125	1,841	Under ground power line		
30,314	36,023	449,482	133,710	Total		
1,606	1,831	21,935	6,677	Overhead power line	Capacity (MVA)	
621	192	2,824	557	Under ground power line		
2,227	2,023	24,759	7,234	Total		
1,458	1,599	12,793	5,804	Overhead power line	Gas Insulated Switch gear	
4,210	1,204	17,790	1,934	Under ground power line		
5,668	2,803	30,583	7,738	Total		

## 16. 배전설비 현황 (2)

(’17.12.31 현재) Distribution facilities

구 분		행정구역별		총 북	총 남	전 북	전 남	경 북
				Chungbuk	Chungnam	Jeonbuk	Jeonnam	Gyeongbuk
선로공장 (c-km)	고압	가공	11,850	19,808	15,016	23,046	26,279	
		지중	1,221	2,054	1,689	1,898	1,780	
		수중	-	4	6	68	-	
		계	13,071	21,866	16,711	25,012	28,059	
	저압	가공	17,248	29,719	24,786	36,643	38,172	
		지중	518	638	554	423	320	
		계	17,766	30,358	25,340	37,066	38,492	
	계	가공	29,098	49,527	39,802	59,689	64,452	
		지중	1,739	2,693	2,243	2,321	2,099	
수중		-	4	6	68	-		
	계	30,838	52,224	42,051	62,078	66,551		
선로연장 (km)	고압	가공	40,760	68,160	53,353	81,971	90,563	
		지중	3,571	6,119	5,026	5,635	5,279	
		수중	-	13	17	204	-	
		계	44,331	74,292	58,396	87,809	95,842	
	저압	가공	37,468	62,687	53,806	83,218	91,461	
		지중	1,868	2,308	1,937	1,527	1,098	
		계	39,336	64,995	55,743	84,745	92,559	
	계	가공	78,228	130,847	107,159	165,188	182,023	
		지중	5,438	8,428	6,963	7,162	6,377	
수중		-	13	17	204	-		
	계	83,667	139,288	114,139	172,554	188,401		
지지물 (기)	콘크리트주 강관주 목주 철주 철탑 계		554,307	1,024,828	839,268	1,268,648	1,307,636	
			8,753	18,581	23,293	52,875	58,957	
			7	2	5	1	15	
			1	2	11	12	10	
			56	53	25	567	60	
			563,124	1,043,466	862,602	1,322,103	1,366,678	
변압기	수량 (대)	가공	104,463	184,986	148,765	202,587	232,798	
		지중	1,603	2,313	2,398	1,870	1,277	
		계	106,066	187,299	151,163	204,457	234,075	
	용량 (MVA)	가공	5,171	7,897	6,378	7,115	9,484	
		지중	454	622	631	500	315	
		계	5,625	8,519	7,008	7,615	9,799	
가스절연부하 개폐기(대)	가공	5,039	4,207	5,285	5,357	7,817		
	지중	1,738	2,692	2,206	2,282	1,033		
	계	6,777	6,899	7,491	7,639	8,850		

(As of Dec. 31. '17)

경 남 Gyeongnam	제 주 Jeju	세 종 Sejong	계 Total	Province		
				Items		
18,560	3,457	1,072	187,668	Overhead power line	Over 600 voltage	Route length (c-km)
2,035	732	433	40,316	Under ground power line		
43	6	-	132	Under water power line		
20,638	4,195	1,505	228,116	Sub total		
20,534	4,822	1,566	243,968	Overhead power line	Under 600 voltage	Route length (c-km)
141	358	75	9,280	Under ground power line		
20,675	5,180	1,641	253,248	Sub total		
39,095	8,279	2,639	431,636	Overhead power line	Total	Route length (c-km)
2,176	1,090	508	49,596	Under ground power line		
43	6	-	132	Under water power line		
41,314	9,375	3,146	481,365	Total		
66,164	13,438	3,757	663,313	Overhead power line	Over 600 voltage	Total length (km)
6,072	2,195	1,293	120,260	Under ground power line		
129	18	-	396	Under water power line		
72,365	15,652	5,051	783,969	Sub total		
47,889	14,068	3,454	557,673	Overhead power line	Under 600 voltage	Total length (km)
486	1,335	275	34,071	Under ground power line		
48,374	15,403	3,729	591,744	Sub total		
114,052	27,506	7,211	1,220,986	Overhead power line	Total	Route length (c-km)
6,558	3,530	1,568	154,331	Under ground power line		
129	18	-	396	Under water power line		
120,739	31,055	8,779	1,375,713	Total		
724,983	174,362	52,987	8,812,470	Concrete pole	Supporter (ea)	Route length (c-km)
75,380	4,795	1,667	367,970	Tubular pole		
28	2	-	231	Wooden pole		
14	-	-	232	Steel pole		
136	-	5	1,134	Steel tower		
800,541	179,159	54,659	9,182,037	Total		
175,719	35,480	9,588	2,120,936	Overhead power line	Number (ea)	Trans- former
876	1,321	229	47,889	Under ground power line		
176,595	36,801	9,817	2,168,825	Total		
8,185	1,606	439	102,393	Overhead power line	Capacit y (MVA)	Route length (c-km)
203	373	46	11,844	Under ground power line		
8,388	1,979	485	114,237	Total		
5,296	1,432	466	75,219	Overhead power line	Gas Insulated Switch gear	Route length (c-km)
1,196	1,177	364	64,133	Under ground power line		
6,492	2,609	830	139,352	Total		

# 17. 정보통신설비 추이 (1)

## Trends in Information & communication facilities

구 분	정보통신설비 Informaion 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 공 용 통 신 시 스템 (중계/단말) Trunked radio system	반 송 설 비 Carrier tele- phone equip- ment
연 도 말									
1961	-	-	-	-	-	-	46	-	-
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	0	28	1,610	63/3,241	-
2001	726	-	-	1,457	81.00	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	-
2012	250	-	-	1,979	2,871	4	-	130/6,667	-
2013	255	-	-	1,943	3,174	4	-	130/8,648	-
2014	261	-	-	1,979	3,178	-	-	139/9521	-
2015	258	-	-	1,864	3,011	-	-	147/11,395	-
2016	257	-	-	1,950	3,856	-	-	147/12,657	-
2017	257	-	-	2,280	3,450	-	-	147/13,578	-

1) 2001년도 이전 서버 통계자료는 중간전산기임

2) 2002년도 이후 서버 통계자료는 중간전산기 및 서버(NT서버 포함)가 포함된 수치임

전 산 설 비 Computer facilities (set)			전 력 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
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	-	-	2,797	-	2010
15	1,194	26,160	-	55/710	2,859	-	2011
2	3,190	26,805	-	-	3,045	-	2012
15	2,767	25,316	-	57/740	3,187	-	2013
	857	25,729	-	571,759	3,452	-	2014
18	632	43,667	-	57/770	3,877	-	2015
18	659	46,192	-	59/781	4,491	-	2016
15	704	47,186	-	64/785	4,781	-	2017

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

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

## 17. 정보통신설비 추이 (2)

### Trends in Information & communication facilities

구분 Items	통신선로 Communication cables & wires ( km )								
	금속케이블 Metalic cable		동축케이블 Coaxil cable	광케이블 Optical fiber cable		광섬유복합가공지선 Composite over-head ground wire with optical fiber		계 Total	
연도말 End of	길이 Route length	전체길이 Total length	길이 Route length	길이 Route length	전체길이 Total length	길이 Route length	전체길이 Total length	길이 Route length	전체길이 Total length
1961	-	-	-	-	-	-	-	-	-
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
2012	-	-	-	4,656	122,522	15,078	445,984	19,734	568,506
2013	-	-	-	5,292	138,650	15,735	471,985	21,027	610,635
2014	-	-	-	5,551	145,150	15,895	473,722	21,446	618,872
2015	-	-	-	6,448	170,473	16,147	481,702	22,595	652,175
2016	-	-	-	8,696	260,880	16,173	485,190	24,869	746,070
2017	-	-	-	9,227	272,620	15,779	466,204	25,006	738,824

1) 케이블은 2000년도에 자회사 파워콤에 전량 현물출자됨

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

# 18. 정보통신설비 현황 (1)

(\*17.12.31현재) Information & communication facilities

(As of Dec.31.'17)

구 분 Items	종 류 Classification		단 위 Unit	수 량 Quantity
정 보 통 신 설 비 Information communication facilities	교 환 기 Switch board	전 자 교 환 기 Electronics switching system	대 ea	257
		기 타 교 환 기 Others	대 ea	-
	F A X	Facsimile terminal	대 ea	2,280
	망 관 리 시 스템 Network management system	L C S	식 set	16
		원격 단말장치	식 set	3,613
	근 거 리 통 신 망 Local area network	SW Hub	대 ea	10,627
	Router	대 ea	473	
전 송 설 비 Data transmission facilities	광 송 수 신 기		대 ea	3,450
	무 선 송 수 신 기 Radio transceiver	다 중 무 선 송 수 신 기 M / W	대 ea	
		단 신 무 선 송 수 신 기 V H F	대 ea	
		주 파 수 공 용 통 신 T R S	중 계	식 set
		단 말	식 set	13,578
전 산 설 비 Computer facilities	주 전 산 기 (Main computer)		대 ea	15
	서 버 (Server)		대 ea	704
	PC 및 단말기 (P/C&Terminal)		대 ea	47,186

## 18. 정보통신설비 현황 (2)

('17.12.31현재) Information & communication facilities

(As of Dec.31.'17)

	종 류 Classification		단 위 Unit	수 량 Quantity	
전 자 응 용 설 비  Electronic application facilities	건 물 자 동 화 시 스템 Building automatic system		BAS 개소 site	25	
	보 안 & 운 전 감 시 카 메 라 Security system	CCTV	Controller	식 set 18	
			Camera	식 set 511	
전 력 운 전 제 어 설 비  Power operation & control facilities	원 방 감 시 제 어 설 비 Supervisory control and data Acquisition system		중앙 SCADA	식 set 1	
			SCADA	Host	식 set 63
				RTU	식 set 785
	계 통 보 호 전 송 장 치 Power line carrier relay equipment		식 set	4,781	
통 신 선 로  Communication cable & wires	광섬유복합가공지선 With optical fiber composite overhead ground wire(OPGW)	길 이 Circuit length	km	15,779	
		전체전선길이 Total length	km	466,204	
전 원 설 비  Electric power source facilities	충 전 기 Charger		대 ea	1,471	
	축 전 지 Battery		식 set	2,820	
	무 정 전 전 원 장 치 Uninterruptable power supply system		식 set	1,349	





### III. 구입부문

Power purchasing



# 19. 전력 구입 실적 (1.종합)

('17.1.1~12.31) Power purchasing results

구분 Items 연월별 During	전력시장 Electricity Market			PPA			합계 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)
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
2012	471,799,913	42,613,214	90.32	17,400,164	3,248,681	186.70	489,200,078	45,861,895	93.75
2013	479,286,615	42,288,353	88.23	16,892,263	3,160,590	187.10	496,178,878	45,448,943	91.60
2014	490,371,596	44,727,079	91.21	11,114,215	2,259,768	203.32	501,485,811	46,986,847	93.70
2015	495,113,858	41,913,114	84.65	8,714,833	1,374,699	157.74	503,828,691	43,287,813	85.92
2016	508,878,892	41,828,977	82.20	9,719,059	1,222,800	125.81	518,597,951	43,051,778	83.02
2017	520,229,507	44,984,718	86.47	10,702,251	1,374,914	128.47	530,931,758	46,359,632	87.32
1	46,768,445	4,392,188	93.91	1,207,974	145,291	120.28	47,976,419	4,537,479	94.58
2	42,575,436	4,152,534	97.53	1,185,453	150,640	127.07	43,760,889	4,303,174	98.33
3	43,774,907	4,131,540	94.38	1,096,420	148,875	135.78	44,871,328	4,280,415	95.39
4	39,690,674	2,884,185	72.67	942,793	111,539	118.31	40,633,467	2,995,723	73.73
5	40,122,797	3,071,539	76.55	888,631	119,611	134.60	41,011,428	3,191,149	77.81
6	40,624,024	4,383,703	107.91	632,720	85,288	134.80	41,256,744	4,468,991	108.32
7	47,364,752	3,846,960	81.22	602,169	93,780	155.74	47,966,921	3,940,740	82.16
8	46,135,266	3,842,919	83.30	595,827	81,890	137.44	46,731,092	3,924,809	83.99
9	41,080,012	3,180,468	77.42	732,673	89,054	121.55	41,812,685	3,269,523	78.19
10	40,291,406	2,792,373	69.30	778,334	101,280	130.12	41,069,739	2,893,654	70.46
11	43,382,170	3,540,428	81.61	927,565	106,308	114.61	44,309,735	3,646,737	82.30
12	48,419,619	4,765,880	98.43	1,111,691	141,357	127.15	49,531,310	4,907,237	99.07

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

※ PPA(Power Purchase Agreement) : 전력수급계약

※ 수수료, RPS, DR비용을 포함한 금액임(The amount which includes a commission, RPS, DR)

## 19. 전력 구입 실적 (2.전력시장 구입)

(\*17.1.1~12.31) Purchase results from Electricity market

구 분 Items		구 입 량 Volume (MWh)	구 입 금 액 Payment		구 입 단 가 Unit cost (won/kWh)	
			점 유 율 (% of total)	(백만원, mil. won)		점 유 율 (% of total)
발 전 회 사 별  Companies	한수원 KHNP	146,221,179	28.1	9,293,096	20.7	63.56
	남 동 KOEN	66,640,309	12.8	5,410,504	12.0	81.19
	중 부 KOMIPO	50,253,676	9.7	4,690,549	10.4	93.34
	서 부 W P	45,464,194	8.7	4,358,717	9.7	95.87
	남 부 KOSPO	47,659,308	9.2	4,553,756	10.1	95.55
	동 서 EWP	48,306,850	9.3	4,632,524	10.3	95.90
	기 타 Others	115,683,990	22.2	12,045,572	26.8	104.12
발 전 원 별  Fuel	원자력 Nuclear	141,097,974	27.1	8,573,361	19.1	60.76
	유연탄 Bituminous	224,833,514	43.2	18,833,822	41.9	83.77
	무연탄 Domestic Coal	4,014,349	0.8	384,943	0.9	95.89
	유 류 Oil	5,734,647	1.1	948,517	2.1	165.40
	L N G/복합	117,540,002	22.6	13,276,602	29.5	112.95
	수 력 Hydro	2,254,718	0.4	218,596	0.5	96.95
	양 수 Pumping	4,170,965	0.8	450,297	1.0	107.96
기 타 Others	20,583,338	4.0	2,298,580	5.1	111.67	
구 하 별  Load	기 저 Base Load	360,355,450	69.3	27,016,816	60.1	74.97
	일 반 Non-Base Load	159,874,057	30.7	17,967,902	39.9	112.39
	합 계 Total	520,229,507	100.0	44,984,718	100.0	86.47

## 19. 전력 구입 실적 ( 3. PPA 사업자 구입 )

('17.1.1~12.31) Purchase results from Power Purchase Agreement

구분 Items	구입량 Volume (MWh)	구입금액 Payment		구입단가 Unit cost (won/kWh)		
		점유율 (% of total)	(백만원, mil. won)		점유율 (% of total)	
복 합 화 력	POSCO POWER	170,414	1.6	76,463	5.6	448.69
	GS EPS	2,419,138	22.6	285,126	20.7	117.86
	GS Power	2,403,713	22.5	336,767	24.5	140.10
	C G N	1,794,938	16.8	242,822	17.7	135.28
	소계	6,788,204	63.4	941,177	68.5	138.65
구역전기 Community Energy Service	97,321	0.9	8,356	0.6	85.86	
소수력 small hydro	8,677	0.1	611	0.0	70.43	
풍력 wind	36	0.0	2	0.0	59.96	
바이오 Bio	24,032	0.2	1,935	0.1	80.50	
폐기물 Waste	8,412	0.1	681	0.0	81.01	
연료전지 Fuel cell	925	0.0	75	0.0	80.81	
태양광에너지 Solar energy	3,774,645	35.3	422,076	30.7	111.82	
합계 Total	10,702,251	100	1,374,914	100	128.47	

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## IV. 판매부문

Electricity sales



## 20. 전력손실 추이

(단위 : MWh, %) Trends in power losses

연도별	송전단 전력량 <sup>1)</sup> Net generation A	송변전손실 Transmission & Substation losses		
		배분전력량 <sup>2)</sup> Distribution B	손실량 Losses A - B	손실률 (%) (A-B)/A
1961	1,683,584	1,495,254	188,330	11.19
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
2012	484,334,191	476,693,295	7,640,896	1.58
2013	491,002,788	483,172,107	7,830,681	1.59
2014	494,716,613	486,874,854	7,841,759	1.59
2015	499,239,421	491,285,577	7,953,844	1.59
2016	514,118,988	505,937,374	8,181,614	1.59
2017	525,710,752	517,358,021	8,352,731	1.59
1	47,514,225	46,672,964	841,261	1.77
2	43,323,204	42,665,024	658,180	1.52
3	44,461,602	43,791,678	669,924	1.51
4	40,231,088	39,481,308	749,780	1.86
5	40,546,025	39,975,973	570,052	1.41
6	40,809,604	40,326,145	483,459	1.18
7	47,576,339	46,515,485	1,060,854	2.23
8	46,198,199	45,629,182	569,017	1.23
9	41,301,761	40,765,588	536,173	1.30
10	40,607,990	39,741,355	866,635	2.13
11	43,968,593	43,145,401	823,192	1.87
12	49,172,122	48,647,918	524,204	1.07

1) 송전단전력량 (A)

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

2) 배분전력량 (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			총 합 손 실 Total losses		During
배전판매량 Distribution Power sold C	손 실 량 Losses B - C	손 실 률 (%) (B-C)/B	손 실 량 Losses A - C	손 실 률 (%) (A-C)/A	
1,189,386	305,868	18.17	494,198	29.35	1961
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
467,042,687	9,650,608	2.02	17,291,504	3.57	2012
472,691,677	10,480,430	2.17	18,311,111	3.73	2013
476,446,201	10,428,653	2.14	18,270,412	3.69	2014
481,260,212	10,025,366	2.04	17,979,210	3.60	2015
495,644,146	10,293,228	2.03	18,474,842	3.59	2016
506,920,655	10,437,366	2.02	18,790,097	3.57	2017
45,678,830	994,134	2.13	1,835,395	3.86	1
41,770,331	894,693	2.10	1,552,873	3.58	2
43,009,429	782,249	1.79	1,452,173	3.27	3
38,667,464	813,844	2.06	1,563,624	3.89	4
39,256,456	719,517	1.80	1,289,569	3.18	5
39,783,637	542,508	1.35	1,025,967	2.51	6
45,479,055	1,036,430	2.23	2,097,284	4.41	7
44,405,597	1,223,585	2.68	1,792,602	3.88	8
40,101,939	663,649	1.63	1,199,822	2.91	9
39,179,178	562,177	1.41	1,428,812	3.52	10
42,282,779	862,622	2.00	1,685,814	3.83	11
47,305,960	1,341,958	2.76	1,866,162	3.80	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 호 수 추 이

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

연·월말 End of	주택용 Resi- dential	일반용 Public & Service	교육용 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
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
2012	13,514,464	2,817,597	34,788	367,888	1,432,599	1,398,414	910,149	20,475,899
2013	13,822,791	2,893,935	19,912	377,411	1,495,113	1,511,494	897,037	21,017,693
2014	14,117,408	2,954,628	20,217	387,533	1,565,503	1,604,510	882,470	21,532,269
2015	14,419,050	3,016,678	20,489	396,862	1,638,132	1,672,745	866,259	22,030,215
2016	14,728,391	3,088,632	20,663	405,771	1,710,781	1,751,669	846,812	22,552,719
2017	15,085,547	3,115,221	20,972	413,877	1,784,191	1,830,973	826,242	23,077,023
1	14,772,488	3,083,090	20,737	406,460	1,629,512	1,763,089	845,391	22,520,767
2	14,799,363	3,081,614	20,900	407,186	1,629,555	1,771,479	843,719	22,553,816
3	14,828,872	3,079,134	20,958	407,754	2,155,756	1,774,923	842,217	23,109,614
4	14,859,464	3,080,491	20,928	408,560	1,726,224	1,778,808	840,388	22,714,863
5	14,882,047	3,080,923	20,916	409,275	1,656,092	1,784,736	837,982	22,671,971
6	14,917,100	3,085,183	20,913	410,088	1,667,464	1,788,153	835,849	22,724,750
7	14,948,181	3,090,698	20,918	410,891	1,677,393	1,803,156	833,635	22,784,872
8	14,976,433	3,095,219	20,932	411,719	1,686,661	1,818,703	831,528	22,841,195
9	15,012,379	3,096,919	20,953	412,344	1,694,900	1,825,153	830,355	22,893,003
10	15,031,977	3,097,088	20,951	412,837	1,698,970	1,828,193	828,422	22,918,438
11	15,061,771	3,103,677	20,960	413,470	2,234,642	1,829,619	827,460	23,491,599
12	15,085,547	3,115,221	20,972	413,877	1,784,191	1,830,973	826,242	23,077,023



## 22. 요금 적용 전력 추이

### Trends in billing demand by tariff

(단위:kW)

(unit : kW)

연·월말 End of	주 택 용 Residential	일반용 Pub & Ser	교육용 Educational	산업용 Industrial	농사용 Agricultural	가 로 등 Street lighting	심 야 Midnight	계 Total
1961			602,077		1,893	-		603,970
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
2012	8,270,221	47,200,052	4,578,800	60,769,083	9,725,591	948,722	583,698	132,076,167
2013	8,441,223	47,494,772	4,523,631	61,421,501	9,643,455	971,649	588,390	133,084,621
2014	8,612,424	49,801,241	4,231,061	64,371,002	11,343,616	1,077,707	598,598	140,035,649
2015	9,771,619	50,056,608	4,268,931	64,882,595	12,061,741	1,118,414	621,044	142,780,952
2016	11,363,510	53,637,763	4,384,746	66,708,537	12,809,910	1,166,566	828,604	150,899,636
2017	10,799,028	55,381,056	4,636,161	68,276,143	13,463,379	1,899,798	666,765	155,122,330
1	11,604,032	53,773,479	4,277,274	66,526,348	12,725,169	1,170,377	467,321	150,544,000
2	11,571,397	53,606,072	4,440,648	66,723,675	12,636,062	1,169,396	651,256	150,798,506
3	11,648,813	53,533,920	4,331,704	66,406,147	13,868,609	1,172,440	653,782	151,615,415
4	11,667,120	53,622,908	4,382,032	67,009,211	13,371,040	1,177,453	662,831	151,892,595
5	11,133,349	54,073,695	4,355,038	66,944,574	13,383,920	1,178,628	662,561	151,731,765
6	10,971,974	53,445,214	4,355,547	67,398,302	12,979,200	1,183,269	671,820	151,005,326
7	11,040,989	54,079,358	4,379,807	67,622,659	12,804,840	1,185,248	674,889	151,787,790
8	10,600,011	54,185,384	4,393,682	67,673,162	12,856,834	1,184,697	672,408	151,566,178
9	10,685,789	54,241,038	4,457,620	68,015,506	12,887,416	1,184,938	668,289	152,140,596
10	10,731,968	54,349,114	4,318,514	68,554,199	13,153,856	1,189,569	671,061	152,968,281
11	10,778,382	54,617,065	4,956,106	68,522,742	14,551,007	1,196,332	671,681	155,293,315
12	10,799,028	55,381,056	4,636,161	68,276,143	13,463,379	1,899,798	666,765	155,122,330

## 23. 판매 전력량 추이

(단위 : MWh) Trends in power sales

연·월 별	주 택 용 Residential	일 반 용 Public & Service	교 육 용 Educational	산 업 용 Industrial
1961	222,510		940,277	
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
2012	65,483,733	101,592,760	7,860,449	258,101,933
2013	65,814,572	102,196,338	7,947,317	265,372,531
2014	64,457,263	100,760,879	7,438,374	272,551,573
2015	65,618,610	103,679,346	7,690,600	273,547,997
2016	68,056,786	108,616,888	8,079,392	278,827,855
2017	68,543,760	111,297,776	8,316,290	285,969,563
1	5,988,692	10,273,698	811,031	24,140,679
2	6,082,350	10,432,553	806,755	22,832,169
3	5,269,452	8,957,212	764,922	24,083,704
4	5,511,076	8,349,327	664,356	23,287,362
5	5,095,282	7,733,905	510,372	23,244,541
6	5,181,343	8,459,961	586,053	23,434,060
7	5,912,567	9,954,776	709,092	24,707,917
8	7,178,603	11,069,642	679,138	24,310,597
9	5,845,405	9,553,092	660,478	24,259,509
10	5,150,467	7,942,894	506,575	22,845,707
11	5,467,026	8,318,063	647,233	23,856,131
12	5,861,497	10,252,652	970,285	24,967,186

(unit : MWh)

농 사 용 Agricultural	가 로 등 Street lighting	심 야 Midnight Power	합 계 Total	During
20,851	5,748		1,189,386	1961
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
12,776,045	3,158,091	17,619,937	466,592,949	2012
13,865,837	3,156,226	16,495,759	474,848,580	2013
14,504,731	3,221,008	14,657,873	477,591,701	2014
15,702,468	3,341,240	14,074,556	483,654,816	2015
16,579,843	3,462,314	13,415,826	497,038,904	2016
17,250,850	3,556,775	12,811,372	507,746,386	2017
1,651,612	338,587	1,992,653	45,196,953	1
1,757,078	319,908	2,191,587	44,422,400	2
1,506,689	296,879	1,679,677	42,558,535	3
1,372,973	291,258	1,334,708	40,811,060	4
1,135,183	271,860	752,751	38,743,894	5
1,244,327	262,700	504,220	39,672,664	6
1,240,018	256,808	427,313	43,208,492	7
1,463,315	268,178	384,260	45,353,733	8
1,361,333	284,606	371,678	42,336,101	9
1,143,337	303,997	475,826	38,368,804	10
1,712,545	324,830	967,347	41,293,174	11
1,662,440	337,165	1,729,352	45,780,576	12

## 24. 용도별 판매전력량 추이

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

연·월 별	가 정 용		공 공 용		서 비 스 업		농 립 어 업 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
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
2012	63,536,150	13.6	21,422,340	4.6	132,498,775	28.4	12,074,001
2013	63,970,472	13.5	21,982,156	4.6	132,054,876	27.8	13,061,607
2014	62,675,310	13.1	21,669,253	4.5	128,629,516	26.9	13,556,457
2015	63,794,044	13.2	22,178,572	4.6	132,049,197	27.3	14,644,964
2016	66,173,065	13.3	22,908,419	4.6	137,982,086	27.8	15,396,810
2017	66,517,357	13.1	23,604,528	4.6	140,952,297	27.8	15,981,131
1	5,818,186	12.9	2,242,732	5.0	13,615,459	30.1	1,551,606
2	5,908,998	13.3	2,223,466	5.0	13,847,567	31.2	1,664,694
3	5,114,346	12.0	2,055,510	4.8	11,889,602	27.9	1,423,129
4	5,350,759	13.1	1,866,996	4.6	10,995,210	26.9	1,282,616
5	4,948,471	12.8	1,606,449	4.1	9,897,405	25.5	1,051,543
6	5,026,250	12.7	1,734,025	4.4	10,344,495	26.1	1,150,035
7	5,736,415	13.3	2,027,381	4.7	11,815,600	27.3	1,121,251
8	6,973,292	15.4	2,081,653	4.6	12,886,528	28.4	1,327,537
9	5,664,935	13.4	1,891,449	4.5	11,433,383	27.0	1,233,218
10	4,994,141	13.0	1,622,338	4.2	9,970,487	26.0	1,031,663
11	5,302,270	12.8	1,842,265	4.5	10,795,088	26.1	1,592,970
12	5,679,295	12.4	2,410,267	5.3	13,461,476	29.4	1,550,869

(unit : MWh)

점유율 (% of total)	광업		제조업		계		During
	Mining	점유율 (% of total)	Manufac- turing	점유율 (% of total)	Total	점유율 (% of total)	
1.5	194,629	7.9	1,302,728	52.9	2,463,687	100	1965
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
2.6	1,616,370	0.3	235,445,313	50.5	466,592,949	100	2012
2.8	1,478,043	0.3	242,301,427	51.0	474,848,580	100	2013
2.8	1,570,929	0.3	249,490,235	52.2	477,591,701	100	2014
3.0	1,630,853	0.3	249,357,185	51.6	483,654,816	100	2015
3.1	1,754,503	0.4	252,824,020	50.9	497,038,904	100	2016
3.1	1,746,244	0.3	258,944,828	51.0	507,746,386	100	2017
3.4	152,302	0.3	21,816,668	48.3	45,196,953	100	1
3.7	143,111	0.3	20,634,564	46.5	44,422,400	100	2
3.3	158,768	0.4	21,917,181	51.5	42,558,535	100	3
3.1	156,978	0.4	21,158,500	51.8	40,811,060	100	4
2.7	153,789	0.4	21,086,238	54.4	38,743,894	100	5
2.9	256,663	0.6	21,161,196	53.3	39,672,664	100	6
2.6	115,407	0.3	22,392,440	51.8	43,208,492	100	7
2.9	113,646	0.3	21,971,077	48.4	45,353,733	100	8
2.9	122,378	0.3	21,990,739	51.9	42,336,101	100	9
2.7	107,854	0.3	20,642,321	53.8	38,368,804	100	10
3.9	131,846	0.3	21,628,735	52.4	41,293,174	100	11
3.4	133,502	0.3	22,545,168	49.2	45,780,576	100	12

## 25. 제조업 종별 판매 전력량 추이 (1)

(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
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
2012	9,792,881	12,723,374	1,771,977	8,513,144	1,537,845
2013	10,018,478	12,428,655	1,858,881	8,689,559	1,480,562
2014	10,105,219	11,965,254	1,927,731	8,547,863	1,432,506
2015	10,485,097	11,604,490	1,903,958	8,521,616	1,410,969
2016	10,998,804	11,425,575	1,917,895	8,615,101	1,398,619
2017	11,282,454	11,260,606	1,925,029	8,386,402	1,397,293
1	902,822	975,345	180,497	737,701	135,652
2	856,103	938,291	169,057	703,197	131,759
3	862,750	960,139	171,730	739,314	122,137
4	877,297	950,678	163,808	698,134	112,242
5	899,282	910,997	154,917	698,456	96,135
6	867,380	927,695	154,190	674,527	108,863
7	1,057,959	956,597	152,042	700,010	117,062
8	1,082,469	933,105	147,344	677,063	117,650
9	1,051,136	951,523	151,318	691,801	118,088
10	908,923	848,766	141,091	654,500	91,892
11	958,935	936,287	162,733	690,801	112,281
12	957,384	971,187	176,300	720,899	133,526

(unit : MWh)

석유·화학 Petroleum, chemistry	요 업 Ceramic industry	1 차 금 속 Basic metal	조 립 금 속 Fabricated metal	기 타 기 계 Other Machinery	During
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
50,539,522	10,927,942	45,675,836	8,322,460	13,554,603	2012
52,112,317	11,236,441	46,466,613	8,479,272	14,262,025	2013
54,992,167	11,642,680	48,790,672	8,613,090	14,960,420	2014
55,660,380	12,022,646	46,191,526	8,723,716	15,750,983	2015
58,483,202	12,575,440	45,004,788	9,037,399	10,096,754	2016
60,469,128	12,612,253	45,329,277	9,523,399	10,539,701	2017
5,101,872	1,038,979	3,818,932	846,990	967,276	1
4,763,983	947,535	3,495,435	848,574	972,736	2
5,118,497	1,123,515	3,869,841	836,592	912,629	3
4,904,147	1,098,596	3,750,262	794,667	872,016	4
4,976,937	1,096,560	3,833,102	723,016	773,448	5
4,943,200	1,067,395	3,906,651	759,045	826,097	6
5,196,123	1,037,089	3,749,319	774,360	875,563	7
5,185,835	970,167	3,735,856	753,205	851,272	8
5,139,684	1,012,788	3,789,516	797,445	879,634	9
4,957,669	996,145	3,787,782	667,382	725,835	10
4,933,027	1,109,778	3,753,467	832,794	889,786	11
5,248,157	1,113,711	3,839,113	889,334	993,415	12

## 25. 제조업 종별 판매 전력량 추이 (2)

(단위: MWh) Trends in power sales by manufacturing

연·월 별	사무 기기 Office apparatus	전기 기기 Electricity apparatus	영상·음향 Sound, image	의료·광학 Medical, optical	자동차 Motorcar
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
2012	928,899	5,151,053	37,681,598	3,191,567	17,041,508
2013	887,415	5,088,701	38,678,769	4,948,416	17,588,169
2014	699,380	5,222,061	38,698,785	5,054,536	18,334,344
2015	441,025	5,353,309	38,440,881	5,615,076	18,468,778
2016	453,424	5,656,438	44,497,525	5,859,907	18,276,571
2017	489,279	5,801,908	47,699,795	5,931,997	17,903,597
1	40,954	492,714	3,786,003	477,830	1,570,731
2	39,570	487,812	3,523,818	469,005	1,568,005
3	39,591	501,534	3,848,293	486,553	1,623,527
4	37,933	467,820	3,756,223	496,254	1,523,876
5	35,959	451,910	3,921,380	497,906	1,428,577
6	40,322	486,891	3,994,959	280,173	1,516,803
7	41,465	499,339	4,313,550	600,301	1,535,947
8	42,992	476,062	4,333,783	548,564	1,391,978
9	42,506	496,024	4,100,505	543,820	1,486,956
10	40,444	432,360	4,055,341	481,722	1,239,505
11	43,092	489,283	3,976,119	510,173	1,509,137
12	44,446	520,154	4,089,825	539,669	1,508,555



(unit : MWh)

기 타 운 송 Other transport	가 구 및 기 타 Furniture, others	재 생 재 료 Recycling	계 Total	During
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
5,643,224	1,890,200	557,681	235,445,313	2012
5,387,979	2,118,916	570,258	242,301,427	2013
5,679,767	2,265,057	558,701	249,490,234	2014
5,821,973	2,392,199	548,564	249,357,185	2015
5,435,471	2,547,145	543,961	252,824,020	2016
4,420,507	3,408,876	563,328	258,944,828	2017
430,482	262,405	49,482	21,816,667	1
408,271	263,869	47,541	20,634,561	2
406,523	246,814	47,204	21,917,183	3
370,730	236,284	47,540	21,158,507	4
336,090	207,038	44,526	21,086,236	5
360,721	200,365	45,915	21,161,192	6
410,640	329,626	45,440	22,392,432	7
351,757	326,871	45,107	21,971,080	8
360,265	330,773	46,958	21,990,740	9
290,679	280,053	42,233	20,642,322	10
333,847	338,510	48,690	21,628,740	11
360,498	386,266	52,696	22,545,135	12

## 26. 행정구역별 고객호수 추이 (1)

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

연도별 / 시도별	서울 Seoul	부산 Busan	대구 Daegu	인천 Incheon
1961	219,134	-	-	-
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
2012	3,297,656	1,217,929	839,322	905,425
2013	3,396,721	1,238,164	851,861	916,535
2014	3,441,223	1,252,737	870,345	936,198
2015	3,467,528	1,263,051	891,935	955,702
2016	3,506,464	1,270,512	918,572	978,238
2017	3,563,803	1,279,193	929,637	1,005,645
1	3,511,470	1,271,480	919,766	975,545
2	3,513,679	1,271,253	921,490	978,530
3	3,517,496	1,271,640	922,119	989,613
4	3,520,855	1,272,382	922,737	988,485
5	3,523,693	1,272,798	924,009	985,409
6	3,527,217	1,274,275	924,792	988,393
7	3,532,497	1,275,258	926,874	990,687
8	3,535,496	1,275,573	926,847	995,139
9	3,550,203	1,276,680	927,963	996,966
10	3,553,596	1,276,686	928,354	997,800
11	3,559,243	1,278,002	930,700	1,007,393
12	3,563,803	1,279,193	929,637	1,005,645

※ 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
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
484,454	504,791	401,743	3,784,921	2012
504,496	513,418	414,659	3,889,183	2013
516,639	522,331	427,835	3,998,459	2014
526,471	538,213	440,557	4,117,575	2015
531,637	556,529	450,632	4,248,808	2016
543,151	576,795	459,420	4,369,707	2017
537,567	557,978	451,595	4,247,937	1
538,099	562,853	452,241	4,254,809	2
542,807	565,249	454,241	4,326,700	3
538,945	564,494	454,627	4,285,050	4
539,036	565,317	455,035	4,284,222	5
539,676	566,012	455,984	4,296,714	6
540,258	566,787	456,712	4,308,817	7
540,608	574,841	457,289	4,320,501	8
541,069	574,501	457,975	4,331,136	9
541,461	574,774	458,486	4,337,077	10
546,681	577,065	459,898	4,413,518	11
543,151	576,795	459,420	4,369,707	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 고객 호수 추이 (2)

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

연도별 / 시도별	강 원 Gangwon	충 북 Chungbuk	충 남 Chungnam	전 북 Jeonbuk	전 남 Jeonnam
1961	24,626	30,418	58,205	58,015	70,043
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
2012	908,906	916,759	1,171,169	1,022,299	1,251,282
2013	930,463	940,692	1,208,741	1,046,867	1,284,336
2014	950,946	964,440	1,243,023	1,109,077	1,308,664
2015	975,262	991,176	1,281,942	1,133,398	1,335,482
2016	1,000,910	1,016,059	1,317,480	1,155,045	1,364,679
2017	1,026,188	1,041,178	1,357,245	1,178,675	1,393,273
1	1,003,885	1,017,800	1,320,824	1,115,523	1,343,010
2	1,004,579	1,018,790	1,322,851	1,116,505	1,344,292
3	1,028,433	1,054,620	1,430,127	1,185,143	1,461,735
4	1,008,583	1,022,356	1,328,179	1,161,527	1,372,674
5	1,011,213	1,024,034	1,331,323	1,122,090	1,351,489
6	1,014,788	1,026,881	1,335,372	1,124,855	1,354,594
7	1,024,298	1,029,807	1,339,026	1,127,596	1,357,989
8	1,021,815	1,032,435	1,350,835	1,129,991	1,361,087
9	1,025,501	1,037,300	1,348,025	1,132,408	1,363,617
10	1,025,127	1,037,320	1,350,593	1,133,895	1,365,664
11	1,048,342	1,073,461	1,462,096	1,202,448	1,486,252
12	1,026,188	1,041,178	1,357,245	1,178,675	1,393,273

(unit:Households)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	세 종 Sejong	개 성 Gaeseong	계 Total	Province End of
103,507	161,063	6,761	0	0	797,252	1961
1,345,213	1,336,161	249,331	0	0	17,061,591	2004
1,375,853	1,365,303	254,889	0	0	17,329,494	2005
1,416,085	1,396,399	261,131	0	0	17,624,836	2006
1,471,397	1,430,566	265,851	0	0	18,038,810	2007
1,524,494	1,472,953	271,002	0	253	18,419,048	2008
1,566,729	1,508,845	276,850	0	244	18,727,411	2009
1,607,210	1,551,878	282,977	0	238	19,229,450	2010
1,662,139	1,599,848	296,567	0	232	19,814,866	2011
1,729,293	1,660,652	311,032	68,018	248	20,475,899	2012
1,777,464	1,705,087	324,574	74,187	245	21,017,693	2013
1,826,845	1,744,017	339,072	80,165	253	21,532,269	2014
1,884,765	1,785,232	358,644	83,028	254	22,030,215	2015
1,937,384	1,828,814	385,200	85,756	0	22,552,719	2016
1,980,254	1,865,308	418,037	89,514	0	23,077,023	2017
1,939,404	1,831,992	388,838	86,153		22,520,767	1
1,941,165	1,834,087	392,248	86,345		22,553,816	2
2,013,044	1,860,726	394,321	91,600		23,109,614	3
1,948,661	1,840,796	397,463	87,049		22,714,863	4
1,953,087	1,842,628	399,295	87,293		22,671,971	5
1,959,618	1,845,510	402,317	87,752		22,724,750	6
1,965,878	1,848,862	405,383	88,143		22,784,872	7
1,970,362	1,852,340	407,651	88,385		22,841,195	8
1,975,193	1,855,479	410,179	88,741		22,893,003	9
1,977,695	1,858,105	412,832	88,919		22,918,438	10
2,049,773	1,886,948	415,610	94,156		23,491,599	11
1,980,254	1,865,308	418,037	89,514		23,077,023	12

## 27. 행정구역별 판매전력량 추이 (1)

(단위 : MWh) Trends in power sales by province

연도별 / 시도별	서울 Seoul	부산 Busan	대구 Daegu	인천 Incheon
1961	384,492	-	-	-
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
2012	47,234,102	20,664,842	14,954,958	22,651,946
2013	46,555,105	20,364,705	15,080,052	22,673,441
2014	45,018,863	19,980,898	14,858,787	22,578,048
2015	45,381,484	20,002,307	14,947,708	23,211,766
2016	46,493,234	20,467,093	15,268,114	23,875,857
2017	46,298,158	21,007,358	15,386,372	24,515,313
1	4,139,968	1,823,489	1,391,374	2,171,786
2	4,166,703	1,824,628	1,375,377	2,146,147
3	3,649,112	1,693,921	1,263,788	2,042,079
4	3,470,753	1,696,125	1,234,857	1,945,740
5	3,290,789	1,584,173	1,147,637	1,867,275
6	3,621,610	1,646,152	1,218,413	1,938,030
7	4,273,772	1,815,919	1,349,358	2,117,650
8	4,733,094	1,979,174	1,413,995	2,225,963
9	3,998,064	1,848,565	1,306,138	2,043,140
10	3,329,880	1,569,821	1,107,848	1,820,832
11	3,488,081	1,675,282	1,220,285	1,979,776
12	4,136,331	1,850,110	1,357,291	2,216,892

※ 1961 부산 실적은 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
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
8,130,493	9,160,107	29,362,724	100,291,952	2012
8,274,074	9,225,140	29,992,969	102,227,067	2013
8,197,277	9,102,524	30,115,123	102,180,707	2014
8,333,873	9,182,737	30,286,140	105,048,003	2015
8,558,369	9,379,633	32,095,217	109,403,901	2016
8,683,649	9,423,804	31,609,850	114,847,859	2017
765,089	848,528	2,693,952	10,297,551	1
773,394	848,648	2,492,174	10,228,592	2
717,912	779,390	2,659,206	9,551,033	3
698,717	748,956	2,559,429	9,094,731	4
634,698	700,348	2,593,990	8,531,718	5
677,386	741,221	2,520,793	8,873,250	6
761,988	826,382	2,774,159	9,771,138	7
833,273	895,487	2,782,575	10,298,533	8
758,365	787,500	2,706,480	9,494,123	9
631,755	680,664	2,617,830	8,547,612	10
680,053	730,895	2,511,997	9,438,810	11
751,019	835,784	2,697,259	10,720,767	12

※ 1961~1986 광주 실적은 전남, 1961~1988 대전 실적은 충남, 1961~1999 울산 실적은 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 판매 전력량 추이 (2)

(단위 : MWh) Trends in power sales by province

시도별 연도별	강 원 Gangwon	충 북 Chungbuk	충 남 Chungnam	전 북 Jeonbuk	전 남 Jeonnam
1961	116,339	24,490	61,951	50,630	50,543
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
2012	15,904,382	21,361,911	44,492,412	21,462,325	28,484,719
2013	15,794,741	21,665,043	45,466,812	21,708,655	30,302,068
2014	15,778,144	22,179,262	47,294,961	22,297,413	31,722,943
2015	16,206,618	22,949,032	47,286,062	22,086,860	32,637,829
2016	16,498,768	24,008,863	48,453,931	22,733,495	33,096,902
2017	16,552,816	24,843,494	50,180,209	22,799,647	33,562,076
1	1,579,861	2,209,997	4,362,664	2,038,015	2,966,419
2	1,570,621	2,166,241	4,225,255	2,027,151	2,784,462
3	1,460,102	2,138,946	4,277,074	1,996,164	2,846,970
4	1,390,747	2,027,118	4,069,578	1,882,119	2,791,506
5	1,260,135	1,923,716	3,974,475	1,793,383	2,706,544
6	1,228,373	1,937,772	4,000,824	1,770,290	2,615,729
7	1,266,280	2,078,381	4,240,321	1,828,010	2,753,901
8	1,309,953	2,096,901	4,316,873	1,963,681	2,925,333
9	1,242,836	2,025,776	4,109,029	1,875,216	2,827,403
10	1,228,640	1,862,331	3,903,713	1,710,327	2,737,098
11	1,413,444	2,086,965	4,263,160	1,854,750	2,675,817
12	1,601,791	2,289,261	4,437,241	2,060,543	2,930,889



(unit : MWh)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	세 종 Sejong	개 성 Gaeseong	계 Total	Province End of
119,169	173,192	1,332	-	-	1,189,386	1961
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
44,799,525	33,014,947	3,864,639	578,610	178,351	466,592,949	2012
45,444,247	33,530,619	4,094,900	2,345,527	103,415	474,848,580	2013
46,016,364	33,435,157	4,220,090	2,437,031	178,108	477,591,701	2014
44,956,836	33,876,325	4,429,553	2,641,139	190,544	483,654,816	2015
44,647,503	34,497,477	4,738,201	2,801,869	20,479	497,038,904	2016
45,455,611	34,647,864	5,013,545	2,918,758	-	507,746,386	2017
4,016,218	3,192,938	442,926	256,177		45,196,953	1
3,858,428	3,216,893	462,912	254,768		44,422,400	2
3,827,880	2,992,019	415,696	247,248		42,558,535	3
3,668,406	2,879,084	418,497	234,700		40,811,060	4
3,553,236	2,587,208	373,248	221,322		38,743,894	5
3,592,871	2,683,613	373,509	232,819		39,672,664	6
3,811,465	2,873,065	419,190	247,502		43,208,492	7
3,872,113	2,960,980	490,005	255,802		45,353,733	8
3,757,191	2,879,663	430,855	245,762		42,336,101	9
3,581,570	2,456,873	366,233	215,766		38,368,804	10
3,862,256	2,786,080	383,332	242,114		41,293,174	11
4,053,981	3,139,457	437,138	264,776		45,780,576	12

## 28. 행정구역별 용도별 판매전력량 (1)

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

시도별 용도별	서울 Seoul	부산 Busan	대구 Daegu	인천 Incheon
1. 가정용	13,131,172	4,473,510	3,151,904	3,856,852
2. 공공용	3,581,534	1,305,876	826,396	921,748
3. 서비스업	27,647,345	7,582,169	5,470,438	7,154,416
4. 농림어업	15,150	107,927	69,142	142,953
5. 광업	4,064	25,289	5,858	71,529
6. 제조업	1,918,893	7,512,588	5,862,633	12,367,816
식료품	227,077	532,943	212,626	641,088
섬유·의복	497,699	528,513	1,057,342	75,895
목재·나무	4,399	51,980	16,215	639,429
펄프·종이	43,281	27,240	445,646	57,159
출판·인쇄	296,772	33,000	46,804	71,120
석유·화학	286,957	438,833	418,485	2,039,737
요업	26,941	77,771	68,137	182,028
1차 금속	17,236	2,426,694	317,580	2,346,232
조립금속	64,682	872,952	661,307	750,654
기타기계	163,688	904,149	516,493	942,801
사무기기	4,395	4,913	58,446	7,853
전기기기	11,425	107,717	180,189	178,502
영상·음향	46,225	90,644	252,662	1,124,564
의료·광학	54,697	74,733	85,871	2,250,315
자동차	20,182	1,046,529	1,381,273	612,898
기타운송	17,656	231,141	68,127	54,225
가구및기타	132,707	49,733	41,814	360,778
재생재료	2,875	13,104	33,616	32,538
합계	46,298,158	21,007,358	15,386,372	24,515,313

(As of Dec. 31. '17, unit : MWh)

광 주 Gwangju	대 전 Daejeon	울 산 Ulsan	경 기 Gyeonggi	강 원 Gangwon	Province End of
1,954,876	1,872,890	1,487,143	16,587,710	1,940,933	Residential
565,527	954,681	489,865	5,533,662	1,400,421	Public
3,174,973	3,955,921	3,649,386	33,434,551	6,203,749	Service
74,608	28,643	80,221	2,371,347	607,139	Agri., For. & Fishery
2,898	3,326	20,103	317,263	398,287	Mining
2,910,768	2,608,343	25,883,132	56,603,327	6,002,286	Manufacturing
161,072	204,171	187,738	2,544,420	546,621	Food, beverage
295,922	41,687	943,299	2,109,963	13,027	Textile, clothes
6,782	4,311	12,286	529,274	19,147	Lumber, wood
41,827	539,332	620,457	1,917,458	24,382	Pulp, paper
22,038	14,802	3,325	731,348	7,727	Publication, printing
391,151	630,776	14,870,740	6,881,775	175,323	Petroleum, chemistry
20,728	53,481	183,981	1,728,379	3,695,776	Ceramic industry
75,702	56,535	4,671,005	2,020,196	1,038,913	Basic metal
156,396	69,342	393,469	2,302,355	39,477	Fabricated metal
198,847	77,970	169,132	3,613,798	35,063	Other Machinery
5,967	2,949	5,053	317,244	2,019	Office apparatus
236,622	83,609	381,602	1,040,171	38,062	Electricity apparatus
723,764	474,561	24,165	24,519,644	43,986	Sound, image
27,221	97,278	22,508	1,336,390	84,397	Medical, optical
512,148	218,191	2,367,150	2,977,165	113,448	Motorcar
5,140	5,439	1,020,610	67,594	108,629	Other transport
13,392	31,657	4,984	1,833,112	12,872	Furniture, others
16,049	2,252	1,626	133,041	3,418	Recycling
8,683,649	9,423,804	31,609,850	114,847,859	16,552,816	Total

## 28. 행정구역별 용도별 판매전력량 (2)

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

시도별 연도별	충북 Chungbuk	충남 Chungnam	전북 Jeonbuk	전남 Jeonnam
1. 가 정 용	2,027,281	2,691,823	2,326,183	2,284,124
2. 공 공 용	1,267,140	1,089,613	1,096,968	964,024
3. 서 비 스 업	4,804,638	7,164,439	4,910,318	5,690,659
4. 농 림 어 업	721,131	1,928,066	1,415,004	3,096,126
5. 광 업	139,856	248,313	85,300	73,217
6. 제 조 업	15,883,448	37,057,955	12,965,875	21,453,926
식료품제조	1,152,073	1,137,035	1,459,217	511,361
섬유·의복	333,846	269,998	731,651	160,506
목재·나무	51,682	134,109	291,729	27,998
펄프·종이	880,020	809,760	1,282,937	145,685
출판·인쇄	23,940	50,869	10,512	6,714
석유·화학	2,350,133	7,787,274	4,452,120	13,945,376
요 업	2,431,846	914,757	614,013	586,208
1 차 금속	469,546	9,976,454	2,158,438	5,036,891
조립금속	738,699	565,003	137,635	123,651
기타기계	366,871	611,925	159,699	66,431
사무기기	23,076	12,208	7,240	1,061
전기기기	1,125,141	428,906	130,692	149,939
영상·음향	4,103,832	10,953,811	420,005	42,399
의료·광학	587,361	771,894	64,088	49,380
자 동 차	603,349	2,526,658	859,741	72,132
기타운송	82,496	33,766	70,980	481,592
가구및기타	513,501	53,804	16,175	14,670
재생재료	46,038	19,725	99,003	31,932
합 계	24,843,494	50,180,209	22,799,647	33,562,076

(As of Dec. 31. '17, unit : MWh)

경 북 Gyeongbuk	경 남 Gyeongnam	제 주 Jeju	세 종 Sejong	계 Total	Province End of
3,302,463	4,260,988	782,601	384,903	64,576,423	Residential
1,578,115	1,427,560	301,727	299,675	22,204,112	Public
8,487,402	8,667,737	2,308,732	645,424	134,748,546	Service
1,747,462	2,141,813	1,364,930	69,469	15,373,994	Agri., For. & Fishery
224,568	95,989	14,019	16,364	1,347,957	Mining
30,115,601	18,053,778	241,537	1,502,922	252,942,540	Manufacturing
566,071	932,743	155,987	110,211	10,735,833	Food, beverage
3,780,171	346,974	3,497	70,617	11,247,578	Textile, clothes
72,680	60,160	1,524	1,324	1,905,882	Lumber, wood
361,772	817,685	20,864	350,896	8,362,019	Pulp, paper
44,402	28,486	2,436	2,998	1,389,566	Publication, printing
3,653,665	1,865,583	19,615	261,583	60,293,807	Petroleum, chemistry
1,269,917	429,920	22,521	305,848	8,916,474	Ceramic industry
10,874,970	3,809,547	993	32,345	44,290,363	Basic metal
933,178	1,699,879	3,331	11,390	9,483,924	Fabricated metal
782,570	1,902,913	1,167	26,185	10,504,640	Other Machinery
14,468	8,070	0	14,319	487,262	Office apparatus
750,786	924,235	771	33,539	5,763,846	Electricity apparatus
4,174,971	534,196	0	170,366	47,655,808	Sound, image
217,771	178,498	5,038	24,557	5,847,599	Medical, optical
2,356,890	2,156,059	773	79,009	17,790,147	Motorcar
123,935	2,048,646	532	0	4,311,878	Other transport
60,280	262,523	1,743	5,132	3,396,006	Furniture, others
77,104	47,662	743	2,603	559,909	Recycling
45,455,611	34,647,864	5,013,545	2,918,758	491,193,571	Total

## 29. 전력 판매 수입 추이

(단위 : 천원) Trends in revenues from sales

연·월 별	주 택 용 Residential	일 반 용 Public & Service	교 육 용 Educational	산 업 용 Industrial
1961	1,354,665		2,433,469	
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
2012	8,099,666,224	11,428,849,503	855,546,883	23,959,881,861
2013	8,359,482,143	12,466,201,558	921,824,186	26,723,313,244
2014	8,066,376,737	13,073,321,416	849,078,687	29,116,998,686
2015	8,116,164,990	13,526,415,520	870,691,773	29,382,565,885
2016	8,270,443,259	14,164,678,060	900,914,372	29,866,595,242
2017	7,437,258,827	14,515,430,182	857,124,037	30,715,446,368
1	674,252,228	1,369,130,566	80,421,897	2,765,633,206
2	691,457,233	1,385,662,433	80,580,965	2,690,726,807
3	531,282,677	1,104,010,061	74,124,986	2,299,640,462
4	577,705,896	959,021,691	60,004,966	2,184,912,900
5	510,046,429	918,491,430	47,221,606	2,177,537,141
6	528,243,094	1,142,432,932	66,453,282	2,720,966,973
7	661,278,396	1,442,717,736	83,259,207	2,917,614,712
8	914,769,738	1,568,508,548	82,834,101	2,880,569,497
9	633,586,427	1,215,766,847	70,476,985	2,349,740,800
10	511,163,426	925,149,958	47,802,732	2,110,233,934
11	567,186,774	1,104,005,669	69,022,462	2,755,278,780
12	636,286,508	1,380,532,310	94,920,848	2,862,591,156

(Unit : Thousand won)

농 사 용 Agricultural	가 로 등 Street lighting	심 야 Midnight Power	합 계 Total	During
31,943	15,684		3,835,761	1961
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
548,102,427	312,298,567	1,033,474,501	46,237,819,965	2012
630,970,913	338,753,964	1,047,827,078	50,488,373,086	2013
686,214,233	365,234,262	986,847,399	53,144,071,420	2014
742,907,237	378,803,714	946,136,976	53,963,686,067	2015
786,031,602	392,456,597	906,403,930	55,287,523,060	2016
820,634,504	403,630,974	864,485,918	55,614,010,810	2017
79,211,050	35,808,755	149,796,887	5,154,254,590	1
83,388,143	35,508,365	164,877,087	5,132,201,033	2
72,432,700	33,274,145	111,599,735	4,226,364,768	3
66,371,562	33,847,853	73,039,569	3,954,904,436	4
55,278,867	32,580,362	42,111,366	3,783,267,203	5
58,047,127	32,458,007	29,511,306	4,578,112,721	6
59,977,906	31,516,221	26,669,835	5,223,034,013	7
69,705,702	31,900,037	24,398,717	5,572,686,339	8
65,584,627	32,706,653	22,469,102	4,390,331,442	9
57,171,913	33,476,696	27,420,942	3,712,419,602	10
74,357,653	35,013,469	62,403,786	4,667,268,594	11
79,107,253	35,540,411	130,187,585	5,219,166,070	12

## 30. 판매 단가 추이

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

연·월 별	주택용 Resi- dential	일반용 Public & Service	교육용 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
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
2012	123.69	112.50	108.84	92.83	42.90	98.89	58.65	99.10
2013	127.02	121.98	115.99	100.70	45.51	107.33	63.52	106.33
2014	125.14	129.75	114.15	106.83	47.31	113.39	67.33	111.28
2015	123.69	130.46	113.22	107.41	47.31	113.37	67.22	111.57
2016	121.52	130.41	111.51	107.11	47.41	113.35	67.56	111.23
2017	108.50	130.42	103.07	107.41	47.57	113.48	67.48	109.53
1	112.59	133.27	99.16	114.56	47.96	105.76	75.17	114.04
2	113.68	132.82	99.88	117.85	47.46	111.00	75.23	115.53
3	100.82	123.25	96.91	95.49	48.07	112.08	66.44	99.31
4	104.83	114.86	90.32	93.82	48.34	116.21	54.72	96.91
5	100.10	118.76	92.52	93.68	48.70	119.84	55.94	97.65
6	101.95	135.04	113.39	116.11	46.65	123.56	58.53	115.40
7	111.84	144.93	117.42	118.08	48.37	122.72	62.41	120.88
8	127.43	141.69	121.97	118.49	47.64	118.95	63.50	122.87
9	108.39	127.26	106.71	96.86	48.18	114.92	60.45	103.70
10	99.25	116.48	94.36	92.37	50.00	110.12	57.63	96.76
11	103.75	132.72	106.64	115.50	43.42	107.79	64.51	113.03
12	108.55	134.65	97.83	114.65	47.59	105.41	75.28	114.00



Statistics of Electric Power in Korea

제87호 2017년 한국전력통계



# V. 경영관리

Management





### 31. 경영 분석 비율 (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 (%)
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	39.4	153.6	228.1	103.3	77.6
2012(연결)	34.9	186.2	258.9	103.8	74.0
2013(연결)	33.1	202.3	272.6	103.7	75.5
2014(연결)	33.5	198.6	267.9	103.4	77.9
2015(연결)	38.8	157.9	225.5	100.4	97.0
2016(연결)	41.1	143.4	216.5	103.3	79.7
2017(연결)	40.1	149.1	222.9	102.7	81.7

## 31. 경영 분석 비율 (2)

### Ratios of business analysis

연도별	당좌비율 Quick ratio (%)	총자본순이익율 Net income to stockholders' equity and liabilities (%)	자기자본 순이익율 Net income to stockholders' equity (%)	매출액순이익율 Net income to net sales (%)
1994	38.7	3.9	8.4	9.9
1995	34.8	3.6	7.6	9.1
1996	38.6	1.9	4.0	5.2
1997	28.7	1.4	3.3	4.3
1998	27.6	2.3	6.3	7.8
1999	23.9	2.6	6.1	9.5
2000	25.1	2.8	5.8	9.8
2001	52.8	3.1	5.5	9.0
2002	43.6	5.8	8.8	14.5
2003	37.4	4.2	6.3	10.3
2004	45.9	5.0	7.4	12.2
2005	49.8	4.1	5.9	9.8
2006	50.9	3.3	4.9	7.7
2007	49.6	2.4	3.6	5.4
2008	50.8	-4.5	-6.9	-9.4
2009	51.0	-0.1	-0.2	-0.2
2010	55.9	-0.1	-0.1	-0.2
2011	55.9	-2.4	-6.3	-7.6
2012(연결)	55.8	-2.2	-6.1	-6.2
2013(연결)	54.4	0.1	0.1	0.3
2014(연결)	56.9	1.8	5.2	4.9
2015(연결)	75.2	7.9	22.1	22.8
2016(연결)	57.5	4.0	10.2	11.9
2017(연결)	56.1	0.8	1.8	2.4

수 지 비 율 Total expenses to total revenues (%)	총자본회전율 Stockholders' equity and liabilities turnover ratio (times)	자기자본회전율 Net worth turnover ratio (times)	During
90.3	0.4	0.8	1994
91.2	0.4	0.8	1995
94.9	0.4	0.8	1996
95.8	0.3	0.8	1997
92.5	0.3	0.8	1998
91.1	0.3	0.6	1999
91.0	0.3	0.6	2000
91.9	0.3	0.6	2001
87.5	0.4	0.6	2002
90.7	0.4	0.6	2003
89.1	0.4	0.6	2004
91.2	0.4	0.6	2005
92.9	0.4	0.6	2006
95.0	0.4	0.7	2007
108.9	0.5	0.7	2008
100.2	0.5	0.8	2009
100.1	0.5	1.0	2010
107.3	0.3	0.8	2011
106.0	0.3	0.9	2012(연결)
99.7	0.4	1.1	2013(연결)
95.3	0.4	1.1	2014(연결)
80.8	0.3	1.0	2015(연결)
88.5	0.3	0.9	2016(연결)
97.7	0.3	0.8	2017(연결)

## 32. 종업원수

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

연도말 End of	경 영 Administration	사 무 Office clerk	기 술 Engineer	기 능 Skilled worker	계 Total
1961		3,116	5,775	1,204	10,095
2000		5,592	19,224	4,712	29,528
2001 <sup>1)</sup>		4,533	8,110	3,998	16,641
2002		4,539	8,250	3,984	16,773
2003		4,583	8,608	3,931	17,122
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
2012	415	4,197	9,345	3,160	17,117
2013	393	4,367	9,616	3,141	17,517
2014	400	4,465	9,449	3,473	17,787
2015	379	4,516	9,739	3,453	18,087
2016	390	4,585	10,250	3,628	18,853
2017	369	4,729	10,913	3,585	19,596
전력거래소 (KPX)	3	81	244	0	328
한수원 (KHNP)	6	1,053	8,944	906	10,909
남동 (KOEN)	3	262	1,881	17	2,163
중부 (KOMIPO)	3	298	2,061	31	2,393
서부 (WP)	3	273	1,848	13	2,137
남부 (KOSPO)	3	279	1,803	4	2,089
동서 (EWP)	3	272	1,978	19	2,272

※ 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.

### 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	-
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	14,475	52.1	13,596	53.1
2002	292,182,776	278,451,371	18,934	15,432	6.6	14,706	8.2
2003	306,866,082	293,599,230	19,116	16,053	4.0	15,359	4.4
2004	327,191,191	312,095,586	19,754	16,563	3.2	15,799	2.9
2005	349,758,383	332,412,828	20,356	17,182	3.7	16,330	3.4
2006	362,446,663	348,719,371	20,480	17,698	3.0	17,027	4.3
2007	380,201,047	368,605,433	20,577	18,477	4.4	17,913	5.2
2008	394,929,871	385,070,137	20,976	18,828	1.9	18,358	2.5
2009	406,779,556	394,474,637	20,371	19,969	6.1	19,365	5.5
2010	435,384,166	434,160,228	19,790	22,000	10.2	21,938	13.3
2011	443,409,223	455,070,261	19,452	22,795	3.6	23,395	6.6
2012	448,516,180	466,592,949	19,278	23,266	2.1	24,203	3.5
2013	448,756,663	474,848,580	19,644	22,844	-1.8	24,173	-0.1
2014	442,914,458	477,591,701	19,899	22,258	-2.6	24,001	-0.7
2015	432,758,183	483,654,816	19,915	21,730	-2.4	24,286	1.2
2016	436,314,042	497,038,904	20,408	21,380	-1.6	24,355	0.3
2017	426,484,068	507,746,386	20,976	20,332	-4.9	24,206	-0.6

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	2010	2011	2012	2013
1. 유동자산	13,156,402	14,125,902	13,933,483	15,269,078
가. 현금 및 현금성 자산	2,090,051	1,387,921	1,954,949	2,232,313
나. 유동금융자산	723,422	770,539	656,217	436,213
다. 매출채권 및 기타채권	6,612,377	7,632,497	7,184,625	7,526,311
라. 재고 자산	3,483,415	3,851,751	3,440,341	4,279,593
마. 기타 자산	247,137	483,194	697,351	794,647
2. 비유동자산	116,361,392	122,341,949	132,219,336	140,258,256
가. 비유동 금융자산	2,457,432	2,199,032	1,873,676	1,902,953
나. 장기매출 채권 등	846,317	1,284,532	1,254,330	1,644,333
다. 유형자산	107,406,466	112,384,881	122,376,140	129,637,596
라. 투자부동산	533,166	517,150	590,223	538,327
마. 무형자산	923,136	848,710	883,814	813,246
바. 관계기업 투자지분	3,490,510	3,718,154	4,890,933	5,230,756
사. 기타 자산	704,365	1,389,491	350,220	491,045
자 산 총 계	129,517,794	136,467,850	146,152,820	155,527,334
1. 유동부채	14,072,173	17,741,167	18,817,079	20,213,849
2. 비유동부채	58,169,084	64,922,732	76,271,539	83,862,748
부 채 계	72,241,257	82,663,900	95,088,618	104,076,597
1. 납입자본	4,042,978	4,053,578	4,053,578	4,053,578
2. 이익 잉여금	39,296,232	35,769,094	32,564,283	32,766,086
3. 기타자본구성요소	13,478,768	13,447,624	13,270,906	13,440,004
4. 지배기업 소유주에게 귀속되는 자본	56,817,978	53,270,297	49,888,767	50,259,668
5. 비 지배분	458,559	533,654	1,175,435	1,191,069
자 본 총 계	57,276,537	53,803,950	51,064,202	51,450,736
부 채 및 자 본 총 계	129,517,794	136,467,850	146,152,820	155,527,334

※ Consolidated Financial was applied since 2010



(Unit : Million won)

2014	2015	2016	2017	End of Accounts
16,819,855	22,025,325	19,708,526	19,141,707	1. Current Assets
1,796,300	3,783,065	3,051,353	2,369,739	a. Cash and cash equivalents
176,428	5,335,621	2,671,989	1,958,357	b. Current financial assets, net
7,697,862	7,473,548	7,788,876	7,928,972	c. Accounts and other receivables, net
4,537,469	4,946,413	5,479,443	6,002,086	d. Inventories, net
2,611,796	486,678	716,865	882,553	e. Current non-financial and other assets
146,888,434	153,232,034	158,128,516	162,647,208	2. Non-Current Assets
2,040,921	2,495,554	2,657,494	2,038,913	a. Non-current financial assets, net
1,724,357	1,798,419	1,903,515	1,754,797	b. Non-current accounts and other receivables, net
135,812,499	141,361,351	145,743,056	150,882,414	c. Property, plant and equipment, net
317,264	269,910	353,680	284,714	d. Investment properties, net
823,642	858,414	983,403	1,189,703	e. Intangible assets, net
5,508,724	5,693,530	5,510,448	5,330,696	f. Investments in associates
661,027	754,856	976,920	1,165,971	g. Investments in joint ventures and other assets
163,708,289	175,257,359	177,837,042	181,788,915	Total Assets
21,600,068	22,710,842	24,739,226	23,424,281	1. Current Liabilities
87,283,211	84,604,042	80,047,271	85,399,993	2. Non-Current Liabilities
108,883,279	107,314,884	104,786,497	108,824,274	Total Liabilities
4,053,578	4,053,578	4,053,578	4,053,578	1. Contributed Capital
35,303,647	48,187,241	53,173,871	53,370,558	2. Retained Earnings
14,244,106	14,393,648	14,496,244	14,257,309	3. Other Components of Equity
53,601,331	66,634,467	71,723,693	71,681,445	4. Equity attributable to Owners of the company
1,223,679	1,308,008	1,326,852	1,283,196	5. Non-controlling Interests
54,825,010	67,942,475	73,050,545	72,964,641	Total Equity
163,708,289	175,257,359	177,837,042	181,788,915	Total Liabilities and Equity

## 35. 손익계산서

(단위 : 백만원) Income statement

연도별 계정과목	2010	2011	2012	2013
	1. 매출액	39,506,582	43,455,675	49,421,513
가. 재화의 판매로 인한 매출액	38,004,325	41,397,469	46,906,587	51,132,803
나. 용역의 제공으로 인한 매출액	747,044	322,616	357,877	326,619
다. 건설계약으로 인한 매출액	755,213	1,455,132	1,856,045	2,253,083
라. 공사부담금 수익으로 인한 매출액	0	0	301,004	325,290
2. 매출원가	36,187,237	42,724,894	48,459,262	50,595,638
가. 재화의 판매로 인한 매출원가	35,021,667	40,926,543	46,293,591	47,983,987
나. 용역의 제공으로 인한 매출원가	414,672	393,049	470,454	452,629
다. 건설계약으로 인한 매출원가	750,897	1,405,302	1,695,218	2,159,023
3. 판매비와 관리비	536,915	317,385	373,996	400,167
4. 영업이익 ( 1 - 2 - 3 )	1,644,760	1,751,236	1,780,168	1,923,192
5. 기타수익	69,787	147,595	74,567	99,811
6. 기타비용	118,208	165,703	-1,781,835	128,514
7. 기타이익(손실)	2,259,920	-684,962	-2,300,323	1,947,834
8. 금융수익	591,491	607,592	1,128,357	629,542
9. 금융원가	2,558,425	2,518,850	3,068,321	2,931,622
10. 지분법 적용 관련 이익	76,626	123,095	176,941	-42,242
11. 법인세 비용 차감전 순이익 ( 4 + 5 - 6 + 7 + 8 - 9 + 10 )	369,612	-2,473,125	-4,063,346	-396,488
12. 법인세 비용	438,779	819,871	-985,377	-570,794
13. 당기순이익 ( 11 - 12 )	-69,167	-3,292,997	-3,077,969	174,306
가. 지배기업의 소유주에게 귀속 되는 당기순이익	-119,931	-3,370,464	-3,166,616	60,011
나. 비지배 지분에 귀속되는 당기순이익	50,764	77,467	88,647	114,295

※ 연결재무제표 기준

(Unit : Million won)

2014	2015	2016	2017	End of Accounts
57,474,883	58,957,722	60,190,384	59,814,862	1. Sales
53,706,828	54,367,036	55,379,487	55,772,548	a. Sales of goods
451,013	453,487	356,743	351,157	b. Sales of service
2,965,185	3,761,204	4,026,857	3,212,184	c. Sales of construction contracts
351,857	375,995	427,297	478,973	d. Sales of contributions for construction
49,762,952	45,457,729	45,549,553	52,098,855	2. Cost of Sales
46,509,555	41,348,917	41,237,372	48,454,036	a. Cost of goods
500,787	545,692	557,037	597,423	b. Cost of service
2,752,610	3,563,120	3,755,144	3,047,396	c. Cost of construction contracts
1,924,366	2,153,261	2,639,232	2,762,855	3. Selling and administrative expenses
5,787,565	11,346,732	12,001,599	4,953,152	4. Operation income
402,329	432,219	412,887	390,145	5. Other income
88,220	108,848	188,624	180,055	6. Other expenses
107,396	8,610,773	70,498	156,627	7. Other gains, net
885,290	1,182,988	791,543	1,530,618	8. Finance income
3,140,038	3,015,457	2,437,087	3,127,952	9. Finance expenses
274,984	207,379	-137,348	-108,317	10. Profits of associates and joint ventures using equity method
4,229,306	18,655,786	10,513,468	3,614,218	11. Income before income tax
1,430,339	5,239,413	3,365,141	2,172,824	12. Income tax expense
2,798,967	13,416,373	7,148,327	1,441,394	13. Net income attributable to
2,686,873	13,289,127	7,048,581	1,298,720	a. Owners of the company
112,094	127,246	99,746	142,674	b. Non-controlling interests

※ Consolidated Financial

## 36. 자본금 변천 (1)

(단위 : 천원) History of Capital equity

(Unit : Thousa

연 도 별 During	증자자본액 Increase in Capital equity	증자후자본액 After increase	비 고 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 earnings
1982	18,400,000	1,588,173,189	정부출자 Government investment
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	"

## 36. 자본금 변천 (2)

(단위 : 천원) History of Capital equity

(Unit : Thousa

년 도 별 During	증자자본액 Increase in Capital equity	증자후자본액 After increase	비 고 Remarks
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
2012	-	3,209,820,385	-
2013	-	3,209,820,385	-
2014	-	3,209,820,385	-
2015	-	3,209,820,385	-
2016	-	3,209,820,385	-
2017	-	3,209,820,385	-



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## VI. 주요지표 국제비교

International comparison of major indexes



## VI. 주요지표 국제 비교

### International comparison of major index

국가별 항 목	단위 Unit	한 국 Korea ( '15)	일 본 Japan ( '15)	러시아 Russia ( '15)	미 국 United States ( '15)	캐나다 Canada ( '15)
발전 설비 <sup>1)</sup>	MW	101,590	291,836	257,100	1,176,981	135,268
수 력	"	6,471	50,035	51,000	100,442	79,232
화 력	"	67,754	190,805	179,100	878,525	34,148
원 자 력	"	21,716	42,048	26,300	107,360	14,033
신 재 생	"	5,649	8,948	-	90,654	7,855
발전전력량 <sup>2)</sup>	100만kWh	547,802	1,024,179	1,067,540	4,077,601	631,192
수 력	"	5,796	91,383	169,910	243,989	373,845
화 력	"	359,926	908,779	698,400	2,814,779	139,463
원 자 력	"	164,762	9,437	195,470	797,178	95,682
신 재 생	"	17,318	14,580	3,760	221,655	22,202
설비 이용율	%	61.7	...	...	40.2	52.1
고 객 호 수	1,000호	22,030	85,654	...	150,081	...
가 정 용	"	12,970	...	...	131,027	...
상 공 업 용	"	6,794	...	...	19,052	...
기 타	"	2,267	...	...	-	...
판매 전력량	100만kWh	483,655	797,057	...	3,786,426	539,330
가 정 용	"	63,794	...	...	1,417,027	159,265
상 공 업 용	"	383,037	...	...	2,361,740	161,284
기 타	"	36,824	...	...	7,659	218,781
최 대 전 력	MW	78,790	153,674	147,000	741,056	95,507
부 하 율	%	72.6	63.3	78.3	61.1	65.6
송배전손실률	%	3.6	4.7	...	5.1	...
인구 1 인당 전력 소비량	kWh/인	9,953	6,257	6,666	...	17,508

1) 2) 자가설비, 자가발전량 포함분임

3) 소비전력량 실적치임

4) 2017년 해외전기사업통계 발체



중 국 China ( '15)	프랑스 France ( '15)	독 일 Germany ( '15)	스웨덴 Sweden ( '15)	영 국 United Kingdom ( '15)	이탈리아 Italy ( '15)	Nations Item
1,525,270	129,119	202,436	39,608	81,026	116,955	Generating facilities <sup>1)</sup>
319,540	25,430	10,320	16,329	4,330	22,220	Hydro
1,005,540	22,335	87,466	7,751	53,967	65,938	Thermal etc.
27,170	63,130	12,696	9,688	9,487	-	Nuclear
173,020	18,224	91,954	5,840	13,242	28,797	Renewable
5,740,000	546,767	646,888	161,960	338,917	282,994	Power generation <sup>2)</sup>
1,112,700	59,079	24,898	75,439	9,037	46,970	Hydro
4,230,700	34,381	340,442	13,905	182,429	192,053	Thermal etc.
171,400	416,797	91,786	56,348	70,345	-	Nuclear
225,200	36,510	189,762	16,268	77,105	43,971	
45.6	48.3	...	47.1	45.5	26.2	Utilization Plant factor
...	...	...	5,417	30,038	37,639	Customers
...	...	...	4,665	27,622	32,247	Residential
...	...	...	539	2,416	741	Commercial & Industrial
...	...	...	213	...	4,652	Others
4,534,700	...	450,775	...	286,161	272,056	Power sold
...	...	128,068	...	106,630	65,241	Residential
...	...	...	...	170,898	107,262	Commercial & Industrial
...	...	...	...	8,633	99,553	Others
797,730	91,900	77,992	23,400	52,753	60,491	Peak load
81.7	59.1	61.6	66.5	68.3	51.1	Load factor
6.6	7.5	6.1	7.0	8.0	6.2	Loss factor ( T & D )
4,221	6,837	6,483	13,375	4,798	4,888	Electricity consumption per capita





# VII. 광복후 창사전 주요통계

Major statistical indicator from 1945 to 1960



## Ⅶ. 광복 후 창사전 주요 통계

Major statistical indicator from 1945 to 1960

구 분	단 위	1945	1946	1947	1948	1949	1950	1951	1952
발전 설비	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
소 내 전력량	MWh	...	10,335	20,183	27,821	47,924	38,332	23,559	40,995
소 내 전력율	%	...	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
판매 전력량	MWh	...	...	...	...	...	...	...	...
수요 성장율	%	...	...	...	...	...	...	...	...
최대 전력	kW	115,000	119,000	146,000	122,000	115,000	74,000	59,000	117,000
평균 전력	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	%	...	...	...	...	...	...	...	...
판매 단가	원/kWh	...	...	...	...	...	...	...	...
고객 호수	호	...	...	...	...	...	...	...	...
종업원 수 (경상평균)	명	...	...	...	...	...	...	...	...
자본금	백만원	422	425	425	425	425	425	425	425
총 자산	백만원	980	742	1,375	1,515	1,721	1,919	2,012	3,648
인구 1인당 소비전력량	kWh/명	...	...	...	...	...	...	...	...
종업원 1인당 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	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 (Average employees electric operating only)
...	...	...	...	(5,631)	(5,609)	(5,591)	(5,783)	
4,245	4,245	4,245	4,245	4,245	4,335	4,335	2,021	Capital equity (Million won)
90,052	161,800	4,541	6,837	9,221	58,188	...	...	Total assets (Million won)
...	...	...	...	35	42	49	46	Generation per capita
...	...	...	...	139	173	140	141	Consumption per capita



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# 부 록

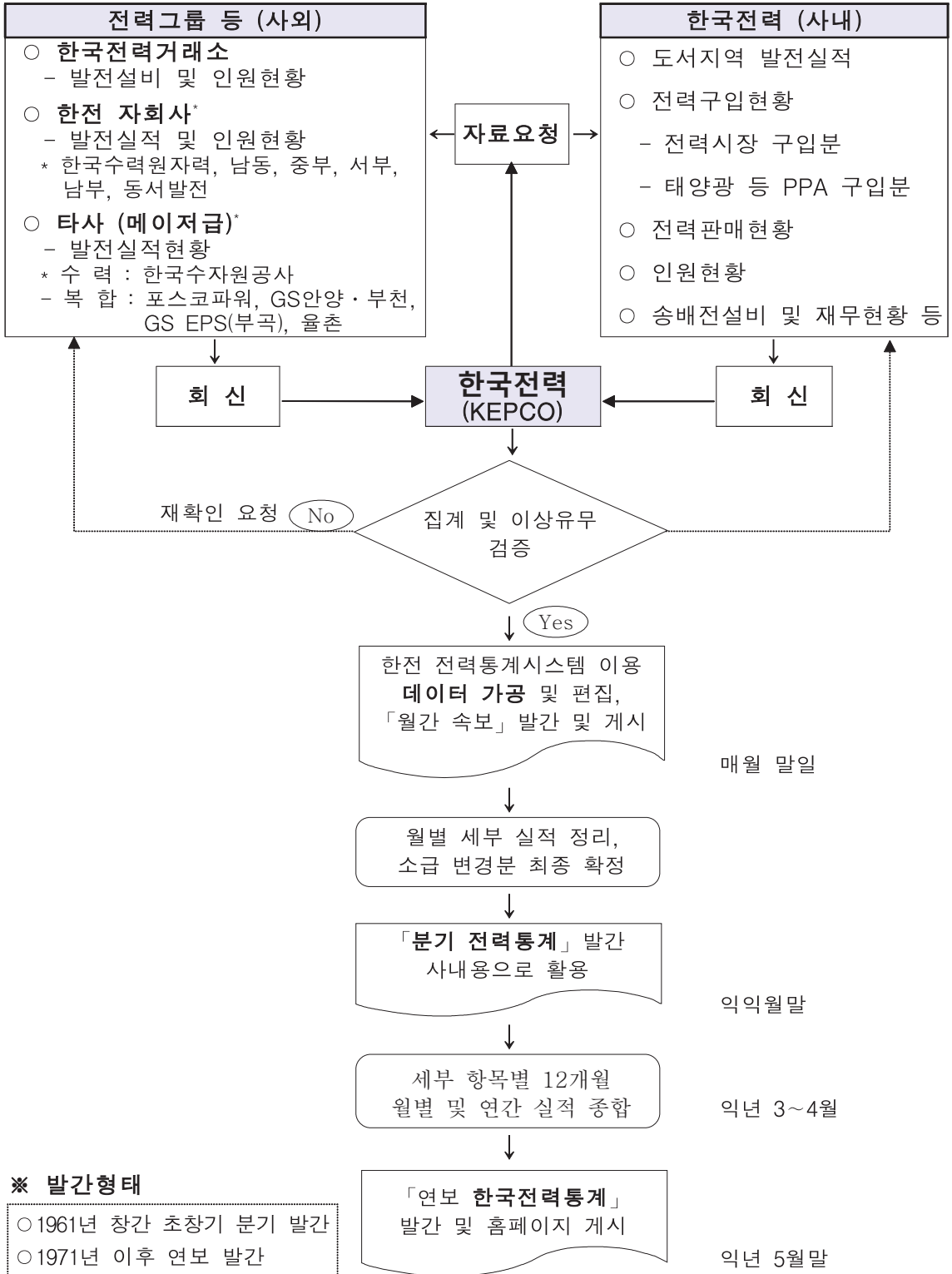
Appendix







# I. 통계 작성 개요



## II. 주요 용어해설

### 1. 발전 및 전력수급 부문

#### 가. 발전원별(발전설비별) 분류 체계

##### 1) 수력 水力 Hydro

- 정 의 : 물의 낙차를 이용하여 물의 위치에너지가 운동에너지로 전환하는 과정에서 수차를 구동하여 발전하는 발전소
- 일반 一般 General
- 양수 揚水 Pumping : 심야 경부하시 하부 저수지 물을 상부 저수지로 펌핑(양수), 주간 최대부하시 이 물로 첨두부하 전력을 공급하는 발전소
- 소수력 小水力 Small hydro power : 설비용량 10MW 이하의 수력발전. 수차, 발전기 및 전력변환장치 등으로 구성된다

##### 2) 기력 汽力 Steam

- 정 의 : 증기 터빈을 이용한 화력발전소
- 무연탄 無煙炭 Anthracite coal : 국내탄 발전소
  - 영동, 동해화력
- 유연탄 有煙炭 Bituminous coal : 수입 석탄 발전소
- 중유 重油 Heavy oil : 유류 발전소
- LNG

##### 3) 복합화력 複合火力 Combined cycle

- 정 의 : 1차 가스터빈 2차 증기터빈(or 열공급) 발전형식
- 열공급 熱供給 Heat & Electric : 일산, 분당 및 GS 파워 안양, 부천 CC 등
- 일반 一般 General : 나머지 CC
  - 한림, 대산복합은 유류 사용, 나머지 LNG

##### 4) 내연력 內燃力 Internal combustion

- 정 의 : 연소실내에서 공기와 연료를 혼합 고온 고압의 동작가스를 만들어 기계적인 일로 변화하는 내연 기관으로 발전하는 발전소

##### 5) 원자력 原子力 Nuclear

- 정 의 : 핵분열 에너지를 이용하는 발전방식으로 화력발전소의 보일러 부분이 원자로 계통으로 치환되어 포화 증기를 발생하고 그 이외는 화력발전소와 유사

## 6) 신재생 New & Renewable

- 정 의 : 화석에너지의 대체용으로 원칙적으로 수력 포함(단, 양수발전 제외)
- 종 류 : 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

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

### 2) 사용열량 Caloric consumption (Gcal = 10<sup>6</sup> kcal = 10<sup>9</sup> 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. 발전실적

### 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 운휴중 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 = (평균전력÷최대전력)×100

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

- 일정 기간내에 발전설비의 이용 비율로 발전소 전 설비 출력에 대한 평균 출력의 비로 나타냄
- (평균전력/설비용량)×100 또는 (발전량-시운전발전량) / 역일가능발전량×100
- ※ 시운전 발전량이 전력거래 될 경우 시운전 발전량은 없는 것으로 판단
- 역일가능 발전량 = 설비용량 × 일수 × 24(h)

### 6) 열효율 熱效率 Thermal efficiency

- 터빈을 돌리는 열에너지가 일로 전환되는 에너지 비율

## 라. 전력수급 電力需給 Power Supply & Demand

### 1) 공급능력

- 발전설비 총용량에서 고장 또는 정비 등 발전이 불가능한 발전기를 제외한 용량
- 실제 출력가능 용량으로 산정하며 총발전설비 용량보다 공급능력이 큰 경우도 있음.

### 2) 최대전력

- 전력수요중 최대값으로 소내전력량을 포함한 발전단 1시간 평균전력중 최대값

### 3) 공급예비율

- 최대전력대비 공급가능 발전설비용량 비율 = (공급능력-최대전력)/최대전력×100%

### 4) 설비예비율

- 최대전력대비 잉여설비용량 비율 = (총 설비용량-최대전력)/최대전력×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 집계
종 합	손실량	송전단전력량-(배전)판매량
송배전	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\*

\* 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 선로 길이 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 碍子 Insulator

- 전선을 철탑 또는 전주의 완금에 기계적으로 고정시키고 전기적으로 절연하기 위해서 사용하는 절연 지지체. 즉, 전선과 전주 등과의 절연간격을 확보하여 주는 역할을 하며, 핀 애자 및 현수 애자 등이 있음.

### 나. 변전설비

#### 1) 변전소 變電所 Substation

- 발전소에서 생산된 전력을 전기사용자에게 효율적으로 공급 하기 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 遮斷器 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 장공장선로의 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 또는 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 (基)

- 기초가 4개소로 각각의 기초를 시행하는 사각형 철탑조 지지물

### 4) 철주 鐵柱 Steel pole (基)

- 기초가 1개소인 사각형 철탑조 지지물

### 5) 콘크리트주 Concrete pole (基)

- 철근 또는 철탑 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 가스絶緣 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)

- 전기요금에 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, 심야전력으로 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 검침일전 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
- 한국표준산업분류에 따라 신규접수시 고객별로 부여한 용도코드에 의해 분류

구 분	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, 전기사업자이외 고객)	
생산 부문	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)
- 지 침 : 전기요금 = 기본요금 + 사용량요금
  - 전력산업기반기금 및 부가가치세 불포함

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

- 정 의 : 전력판매량 1kWh 당 평균판매단가
- 지 침 : 판매단가 = 전력판매수입(기본요금+사용량요금) / 전력판매량

### Ⅲ. 단 위

#### 1. 주요단위

구 분	단 위	표 시	구 분	단 위	표 시
힘	Newton(뉴턴)	N	주 파 수	Hertz(헤르츠)	Hz
일	Joule(주울)	J	광 속	Lumen(루멘)	lm
피 상 전 력	Volt Ampere	VA	조 명 도	Lux(룩스)	lx
유 효 전 력	Watt(와트)	W	방 사 능	Curi(큐리)	Ci
무 효 전 력	var(바)	var	자 속	Weber(웨버)	Wb
전 위 (압)	Volt(볼트)	V	조 사 선 량	Roentgen(뢴트겐)	R
전 하	Coulomb(쿨롱)	C	흡 수 선 량	Rad(라드)	Rad
정 전 용 량	Farad(파라드)	F	방 사 선 량	Rem(렘)	REm
전 류	Ampere(암페어)	A	전 자 볼 트	Electron Volt	eV
전 기 저 항	Ohm(옴)	Ω	연 소 도	Megga Watt Day	MWD
콘 덕 턴 스	Mho(모오)	Ω		Per Metric Ton	/MTU
도 전 율	Mho/meter	Ω/m	핵반응단면적	barm( $10^{-24}cm^2$ )	Barn
저 항 률	ohm meter	Ω · m	분리작업량	Separative Work Unit	SWU
인 덕 턴 스	Henry(헨리)	H	원 자 질 량	Atomic Mass Unit	AMU

## 2. 단위표기 기본원칙 (한국산업규격 기준)

### 가. 기본원칙

- 단위기호는 복수일 경우에도 그 모양을 바꾸지 않고, 마침표도 찍지 않음
- 소문자를 사용하며, 고유명사에서 유래된 기호는 최초의 문자만 대문자로 표기함

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 <sup>-1</sup>	데시(dec)	d	소문자
10 <sup>2</sup>	헥토(hecto)	h	"	10 <sup>-2</sup>	센티(centi)	c	"
10 <sup>3</sup>	킬로(kilo)	k	"	10 <sup>-3</sup>	밀리(milli)	m	"
10 <sup>6</sup>	메가(mega)	M	대문자	10 <sup>-6</sup>	마이크로(micro)	μ	"
10 <sup>9</sup>	기가(giga)	G	"	10 <sup>-9</sup>	나노(nano)	n	"
10 <sup>12</sup>	테라(tera)	T	"	10 <sup>-12</sup>	피코(pico)	p	"
10 <sup>15</sup>	페타(peta)	P	"	10 <sup>-15</sup>	펨토(femto)	f	"
10 <sup>18</sup>	엑사(exa)	E	"	10 <sup>-18</sup>	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.

### 다. 표준 단위

구 분	단위의 명칭	바로 쓰는 예		잘못 쓰는 예
		표준단위	응용단위	
길	미터	m	μm, mm, cm, km	MM, CM, KM, Km
주 파 수	헤르츠	Hz	KHz, MHz, GHz	KHZ
질 량	킬로그램	kg	g, μg, mg	KG, Kg
일	줄	J	kJ, MJ	KJ
동 력, 전 력	와트	W	kW, MW	KW, Kw, kw, Mw
전 력 량	와트시	Wh	kWh, MWh, GWh	KWH, MW, MWH, GWH
전 류	암페어	A	mA, kA	KA
전 하	쿨롱	C	μC, kC	KC
전 압	볼트	V	mV, kV, mv	KV, kv, Mv
저 항	옴	Ω	kΩ, MΩ	KΩ
무 효 전 력	바	var	kvar	KVAR, Kvar
피 상 전 력	볼트암페어	VA	kVA, MVA	KVA
열	칼로리	cal	kcal	Kcal, KCAL





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발행인 한국전력공사 사장  
김종갑  
전라남도 나주시 전력로 55(빛가람동 120)

발행처 경영개선처

편집인 경영개선처 출자관리실  
실장 허태현 ☎ (061) 345-3302  
차장 라홍욱 ☎ (061) 345-3326  
대리 임은정 ☎ (061) 345-3327

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