# 管理層論述與分析 Management Discussion and Analysis

## 宏觀經濟與行業發展

2006年,中國經濟保持平穩快速增長,國民生產總值比上年增長10.7%。隨著國民經濟快速增長和居民生活水準的提高,全社會用電量達到28,248億千瓦時,同比增長14%。全國發電量達到28,344億千瓦時,同比增長13.4%。全國新增投運的發電裝機10,117萬千瓦,總裝機容量突破6億千瓦,達到62,200萬千瓦,同比增長20.3%。電力需求的持續旺盛,推動了發電設備製造行業的快速發展。

## 訂貨情況

2006年,本集團新接訂單合人民幣285億元,其中火電設備184億元,水電設備26億元,電站工程服務41億元,燃機21億元。本集團一方面著力提高大型機組市場佔有率,另一方面著眼行業發展方向,加快發展超超臨界、大型水電、重型燃機、核電等高新技術產品和環保產品。

水電方面:2006年11月與二灘水電開發公司簽定了錦屏一級水電站6 X 600MW混流式水輪發電機製造合同,使本集團在大型水電產品市場居同行業領先水平。與新源公司簽訂了蒲石河4 X 300MW抽水蓄能機組供貨合同,在大型抽水蓄能機組上實現了由分包到主承制的重要轉換。

#### **MACRO-ECONOMY & INDUSTRY DEVELOPMENT**

In the year of 2006, China economy continued to grow steadily and rapidly, with a 10.7 per cent increase in GDP growth over last year. As the rapid development of national economy and the improvement of people's life standard, overall domestic power consumption amounted to 2,824.8 billion KW/h, an increase of 14 per cent over last year. National power generation amounted to 2,834.4 billion KW/h, an increase of 13.4 per cent over last year. The new approved start-up projects reached 101.17MW, while the total capacity surpassed 600,000MW to 622,000MW, an increase of 20.3 per cent over last year. The strong demand for power keeps promoting the rapid development of power generation equipment industry.

#### **NEW CONTRACTS**

In the year of 2006, the new-receiving contracts of the Group have already amounted to Rmb28.5 billion, among which the thermal power equipments contracts have reached Rmb18.4 billion, and for hydro power equipments is Rmb2.6 billion, and Rmb4.1 billion for engineering services and Rmb2.1 billion for gas turbines. The Group on the one hand, seeks to increase the market occupation of large scale units; on the other hand, the Group focused on the development trend of the industry, and speeded up the development of high-tech products and environment-friendly products, including ultra super critical products, large scale hydro power units, heavy duty gas turbines and nuclear power equipments.

In the hydro power front: The Group has signed a contract in November 2006 with Ertan Hydropower Development Company Limited to manufacture 6 X 600MW Francis Turbine hydro-generators for Jinping-I Hydropower Project, which raised the Group to the leading position of the industry. The Group also signed a contract with Xinyuan Company to supply Pushi River 4 X 300MW pumped storage units, turning its role to general contractor form sub-contractor in large scale pumped storage units.

煤電方面:取得了潮州2 X 1,000MW等級鍋爐、汽輪機、發電機、蕪湖2 X 1,000MW等級鍋爐和鐵嶺2 X 600MW超超臨界鍋爐、汽輪機和發電機供貨合同。取得了國內首台具有自主知識產權的江西分宜330MW循環流化床鍋爐的訂單。廣東德勝300MW火電機組脱硝的中標,標誌著本集團在環保業務的拓展上邁出了重要的一步。

氣電方面:繼2006年1月本集團與北京太陽宮燃氣熱電公司簽訂了為奧運工程供電、供熱、供冷的太陽宮燃機項目,又取得了福建晉江項目4台9FA級燃機及聯合循環機組的訂單,鞏固了本集團在重型燃機市場上的領先地位。

國際市場和電站工程總承包方面:本集團大力開發國際市場,簽訂了越南錦普1 X 300MW和廣東德勝2 X 300MW工程總承包合同,是本集團首次承攬境外和國內300MW級 EPC項目。簽訂了出口印度2 X 600MW鍋爐,是目前我國出口容量最大的鍋爐。

## 生產與服務

針對2006年交貨任務繁重的特點,本集團以滿足用戶需求為目標,加強項目管理,通過加強與用戶溝通,合理調配生產資源,實現了全部產品按期交貨,產品產量再創歷史新高。

In the Thermal Power front: The Group won the contracts to supply Chaozhou 2 X 1,000MW boiler, steam turbine and power generator, Wuhu 2 X 1,000MW class boiler and Tieling 2 X 600MW ultra super critical boiler, steam turbine and power generator; the order for Jiangxi Fenyi 330MW circle fluid bed boiler, the first unit with proprietary intellectual right; and the tender of deNOx of Guangdong Desheng 300MW thermal unit, which marked an important step forward of the Group's environment-friendly business.

In the gas power front: After signing the Taiyanggong gas turbines contract with the Beijing Taiyanggong Heat and Power Company to supply power, gas and cooling for the Beijing Olympics on Jan 2006, the Group won a contract to supply four 9FA class gas turbines and combined circle units to Fujian Jinjiang projetct, which further strengthened the Group's leading position in heavy duty turbine market.

In the international market and general contract for power plant engineering field: the Group made great effort to develop international market and won general contracts for Vietnam Cam pha 1 X 300MW project and Guangdong Desheng 2 X 300MW project, which is the first time to contract for overseas and domestic 300MW class EPC projects, and an export contract of 2 X 600MW boiler to India, which is of the largest capacity in exported boilers from China.

## **PRODUCTS AND SERVICES**

Given the feature of tight schedule and heavy task in 2006, the Group focused on the customer's need and strengthened the project management. Based on the effort to enhance the communication with the user and to allocate production resources properly, all the orders were delivered on-schedule and the product output created the record in the history of the Group.

全年共完成發電設備27,056MW(以汽輪發電機和水輪發電機組計),同比增長26.77%,其中電站鍋爐完成52台21,345MW,同比增長4.07%;電站汽輪機完成64台20,097MW,同比下降13.82%;汽輪發電機完成65台23,470MW,同比增長28.74%;水輪發電機組完成26組3,576MW,同比增長15.21%;燃氣輪機4台1,020MW。

玉環1號、2號鍋爐已經投入運行、3號鍋爐已經交貨,4號鍋爐交貨正在進行。泰州2X1,000MW項目鍋爐、汽輪機和汽輪發電機技術準備和材料採購已全部完成,部分部件已運抵現場進入安裝。河源項目正在進行技術準備,主要原材料已開始採購。電站行技術準備,主要原材料已開始採購。電站工程服務方面,韓城項目順利完成驗收運行;起南高岸火電項目已經通過可靠性運行,正在進行驗收。蘇丹麥洛維輸變電線路項目、越南宣光水電、伊朗塔瓦茲以及蘇丹吉利二期聯合循環電站項目進展順利。

順利實施的玉環項目成為國內第一個投產發電的百萬千瓦級超超臨界機組。在烏沙山4 X 600MW項目上,與用戶攜手創造了一年四台機組全部投入商業運行的紀錄。

## 科研開發與技術引進

2006年,本集團共完成科研課題173項,投入 科研經費 4.50 億元,比2005年增長48.5%, 一批優秀的科研成果獲省、部級獎勵。 The total output for the year was up to 27,056MW (in terms of steam turbine generator units and hydro power turbine generator units), representing an increase of 26.77 per cent compared with that of last year. Among which, 52 units of utility boiler with total capacity of 21,345MW, an increase of 4.07 per cent over last year; 64 steam turbines for power plant with total capacity of 20,097MW, a decrease of 13.82 per cent over 2005 and 65 turbine generators with total capacity of 23,470MW, an increase of 28.74 per cent over 2005; 26 units of hydro power turbo-generators with total capacity of 3,576MW, an increase of 15.21 per cent over last year; 4 units of gas turbines with total capacity of 1,020MW.

Yuhuan I and II boilers have been putting into operation, while boiler III is delivered and boiler IV is under the process of delivery. The technology preparation and material purchase for Taizhou 2 X 1,000MW boiler, steam turbine and steam turbine generator has completed, with some of the parts have been shipped to the site and under assemble. The technology preparation for Heyuan project is under progress, and purchase for major materials is getting started. For power plant engineering services, Hancheng project has completed and under inspection, while Vietnam Cao Ngan thermal power project has passed test operation process and under accepting process. Sudan Merowe transmission line project, Vietnam Tuyen Quang hydro power, second stage of combined circle power plant projects for Iran Towicz and Sudan Elgaili are all progressed smoothly.

Successful Yuhuan project is the first 1,000MW class ultra super critical units put into power generation operation in China. The Wusha Mountain project, where 4 X 600MW units applied to business production within one year, also marked a record in the industry.

### **R&D AND TECHNOLOGY INTRODUCTION**

In the year 2006, the Group completed 173 items of R&D, among which the outstanding ones have obtained provincial or ministerial awards. Total investment in R&D amounted to Rmb450 million, representing an increase of 48.5 per cent compared to that of 2005.

繼續加大同國外大公司技術交流的深度和廣度,積極開展技術引進和技術合作,為增強自主創新能力、加快發展創造了必要條件。完成了600~1,000MW超超臨界鍋爐的技術引進:與東芝簽訂了1,000MW超超臨界汽輪機和發電機技術轉讓協議:與法國阿爾斯通簽訂的抽水蓄能技術轉讓協議正在執行中,2007年可完成關鍵技術的轉讓工作。

在引進消化吸收國外先進技術的同時,積極開發具有自主知識產權的技術和產品。鍋爐公司與西安熱工院合作,開發了具有我國自主知識產權的分宜330MW大型CFB鍋爐;空冷汽輪機組的開發取得了較大進展;三峽電站右岸水輪發電機組是自行研製的世界最大全空冷700MW水輪發電機組,各項技術性能指標達到或超過三峽左岸機組水準。

## 溢利

2006年,本集團實現淨溢利102,458萬元,比上年增長120.3%;每股盈利人民幣0.80元,比上年同期增加0.41元;期末資產淨值為483,147萬元,比年初增加94,684萬元;每股資產淨值為3.79元,比年初增加0.74元。

期內,本集團溢利的增長得益於主營業務收入的大幅增長,同時本集團控制成本費用、提高盈利能力的諸項措施開始顯現效果。

The Group has been putting more efforts on the cooperation with large international firms in both depth and extent, to carry out technology transfer and cooperation, which created a necessary foundation for the improving of independent innovation ability and the development acceleration. The Group has completed the 600~1,000MW ultra super critical boiler technology transfer and signed an agreement of technology transfer of 1,000MW ultra super critical steam turbine and power generator with Toshiba. In the meantime, the technology transfer agreement of large scale pump storage units with France Alstom Corporation is under execution, of which the transfer of critical technology is due to complete by 2007.

Besides introducing and absorbing advanced technology from abroad, the Group initiated R&D in proprietary intellectual right technology and products. The Boiler Company has worked with Xi'an Thermal Power Research Institute to develop Fenyi 330 MW Large Scale Boiler, the first unit with proprietary intellectual right; the R&D of air-cooling steam turbine units has achieved a significant progress; the hydro power turbine generator units in right-shore of Three Gorges Hydro-power Station is a self-developed and largest all-air-cooling 700 MW hydro power turbine generator units in the world, with all the technical indicators achieved or surpassed the standards of the left-shore units in Three Gorges Station.

### **PROFIT**

In the year of 2006, the net profit of the Group was Rmb1,024.58 million, an increase of 120.3 per cent compared to the last year; the earnings per share was Rmb0.80, an increase of Rmb0.41 compared to the corresponding period of last year; the net asset as at the end of the period was Rmb4,831.47 million, an increase of Rmb946.84 million compared to the beginning of the year; the net asset per share was Rmb3.79, an increase of Rmb0.74 compared to the beginning of the year.

During the period, the growth in the profit of the Group was due to the substantial increase in return from principal operations as well as the effective measures adopted by the Group to control cost expenditure and to improve the ability to make profit.

## 股息

董事會建議派發2006年度股息為每股0.090元(2005年度為每股0.061元)。

## 營業額

2006年,本集團實現主營業務收入2,909,802萬元·比上年增長57.5%。其中,火電主機設備的營業額為2,183,661萬元,比上年增長64.8%,佔主營業務收入的75%;水電主機設備的營業額為160,856萬元,比上年增長32.5%,佔主營業務收入的6%;電站工程服務的營業額為300,767萬元,比上年增長33.7%,佔主營業務收入的10%;電站輔機及配套產品的營業額為105,303萬元,比上年增長232.5%,佔主營業務收入的4%;交直流電機及其它產品與服務的營業額為159,215萬元,比上年增長11.3%,佔主營業務收入的5%。

營業額增長的主要原因是發電設備需求旺盛,年內交貨產品較多所致。

期內,本集團出口收入354,405萬元,比上年同期增長22,573萬元,佔主營業務收入的12.2%,主要出口亞洲及非洲地區。

## 成本

年內·本集團的主營業務成本為2,585,904 萬元·比上年同期增長55.8%。主要是主營 業務收入增長所帶來的成本相應上升。

#### DIVIDEND

A dividend of Rmb0.090 per share for the year of 2006 (2005: Rmb0.061 per share) was proposed by the Board of Directors.

### **TURNOVER**

In 2006, the Group recorded turnover of main business activities of Rmb29,098.02 million, an increase of 57.5 per cent compared to the last year. In particular, turnover of the thermal power main equipment was Rmb21,836.61 million, an increase of 64.8 per cent over last year, representing 75 per cent of the turnover of main business activities. Turnover of hydropower main equipment was Rmb1,608.56 million, an increase 32.5 per cent over last year, representing 6 per cent of the turnover of main business activities. Turnover of power plant engineering services project was Rmb3,007.67 million, an increase of 33.7 per cent compared to last year, representing 10 per cent of the turnover of main business activities. Turnover of power plant accessories and parts was Rmb1,053.03 million, an increase of 232.5 per cent over last year, representing 4 per cent of the turnover of main business activities. Turnover of AC/DC motors and other products and services was Rmb1,592.15 million, an increase of 11.3 per cent over last year, representing 5 per cent of the turnover of main business activities.

The increase of turnover was mainly driven by remarkable demand for power generation equipment and more products delivery during the year.

During the period under review, the export sales of the Group (which was mainly in Asia and in Africa) amounted to Rmb3,544.05 million, an increase of Rmb225.73 million over last year, representing 12.2 per cent of the turnover of main business activities.

### **COST**

During the period under review, the cost of main business activities of the Group was Rmb25,859.04 million, an increase of 55.8 per cent as compared to last year. The increase in turnover of main business activities led to the corresponding increase in cost.

## 毛利及毛利率

期內,本集團主營業務實現毛利為323,898 萬元,比上年同期增長73.9%。毛利率為 11.13%,比上年同期上升1.04個百分點。

其中·火電主機設備毛利為264,626萬元·比上年同期增加112,299萬元:毛利率為12.1%,比上年同期上升0.7個百分點。水電主機設備毛利為11,210萬元·比上年同期增加4,425萬元:毛利率為7.0%,比上年同期出升1.4個百分點。受人民幣升值的影響,電站工程服務毛利為520萬元·比上年同期下降2,785萬元:毛利率為0.2%,比上年同期下降1.3個百分點。電站輔機及配套產品毛利為26,559萬元·比上年同期增加18,580萬元:毛利率為25.2%,與上年同期基本持平:交直流電機及其它產品與服務的毛利完50,984萬元·比上年同期增加5,071萬元:毛利率為13.2%,比上年同期增加5,071萬元;毛利率為13.2%,比上年同期上升2.1個百分點。

毛利率上升的主要原因是本集團在成本管理上所採取的措施取得成效。

### 期間費用

2006年,本集團發生營業費用36,534萬元, 比上年同期增加14,020萬元,主要是市場開 發費用增加所致。

2006年,本集團發生管理費用154,405萬元, 比上年同期增加41,151萬元。主要是研究開 發費和資產減值準備及人工成本增加所致。

#### **GROSS PROFIT AND PROFIT MARGIN**

During the period under review, the gross profit from main business activities of the Group was Rmb3,238.98 million, an increase of 73.9 per cent as compared to last year. The profit margin is 11.13 per cent, an increase of 1.04 per cent over last year.

Among which the profit for thermal power main equipment were Rmb2.646.26 million, an increase of Rmb1,122.99 million compared to last year. The profit margin for thermal power main equipment was 12.1 per cent, an increase of 0.7 per cent compared to last year. The profit for hydropower main equipment was Rmb112.1 million, an increase of Rmb44.25 million compared to last year. The profit margin for hydropower power main equipment was 7.0 per cent, an increase of 1.4 per cent compared to last year. Due to the Rmb appreciation, the profits for power plant engineering services were Rmb5.2 million, a decrease of Rmb27.85 million compared to last year. The profit margin for engineering services was 0.2 per cent, a decrease of 1.3 per cent over last year. And the profit for power plant accessories and parts were Rmb265.59 million, an increase of Rmb185.8 million compared to last year. The profit margin for power plant accessories and parts were 25.2 per cent, almost the same as last year. The profit for the AC/DC motors and other product and service was Rmb209.84 million, an increase of Rmb50.71 million compared to last year. The profit margin for he AC/DC motors and other product and service was 13.2 per cent, an increase of 2.1 per cent over the same period last year.

The main reason for profit margin increase is that the strategy for cost management has gained a satisfactory result.

### **EXPENSES DURING THE PERIOD**

The Group's expenses from operation activities during the year of 2006 amounted to Rmb365.34 million, an increase of Rmb140.2 million compared to last year, of which the main reason is the increase in marketing expenses.

Expense from administration activities amounted to Rmb1,544.05 million, an increase of Rmb411.51 million compared to last year of which the main reason is the increase in R&D expenses, asset impairment provision and labor cost.

## 利息支出

2006年,本集團發生利息費用15,665萬元, 比上年同期增加12,288萬元。主要是長期貸 款增加所致。

## 資金來源及借款情況

本集團之營運及發展所需資金主要有三個來源:股東資金、客戶貨款和銀行借款。本集團之借款乃根據具體項目而安排,除特殊情況外,借款一般由旗下各子公司分別籌措,但屬於資本投資性借款須先由總公司批准。至2006年12月31日,本集團銀行借款總額為437,304萬元(2005年12月31日為313,095萬元),均為按國家規定利率從各商業銀行及國家政策性銀行取得的借款。其中,須於一年內償還之借款為50,112萬元,比年初增加4,894萬元。須於一年後償還之借款為387,192萬元,比年初增加119,316萬元。

## 存款及現金流量

截至2006年12月31日,本集團銀行存款及現金為573,847萬元,比年初增加85,776萬元。期內,本集團經營業務現金流出淨額為164,033萬元:投資業務之現金流入淨額為123,934萬元:融資業務之現金流入淨額為96,234萬元。

### **INTEREST EXPENSE**

In 2006, the Group has incurred an interest expense of Rmb 156.65 million, an increase of Rmb122.88 million compared to last year. This is mainly due to the increase of long-term load.

### **FUNDING AND BORROWINGS**

The Group's funding for operation and development mainly has three resources; they are shareholder capital, customer loans and bank borrowings. The borrowings of the Group will be arranged according to specific projects. Except for those special situations, the loans will be separately conducted by subsidiaries under the Group. However, the Group must approve the capital investment borrowings in advance. As at 31st December 2006, the total sums of the Company's bank borrowings are Rmb4,373.04 million (31st December 2005: Rmb3,130.95 million). The Group's bank borrowings are loans from various commercial banks and the State's policy banks with interest rates stipulated by the state. Among which the Group's borrowings due within one year were Rmb501.12 million, an increase of Rmb48.94 million compared to the beginning of the year. The Group's borrowings due after one year were Rmb3,871.92 million, an increase of Rmb1,193.16 million compared to the beginning of the year.

## **DEPOSITS AND CASH FLOW**

As at 31st December 2006, bank deposits and cash flow of the Group amounted to Rmb5,738.47 million, an increase of Rmb857.76 million over the beginning of the year. During the period, net cash outflow from operating activities amounted to Rmb1,640.33 million. Net cash inflow from investment activities amounted to Rmb1,239.34 million. And net cash inflow from financing activities was Rmb962.34 million.

## 資產結構及變動情況

截至2006年12月31日,本集團資產總值 為3,744,455萬元,比年初增加了99,566 萬元,增長2.7%。其中,流動資產3,384,525萬元,佔資產總值的90.4%;非流動資產359.930萬元,佔資產總值的9.6%。

## 負債

截至2006年12月31日,本集團負債總額為3,166,515萬元,比年初減少25,906萬元。其中,流動負債總值為2,605,883萬元,佔負債總值的82.3%;非流動負債總值為560,632萬元,佔負債總值的17.7%。於2006年12月31日本集團的資產負債率為84.6%。

### 股東權益

截至2006年12月31日,本公司股東權益總額 為483,147萬元,比年初增加94,684萬元;每 股資產淨值為3.79元。期內,本公司淨資產 收益率為21.2%。

## 資本與負債比率

截至2006年12月31日,本集團的資本杠杆比率(非流動負債比股東權益總額)為1.16:1,年初為1.28:1。

## 或有負債及抵押

截至2006年12月31日,本集團有4,050萬元 銀行存款抵押用於流動資金貸款。

#### **CAPITAL STRUCTURE AND ITS CHANGES**

As at 31st December 2006, total assets of the Group amounted to Rmb37,444.55 million, an increase of Rmb995.66 million (or 2.7 per cent) compared to the beginning of the year. Among which, total current assets were Rmb33,845.25 million, representing 90.4 per cent of the total assets; total non-current assets were Rmb3,599.3 million, representing 9.6 per cent of the total assets.

### **LIABILITIES**

As at 31st December 2006, the Group's total liabilities amounted to Rmb31,665.15 million, a decrease of Rmb259.06 million compared to the beginning of the year. Among which, total current liabilities were Rmb26,058.83 million, representing 82.3 per cent of the total liabilities; total non-current liabilities were Rmb5,606.32 million, representing 17.7 per cent of the total liabilities. As at 31st December 2006, asset liability ratio of the Group was 84.6 per cent.

### SHAREHOLDERS' EQUITY

As at 31st December 2006, the shareholders' equity of the Company amounted to Rmb4,831.47 million, an increase of Rmb946.84 million compared to the beginning of the year; the net asset per share was Rmb3.79. During the period, return rate on net assets of the Company is 21.2 per cent.

### **GEARING RATIO**

As at 31st December 2006, gearing ratio of the Group (non-current liabilities over total shareholders' equity) was 1.16:1 as compared to that of 1.28:1 at the beginning of the year.

### CONTINGENT LIABILITIES AND PLEDGE OF ASSET

As at 31st December 2006, the Group's pledge of assets of RMB40.5 million were used for securing liquidity loan.

## 資本開支及所持重大投資情況

2006年,本集團用於基本建設和技術改造的資本開支總額為4.80億元。百萬千瓦級核島主設備製造建設項目為第二批國家東北東基地調整改造項目,項目擬採用第三式基地調整改造項目,項目擬採用第三域核島主設備技術,以生產百萬千瓦級壓生產1400~1500MW二回路核電產品,生產化與百萬千瓦級核島主設備投資45,170萬元,至2006年底完成投資5,933萬元。重型核電廠房已於2006年4月10日正式開工,廠房基礎施工完畢,正在進行廠房主體鋼結構加工安裝,關鍵設備已簽訂供貨合同。

大型燃氣輪機技術改造項目總投資24,750萬元·至2006年底完成投資12,904萬元·其中2006年完成投資3,540萬元。大型抽水蓄能機組國產化項目為第二批國家東北老工業基地調整改造項目·項目擬引進法國阿爾斯通公司的大型抽水蓄能機組全部關鍵技術·年新增1X200MW、2X300MW大型抽水蓄能機組共計800MW生產能力。項目總投資18,214萬元·至2006年底完成投資2,182萬元。以上項目均在順利進行。

## 匯率波動風險及相關對沖

本集團擁有部分外幣存款,於2006年12月 31日,本集團外幣存款折合人民幣72,482萬元。本集團出口及以外幣結算之業務,存在 匯兑風險。

#### CAPITAL EXPENDITURE AND IMPORTANT INVESTMENT

In the year 2006, the Group has invested a total capital expenditure of Rmb480 million in basic constructions and technology renovation. Construction project of 1,000MW class Nuclear Island Main Equipment is the second stage of restructurings and renovation of Northeast old industry base, which focuses on the production of 1,000MW Pressurized Water Reactor Nuclear Island Main Equipment through applying the third generation nuclear plant technology, as well as the production of 1400~1500MW second circuit nuclear power products, with a production capacity of one set of 1,000MW class Nuclear Island Main Equipment annually. Total investment was Rmb451.7 million, and investment of Rmb59.33 million was completed by the end of 2006. The construction of heavyduty nuclear power plant started on 10th April 2006, and infrastructures of the plant is completed with installation of steel main structure undergoing. Purchase contracts for key equipments have been entered into.

The large-scale gas turbine renovation project has a total investment of Rmb247.5 million, and investment of Rmb129.04 million was completed by the end of 2006, among which Rmb35.4 million was invested within 2006. Localization project of Introduced Large Scale Pump Storage Units Technology is the second stage of restructurings and renovation of Northeast old industry base, which brings in all key technologies of Large Scale Pump Storage Units from the France Alstom Corporation (阿爾斯通公司), with an increase in production capacity of 1X200MW and 2X300MW Large Scale Pump Storage Units of 800MW annually. Total investment of the project amounts to Rmb182.14 million, and investment of Rmb21.82 million was completed by the end of 2006. All of these projects are proceeding smoothly.

# EXPOSURE TO FLUCTUATIONS IN EXCHANGE RATES AND RELATED HEDGES

The Group has certain amount of deposits that are in foreign currencies. As at 31st December 2006, the amount of the Group's deposits in foreign currencies was approximately RMB724.82 million. Export and foreign currencies settled businesses exposed the Group to exchange risk.

## 募集資金運用

2006年,本集團共運用募集資金2.90億元, 主要用於出海口基地建設等項目。

截至2006年12月31日,本集團已累計運用H股募集資金14.45億元,剩餘募集資金1.85億元及新增發股本募集資金10億元暫存放於銀行,將用於出海口基地二期建設及其它技術改造項目。

## 投資計劃

2007年本集團計劃投資6億元繼續用於出海 口基地二期建設等項目。一是在出海口一期 工程基礎上新建重型廠房23,040平方米,新 增卷板機、窄間隙焊機、9MeV直線加速器、 ♦200數控鎧床、♦3000立車等,形成百萬千 瓦級核電機組生產能力,項目總投資45,170 萬元。二是用於大型抽水蓄能機組技術改 造,形成年產800MW大型抽水蓄能機組的 能力,項目投資18,214萬元。另外還有超超 臨界項目、大型燃氣輪機技術引進項目、聯 合循環餘熱鍋爐技術引進項目及企業信息 化建設項目等。本集團將進一步通過技術改 造和技術創新促進產品升級換代,增強核心 競爭能力,尤其是通過秦皇島核電核島主設 備建設,使本集團能成套供應核電主設備, 進入核電發展領域。

#### UTILIZATION OF LISTING PROCEEDS

In the year 2006, the Group has utilized a total of Rmb 290 million from its listing proceeds for Workshop Base Construction project and other projects.

For the year ended 31st December 2006, the Group has utilized a total of Rmb1.445 billion from its H share listing proceeds, and the remaining balance of listing proceeds of Rmb185 million and the listing proceeds from the newly issued shares of Rmb1 billion were deposited with the bank, and will be used in the second stage of Workshop Base Construction project and other technology renovation projects.

#### **INVESTMENT PLAN**

In the year 2007, the Group plans a further investment of Rmb0.6 billion in projects such as the second stage of seaside Workshop Construction. Among which Rmb451.7 million will be used for the building of 23,040 sqm Heavy Duty Workshop on the basis of the first stage Workshop Construction, with additions such as Rolling Machines, Narrow Gap Welding Machines, 9MeV Linear Accelerators, \$\phi 200 Numerical Control Boring Machines, and \$\phi 3000 Vertical Lathes, to develop a production capacity of 1,000MW class Nuclear Generator Units. And Rmb182.14 million will be used for technical renovation of Large Scale Pump Storage Units, to develop an annual production capacity of 800MW Large Scale Pump Storage units. Other projects include ultra super critical project, large gas turbine technology transfer project, combined cycle HRSG technology transfer project and corporate information system construction project. The Group will boost product upgrading and improve core competitiveness through technology renovation and innovation, particularly with the construction of QHD Nuclear Island Nuclear Generators Main Equipment, which will enable the Group to provide a whole set of nuclear products and lead the Group into the field of nuclear power development.

## 股權融資

2007年3月2日,本集團完成了H股增發工作。增發H股10,235.5萬股,發行價格每股10.00港元,募集資金淨額約10億港元。同日,本集團控股股東將1,023.5萬股國有股劃轉給社保基金並轉為H股。募集資金主要用於本集團秦皇島出海口基地二期重型廠房百萬千瓦級核島主設備建設項目。發行後本集團總股本137,680.6萬股,其中哈電集團持有70,123.5萬股,佔50.93%,H股67,557.1萬股,佔49.07%。

## 員工及薪酬

於2006年12月31日,本集團擁有在崗員工 18,279人,薪酬總額為8億元。本集團堅持以 人為本,做好人力資源需求預測,開展有針 對性、分層次、分類別的培訓工作,全面提高 員工素質。按照市場規律深化內部分配制度 改革,實行了崗位工資制、計件工資制等多 種工資制度,加強了崗位考核,調動各方面 的積極性,推動公司發展。

### **EQUITY FINANCING**

The Group further issued 102.355 million H shares on 2nd March 2007, with an issue price of HK\$10.00 each share, and the listing proceeds amounted to HK\$1 billion. On the same day, controlling shareholders of the Group remitted 10.235 million shares of state share to National Social Security Fund and registered as H share. Such fund raised is mainly used for the construction of 1,000MW class nuclear island main equipment project of the Second stage of Qinghuangdao Seaside Heavy Duty Workshop of the Group. After the issuance, total capital of the Group increased to 1,376.806 million shares. Among which 701.235 million shares were held by Harbin Power Engineering Corp, accounting for 50.93 per cent; and H share amounted to 675.571 million Shares, accounting for 49.07 per cent.

#### STAFF AND REMUNERATION

As at 31st December 2006, the Group had a workforce of 18,279 employees, and the total remuneration was approximately Rmb0.8 billion. The Group regards human resource as the core development value, and will arrange demand estimates on human resources appropriately, implement targeted, layered and segmented trainings so as to promote the overall quality of its staff. As for remuneration, the Group adopted various salary systems including position salary system and piece rate system, which enhanced check-up, bringing all positive factors into play and boosting the development of the Company.

## 展望

2007年國家提出國民經濟要實現「又好又 快」發展,意味著中國經濟發展將更重視發 展品質和效益,強化節能降耗和污染減排指 標的約束,節約資源、保護環境將會放在更 突出的戰略地位。2007年全國電力供需將趨 於平衡,缺電範圍和時段將大為減少,電力 需求將呈平穩增長的態勢。但600MW以下 的常規煤電機組需求會有所下降,每年將有 10000MW左右的小型、低參數機組被新型 發電設備所替代。電力發展的重點是調整電 源結構,發電設備市場需求將向大容量、高 參數、環保、高效的高新技術產品發展。核 電、IGCC、風電等產品的需求亦將逐步上升。 國家發展核電的戰略已經啟動,第三代核電 的技術路線已經確定,本集團被確定為第三 代核電主要供應商之一。對發電設備製造企 業而言,以產品的技術水準、合同履約率、產 品價格等指標為代表的企業綜合競爭力將 成為競爭的關鍵。另外國家振興裝備製造業 和東北老工業基地政策的進一步實施,為本 集團的發展提供了良好的政策環境。

#### **PROSPECT**

In 2007, China calls on a "healthy and fast" development in national economy, which means the economy of China will be more focused on the quality and efficiency. As such, increasing the restriction on energy consumption reducing and emission of pollutants reducing indicators, resources conservation and environmental protection are playing a more important strategic role. The gap between supply and demand of electricity in 2007 will be narrowed, with regional and periodic electricity shortage would significantly ease and the power demand would steadily increase. Nevertheless, the demand for regular coal fired power units below 600MW will be lower, with around 10,000MW small capability and low parameter units will be replaced by new power generation equipment. The core of power development is to rebalance the structure of power supply and power generation equipment market's demand will shift for large capability, high parameter, environment-friendly and efficient high-tech products. The demand for products such as nuclear power, IGCC and wind power will also increase steadily. The national strategy of nuclear power development has been startup and the technological guideline of the third generation nuclear power is fixed, in which the Group has been chosen as one of the major supplier of the third generation nuclear power. For the power generation equipment manufacturers, the consolidated capability measured by indicators such as technological level, contract implementation ratio, product price will become the key to success in the market. The further implementation of development policy of "To Thrive the Northeast Old Industry Base" and "To Thrive Equipment Manufacture Industry" provided a sound policy environment for the Group.

本集團將抓住發展機遇,加大機制和體制改革的力度,努力提高自主創新能力,不斷增強核心競爭能力。為此,本集團2007年將重點做好以下工作:

# 1. 開拓高新產品、鞏固常規產品,全面開發國內、國際市場

## 2. 推進技術進步<sup>,</sup>加快自主創新<sup>,</sup>提高核 心競爭能力

本集團將結合電力市場發展趨勢進一步完善科技創新體系,調動各方建技 極性,努力開發新產品。加快引進機、的消化吸收再創新進程,在對燃機、 臨界和超超臨界煤電、大型抽水超 機制、工藝和材料等關鍵技術與收的基礎上 設計、工藝和材料等關鍵技術與 上節 一步完善,提高國產化比率,加快信 之一步完善,實施信息化工程系統項目,為 化建設,實施信息化工程系統項息 提高公司管理水平和科技進步創造良 好條件。 The Group will seize this development opportunity, enhance the reform and adjustment of mechanism and cooperation system, and make great effort to improve the company's independent R&D capability and the core competition capability. Especially, the Group will pay attention to the following work in 2007:

## Develop high-tech products and strengthen regular products, fully explore domestic and international market

In the year of 2007, the Group will continue to improve the market development system, to enhance the operational team construction, to allocate the interior resources scientifically, and to strengthen the macro level of market development. The Group will focus on the market development of key projects such as large thermal power, large hydro power, large circulated fluidized bed and gas turbine, to increase the product coverage and market share and seek to make a breakthrough in the development of the 1,000MW nuclear power project. The Group will also commit to explore the supplemental product market such as old units reconstruction, accessories, deNOx, valve parts, gasifier, so as to further broaden the product chain. Besides, the Group will strongly explore the international market, seeking to export boiler, steam turbine and power generator main equipments in batch.

## Accelerate technology development and independent innovation, improve the core capability

The Group will continue to improve the technologic innovation system according to the development trend of electric power market, so as to evoke staffs' enthusiasm and to develop new products. The Group will accelerate the absorption of the digesting technology, to further improve the key technologic processes such as the designing, craftwork and material based on the absorption of the digesting technology in fields of gas turbine, ultra super critical coal fired power, super critical units coal fired power and large scale pumped storage units, in order to increase the homemade proportion and reduce the cost, improve the quality and capability. Pushing forwards IT work, The Group will also implement IT engineering system project and to create a sound foundation to improve work efficiency and management level.

繼續加強與國際大公司的技術合作, 重點做好三代核電技術的引進和消化 吸收工作。密切跟蹤國際上IGCC技術 的發展和國內IGCC項目的進展,做好 IGCC技術引進的各項準備工作。

## 3. 加強管理<sup>,</sup>提高企業經濟效益和運行 效率

不斷完善品質管制體系,注重對產品設計、製造過程的品質控制,對安裝、運行過程中產品品質進行跟蹤,並將跟蹤信息回饋到設計、製造過程,形成品質信息的閉環。

The Group will further strengthen its technologic cooperation with international companies focusing on the introduction and absorption of the third generation nuclear power technology. The Group will closely monitor the international development of IGCC technology and the progress of domestic IGCC projects, getting prepared for the introduction of IGCC technology.

# 3. Improve management level, corporate cost efficiency and operational efficiency.

The Company will adopt strong measures to improve management level, corporate cost efficiency and operational efficiency; to strengthen the staffs' cost attitude, the project cost management and the mechanism of cost control; to make full use of the roles of the settlement center such as supervise. forecast and control, so as to improve the budge management level and make sure the funds are used in a standard and scientific way; to deepen the research on the exchange rate fluctuation and develop new tools to protect foreign exchange against exchange rate fluctuation risk; to further enhance the management on the product outsourcing and sub-contract and reduce the number and the cost of sub-contract; to take good care of large hydro power, super critical, ultra super critical projects, gas turbine, nuclear power and product export and make sure all the products delivered on schedule.

The Group will put more efforts on quality control system improving, especially the quality control in the product designing and manufacturing. The Group will trace the product quality during the installation and operation course, in which the trace information will feed back to the product designing and manufacturing, forming a circulation of quality information.

4. 加快秦皇島二期建設<sup>,</sup>為發展百萬千 瓦級核電創造條件

2007年本集團計劃投資6.0億元用於核電、大型抽水蓄能等新型產品建設,力爭使核電、大型抽水蓄能具備生產能力。秦皇島二期建設工程是完成項目萬千瓦等級核島主設備製造建設工程是完成項目的基礎,項目已於2006年4月動工建設,2007年進入關鍵時期。本集上進一步加快施工進度,嚴格落實施工計劃,加強工程質量監督,並盡快完成全部設備的採購和安裝調試,確保2008年初竣工投產。

做好大型抽水蓄能機組國產化項目的 技術改造工作,力爭2007年末完工投 入使用,形成年產800MW大型抽水蓄 能機組的生產能力。

完成大型燃氣輪機項目轉子加工等主要設備的安裝調試和項目建設工作,逐步形成燃氣輪機轉子加工能力,提高大型燃機國產化率。

完成秦皇島百萬千瓦等級發電機定子 製造項目的評審和設計工作,將秦皇 島出海口基地建設成核島主設備、大 型燃機、百萬千瓦發電機定子和大型 水電部件的生產製造基地。  Accelerate the progress of the second stage of Workshop Construction project of QHD, to create a foundation for 1,000MW class nuclear power.

In the year of 2007, the Group is planning to invest Rmb600 million in the construction new projects such as of nuclear power and large-scale pumped storage units, so as to actualize the producing capacity of nuclear power and large-scale pumped storage units. QHD second phase construction project is the foundation base of this 1,000 MW nuclear island main equipment construction project; the construction of this project was started in April of 2006, and entered the critical stage in 2007. Base on the foundation of initial phase construction, the Group is going to further accelerate the construction process, strictly enforce the construction plan, strengthen the quality control and supervision of the engineering project, in order to accomplish the procurement, installation and testing of all equipments, ensure this project would be fully accomplished and able to commission in early 2008.

To accomplish the technical renovation of the large-scale pumped storage unit localization, strive to finish the construction and commission by the end of 2007, so as to formulate the annual production capability of 800MW large pumped storage units.

To accomplish the installation, testing and project construction of key equipments such as large scale gas turbine rotor assembly, gradually formulate the gas turbine rotor assembly capability, so as to enhance the localisation rate of large scale turbine.

To accomplish the evaluation and design of the QHD 1,000MW class generator stator manufacturing project, to finish the Seaside Workshop Construction project of QHD as the manufacturing base of nuclear island key equipments, large scale gas turbine, 1,000MW generator stator and large scale hydro power parts.

2007年4月20日於中國哈爾濱

20th April, 2007, Harbin, People's Republic of China