

KOREA ELECTRIC POWER CORP

Form 20-F

June 27, 2003

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As filed with the securities and Exchange Commission on June 27, 2003

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 20-F

- Registration statement pursuant to Section 12(b) or (g) of the Securities Exchange Act of 1934
 Annual report pursuant to Section 13 or 15 (d) of Securities Exchange Act of 1934
For the fiscal year ended December 31, 2002.
 Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____

Commission file number 1-13372

KOREA ELECTRIC POWER CORPORATION

(Exact name of Registrant as specified in its charter)

REPUBLIC OF KOREA

(Jurisdiction of incorporation or organization)

167 SAMSEONG-DONG, GANGNAM-GU, SEOUL 135-791, KOREA

(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
American Depositary Shares, each representing one-half of one share of common stock	New York Stock Exchange, Inc.
Common stock, par value KRW5,000 per share*	New York Stock Exchange, Inc.

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

7-3/4% Debentures due April 1, 2013
6-3/8% Notes due December 1, 2003
Twenty Year 7.40% Amortizing Debentures, due April 1, 2016
One Hundred Year 7.95% Zero-to-Full Debentures, due April 1, 2096

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CERTAIN DEFINED TERMS

All references to Korea or the Republic in this report are references to The Republic of Korea. All references to the Government in this report are references to the government of The Republic. All references to we, us, the Company or KEPCO in this report are references to Korea Electric Power Corporation and, as the context may require, its subsidiaries. All references to tons are to metric tons, equal to 1,000 kilograms, or 2,204.6 pounds. Any discrepancies in any table between totals and the sums of the amounts listed are due to rounding.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 20-F includes future expectations, projections or forward-looking statements (as defined in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934). The words believe, expect, anticipate, estimate and similar words identify forward-looking statements. In addition, all statements other than statements of historical facts included in this report are forward-looking statements. Although we believe that the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to have been correct. Cautionary Statements, or important factors that could cause actual results to differ materially from our expectations, are disclosed in this report. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the Cautionary Statements.

Table of Contents**PART I****ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS**

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION**SELECTED FINANCIAL DATA**

The following table sets forth the selected financial data and our other operating information. The selected consolidated financial data in the table have been derived from our consolidated financial statements for each of the years in the five-year period ended December 31, 2002. The consolidated financial statements for the three years ended December 31, 2000 have been audited by Young Wha Corporation, a member firm of Ernst & Young International, and the consolidated financial statements for the years ended December 31, 2001 and 2002 (the Consolidated Financial Statements) have been audited by Anjin & Co., an associate member firm of Deloitte Touche Tohmatsu since July 2, 2002. Young Wha Corporation and Anjin & Co. are each Korean independent certified public accountants. The report of Young Wha Corporation, a member firm of Ernst & Young International, covering the December 31, 1998 consolidated financial statements refers to a change made in our method of accounting for foreign currency translation differences as permitted under Korean GAAP. The report of Young Wha Corporation, a member firm of Ernst & Young International, covering the December 31, 1999 consolidated financial statements refers to changes in our methods of accounting for depreciation as applied to certain buildings and structures, provision for income taxes, bond issuance costs and derivative financial instruments to conform with revisions in Korean GAAP. The report of Young Wha Corporation, a member firm of Ernst & Young International, covering the December 31, 2000 consolidated financial statement refers to changes in our method of accounting for consolidation to conform with revisions in Korean GAAP. The selected consolidated financial data should be read in conjunction with our Consolidated Financial Statements and Notes thereto as of December 31, 2001 and 2002 and for each of the years in the three-year period ended December 31, 2002 included in this report.

Our financial statements are prepared in accordance with accounting regulations applicable to Government-invested companies and Korean GAAP, which differ in certain significant respects from U.S. GAAP. See Item 5 Operating and Financial Review and Prospects Operating Results Recent Accounting Changes and Note 24 of Notes to Consolidated Financial Statements.

Consolidated Statement of Earnings Data	Year Ended December 31,					
	1998	1999	2000	2001	2002	2002
(Won in billion, US\$ in million, except per share data)						
Amounts in Accordance with Korean GAAP(1):						
Operating revenues	KRW 14,228	KRW 15,751	KRW 18,708	KRW 20,225	KRW 21,366	\$ 18,011
Operating expenses	11,897	13,179	15,238	16,236	16,319	13,756
Operating income	2,331	2,571	3,470	3,989	5,047	4,254
Income before income taxes, minority interest and amortization of consolidation adjustment	KRW 1,690	KRW 2,154	KRW 2,205	KRW 2,932	KRW 5,171	KRW 4,359
Income taxes	470	677	721	1,293	2,104	1,774
Net income	1,220	1,477	1,483	1,635	3,048	2,569

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Consolidated Statement of Earnings Data	Year Ended December 31,					
	1998	1999	2000	2001	2002	2002
(Won in billion, US\$ in million, except per share data)						
Diluted earnings per share of common stock	1,943	2,330	2,319	2,559	4,770	4.02
Earnings per share of common stock	1,967	2,337	2,320	2,559	4,770	4.02
Dividends per share held by public	450	600	600	550	800	0.67
Dividends per share held by Government	150	350	450	550	800	0.67
Amount in Accordance with U.S. GAAP(3):						
Net income	KRW 1,764	KRW 2,248	KRW 2,796	KRW 3,287	KRW 3,573	\$ 3,012
Diluted earnings per share of common stock	2,793	3,533	4,340	5,144	5,591	4.71
Earnings per share of common stock	2,844	3,556	4,376	5,144	5,591	4.71
Other Data:						
Ratio of Earnings to Fixed Charges(2)						
Korean GAAP	1.7	2.0	1.9	2.5	4.2	
U.S. GAAP(3)	1.9	2.3	2.5	3.6	4.5	

Consolidated Balance Sheet Data	As of December 31,					
	1998	1999	2000	2001	2002	2002
(Won in billion, US\$ in million)						
Amounts in Accordance with Korean GAAP(4):						
Net working capital deficit(5)	KRW (4,270)	KRW (7,220)	KRW (6,027)	KRW (3,913)	KRW (5,192)	\$ (4,377)
Net utility plant in service	32,690	47,447	48,450	49,440	53,527	45,121
Construction in progress	12,402	10,442	10,653	11,154	7,777	6,556
Total assets	50,878	64,766	65,920	70,562	70,512	59,439
Total stockholders equity	18,721	30,325	32,059	33,182	35,562	29,977
Capital stock	3,141	3,199	3,201	3,201	3,201	2,698
Long-term debt	20,178	20,343	20,460	22,089	17,671	14,896
Other liabilities-long term liabilities	4,781	3,539	4,148	6,005	7,173	6,047
Amounts in Accordance with U.S. GAAP(4):						
Total stockholders equity	16,459	18,982	21,437	24,162	27,291	23,005

- (1) See Item 5 Operating and Financial Review and Prospects Operating Results for discussion of certain changes in Korean GAAP adopted in 2000, 2001 and 2002.
- (2) For purposes of computing ratios of earnings to fixed charges, earnings consist of earnings before income tax and fixed charges. Fixed charges consist of interest expense (including capitalized interest) and amortization of bond discount and issue expenses.
- (3) See Item 5 Operating and Financial Review and Prospects Liquidity and Capital Resources Reconciliation to U.S. GAAP and Note 24 of Notes to Consolidated Financial Statements.
- (4) In 1999, utility plant was revalued by KRW9,439 billion, with a corresponding increase in stockholders equity under Korean GAAP.
- (5) Net working capital means current assets minus current liabilities.

Currency Translations and Exchange Rates

In this report, unless otherwise indicated, all references to Won or KRW are to the currency of the Republic, and all references to U.S. Dollars, Dollars, \$ or US\$ are to the currency of the United States of America. Unless otherwise indicated, all translations from Won to Dollars

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were made at KRW1,186.30 to US\$1.00, which was the noon buying rate in The City of New York for cable transfers in Won per US\$1.00 as certified for customs purposes by the Federal Reserve Bank of New York (the Noon Buying Rate) on December 31, 2002. On June 19, 2003, the Noon Buying Rate was KRW1,200.00 to

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US\$1.00. No representation is made that the Won or U.S. Dollar amounts referred to in this report could have been or could be converted into Dollars or Won, as the case may be, at any particular rate or at all.

The following table sets forth, for the periods and dates indicated, certain information concerning the Noon Buying Rate in Won per US\$1.00.

<u>Year Ended December 31,</u>	<u>At End of Period</u>	<u>Average(1)</u>	<u>High</u>	<u>Low</u>
(Won per US\$1.00)				
1998	1,206.00	1,401.00	1,812.00	1,196.00
1999	1,136.00	1,189.80	1,243.00	1,125.00
2000	1,267.00	1,130.90	1,267.00	1,105.50
2001	1,313.50	1,292.00	1,369.00	1,234.00
2002	1,186.30	1,250.40	1,332.00	1,160.60
2003 (through June 19)	1,200.00	1,206.40	1,262.00	1,164.60
January	1,165.00	1,176.45	1,197.30	1,164.60
February	1,193.70	1,190.37	1,206.00	1,173.00
March	1,252.00	1,237.20	1,260.00	1,184.60
April	1,215.50	1,231.10	1,262.00	1,204.00
May	1,210.00	1,201.20	1,217.00	1,192.00
June (through June 19)	1,200.00	1,195.60	1,203.00	1,185.00

(1) The average of the Noon Buying Rates over the relevant period.

RISK FACTORS

Our business and operations are subject to various risks, many of which are beyond our control. If any of the risks described below actually occurs, our business, financial condition or results of operations could be seriously harmed.

Risks Relating to KEPCO

The Government's Plan for Restructuring the electricity industry in Korea (the Restructuring Plan) may have a material adverse effect on us and the price of our securities.

On January 21, 1999, the Ministry of Commerce, Industry and Energy (the MOCIE) announced the Restructuring Plan for the electricity industry in Korea. For a detailed description of the Restructuring Plan, see Item 4 Information on the Company Business Overview Restructuring of the Electricity Industry in Korea.

The Government promulgated the Law on Promotion of Restructuring of Electricity Industry (the Restructuring Law) and amended the Electricity Business Law on December 23, 2000, which allowed us to implement the Restructuring Plan. Pursuant to such law:

on April 2, 2001, the Government established the Korea Power Exchange to deal with the sale of electricity and to work out regulations governing the electricity industry to allow for electricity distribution via a competitive bidding process;

on April 2, 2001, the Government established a competitive bidding pool system; and

on April 27, 2001, the Government established the Korean Electricity Commission to regulate the restructured Korean electricity industry and to ensure fair competition.

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On February 23, 2001, our board of directors approved a new plan to split our non-nuclear and non-hydroelectric generating capacity into five wholly-owned generation subsidiaries and our nuclear and hydroelectric generating capacity into a separate wholly-owned generation subsidiary. On March 16, 2001, our shareholders approved the plan to establish the generation subsidiaries and the allocation of our assets and liabilities to such generation subsidiaries, effective as of April 2, 2001.

It is possible that the Government may make substantial changes to the currently announced details of the Restructuring Plan, particularly since a new administration has taken office in February 2003. Such possible changes to the Restructuring Plan, as well as the uncertainty regarding the timing and manner of implementing the Restructuring Plan, may adversely affect us or the price of our securities.

The Restructuring Plan currently contemplates that we eventually dispose of our interests in our generation subsidiaries (excluding our nuclear and hydroelectric power generation subsidiary) and distribution subsidiaries. In April 2002, the MOCIE released the basic privatization plan for five of our generation subsidiaries, excluding our nuclear and hydroelectric power generation subsidiary. In the first phase of the privatization plan, we have commenced the sale of two generation subsidiaries in the second half of 2002. The process of selling these two generation subsidiaries will involve strategic stake sale and domestic initial public offering. Upon completion of the first phase, we will evaluate the results of the initial sale of two generation subsidiaries before proceeding with the sale of the remaining three non-nuclear generation subsidiaries. The aggregate foreign ownership will be limited to 30% of total power generation capacity. We cannot assure you as to the timing or the extent to which our divestiture will occur. In addition, it is possible that Korean law relating to anti-competitive practices as existing at that time may affect the manner in which we conduct our business through such subsidiaries.

The Restructuring Plan as currently approved by our board contemplates corporate splits to form certain new subsidiaries (as was the case in forming generation subsidiaries) and disposition of the shares of such subsidiaries. Each step of the corporate split and disposition of the shares of the subsidiaries may not itself trigger the shareholders' legal right to require us to purchase their shares under the Korean Commercial Code. However, in the event that the combination of such corporate split and disposition of the shares of the new subsidiaries within a short-time frame shall be interpreted as a transfer of material business, dissenting shareholders may exercise their rights to require us to purchase their common stock. If the foregoing would be the case, it is also possible that a substantial number of our shareholders may dissent with respect to such allocation and exercise their right to require us to purchase their common stock. The purchase price will be determined by negotiation between the dissenting shareholders and us. If a price cannot be agreed upon through such negotiation, the purchase price will be the average of (1) the weighted average of the daily share price on the Korea Stock Exchange (the "KSE") for a two-month period before the date of adoption of the board resolution approving the allocation of a substantial portion of our assets or liabilities, (2) the weighted average of the daily share price on the KSE for the one month period before such date and (3) the weighted average of the daily share price on the KSE for the one week period before such date. However, the Korea Financial Supervisory Commission (the "FSC") may adjust this price if we or at least 30% of the dissenting shareholders do not accept such purchase price. If a substantial number of shareholders exercise dissenters' rights, we may have to expend a substantial amount of funds to repurchase such common stock and this may adversely affect our financial condition.

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The Restructuring Plan and the privatization plan for our generation subsidiaries in particular continue to generate labor unrest. Labor unions to which our employees belong have voiced their opposition to the Restructuring Plan from its very inception. In particular, the prospect of privatizing some of our core assets have raised concerns among some of our employees. On February 25, 2002, employees belonging to labor unions of our five non-nuclear generation subsidiaries commenced a six-week strike to protest the Government's plans to privatize our five non-nuclear generation subsidiaries. The Korean Confederation of Trade Unions (KCTU), the second-largest governing body of labor unions in Korea with over 600,000 members, negotiated with the Government on behalf of the labor unions. After prolonged negotiations with the Government, KCTU directed the labor unions of our five non-nuclear generation subsidiaries to end their strike on April 2, 2002. We cannot assure you that a large-scale strike will not occur again in the future, or that any such labor unrest will be satisfactorily resolved. Such labor unrest may adversely affect our results of operations by severely disrupting the power supply as well as substantially hinder the implementation of the Restructuring Plan.

We anticipate that we need to incur substantial indebtedness for future capital expenditures.

Subject to the implementation of the Restructuring Plan, we anticipate that a substantial additional indebtedness will be required through the years in order to refinance existing debt and to make capital expenditures for construction of generation plants and other facilities. We expect that a substantial portion of our long-term debt will need to be raised through foreign currency borrowings and in external capital markets. It is possible that the cost at which such financing may be provided may not be acceptable to us.

We conduct a portion of our operations through and depend, to an extent, on funds from our subsidiaries.

We hold a significant portion of our assets in, and conduct some of our operations through, subsidiaries. In addition, the Restructuring Plan currently contemplates the creation of additional subsidiaries to which certain of our assets and liabilities will be transferred. See Item 4 Information on the Company Business Overview Restructuring of the Electricity Industry in Korea .

In order to satisfy our payment obligations, we will rely on our own operations as well as to an extent on dividends and other payments received from our subsidiaries. The Restructuring Plan contemplates that we will eventually dispose of our interests in our generation subsidiaries (excluding our hydro and nuclear power generation subsidiary) and distribution subsidiaries to be established later.

Our generation subsidiaries are dependent on imported fuel bought in currencies other than Won.

Our generation subsidiaries purchase substantially all of the fuel materials they use, other than anthracite coal, from sources outside Korea. In addition, our generation subsidiaries purchase a significant portion of such fuel materials under contracts with limited duration and at prices determined in whole or in part by prevailing market prices in currencies other than Won. Our generation subsidiaries have not experienced any material fuel delivery disruptions to date. Fuel cost increases, including as a result of

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depreciation of Won against U.S. dollars or other foreign currencies, or supply disruptions could adversely affect our results of operations.

Inherent in the operation of nuclear power generation facilities are numerous hazards risks, any of which could result in a material loss of revenues or increased expenses.

We operate nuclear-fuel generating units. The operation of nuclear power plants is subject to certain hazards, including environmental hazards such as leaks, ruptures and discharge of toxic and radioactive substances and materials. These hazards can cause personal injuries or loss of life, severe damage to or destruction of property and natural resources, pollution or other environmental damage, clean-up responsibilities, regulatory investigation and penalties and suspension of operations. The breakdown, failure or suspension of operation of a nuclear unit could result in a material loss of revenues and/or additional costs to repair, which could have a material adverse impact on our financial conditions and results of operation.

Opposition to the constructing and operation of nuclear-fuel generating units may have adverse effect on us.

In 2002, 40.8% of the electricity generated through KEPCO in Korea was generated by nuclear generating units. In recent years, we have encountered increasing opposition in the Republic to the construction and operation of nuclear generating units. Although the Government and we have undertaken various community development programs to address concerns of residents of areas near nuclear units, community opposition to the construction and operation of nuclear units could result in construction delay or relocation of planned nuclear units. See Item 4 Information on the Company # Business Overview Power Generation KHNP , Item 4 Information on the Company Business Overview Environment and Community Programs and Item 4 Information on the Company Business Overview Insurance .

We may not be able to raise equity capital in the future without the participation of the Government.

The Korea Electric Power Corporation Act (the KEPCO Act) requires that the Government, directly or pursuant to The Korea Development Bank Act (the KDB Act), through The Korea Development Bank (a statutory banking institution wholly owned by the Government), own at least 51% of our capital stock. As of March 31, 2003, Government, directly or through The Korea Development Bank, owned 53.9% of our issued capital. Accordingly, without changes in the existing Korean law, it will be difficult or impossible for us to undertake any equity financing in the future other than sales of treasury stock without the participation of the Government.

The impact of Won depreciation may have adverse effect on us.

Due to adverse economic conditions and reduced liquidity, the value of the Won in relation to the U.S. Dollar and other major foreign currencies declined substantially in 1997 but generally rose in 1998, 1999, 2000 and 2001 and modestly declined in 2002. Such depreciation had a material effect on the cost of servicing our foreign currency debt and the cost of our purchases of fuel materials and equipment from overseas sources. As of December 31, 2002, approximately 25.1% of our long-term debt was denominated in foreign currencies, principally in Dollars and Yen. The prices for substantially all of the fuel materials and a significant portion of the equipment we purchase are stated in currencies other than Won, generally in Dollars. Since substantially all of our revenues are denominated in Won, we must generally obtain foreign currencies through foreign-currency denominated financings or through the conversion of Won to effect such purchases or service such debt. As a result, any significant depreciation of the Won against the Dollar or other foreign currencies will adversely impact us.

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Risks Relating to Korea and the Global Economy

Unfavorable financial and economic conditions in Korea and worldwide have had and will in the future continue to have a material adverse impact on us.

Economic conditions in Korea, elsewhere in Asia, in the United States and elsewhere in the world materially affect our business. Financial turmoil in Asia in the late 1990's adversely affected the Korean economy and in turn Korean companies. In addition, investors' reactions to developments in one country can have adverse effects on the securities of companies in other countries, including Korea.

Developments that could hurt Korea's economy in the future include, among other things:

failure of restructuring of *chaebols*, including financial difficulties experienced by SK Global, which admitted in March 2003 that it had falsified financial statements, and other SK Group companies, and accounting scandals of and regulatory proceedings against *chaebols* together with its negative effect on the Korean financial markets and on the small and medium-sized enterprise market;

slowdown in the overall economy and consumer spending;

volatility in commodity prices (including oil prices), exchange rates, interest rates, stock markets or foreign currency reserves;

increased reliance on exports to service foreign currency debts, which could cause friction with Korea's trading partners;

an increase in crude oil prices which may result from, among other reasons, international military conflicts;

adverse developments in the economies of countries to which Korea exports goods and services (such as the United States and Japan), or in emerging market economies in Asia or elsewhere;

social and labor unrest resulting from lay-offs, increasing unemployment and lower levels of income;

a decrease in tax revenues and a substantial increase in the Government's expenditures for unemployment compensation and other social programs that together could lead to an increased Government budget deficit; and

a deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including such deterioration resulting from trade disputes or disagreements in foreign policy.

Deterioration in the Korean economy can also occur as a result of deterioration in the global economic conditions. The worldwide economy has been in a slump since the beginning of 2001, as the United States and other G8 countries have experienced recessionary conditions which have been exacerbated by the terrorist attacks in the United States on September 11, 2001, the looming prospect of war in Iraq throughout much of 2002 and the impact of Severe Acute Respiratory Syndrome (SARS) on global exports or GDP growth rates. Any prolonged stagnation or future deterioration in global economic conditions would continue to have an adverse impact on the Korean economy. A significant adverse

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change in the Korean economy or a loss of investor confidence in the financial systems of emerging and other markets could have an adverse effect on us and the market price of our securities.

Tensions with North Korea could have an adverse effect on us and the price of our securities.

In recent months, the level of tension between the Republic of Korea and Democratic People's Republic of Korea (North Korea), as well as between North Korea and the United States, has increased. In response to North Korea's admission to maintaining of a nuclear weapons program in breach of the peace accord executed in October 1994, the United States, Japan, the Republic of Korea and the European Union (which became party to the 1994 accord in November 2002) decided to suspend shipments of oil to North Korea called for by the 1994 accord and reiterated their demands for the dismantling of North Korea's nuclear weapons program. Following the suspension of oil shipments, North Korea removed seals and surveillance equipment from its Yongbyon nuclear power plant and evicted nuclear inspectors from the United Nations International Atomic Energy Agency (the IAEA) in December 2002. In January 2003, North Korea announced its intention to withdraw from the Nuclear Non-Proliferation Treaty, refusing to abandon its nuclear power and arms program unless the United States were to execute a non-aggression pact. Media reports have stated that North Korea has reactivated a reactor at its main nuclear complex, the Yongbyon nuclear power plant. In February 2003, the IAEA referred the nuclear issue to the United Nations Security Council. In addition, in April 2003, the United States, North Korea and China held tripartite discussions in an effort to resolve issues relating to North Korea's nuclear weapons program, during which North Korea reportedly admitted that it had already successfully developed nuclear weapons. Both President Roh of the Republic and President Bush of the United States have pledged their support in principle to a peaceful resolution of the situation. However, there can be no assurance that the level of tension will not escalate or military confrontations will not occur, which would have a serious adverse effect on our operations and the market price of our securities.

Over the longer term, reunification of the two Koreas could occur. Reunification may entail a significant commitment by the Republic of Korea.

Other Risk

Our Consolidated Financial Statements are prepared in accordance with Korean generally accepted accounting principles, which differ materially from United States generally accepted accounting principles.

Our Consolidated Financial Statements are prepared in accordance with accounting regulations applicable to Government-invested companies and Korean GAAP, which differ in certain significant respects from U.S. GAAP. See Item 5 Operating and Financial Review and Prospects Liquidity and Capital Resources Reconciliation to U.S. GAAP and Note 24 of Notes to Consolidated Financial Statements.

Korean GAAP and U.S. GAAP differ, among other ways, in respect of the following issues:

treatment of assets revaluation;

treatment of foreign exchange translation gains and losses on monetary assets and liabilities;

accounting for consolidation, primarily accounting for disposition of a subsidiary's common stock; and

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the establishment of a regulatory asset and liability to offset the impact of foreign exchange translation losses and gains on our income statement, deferred income taxes and reserves for self-insurance.

In December 1998, the FSC approved changes to Korean GAAP with respect to the accounting treatment of certain unrealized foreign exchange translation gains and losses. Beginning January 1, 1999, under revised Korean GAAP, unrealized foreign exchange translation gains and losses on monetary assets and liabilities, other than those arising from debt incurred for construction of utility plant, are to be credited or charged to current operations. During 1997, these unrealized foreign exchange translation gains and losses were deferred and amortized over the remaining life of the related asset or debt. During 1998, as permitted by Korean GAAP, we changed our method of accounting for unrealized foreign exchange gains and losses, other than those relating to the construction of utility plant. During 1998, such gains and losses were credited or charged to current operations after offsetting against deferred foreign currency translation losses carried over from prior years.

Realized and unrealized foreign exchange translation gains and losses incurred during the construction period on short-term and long-term debt incurred for construction of utility plant will continue to be capitalized as part of the cost of the related asset.

Under U.S. GAAP, all realized and unrealized foreign exchange translation gains and losses are credited or charged to current operations.

In March 2000, the Securities and Futures Commission approved changes in accounting for consolidation in accordance with Korean GAAP. Pursuant to the provisions of the revised Korean GAAP, the disposal gain or loss on a portion of a subsidiary's common stock in consolidation is recorded as additions to or deductions from consolidated capital surplus in the event a controlling company still retains control over its subsidiary (generally, ownership is more than 50%) after disposal of a portion of its equity interest. Under U.S. GAAP, we have elected to record such gain or loss as other income or loss in consolidation.

As discussed in Item 4 Information on the Company Business Overview Restructuring of the Electricity Industry in Korea and Note 1 of Notes to Consolidated Financial Statements, on April 2, 2001, six new generation subsidiaries were established in accordance with the Restructuring Plan. Since our generation subsidiaries' rates are determined by a competitive system that is not cost based, they no longer meet the criteria for application of SFAS No. 71 Accounting for the Effects of Certain Types of Regulation. Our power transmission and distribution divisions continue to meet the criteria for application of SFAS No. 71. The Consolidated Financial Statements reflect the elimination effects of regulations that have been recognized as regulatory assets and liabilities pursuant to SFAS No. 71. The effect of this change has been recognized in current operations, resulting in the increase in net income under U.S. GAAP of KRW423,146 million, in accordance with SFAS No. 101 Accounting for the Discontinuation of Application of SFAS No. 71. However, in accordance with SFAS No. 101, the carrying amounts of property, plant and equipment measured and reported pursuant to SFAS No. 71 were not adjusted since they were not impaired under the provisions of SFAS No. 121 Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of.

The Government approves the rates that we charge to our customers. Our utility rates are designed to recover our reasonable costs plus a fair investment return. In June 2001, the MOCIE announced the revised guidelines for utility rate setting, stating that non-operating expenses should be excluded from reasonable costs while income tax expenses (including deferred income taxes), instead of income tax payables, should be included for rate-making purpose. As a result of this guideline change and the deregulation of our generation subsidiaries, only our deferred income taxes caused by the differences

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between Korean GAAP and U.S. GAAP are subject to SFAS No. 71, to the extent that tax benefits or obligation will affect future allowable costs for rate making purpose.

ITEM 4. INFORMATION ON THE COMPANY

HISTORY AND DEVELOPMENT

General Information

We were established by the Government on December 31, 1981 as the successor to Korea Electric Company and, until 1989, were wholly owned by the Government. Our registered office is located at 167 Samseong-Dong, Gangnam-Gu, Seoul, Korea, and our telephone number is 82-2-3456-4264.

In 1989, the Government sold 21% of our common stock as part of a planned partial privatization. Such partial privatization was one of several sales by the Government of shares of Government-owned companies undertaken. In 1994, we sold 1.2% of our shares in a global offering. In 1995, we sold 1.1% of our shares in another global offering. From November 1997 to February 1998 the Government injected capital into The Korea Development Bank, The Export-Import Bank of Korea, Korea First Bank and Seoul Bank with our shares to support those financial institutions. In March 1999, the Government sold 5% of our shares in a global offering. As a result, as of December 31, 2000, the Government owned, directly or indirectly, 54% of our issued common stock (including treasury stock). On June 20, 2001, the Government transferred 127,086,334 shares of our common stock held by it, which represents 19.85% of our outstanding capital, to The Korea Development Bank as part of ongoing initiatives designed to facilitate the privatization of electricity industry in Korea. As a result of such transfer, the Government and The Korea Development Bank own 32.35% and 21.63%, respectively, of the outstanding shares of our common stock. See the table setting forth certain information relating to certain owners of our capital stock as of March 31, 2003 in Item 7 Major Shareholders and Related Party Transactions Major Shareholders .

The KEPCO Act requires that the Government, directly or pursuant to the KDB Act, through The Korea Development Bank, own at least 51% of our capital. Direct or indirect ownership of more than 50% of our outstanding common stock enables the Government to control the approval of certain corporate matters which require a stockholders resolution, including approval of dividends. The Government s and The Korea Development Bank s rights as holders of our common stock are exercised by the MOCIE based on the Government s ownership of our common stock and a proxy to be received from The Korea Development Bank in consultation with the Ministry of Finance and Economy (MOFE).

We operate under the general supervision of the MOCIE. The MOCIE, in consultation with the MOFE, has responsibility for approving the electric power rates we charge after review by the Korean Electricity Commission. See Business Overview Rates . We furnish reports to officials of the MOCIE, the MOFE and other Government agencies and regularly consult with such officials on matters relating to our business and affairs. See Business Overview Regulation .

Pursuant to our articles of incorporation, our directors are classified into two categories: standing directors and non-standing directors. The number of standing directors shall be not more than seven, including the president (who is our Chairman and CEO), and the non-standing directors shall be not more than eight. In any case, the number of standing directors may not exceed the number of non-standing directors. The standing directors other than our president shall be appointed by the MOCIE upon the motion of our president with the approval at the general meeting of our shareholders. The non-standing directors shall be appointed from among specialists in the private sector with knowledge of business management by the Minister of Planning and Budget of the Republic upon the motion of our president. Our president shall be appointed by the president of the Republic upon the motion of the MOCIE after shareholders approval following the

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nomination by a president nomination committee which is composed of the non-standing directors and other members from the private sector appointed by the board of directors. The president serves as our chief executive officer and represents us and administers our day-to-day business in all matters not specifically designated as responsibilities of the board of directors.

Our auditor is appointed by the President of the Republic upon the motion of the Minister of the Planning and Budget of Korea following a resolution at the general meeting of our shareholders. The auditor is our full-time employee responsible for monitoring our business affairs and accounts. The auditor attends board meetings but is not a director and does not vote at board meetings. See Item 6 Directors, Senior Management and Employees Directors and Senior Management .

We play an important role in the implementation of the Government’s national energy policy, which is established in consultation with us. As an entity formed to serve public policy goals of the Government, we seek to maintain an overall level of profitability which allows us to strengthen our equity base in order to support the growth in our business. Our electricity rates are established pursuant to procedures that take into account, among other things, our needs to recover the costs of operations, to make capital investments and to provide a fair return to our security holders. See Business Overview Rates .

Recent Developments

Debt Restructuring

To accommodate the Restructuring Plan, on November 14, 2002, we commenced solicitations of consents and proxies from the holders of our debentures and notes listed below under the heading Yankee and Global Bonds (the Yankee and Global Bonds) and under the heading Eurobonds (the Eurobonds and, together with the Yankee and Global Bonds, the Bonds).

Yankee and Global Bonds	Eurobonds
US\$1,350mm 6.375% Notes due 2003	JPY2,560mm 2.75% Notes due 2004
US\$300mm 8.25% Notes due 2005	US\$21mm FRNs due 2004
US\$350mm 7.75% Debentures due 2013	JPY5,000mm 2.50% Notes due 2004
US\$70.64mm 6.00% Debentures due 2026	JPY5,000mm 2.92% Notes due 2004
US\$300mm 7.00% Debentures due 2027	EUR25.183mm 5.75% Notes due 2004
US\$200mm 6.75% Debentures due 2027	US\$55mm 7.11% Notes due 2004
US\$139,842mm 7.40% Amortizing Debentures due 2016	US\$50mm FRNs due 2004
US\$52,559mm 7.95% Zero-to-Full Debentures due 2096	JPY30,000mm 2.10% Notes due 2005
	US\$96.5mm FRNs due 2005
	US\$95mm 7.05% Notes due 2007
	GBP24.467mm 8.50% Notes due 2007

The solicitations related to proposed amendments to the agreements under which our debt securities were issued and to waivers of certain rights specified below under the Korean Commercial Code (the KCC). In consideration for the amendments and waivers, and upon the satisfaction or waiver of all closing conditions, The Korea Development Bank (KDB) will furnish a full, unconditional and irrevocable guarantees (the KDB Guarantees) in respect of the Bonds if the amendments and waiver with respect to such issue become effective. Through the adoption of the amendments, we intend to, among other things, eliminate certain constraints to accommodate the implementation of our electricity industry Restructuring Plan. The waivers are intended to eliminate the joint and several liability of the generation subsidiaries on the Bonds and, thereby, facilitate the eventual divestiture or sale of the generation subsidiaries pursuant to the Restructuring Plan. The joint and several liabilities arose as a matter of law

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under the KCC in connection with our creation of the generation subsidiaries and transfer of our assets to them. See [Business Overview](#) Restructuring of the Electricity Industry in Korea [below](#).

In February 2003, we successfully completed the solicitation of consents and proxies for the Yankee Bonds and Global Bonds listed above and KDB Guarantees were given accordingly. In April 2003, we announced the successful completion of the closing conditions relating to our Eurobonds listed above and KDB Guarantees were given accordingly. In March 2003, we completed the solicitation of consents for our domestic bonds, however, the KDB Guarantees have not yet been given.

We plan to obtain consents to eliminate joint and several liability in respect of the Samurai bonds in the second half of 2003. However, there can be no assurance that the consent process will proceed according to this schedule or in the manner currently contemplated or that the consent process will be successfully consummated.

Capital Expenditures

This table below sets forth for each year in the three-year period ending December 31, 2002, the amounts of capital expenditures (including capitalized interest) for the construction of generating, transmission and distribution facilities:

<u>2000</u>	<u>2001</u>	<u>2002</u>
	(in billions of Won)	
KRW7,694	KRW 7,299	KRW 6,653

For the expected completion dates of generating facilities, see [Business Overview](#) [Capital Investment Program](#) .

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BUSINESS OVERVIEW

Restructuring of the Electricity Industry in Korea

On January 21, 1999, the MOCIE published the Restructuring Plan. The overall objectives of the Restructuring Plan are to:

introduce competition and thereby increase efficiency in the Korean electricity industry;

ensure a long-term, inexpensive and stable electricity supply; and

promote consumer convenience through the expansion of consumer choice.

The Restructuring Plan sets forth the Government's broad policy directions and calls for flexible implementation over the next 10 years or more. The Restructuring Plan allows for a phased transition to a competitive system while:

preserving the Government's ability to ensure that adequate supplies of electricity are available to meet demand; and

at the same time maintaining and enhancing our shareholder value.

The Government has designed the Restructuring Plan to enable it to achieve its goals for the electricity industry in a flexible manner over time taking into account the unique characteristics of the Korean economy and the needs and interests of those who provide financing to us.

The KEPCO Act requires that the Government own at least 51% of our capital. Direct or indirect ownership of more than 50% of our outstanding common stock enables the Government to control the approval of certain corporate matters which require a stockholders' resolution, including approval of dividends. The Government's and The Korea Development Bank's rights as holders of our common stock are exercised by the MOCIE in consultation with the Ministry of Finance and Economy (MOFE). The Government currently has no plan to cease to own directly or indirectly at least 51% of our outstanding common stock.

As an entity formed to serve public policy goals of the Government, we seek to maintain an overall level of profitability which allows us to strengthen our equity base to support the growth in our business. After the full implementation of the Restructuring Plan as currently contemplated, we anticipate that our basic strategy, in principle, will be to maximize profits and enhance shareholder value.

The following is a description of the Restructuring Plan and the Government's position relating to the Restructuring Plan as of the date of this report.

Restructuring of the Electricity Industry in Korea

On January 21, 1999, the Ministry of Commerce, Industry and Energy (the MOCIE) published the Restructuring Plan. The overall objectives of the Restructuring Plan are to:

introduce competition and thereby increase efficiency in the Korean electricity industry;

ensure a long-term, inexpensive and stable electricity supply; and

promote consumer convenience through the expansion of consumer choice.

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Phase I

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During Phase I, which was the preparation stage for Phase II and ran from January 1, 1999 until April 2, 2001, we continued to be the principal electricity generator, with a few independent power producers (the IPPs) supplying electricity to us pursuant to existing power purchase agreements (the PPAs). On February 23, 2001, our board of directors approved a plan to split our non-nuclear and non-hydroelectric generating capacity into the following five separate wholly-owned generation subsidiaries, each with its own management structure, assets and liabilities: Korea South-East Power Co., Ltd. (KOSEPCO), Korea Midland Power Co., Ltd. (KOMIPO), Korea Western Power Co., Ltd. (KOWEPO), Korea Southern Power Co., Ltd. (KOSPO), and Korea East-West Power Co., Ltd. (KEWESPO). Our hydroelectric and nuclear generating capacity was transferred into a separate wholly-owned generation subsidiary, Korea Hydro and Nuclear Power Co., Ltd. (KHNP). On March 16, 2001, our shareholders approved the plan to establish the generation subsidiaries effective as of April 2, 2001.

The Government's objectives in dividing the power generation capacity into separate generation subsidiaries are principally to:

introduce competition and thereby increase efficiency in the electricity generation industry in Korea; and

ensure the stable supply of electricity in Korea.

We have retained our monopoly position with respect to transmission and distribution.

While our ownership percentage of the non-nuclear and non-hydroelectric generation subsidiaries will depend on the ultimate form of the Restructuring Plan approved by the Government, our plan is to continue to retain 100% ownership of KHNP.

Phase II

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Phase II, which is the current phase, is expected to run from April 2, 2001 through March 31, 2005. In Phase II, the Government introduced a competitive bidding or bidding pool system under which we purchase power from the generation subsidiaries and other companies for transmission and distribution to customers. Such competitive bidding or bidding pool system was established on April 2, 2001 and is a cost-based pool system (the CBP) (as described below).

Pursuant to the Electricity Business Law amended on December 23, 2000, the Government established the Korea Power Exchange (the KPX) on April 2, 2001 to deal with the sale of electricity and work out regulations governing the electricity market to allow for electricity distribution via a competitive bidding process. The Government also established the Korea Electricity Commission (the KEC) on April 27, 2001 to regulate the restructured Korean electricity industry and to ensure fair competition. As part of this process, the KPX established the Regulation regarding the Operation of the Electricity Market relating to the operation of the bidding pool system. To amend the Regulation regarding the Operation of the Electricity Market, the KPX shall obtain approval from the MOCIE and the amendment shall be reviewed by the KEC, prior to approval of the MOCIE.

The KEC's main functions involve implementation of necessary standards and measures for electricity market operation and review of matters relating to licensing companies in the Korean electricity industry. The KEC also acts as an arbitrator in disputes involving utility rates and companies in the Korean electricity industry and consumers and investigates illegal or deceptive activities of Korean electricity market participants.

The Pool System

Under the pool system, each generation company, including the KHNP and our other generation subsidiaries, participates in competitive bidding pursuant to a bidding process operated by the KPX. Under the current CBP system, each generation company and our other generation subsidiaries, submits its costs and available capacity to KPX one day prior to the date of the actual sale. The submitted costs are divided into two categories: base load units and non-base load units, in order to promote fair competition as base load and non-base load units have different cost structures. Base load plants utilize coal and nuclear fuel materials and non-base load plants utilize non-coal and non-nuclear fuel materials. The final pool price for each of these categories is determined by KPX.

CBP comprises two prices, namely, system marginal price (SMP) and base load marginal price (BLMP), which are determined by variable costs of the most expensive non-base load unit(s) and base load unit(s), respectively, from which electricity is dispatched for the trading period. Non-base load capacity payment (Non-Base Load CP) and base load capacity payment (Base Load CP) represents fixed costs of non-base load units and base load units, respectively, and are settled separately from the CBP.

One uniform pool price for each category is determined every hour as the SMP and the BLMP by merit order (as described below).

Merit order is a power dispatch order system determined and used by the KPX. The KPX determines the allocation of power supplied by generation companies. This determination is primarily dependent on economic principles and other various factors, including the proximity of a generation company to the geographical area to which power is being supplied, transmission and distribution costs, network and fuel constraints and amount of power loss during transmission and distribution.

It is expected that the current CBP will be replaced by a two-way bidding pool system in Phase III under which each generation company will submit bids to KPX to supply power with the price of each segment determined by the highest clearing bid that satisfies demand for power.

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Consumers purchase power from us at prices based upon our purchase price plus transmission and distribution fees and other fees which are set by the KEC. The KEC's prime objective is ensuring transparency and preventing anti-competitive practices in the bidding process to maximize the benefits of competition to consumers.

Contracts for Differences

Since January 2003, large consumers of electricity with maximum demand of at least 50,000 kilovolt ampere (kVA) are allowed to purchase directly from the pool. As of June 19, 2003, we did not have any such consumers. Any IPPs with installed capacity of greater than 20 megawatts is required to supply its electricity through the pool system. Due to the uncertainty associated with variations on the pool system price, generators are subject to variations in revenue from the pool system for the electricity they produce, and retailers are subject to fluctuating costs for the electricity they buy. Contracts for differences (CFDs) are financial contracts designed to reduce exposure to volatility in the pool system prices by effectively fixing the price for specific amounts of electricity at specific times over the contract period. In order to hedge the risk from pool price volatility, a large consumer can enter into a CFD with generation companies, which will provide for the cash settlement of the difference between the contract price of the CFD and the pool price.

Privatization of Non-Nuclear Generation Subsidiaries

In April 2002, the Committee for Privatization of Public Corporation adopted the basic privatization plan for our five non-nuclear generation subsidiaries. In the first phase of the privatization plan, we commenced the sale of interests in one of our non-nuclear generation subsidiaries, KOSEPCO. In March 2003, we suspended our offer to sell, pursuant to competitive bidding process, a portion of our ownership interest together with management control in KOSEPCO, due to, among other things, unfavorable market conditions. Currently, we are pursuing a plan to privatize KOSEPCO through an initial public offering. We will evaluate the results of the sale of KOSEPCO before proceeding with the sale of the other generation subsidiary in the first phase of the privatization plan. In addition, upon completion of the first phase, we will evaluate the results of the initial sale before proceeding with the sale of the remaining non-nuclear generation subsidiaries in the next phase of the privatization plan. The aggregate foreign ownership will be limited to 30% of total power generation capacity in Korea only to the extent that such foreign ownership retains control. In consultation with us, the Government will determine the size of the ownership interest to be sold and the timing of sales, with a view to encouraging competition, assuring adequate electricity supply and debt service capability.

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Phase III

Phase III is expected to run from April 2005 to 2008 and is the preparation stage for Phase IV. During this phase, we expect to split our distribution operations into a number of separate subsidiaries on a basis comparable to the restructuring of the generation assets in Phase I. However, based upon consultations with the Government, we currently believe that it will not be required to create distribution subsidiaries until the end of March 2005 and that the Government plans to cause us to sell interests in all of these subsidiaries as appropriate from time to time taking into account competitive considerations, market conditions and maintenance or enhancement of our shareholder value.

In consultation with the Government, we expect to allocate its distribution assets into distribution subsidiaries by taking into account, among other factors, geographical distribution of consumers and competition enhancement. The Government has not finalized its plan regarding the allocation of the assets and liabilities to our distribution subsidiaries. The Government is expected to allocate our related assets and liabilities to the distribution subsidiaries on a basis similar to the basis for the allocation of the power generation assets and some of its liabilities to the generation subsidiaries.

It is anticipated that, initially, each of our distribution subsidiaries will be permitted to operate only in a specific geographic area.

During Phase III, pursuant to the Electricity Business Law, independent companies may be established to engage in the business of selling electricity.

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Unlike Phase II, in which we purchase electricity under the pool system, during Phase III, the retail companies, including our distribution/retail subsidiaries, would purchase electricity power through the price-bidding pool described below. In our role as the transmission company, it is expected that we will remain for a certain period as parent company to the distribution and generation companies, and charge the distribution companies and generation companies a transmission fee. It is understood that the Government currently intends to have us act as the sole electricity transmission company in Korea.

It is expected that, in the near future, KPX will replace the current CBP with a price-bidding pool system, which is called as TWBP(two-way bidding pool). Under this TWBP, generation companies, including our generation subsidiaries, will submit their offers and retail companies, including our distribution/retail subsidiaries, will submit their bids. Based on these submitted offers and bids, FMCP(forecasted market clearing price) will be determined every trading period by the highest bid by merit order (as described above) that effectively satisfies the aggregate demand of the distribution companies in order to adjust the offer of generation company and to facilitate end-user's response. But MCP(market clearing price) which is used to settle actually is determined by offers from generation companies and real demand.

In contrast to the CBP, under TWBP, each generation company will submit its bids reflecting all variable and fixed costs. In addition, the price-bidding pool system will not take into account the inherent differences in cost structure between the base load and non-base load plants, and the generation companies will not be separately compensated for their fixed costs.

The rule and procedures of the TWBP have almost been finalized by all relevant parties, including us, the Government, KPX, KHNP and our other generation subsidiaries but the drafts of TWBP are currently being reviewed in detail. It is believed that the transition from the CBP to the price-bidding pool system without any safety mechanism to hedge and regulate price volatility could result in a serious market disruption. One of the safety mechanism currently being considered by the Government is the use of vesting contracts for an interim period to stabilize pool prices and to mitigate market power when the price-bidding pool system is introduced. The draft of vesting contracts has finalized and after reviewing by contract parties and government, vesting contracts will be introduced at commencing of TWBP.

Hedging contracts in the electricity generation market are initially expected to be vested by the Government for our generation companies as part of the Governments effort to mitigate pool price volatility and to meet customer tariff level during the transition period into the full retail competition. Such vesting contracts are expected to be mostly in the form of CFDs in which prices and volumes for electricity sold by the generation companies to retailers will be fixed during the contract periods. (Pending the restructuring and privatization of the electricity distribution and retail industry, the role of the retailer will remain with us.) See Phase II Contracts for Differences above. Financial settlements between the generation companies and the retailers will occur to settle difference between strike prices and pool prices under such CFDs. If the pool price is higher than the strike price, the generation companies makes a difference payment to the retailer equal to the contract volume multiplied by the difference between pool price and strike price. If the pool price is lower than the strike price, the generation company receives a difference payment from the retailer equal to the contract volume multiplied by the difference between pool price and strike price. To reduce exposure to volatility to pool prices, retailers and generators are expected to seek to continue to enter into such CFDs bilaterally over the long-term, post the expiry of the initial vesting contracts. The details of hedging contracts have not been finalized by the Government and thus remain subject to change.

Phase IV

Phase IV will be the final phase of the Restructuring Plan and contemplates allowing consumers to choose their power source from any distribution/retail company on market terms. It is understand that the

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Government currently intends for us to continue to act as the sole electricity transmission company in Korea during this phase. The electricity industry will be regulated to assure competition, cost effectiveness, and sufficient supply.

Power Generation

KEPCO and our generation subsidiaries' electricity generating system as of December 31, 2002, was comprised of a total of 256 generating units, including nuclear, thermal, hydro and internal combustion units, which at December 31, 2002 had an aggregate installed generating capacity of 49,561 megawatts. Our thermal units produce electricity using steam turbine generators and include units fired by coal and oil. Internal combustion units are diesel-fired gas turbine and combined cycle units. Combined cycle units consist of either LNG-fired combined cycle units or oil-fired combined cycle units. In addition to the generating facilities our generation subsidiaries own, we purchase power output of several generating plants not owned by our generation subsidiaries.

The table below sets forth as of and for the year ended December 31, 2002, the number of units, installed capacity and the average capacity factor for each type of generating facility that our generation subsidiaries own or that generate electricity primarily for sale to us.

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	Number of Units	Installed Capacity(1)	Average Capacity Factor(2)
		(megawatts)	(percent)
KEPCO facilities:			
Nuclear	18	15,716	92.7
Thermal:			
Coal	37	15,931	86.3
Oil	19	4,280	46.7
LNG	6	1,538	13.2
Total thermal	62	21,749	73.3
Internal combustion	136	9,260	39.1
Hydro	40	2,836	13.1
Total KEPCO facilities	256	49,561	69.1
Facilities of others(3):			
Thermal (LNG/Oil)	28	3,201	27.8
Hydro (4)	101	1,039	22.5
	—	—	—
Total facilities of others	129	4,240	26.5
	—	—	—
Total	385	53,801	65.7
	—	—	—

- (1) Installed capacity represents the level of output that may be sustained continuously without significant risk of damage to plant and equipment.
- (2) Average capacity factor represents the total number of kilowatt hours of electricity generated in the period divided by the total number of kilowatt hours that would have been generated assuming continuous operation of generating units at installed capacity expressed as a percentage.
- (3) Others are independent power producers. See [Business Overview](#) [Purchased Power](#) .
- (4) Facilities owned and operated by the Korea Water Resources Corporation, a Government-owned entity, account for substantially all of the installed capacity of hydro facilities.

The useful life of units of each type without substantial renovation is approximately as follows: nuclear and thermal, over 30 years; internal combustion, over 25 years; hydroelectric, over 50 years. Substantial renovation can extend the useful life of thermal units by up to 20 years.

We attempt to achieve efficient use of generating resources and diversification of generating capacity by fuel types. Our predecessors relied principally upon oil-fired thermal generating units for electricity generation. Since the oil shock in 1974, however, our power development plans (including its predecessors) and the Government have emphasized the construction of nuclear generating units. While nuclear units are more expensive to construct than other units of comparable capacity, nuclear fuel is less expensive than fossil fuels producing comparable amounts of energy. However, efficient operation of nuclear units requires that such plants be run continuously at relatively constant energy output levels. As it is impractical to store large quantities of electric energy, we seek to maintain nuclear power production capacity at a level approximating a level at which demand is continuous within the Republic. For production at times when demand exceeds the level of continuous demand, we rely on units fired by fossil fuel and hydroelectric units, which can be started and shut down more efficiently than nuclear units. Bituminous coal is currently the cheapest thermal fuel per kilowatt hour of electricity produced, and therefore we have sought to maximize the use of bituminous coal for generation needs above the continuous demand level, except for meeting surges in demand requiring rapid startup and shutdown. Thermal units fired by LNG, hydroelectric units and gas turbine internal combustion units are the most efficient types of units for rapid startup and shutdown, and therefore we have used such units principally to meet short-term surges in demand. The use of LNG-fired units, and the use of bituminous coal-fired units rather than anthracite coal-fired units, are intended to reduce the environmental impact of our generating operations. Anthracite coal is also a less efficient fuel source than bituminous coal.

Our generation subsidiaries have constructed and recommissioned thermal and internal combustion units in order to help meet power demand. Subject to market conditions, our generation subsidiaries plan to

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add additional thermal and internal combustion units in future periods for this purpose. Such units may be completed more quickly than new nuclear units.

The table below sets forth for each of the five years ended December 31, 2002 the amount of electricity generated by facilities linked to our grid system, and the amount of power used or lost in connection with transmission and distribution.

	1998	1999	2000	2001	2002	% of 2002 Gross Generation(1)
	(million kilowatt hours)					(percent)
Electricity generated at generation subsidiaries:						
Nuclear	89,689	103,064	108,964	112,133	119,103	38.9%
Thermal Coal	77,662	83,603	99,428	112,257	119,665	39.0
Oil	9,943	11,524	18,888	21,622	17,493	5.7
LNG	1,473	1,345	1,632	1,557	1,771	0.6
Total thermal	89,042	96,472	119,948	135,437	138,929	45.3
Internal combustion	24,455	27,091	24,734	23,914	30,888	10.1
Hydro	3,625	3,560	3,196	2,915	3,262	1.1
Total generation	206,811	230,187	256,842	274,398	292,182	95.3
Electricity purchased from others:						
Thermal	6,015	6,631	7,144	9,589	12,242	4.0
Hydro	2,474	2,507	2,414	1,236	2,049	0.7
Total purchased	8,489	9,138	9,558	10,825	14,291	4.7
Gross generation	215,300	239,325	266,400	285,224	306,474	100.0
Auxiliary use(2)	9,445	10,998	12,328	12,980	13,728	0.9
Pumping storage(3)	2,425	2,525	2,118	2,401	2,688	4.5
Total net generation(4)	203,430	225,802	251,953	269,842	290,058	9.5
Transmission and distribution losses	9,960	11,280	11,871	12,140	12,994	4.48%(5)

- (1) Unless otherwise indicated, the percentages are based on gross generation.
- (2) Auxiliary use represents electricity consumed by generating units in the course of generation.
- (3) Pumping storage represents electricity consumed during low demand periods in order to store water which will be utilized to generate hydroelectric power during peak demand periods.
- (4) Total net generation is gross generation subtracted by auxiliary use and pumping storage.
- (5) Total transmission and distribution losses divided by total net generation.

The table below sets forth our total capacity at the end of each period (including units generating electricity primarily for sale to us) and peak and average load in each period for each of the five years ended December 31, 2002.

	1998	1999	2000	2001	2002
	(megawatts)				
Total capacity	43,406	46,978	48,451	50,859	53,801
Peak-load	32,996	37,293	41,007	43,125	45,773
Average load	24,578	27,320	30,328	32,560	34,986

KHNP

We commenced nuclear power generation activities in 1978 when our first nuclear generating unit, Kori-1, began commercial operations. On April 2, 2001, we transferred all of our nuclear and hydroelectric power generation assets and liabilities to KHNP.

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As of December 31, 2002, KHNP owned and operated (i) 18 nuclear generating units at four power plant complexes in Korea, located in Kori, Wolsong, Yonggwang and Ulchin (including Yonggwang 6 which commenced commercial operation on December 24, 2002) and (ii) 27 hydroelectric generating units through the two main divisions at Gangneung and Hangang.

The table below sets forth as of and for the year ended December 31, 2002, the number of units, installed capacity and the average capacity factor for the two types of generating facility.

	Number of Units	Installed Capacity(1)	Average Capacity Factor(2)
		(megawatts)	(percent)
Nuclear	18	15,716	92.7
Hydro	27	534	25.2
Total	45	16,250	

- (1) Installed capacity represents the level of output that may be sustained continuously without significant risk of damage to plant and equipment.
- (2) Average capacity factor represents the total number of kilowatt hours of electricity generated in the period divided by the total number of kilowatt hours that would have been generated assuming continuous operation of generating units at installed capacity expressed as a percentage.

Two additional nuclear generating units at the Ulchin site, Ulchin 5 and 6, each with a 1,000-megawatt capacity, are currently under construction and are expected to be completed in 2004 and 2005, respectively. In addition, KHNP has six nuclear units (New Kori Nos. 1 through 4 and New Wolsong Nos. 1 and 2) in preparation for which the planning has been approved and locations determined.

Since the oil crisis in 1974, Korea's power development plans have emphasized the construction of nuclear generating units. While nuclear units are more expensive to construct than other units of comparable capacity, nuclear fuel is less expensive than fossil fuels producing comparable amounts of energy. However, efficient operation of nuclear units requires that such plants be run continuously at relatively constant energy output levels. As electricity cannot be stored in significant amounts, generation must be varied continuously to match demand. Within each day there is a certain level below which demand does not fall. This minimum level of demand throughout the day is known as base load. Nuclear power units operate at base load because design and safety considerations limit the extent to which the plant can vary output. For production at times when demand exceeds the level of continuous demand, reliance is made on units fired by fossil fuel and hydroelectric units, which can be started and shut down more efficiently than nuclear units. Hydroelectric units, along with thermal units fired by LNG and gas turbine internal combustion units, are one of the most efficient types of units for rapid startup and shutdown, and therefore have been used principally to meet short-term surges in demand.

Nuclear

The table below sets forth certain information with respect to the nuclear generating units KHNP owned as of December 31, 2002.

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Unit	Reactor	Reactor	Turbine and	Commencement	Installed
	Type(1)	Design(2)	Generation(3)	of Operations	Capacity (megawatts)
Kori-1	PWR	W	GEC	1978	587
Kori-2	PWR	W	GEC	1983	650
Kori-3	PWR	W	GEC	1985	950
Kori-4	PWR	W	GEC	1986	950
Wolsong-1	PHWR	AECL	P	1983	679
Wolsong-2	PHWR	AECL, H	H, GE	1997	700
Wolsong-3	PHWR	AECL, H	H, GE	1998	700
Wolsong-4	PHWR	AECL, H	H, GE	1999	700
Yonggwang-1	PWR	W	W	1986	950
Yonggwang-2	PWR	W	W	1987	950
Yonggwang-3	PWR	H, CE	H, GE	1995	1,000
Yonggwang-4	PWR	H, CE	H, GE	1996	1,000
Yonggwang-5	PWR	D, CE	D, GE	2002	1,000
Yonggwang-6	PWR	D, CE	D, GE	2002	1,000
Ulchin-1	PWR	F	A	1988	950
Ulchin-2	PWR	F	A	1989	950
Ulchin-3	PWR	H, CE	H, GE	1998	1,000
Ulchin-4	PWR	H, CE	H, GE	1999	1,000
Total nuclear					15,716

- (1) PWR means pressurized light water reactor; PHWR mean pressurized heavy water reactor.
- (2) W means Westinghouse Electric Issuer (USA); AECL means Atomic Energy Canada Limited (Canada); F means Framatome (France); H means HANJUNG; CE means Combustion Engineering (USA); D means Doosan Heavy Industries.
- (3) GEC means General Electric Issuer (UK); P means Parsons (Canada and UK); W means Westinghouse Electric Issuer (USA); A means Alstom (France); H means HANJUNG; GE means General Electric (USA); D means Doosan Heavy Industries.
- The table below sets forth certain information for 2002 with respect to each nuclear generating unit KHNP owned.

Unit	Average Capacity Factor	Average Fuel Cost Per kwh
	(percent)	(Won)
Kori-1	85.4	KRW 4.70
Kori-2	93.9	