#### MACROECONOMIC CONDITIONS AND ELECTRICITY DEMAND

The economy of the PRC maintained steady growth in the year of 2002. The gross domestic product ("GDP") of the country amounted to RMB10,239,800 million, representing an increase of 8.0% over 2001. The GDP of Shandong Province amounted to RMB1,055,000 million, representing an increase of 11.6% over 2001, and was 3.6 percentage points over the national average. It was the twelfth consecutive year for the province to record a two-digit economic growth rate.

In 2002, the power consumption of the whole society of Shandong Province was 124.17 million MWh, representing an increase of 12.42% over 2001. The industrial sector of Shandong Province consumed 93.79 million MWh, representing an increase of 13.70% over the same period of last year and accounted for 75.53% of the total power consumption of Shandong Province. The agriculture, fisheries and water conservancy industries consumed 6.26 million MWh, representing an increase of 5.29% over the same period of last year and accounted for 5.04% of the total power consumption of Shandong Province. The power consumed by the urban and rural residents was 14.31 million MWh, representing an increase of 9.72% over the same period of last year and accounted for 11.52% of the total power consumption of Shandong Province. As at 31 December 2002, the total installed capacity of Shandong Province reached 25,153.23MW, representing an increase of 19.7% over 2001.

# **OPERATING REVENUE AND PROFIT**

In 2002, the Group strengthened the management and tightly controlled various costs and expenses so that the Group achieved the expected operating targets. The total volume of electricity supplied by the Group to the grid for the year was 26.54 million MWh. The operating revenue for the year amounted to approximately RMB7,808 million, representing an increase of approximately 9.32% over 2001. The Group's profits attributable to shareholders for the year amounted to approximately RMB1,182 million, representing a decrease of approximately 14.3% over 2001. Earnings per share were RMB0.225. The decrease in profit was mainly attributable to the increase in fuel costs in view of the increase in price of coal.

# **OPERATING EXPENSES**

During the year of 2002, unit cost of electricity generated of the Group amounted to RMB210.44/MWh, representing an increase of 15.26% over 2001.

In 2002, the fuel cost of the Group amounted to RMB2,767 million, of which the fuel cost for electricity generation amounted to RMB2,690 million and the fuel cost for heat generation amounted to RMB77 million. Fuel cost for electricity generation for the year increased by 28.28% over 2001 as a result of an increase in the volume of electricity generation and increase in the prices of coal for power generation. The Group enhanced the management of its facilities and upgraded its technology. As a result, fuel consumption was reduced and partially offset the increase in unit fuel cost caused by the increase in coal prices.

Depreciation and amortisation expenses in 2002 increased by 16.62% over 2001 to RMB1,224 million primarily due to the adjustment on the depreciation charge for certain equipment resulted from technical improvement project in respect of energy saving and increase in capacity amounting to RMB45 million and the additional depreciation charge for the new generating units.

Expenses for maintenance and routine repairs mainly comprised expenses for major and minor overhauls and other expenses for routine repairs. In 2002, such expenses rose by 14.36% over 2001 to RMB548 million primarily due to the increase in the number of generating units.

In 2002, personnel costs amounted to RMB391 million, representing an increase of RMB57,030,000 over 2001 primarily due to the increase in wages and staff welfare fund for the newly acquired power plants.

Selling and administration expenses amounted to RMB462 million, representing an increase of 10.3% over 2001 primarily due to the increase in expenses for newly acquired power plants.

In 2002, other operating expenses amounted to RMB241 million, representing an increase of RMB126 million over 2001 primarily due to a loss on disposal of certain equipment amounting to RMB84 million resulting from technical improvement project in respect of energy saving and increase in capacity, and increase in water fee and fuel expenses.

## **FINANCIAL COST**

The net interest expenses borne by the Group in 2002 amounted to RMB490 million, representing a decrease of RMB21,446,000 from 2001. The decrease in interest expenses was primarily due to the early repayment of part of the World Bank loan in early 2002 and the decrease in the average interest rate of the borrowings.

#### **INDEBTEDNESS**

As at 31 December 2002, the borrowings of the Group amounted to RMB9,330 million, of which loans denominated in US dollars amounted to US\$107 million. The assets to liabilities ratio was 55.37%.

## **PRODUCTION, OPERATION AND SAFETY**

In 2002, the equivalent availability factor of the generating units was 91.57%; the equivalent forced suspension rate was 0.32%; and the average utilization hours of the generating units attained 5,492 hours.

In 2002, the Group's operation safety maintained at satisfactory level. As at 31 December 2002, none of the power plants of the Group had any unsafe incidents throughout the year.

In 2002, a total of 4 major overhauls and 8 minor overhauls were undertaken in respect to the generating units of the Group and the planned overhaul rate was 7.87%, representing an increase of 1.55 percentage points over 2001.

## **TECHNICAL IMPROVEMENT PROJECTS**

In 2002, the technical improvement projects of the Group progressed smoothly. The purpose of these renovation projects of the Group was to enhance operation safety of the facilities and the level of automation so that the production efficiency of the generating units could be improved. The Group had introduced new technology to upgrade some of its steam turbine equipment and the effect was satisfactory.

After implementation of technical improvement project in respect of energy saving and increase in capacity for the fourth 300MW generating unit of Zouxian Plant and the second 125MW generating unit of Shiliquan Plant in 2001, the Company continued to implement the technical improvement project in respect of energy saving and increase in capacity for its power plants in 2002, including the first and third 300MW generating units of Zouxian Plant, the third 125MW generating unit of Shiliquan Plant and the first 300MW generating unit of Weifang Plant. After the implementation of technical improvement project in respect of energy saving and increase in capacity, the average standard coal consumption rate of generation units was reduced by 10-15g/kwh while the capacity of generating units was increased by 10% or above, from the existing 125MW and 300MW to 140MW, 330MW and 335MW. Except for the technical improvement project in respect of spect of spect project in respect of increase in capacity for the third 125MW generating unit of Shiliquan Plant which is pending approval, the capacities of the above-mentioned three units of Zouxian and Weifang Plant have been changed to 335MW and 330MW respectively.

The major proposed technical improvement projects to be undertaken by the Group during 2003, include:

- 1. Technical improvement project in respect of energy saving and increase in the capacity of the second generating unit of Zouxian Plant;
- Technical improvement project in respect of energy saving and increase in the capacity of the fourth and fifth generating units of Shiliquan Plant; and the technical improvement project of the first generating unit of Shiliquan Plant will be completed in 2004;
- 3. Technical improvement project in respect of energy saving and increase in the capacity of the second generating unit of Weifang Plant.

## **OPERATION STATISTICS**

The table below sets out certain operation statistics of the power plants owned by the Group:

#### **Zouxian Plant:**

	2002	2001	2000
Installed capacity at year end (MW)	2,430	2,400	2,400
Amount of electricity generated ('million MWh)	12.85	13.56	13.45
On-grid electricity generation ('million MWh)	12.15	12.81	12.68
Available hours	7,852.7	8,044	8,316
Average utilisation hours	5,288	5,650	5,605
Load factor (%)	71.64	72.40	70.34
Equivalent availability factor (%)	89.23	93.87	94.71
Standard generation coal consumption (g/kWh)	332.8	334.9	342.1

## Shiliquan Plant:

	2002	2001	2000
Installed capacity at year end (MW)	1,237.5	1,225	1,225
Amount of electricity generated ('million MWh)	7.03	6.76	6.71
On-grid electricity generation ('million MWh)	6.59	6.33	6.26
Available hours	8,428.6	8,205	8,241
Average utilisation hours	5,685	5,521	5,475
Load factor (%)	73.57	71.00	70.86
Equivalent availability factor (%)	96.22	94.79	95.15
Standard generation coal consumption (g/kWh)	359.6	359.4	364.0

#### Laicheng Plant:

	2002	2001	2000
Installed capacity at year end (MW)	900	600	600
Amount of electricity generated ('million MWh)	3.80	3.40	2.27
On-grid electricity generation ('million MWh)	3.58	3.19	2.11
Available hours	6,100.3	7,951	5,288
Average utilisation hours	5,556	5,660	5,836
Load factor (%)	73.80	73.95	70.38
Equivalent availability factor (%)	92.59	90.76	94.92
Standard generation coal consumption (g/kWh)	343.5	344.9	355.0

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Note: The third generating unit of Laicheng Plant commenced operation on 19 September 2002.

# Qingdao Plant:

	2002	2001	2000
Installed capacity at year end (MW)	660	600	600
Amount of electricity generated ('million MWh)	3.77	3.40	3.64
On-grid electricity generation ('million MWh)	3.53	3.20	3.43
Available hours	8,183.2	7,784	8,359
Average utilisation hours	5,717	5,661	6,074
Load factor (%)	73.58	73.35	74.20
Equivalent availability factor (%)	93.42	88.86	95.16
Standard generation coal consumption (g/kWh)	349.9	334.2	338.9

## Weifang Plant:

	2002	2001	2000
Installed capacity at year end (MW)	600	600	600
Amount of electricity generated ('million MWh)	3.38	3.51	3.60
On-grid electricity generation ('million MWh)	3.17	3.30	3.38
Available hours	7,689.9	8,246	8,140
Average utilisation hours	5,632	5,849	5,991
Load factor (%)	75.14	73.44	75.74
Equivalent availability factor (%)	87.79	94.14	92.64
Standard generation coal consumption (g/kWh)	349.8	350.0	351.2

#### The three companies newly acquired in 2002

	Zibo Company	Zhangqiu Company	Tengzhou Company
Installed capacity at year end (MW)	177	270	33
Amount of electricity generated ('million MWh)	1.10	0.24	0.18
On-grid electricity generation ('million MWh)	0.96	0.22	0.16
Available hours	8,166.5	2,142.4	7,976.0
Average utilisation hours	5,827	6,721	5,503
Capacity factor (%)	68.32	76.38	62.82
Load factor (%)	78.10	81.65	68.99
Equivalent availability factor (%)	92.98	92.71	91.05
Standard generation coal consumption (g/kWh)	371.7	383.3	436.4

*Note:* The first generating unit of Zhangqiu Company commenced operation on 27 September 2002; the second generating unit commenced operation on 31 September 2002.

The first generating unit of Tengzhou Company commenced operation on 31 March 2003.