

HUANENG POWER INTERNATIONAL INC

Form 20-F

April 17, 2013

HUANENG POWER INTERNATIONAL, INC.

Annual Report On Form 20-F  
2012

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As filed with the Securities and Exchange Commission on April 17, 2013

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2012

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report .....

For the transaction period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 1-13314

HUANENG POWER INTERNATIONAL, INC.  
(Exact name of Registrant as specified in its charter)

PEOPLE'S REPUBLIC OF CHINA  
(Jurisdiction of incorporation or organization)

HUANENG BUILDING  
6 FUXINGMENNEI STREET, XICHENG DISTRICT, BEIJING, PEOPLE'S REPUBLIC OF CHINA  
(Address of principal executive offices)

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(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

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

Title of Each Class	Name of each exchange on which registered
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Ordinary American Depositary Shares	New York Stock Exchange
Overseas Listed Foreign Shares of RMB1.00 each	New York Stock Exchange*

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

NONE  
(Title of Class)

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

NONE  
(Title of Class)

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Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:

Domestic Shares of RMB1.00 each	10,500,000,000
Overseas Listed Foreign Shares of RMB1.00 each	3,555,383,440

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  R                      No  £

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

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Yes  No

Note - Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer	Non-accelerated filer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R	£	£

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP	International Financial Reporting Standards as issued by the International Accounting Standards Board	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
£	R	£

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes  No

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\* Not for trading, but only in connection with the registration of American Depositary Shares.

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## INTRODUCTION

We maintain our accounts in Renminbi yuan (“Renminbi” or “RMB”), the lawful currency of the People’s Republic of China (the “PRC” or “China”). References herein to “US\$” or “U.S. Dollars” are to United States Dollars, references to “HK\$” are to Hong Kong Dollars, and references to “S\$” are to Singapore Dollars. References to ADRs and ADSs are to American Depositary Receipts and American Depositary Shares, respectively. Translations of amounts from Renminbi to U.S. Dollars are solely for the convenience of the reader. Unless otherwise indicated, any translations from Renminbi to U.S. Dollars or from U.S. Dollars to Renminbi were translated at the average rate announced by the People’s Bank of China (the “PBOC Rate”) on December 31, 2012 of US\$1.00 to RMB6.2855. No representation is made that the Renminbi or U.S. Dollar amounts referred to herein could have been or could be converted into U.S. Dollars or Renminbi, as the case may be, at the PBOC Rate or at all.

References to “A Shares” are to common tradable shares issued to domestic shareholders.

References to the “central government” refer to the national government of the PRC and its various ministries, agencies and commissions.

References to the “Company”, “we”, “our” and “us” include, unless the context requires otherwise, Huaneng Power International, Inc. and the operations of our power plants and our construction projects.

References to “HIPDC” are to Huaneng International Power Development Corporation and, unless the context requires otherwise, include the operations of the Company prior to the formation of the Company on June 30, 1994.

References to “Huaneng Group” are to China Huaneng Group.

References to the “key contracts” refer to coal purchase contracts entered into between the Company and coal suppliers for the amount of coals at the annual national coal purchase conferences attended by, among others, representatives of power companies, coal suppliers and railway authorities. These conferences were coordinated and sponsored by National Development and Reform Commission (“NDRC”). The Company enjoys priority railway transportation services with respect to coal purchased under such contracts. Starting from 2008, NDRC ceased to coordinate annual national coal purchase conference. At the end of each year subsequent to 2008, the Ministry of Railways will promulgate the railway transportation capacity plan for the next year. References to the “key contracts” for the year 2008 and thereafter refer to coal purchase contracts entered into between the Company and coal suppliers under the guidance of such railway transportation capacity plan, which, once confirmed by the Ministry of Railways, secures the railway transportation capacity for the coal purchased thereunder. Starting from the beginning of 2013, key contracts were terminated pursuant to a notice issued by the PRC Government in December 2012.

References to “local governments” in the PRC are to governments at all administrative levels below the central government, including provincial governments, governments of municipalities directly under the central government, municipal and city governments, county governments and township governments.

References to “our power plants” are to the power plants that are wholly-owned by the Company or to the power plants in which the Company owns majority equity interests.

References to “our power companies” are to the power companies in which we hold minority equity interests.

References to the “PRC Government” include the central government and local governments.

References to “provinces” include provinces, autonomous regions and municipalities directly under the central government.

References to “Singapore” are to the Republic of Singapore.

References to the “State Plan” refer to the plans devised and implemented by the PRC Government in relation to the economic and social development of the PRC.

References to “tons” are to metric tons.

Previously, the Overseas Listed Foreign Shares were also referred to as the “Class N Ordinary Shares” or “N Shares”. Since January 21, 1998, the date on which the Overseas Listed Foreign Shares were listed on The Stock Exchange of Hong Kong Limited by way of introduction, the Overseas Listed Foreign Shares have been also referred to as “H Shares”.

## GLOSSARY

actual generation	The total amount of electricity generated by a power plant over a given period of time.
auxiliary power	Electricity consumed by a power plant in the course of generation.
availability factor	For any period, the ratio (expressed as a percentage) of a power plant's available hours to the total number of hours in such period.
available hours	For a power plant for any period, the total number of hours in such period less the total number of hours attributable to scheduled maintenance and planned overhauls as well as to forced outages, adjusted for partial capacity outage hours.
capacity factor	The ratio (expressed as a percentage) of the gross amount of electricity generated by a power plant in a given period to the product of (i) the number of hours in the given period multiplied by (ii) the power plant's installed capacity.
demand	For an integrated power system, the amount of power demanded by consumers of energy at any point in time.
dispatch	The schedule of production for all the generating units on a power system, generally varying from moment to moment to match production with power requirements. As a verb, to dispatch a plant means to direct the plant to operate.
GW	Gigawatt. One million kilowatts.
GWh	Gigawatt-hour. One million kilowatt-hours. GWh is typically used as a measure for the annual energy production of large power plants.
installed capacity	The manufacturers' rated power output of a generating unit or a power plant, usually denominated in MW.
kV	Kilovolt. One thousand volts.
kW	Kilowatt. One thousand watts.
kWh	Kilowatt-hour. The standard unit of energy used in the electric power industry. One kilowatt-hour is the amount of energy that would be produced by a generator producing one thousand watts for one hour.
MVA	Million volt-amperes. A unit of measure used to express the capacity of electrical transmission equipment such as transformers.
MW	Megawatt. One million watts. The installed capacity of power plants is generally expressed in MW.

MWh Megawatt-hour. One thousand kilowatt-hours.

peak load The maximum demand on a power plant or power system during a specific period of time.

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planned generation	An annually determined target gross generation level for each of our operating power plants used as the basis for determining planned output.
total output	The actual amount of electricity sold by a power plant in a particular year, which equals total generation less auxiliary power.
transmission losses	Electric energy that is lost in transmission lines and therefore is unavailable for use.

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## 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

## A. Selected financial data

Our consolidated balance sheet data as of December 31, 2012 and 2011 and the consolidated income statement and cash flow data for each of the years in the three-year period ended December 31, 2012 are derived from the historical financial statements included herein. Our consolidated balance sheet data as of December 31, 2010, 2009 and 2008 and income statement and cash flow data for each of the years in the two-year period ended December 31, 2009, are derived from the historical financial statements not included herein. The Selected Financial Data should be read in conjunction with the consolidated financial statements and “Item 5 – Operating and Financial Review and Prospects”. The financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board. The Selected Financial Data may not be indicative of future earnings, cash flows or financial position.

	Year Ended December 31,				
	2008	2009	2010	2011	2012
RMB in thousands except per share data	(RMB)	(RMB)	(RMB)	(RMB)	(RMB)
<b>Income Statement Data</b>					
<b>IFRS</b>					
Operating revenue	67,835,114	76,862,896	104,318,120	133,420,769	133,966,659
Tax and levies on operations	(106,385 )	(151,912 )	(147,641 )	(484,019 )	(672,040 )
Operating expenses	(68,964,955 )	(67,537,281 )	(95,541,488 )	(124,189,148 )	(116,337,679 )
Profit/ (Loss) from operations	(1,236,226 )	9,173,703	8,628,991	8,747,602	16,956,940
Interest income	83,522	60,397	89,026	166,183	175,402
Financial expenses, net	(3,707,943 )	(4,309,325 )	(5,194,585 )	(7,659,712 )	(9,063,875 )
Other investment income	51,061	56,675	60,013	93,460	187,131
Gain/ (Loss) on fair value changes of financial assets/ liabilities	(54,658 )	(33,638 )	11,851	(727 )	(1,171 )
Share of profits of associates / jointly controlled entities	72,688	756,164	568,794	703,561	622,358
Profit/ (Loss) before income tax expense	(4,791,556 )	5,703,976	4,164,090	2,050,367	8,876,785
Income tax (expense)/benefit	239,723	(593,787 )	(842,675 )	(868,927 )	(2,510,370 )
Net profit/ (loss)	(4,551,833 )	5,110,189	3,321,415	1,181,440	6,366,415

Attributable to:

Equity holders of the Company	(3,937,688 )	4,929,544	3,347,985	1,180,512	5,512,454
Non-controlling interests	(614,145 )	180,645	(26,570 )	928	853,961
Basic earnings/(loss) per share	(0.33 )	0.41	0.28	0.08	0.39
Diluted earnings/(loss) per share	(0.33 )	0.41	0.28	0.08	0.39

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RMB in thousands	As of December 31,				
	2008 (RMB)	2009 (RMB)	2010 (RMB)	2011 (RMB)	2012 (RMB)
<b>Balance Sheet Data</b>					
<b>IFRS</b>					
Current assets	20,018,177	24,189,765	31,556,149	36,417,338	36,086,261
Property, plant and equipment	116,737,198	140,777,336	155,224,597	177,968,001	177,013,627
Available-for-sale financial assets	1,524,016	2,555,972	2,223,814	2,301,167	3,052,822
Investments in associates / jointly controlled entities	8,758,235	9,568,576	11,973,216	13,588,012	14,596,771
Land use rights and other non-current assets	3,643,431	4,911,678	9,541,540	8,820,722	9,316,455
Power generation licence	3,811,906	3,898,121	4,105,518	3,904,056	4,084,506
Deferred income tax assets	316,699	374,733	672,475	526,399	532,387
Goodwill	11,108,096	11,610,998	12,640,904	13,890,179	14,417,543
<b>Total assets</b>	<b>165,917,758</b>	<b>197,887,179</b>	<b>227,938,213</b>	<b>257,415,874</b>	<b>259,100,372</b>
Current liabilities	(52,486,200 )	(59,581,608 )	(83,636,880 )	(96,597,620 )	(93,594,320 )
Non-current liabilities	(70,871,605 )	(87,657,451 )	(81,875,861 )	(101,260,501 )	(99,545,710 )
<b>Total liabilities</b>	<b>(123,357,805)</b>	<b>(147,239,059)</b>	<b>(165,512,741)</b>	<b>(197,858,121)</b>	<b>(193,140,030)</b>
<b>Total equity</b>	<b>42,559,953</b>	<b>50,648,120</b>	<b>62,425,472</b>	<b>59,557,753</b>	<b>65,960,342</b>

RMB in thousands except per share data	Year Ended December 31,				
	2008 (RMB)	2009 (RMB)	2010 (RMB)	2011 (RMB)	2012 (RMB)
<b>Cash Flow Data</b>					
<b>IFRS</b>					
Purchase of property, plant and equipment	(27,893,520)	(22,426,098)	(20,704,224)	(16,673,632)	(15,474,614)
Net cash provided by operating activities	5,185,893	14,980,990	18,066,724	20,949,155	26,928,082
Net cash used in investing activities	(47,957,065)	(24,880,261)	(26,980,538)	(21,664,831)	(15,309,604)
Net cash provided by / (used in) financing activities	41,255,291	9,503,886	13,063,323	69,648	(9,816,900 )

<b>Other Financial Data</b>					
<b>IFRS</b>					
Dividend declared per share	0.10	0.21	0.20	0.05	0.21
Number of ordinary shares ('000)	12,055,383	12,055,383	14,055,383	14,055,383	14,055,383

B. Capitalization and indebtedness



Not applicable.

C. Reasons for the offer and use of proceeds

Not applicable.

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D. Risk factors

Risks relating to our business and the PRC's power industry

Government regulation of on-grid power tariffs and other aspects of the power industry may adversely affect our business

Similar to electric power companies in other countries, we are subject to governmental and electric grid regulations in virtually all aspects of our operations, including the amount and timing of electricity generations, the setting of on-grid tariffs, the performance of scheduled maintenance and compliance with power grid control and dispatch directives and environment protection. There can be no assurance that these regulations will not change in the future in a manner which could adversely affect our business.

The on-grid tariffs for our planned output are subject to a review and approval process involving the NDRC and the relevant provincial government. Prior to April 2001, the on-grid tariffs of our planned output were designed to enable us to recover all operating and debt servicing costs and to earn a fixed rate of return. Since April 2001, however, the PRC Government has started to gradually implement a new on-grid tariff-setting mechanism based on the operating terms of power plants as well as the average costs of comparable power plants. Pursuant to the NDRC circular issued in June 2004, the on-grid tariffs for our newly built power generating units commencing operation from June 2004 have been set on the basis of the average cost of comparable units adding tax and reasonable return in the regional grid. Any future reductions in our tariffs, or our inability to raise tariffs (for example, to cover any increased costs we may have to incur) as a result of the new on-grid tariff-setting mechanism, may adversely affect our revenue and profit.

In addition, the PRC Government started in 1999 to experiment with a program to effect power sales through competitive bidding in some of the provinces where we operate our power plants. The on-grid tariffs for power sold through competitive bidding are generally lower than the pre-approved on-grid tariffs for planned output. In recent few years, power sales through competitive bidding were not effected in any province where we operate our power plants. Nevertheless, we can not assure that the PRC Government will not expand the program in the future. Any increased power sales through competitive bidding may reduce our on-grid tariffs and may adversely affect our revenue and profits.

Furthermore, the PRC Government started in 2009 to promote the practice of direct power purchase by large power end-users. Pursuant to the circular jointly issued by NDRC, the State Electricity Regulatory Commission ("SERC") and China National Energy Administration in June 2009, the direct power purchase price consists of direct transaction price, on-grid dispatch and distribution price and governmental levies and charges, in which the direct transaction price shall be freely determined through negotiation between the power generation company and the large power end-user. The price of direct power purchase shall be subject to the demand in the power market, and may increase due to power supply shortfall. Furthermore, the scale and mode of the transaction are also subject to the structure and level of development of local economy. In terms of power generation company engaged in direct power purchase, direct power sales constitute a portion of the total power sales, thus affecting the on-grid power sales of the company. In 2012, the PRC Government continued the reform in the area of direct power purchase by large power end-users. Although the direct power purchase may act as an alternative channel for our power sales, there is uncertainty as to the effect of the practice of direct power purchase over our operating results.

The on-grid tariff-setting mechanism is evolving with the reforming of the PRC electric power industry. There is no assurance that it will not change in a manner which could adversely affect our business and results of operations. See "Item 4 Information of the Company – B. Business Overview – Pricing Policy".

If our power plants receive less dispatching than planned generation, the power plants will sell less electricity than planned

Our profitability depends, in part, upon each of our power plants generating electricity at a level sufficient to meet or exceed the planned generation, which in turn will be subject to local demand for electric power and dispatching to the grids by the dispatch centres of the local grid companies.

The dispatch of electric power generated by a power plant is controlled by the dispatch centre of the applicable grid companies pursuant to a dispatch agreement with us and to governmental dispatch regulations. In each of the markets we operate, we compete against other power plants for power sales. No assurance can be given that the dispatch centres will dispatch the full amount of the planned generation of our power plants. A reduction by the dispatch centre in the amount of electric power dispatched relative to a power plant's planned generation could have an adverse effect on the profitability of our operations. However, we have not encountered any such event in the past.

In August 2007, General Office of the State Council issued a notice, providing that the energy saving and electricity dispatch shall consolidate with the development of the power market, which optimize the power market. In October 2008, the SERC approved the trial implementation of the policy of energy saving and electricity dispatch in certain pilot provinces. In 2012, the PRC Government continued promoting the policy of energy saving and electricity dispatch. There can be no assurance that such implementation will not results in any decrease in the amount of the power dispatched of any of our power plants.

The power industry reform may affect our business

PRC Government in 2002 announced and started to implement measures to further reform the power industry, with the ultimate goal to create a more open and fair power market. As part of the reform, five power generation companies, including Huaneng Group, were created or restructured to take over all the power generation assets originally belonging to the State Power Corporation of China. In addition, two grid companies were created to take over the power transmission and distribution assets originally belonging to the State Power Corporation of China. An independent power supervisory commission, the SERC, was created to regulate the power industry. It is uncertain how these reform measures and any further reforms are going to be implemented and how they will impact our business.

In 2012, the PRC Government continued the reform in power industry. In December 2012, the PRC Government issued a notice to further reform coal pricing mechanism, which mandated (1) the termination of all key coal purchase contracts between power generation companies and coal suppliers, and the abolition of national guidance of railway transportation capacity plan, and (2) the cancellation of the dual-track coal pricing system, effective from January 1, 2013. For a detailed discussion of the reform, see “Item 4 Information of the Company-B. Business Overview – Pricing Policy”. There can be no assurance that such coal pricing reform will not adversely affect our results of operation. It is expected that the PRC Government will continue to promote the reform in power industry during the “Twelfth Five-Year Plan” period. The further reform will not only bring opportunities to power industry but also intensify the competition which may adversely affect our business.

We are effectively controlled by Huaneng Group and HIPDC, whose interests may differ from those of our other shareholders

Huaneng Group, directly or through its wholly-owned subsidiaries, holds 15.29% of our total outstanding shares, and HIPDC directly holds 36.05% of our total outstanding shares. As Huaneng Group is HIPDC’s parent company, they may exert effective control over us acting in concert. Their interests may sometimes conflict with those of our other minority shareholders. There is no assurance that Huaneng Group and HIPDC will always vote their shares, or direct the directors nominated by them to act in a way that will benefit our other minority shareholders.

Disruption in coal supply and its transportation as well as increase in coal price may adversely affect the normal operation of our power plants

A substantial majority of our power plants are fueled by coal. We have obtained coal for our power plants through a combination of purchases pursuant to the key contracts and purchases in the open market. We have not experienced shutdowns or reduced electricity generation caused by inadequate coal supply or transportation services, there can be no assurance that, in the event of national coal supply shortfalls, our operations will not be adversely affected. In addition, our results of operations are sensitive to the fluctuation of coal price. Since 2003, the continuous increase of coal price has increased our costs substantially and caused our profits to decline. Although the coal price decreased substantially in 2012, there is no assurance that coal price will not increase in the future or no assurance that we would adjust our power tariff to pass on the increase of coal price to our customers. Although the government has established a coal-electricity price linkage mechanism to allow power generation companies to increase their power tariffs to cope with the increase of coal price, the implementation of the mechanism involves significant uncertainties. For a detailed discussion of the coal-electricity price linkage mechanism, see “Item 4 Information of the Company – B. Business Overview – Pricing Policy”.

Starting from 2013, the NDRC will no longer issue inter-provincial guidance of railway transportation capacity plan and all key coal purchase contracts between power generation companies and coal suppliers were terminated. The coal price will be determined based on free negotiation between power companies and coal suppliers, and the amount of coal supply will be determined based on free negotiation between power companies and railway authorities, which

increases the uncertainty of the coal supply and the coal price and may adversely affect our operations.

Power plant development, acquisition and construction are a complex and time-consuming process, the delay of which may negatively affect the implementation of our growth strategy

We develop, construct, manage and operate large power plants. Our success depends upon our ability to secure all required PRC Government approvals, power sales and dispatch agreements, construction contracts, fuel supply and transportation and electricity transmission arrangements. Delay or failure to secure any of these could increase cost or delay or prevent commercial operation of the affected power plant. Although each of our power plants in operation and the power plants under construction received all required PRC Government approvals in a timely fashion, no assurances can be given that all the future projects will receive approvals in a timely fashion or at all. In addition, the PRC Government approval requirements and procedures for thermal power plant are increasingly stringent, due to national policies and related regulations promoting environmental friendly energy.

We have generally acted as, and intend to continue to act as, the general contractor for the construction of our power plants. As with any major infrastructure construction effort, the construction of a power plant involves many risks, including shortages of equipment, material and labor, labor disturbances, accidents, inclement weather, unforeseen engineering, environmental, geological, delays and other problems and unanticipated cost increases, any of which could give rise to delays or cost overruns. Construction delays may result in loss of revenues. Failure to complete construction according to specifications may result in liabilities, decrease power plant efficiency, increase operating costs and reduce earnings. Although the construction of each of our power plants was completed on or

ahead of schedule and within its budget, no assurance can be given that construction of future projects will be completed on schedule or within budget.

In addition, from time to time, we may acquire existing power plants from HIPDC, Huaneng Group or other parties. The timing and the likelihood of the consummation of any such acquisitions will depend, among other things, on our ability to obtain financing and relevant PRC Government approvals and to negotiate relevant agreements for terms acceptable to us.

Substantial capital is required for investing in or acquiring new power plants and failure to obtain capital on reasonable commercial terms will increase our finance cost and cause delay in our expansion plans

An important component of our growth strategy is to develop new power plants and acquire operating power plants and related development rights from HIPDC, Huaneng Group or other companies on commercially reasonable terms. Our ability to arrange financing and the cost of such financing depend on numerous factors, including general economic and capital market conditions, credit availability from banks or other lenders, investor confidence in us and the continued success of our power plants. Although we have not been materially affected by inflation in the past, there is no assurance that we would not be affected in the future. Since the beginning of 2012, the PRC Government adopted a more relaxed monetary policy, and the People's Bank of China, or the PBOC, has decreased twice the reserve requirement ratio by 100 basis points for the PRC financial institutions from January 1, 2012 to December 31, 2012. In addition, the PBOC decreased the benchmark one-year lending interest rates two times by 56 basis points from January 1, 2011 to December 31, 2012. Though the PBOC decreased the reserve requirement ratio for the PRC financial institutions and the benchmark one-year lending interest rates, respectively, there is no assurance that the lending interest rate will not further increase in the future if the PRC Government decides to tighten its monetary policy. As a result, we may not be able to carry out our expansion plans due to the failure to obtain financing or the increase of financing costs. Furthermore, although we have historically been able to obtain financing on terms acceptable to us, there can be no assurance that financing for future power plant developments and acquisitions will be available on terms acceptable to us or, in the event of an equity offering, that such offering will not result in substantial dilution to existing shareholders.

Operation of power plants involves many risks and we may not have enough insurance to cover the economic losses if any of our power plants' ordinary operation is interrupted

The operation of power plants involves many risks and hazards, including breakdown, failure or substandard performance of equipment, improper installation or operation of equipment, labor disturbances, natural disasters, environmental hazards and industrial accidents. The occurrence of material operational problems, including but not limited to the above events, may adversely affect the profitability of a power plant.

Our power plants in the PRC currently maintain insurance coverage that is typical in the electric power industry in the PRC and in amounts that we believe to be adequate. Such insurance, however, may not provide adequate coverage in certain circumstances. In particular, in accordance with industry practice in the PRC, our power plants in the PRC do not generally maintain business interruption insurance, or any of third party liability insurance other than that included in construction all risks insurance or erection all risks insurance to cover claims in respect of bodily injury or property or environment damage arising from accidents on our property or relating to our operation. Although each of our power plants has a good record of safe operation, there is no assurance that the afore-mentioned accidents will not occur in the future.

If the PRC Government adopts new and stricter environmental laws and additional capital expenditure is required for complying with such laws, the operation of our power plants may be adversely affected and we may be required to make more investment in compliance with these environmental laws

Most of our power plants, like all coal-fired power plants, discharge pollutants into the environment. We are subject to central and local government environmental protection laws and regulations, which currently impose base-level discharge fees for various polluting substances and graduated schedules of fees for the discharge of waste substances. The amount of discharge fees shall be determined by the local environmental protection authority based on the periodic inspection of the type and volume of pollution discharges. In addition, such environmental protection laws and regulations also set up the goal for the overall control on the discharge volume of key polluting substances. These laws and regulations impose fines for violations of laws, regulations or decrees and provide for the possible closure by the central government or local government of any power plant which fails to comply with orders requiring it to cease or cure certain activities causing environmental damage. In 2007, the PRC Government issued additional policies on discharge of polluting substances and on desulphurization for coal-fired generating units. Certain provinces have raised the rates of waste disposal fees since 2008. In 2012, the new and more stringent standards on discharge of polluting substances by thermal power plants promulgated by the PRC Government in 2011 came into effect, which also require newly commenced thermal power plants to equip all units with denitrification facilities and all existing thermal power plants to be modified with denitrification facilities equipped on all units by the end of 2015. Such stringent standards, together with the increase in the discharge fees, will result in the increases in the environmental protection expenditure and operating costs of power plants and may have adverse impact on our operating results.

We attach great importance to the environmental related matters of our existing power plants and our power plants under construction. We have implemented a system that is designed to control pollution caused by our power

plants, including the establishment of an environmental protection office at each power plant, adoption of relevant control and evaluation procedures and the installation of certain pollution control equipment. We believe our environmental protection systems and facilities for the power plants are adequate for us to comply with applicable central government and local government environmental protection laws and regulations. However, the PRC Government may impose new, stricter laws and regulations on environmental protection, which may adversely affect our operations.

The PRC is a party to the Framework Convention on Climate Change (“Climate Change Convention”), which is intended to limit or capture emissions of “greenhouse” gases, such as carbon dioxide. Ceilings on such emissions could limit the production of electricity from fossil fuels, particularly coal, or increase the costs of such production. At present, ceilings on the emissions of “greenhouse” gases have not been assigned to developing countries under the Climate Change Convention. Therefore, the Climate Change Convention would not have a major effect on the company in the short-term because the PRC as a developing country is not obligated to reduce its emissions of “greenhouse” gases at present, and the PRC Government has not adopted relevant control standards and policies. If the PRC were to agree to such ceilings, or otherwise reduce its reliance on coal-fired power plants, our business prospects could be adversely affected.

Our business benefits from certain PRC Government tax incentives. Expiration of, or changes to, the incentives could adversely affect our operating results

Prior to January 1, 2008, according to the relevant income tax law, domestic enterprises were, in general, subject to statutory income tax of 33% (30% enterprise income tax and 3% local income tax). If these enterprises are located in certain specified locations or cities, or are specifically approved by State Administration of Taxation, a lower tax rate would be applied. Effective from January 1, 1999, in accordance with the practice notes on the PRC income tax laws applicable to foreign invested enterprises investing in energy and transportation infrastructure businesses, a reduced enterprise income tax rate of 15% (after the approval of State Administration of Taxation) was applicable across the country. We applied this rule to all of our wholly owned operating power plants after obtaining the approval of State Administration of Taxation. In addition, certain power plants were exempted from enterprise income tax for two years starting from the first profit-making year, after offsetting all tax losses carried forward from the previous years (at most of five years), followed by a 50% reduction of the applicable tax rate for the next three years. The statutory income tax was assessed individually based on each of their results of operations.

On March 16, 2007, the Enterprise Income Tax Law of PRC, or the New Enterprise Income Tax Law, was enacted, and became effective on January 1, 2008. The New Enterprise Income Tax Law imposes a uniform income tax rate of 25% for domestic enterprises and foreign invested enterprises. Therefore, our power plants subject to a 33% income tax rate prior to January 1, 2008 are subject to a lower tax rate of 25% starting on January 1, 2008. With regard to our power plants entitled to a reduced enterprise income tax rate of 15% prior to January 1, 2008, their effective tax rate is being gradually increased to 25% within a five-year transition period commencing on January 1, 2008. Accordingly, the effective tax rate of our wholly-owned power plants will increase over time. In addition, although our power plants entitled to tax exemption and reduction under the income tax laws and regulations that are effective prior to the the New Enterprise Income Tax Law will continue to enjoy such preferential treatments until the expiration of the same, newly established power plants will not be able to benefit from such tax incentives, unless they can satisfy specific qualifications, if any, provided by then effective laws and regulations on preferential tax treatment.

The increase of applicable income tax rate and elimination of the preferential tax treatment with regard to certain of our power plants may adversely affect our financial condition and results of operations. Moreover, our historical operating results may not be indicative of our operating results for future periods as a result of the expiration of the tax benefits currently available to us.



In addition, according to the New Enterprise Income Tax Law and its implementation rules, any dividends derived from the distributable profits accumulated from January 1, 2008 and are paid to the shareholders who are non-resident enterprises in the PRC will be subject to the PRC withholding tax at the rate of 10%. The withholding tax will be exempted if such dividends are derived from the distributable profits accumulated before January 1, 2008. Under a notice issued by the State Administration of Taxation of the PRC on November 6, 2008, we are required to withhold PRC income tax at the rate of 10% on annual dividends paid for 2008 and later years payable to our H Share investors who are non-resident enterprises.

Fluctuations in exchange rates could have an adverse effect on our results of operations and your investment

As a power producer operating mainly in China, we collect most of our revenues in Renminbi and have to convert Renminbi into foreign currencies to (i) repay some of our borrowings which are denominated in foreign currencies, (ii) purchase foreign made equipment and parts for repairs and maintenance, (iii) purchase fuel from overseas suppliers, and (iv) pay out dividend to our overseas shareholders.

The value of the Renminbi against the U.S. dollar and other currencies may fluctuate and is affected by, among other things, changes in China's political and economic conditions. The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. Renminbi appreciated by more than 20% against the U.S. dollar between July 2005 and July 2008. Between July 2008 and June 2010, this appreciation halted and the exchange rate between the Renminbi and the U.S. dollar remained within a narrow band.

Since June 2010, Renminbi has appreciated slowly against the U.S. dollar again. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future. There remains significant international pressure on the PRC Government to further liberalize its currency policy, which could result in further fluctuations in the value of the Renminbi against the U.S. dollar. However, there is no assurance that there will not be a devaluation of Renminbi in the future. If there is such devaluation, our debt servicing cost will increase and the return to our overseas investors may decrease.

Our revenues from SinoSing Power Pte. Ltd. (“SinoSing Power”) and its subsidiaries are collected in Singapore dollar. However, commencing from 2008, the operating results of SinoSing Power and its subsidiaries are consolidated into our financial statements, which use Renminbi as the functional currency and presentation currency. As a result, we are exposed to foreign exchange fluctuations between Renminbi and Singapore dollar. Appreciation of Renminbi against Singapore dollar may cause a foreign exchange loss upon conversion of SinoSing Power and its subsidiaries’ operating results denominated in Singapore dollar into Renminbi, which may have adverse impact on our operation results.

The audit report included in this annual report is prepared by an auditor who is not inspected by the Public Company Accounting Oversight Board and, as such, you are deprived of the benefits of such inspection.

Auditors of companies that are registered with the US Securities and Exchange Commission and traded publicly in the United States, including our independent registered public accounting firm, must be registered with the US Public Company Accounting Oversight Board (United States) (the “PCAOB”) and are required by the laws of the United States to undergo regular inspections by the PCAOB to assess their compliance with the laws of the United States and professional standards. Because we have substantial operations within the People’s Republic of China and the PCAOB is currently unable to conduct inspections of the work of our auditors as it relates to those operations without the approval of the Chinese authorities, our auditor’s work related to our operations in China is not currently inspected by the PCAOB.

This lack of PCAOB inspections of audit work performed in China prevents the PCAOB from regularly evaluating audit work of any auditors that was performed in China including that performed by our auditors. As a result, investors may be deprived of the full benefits of PCAOB inspections.

Forward-looking information may prove inaccurate

This document contains certain forward-looking statements and information relating to us that are based on the beliefs of our management as well as assumptions made by and information currently available to our management. When used in this document, the words “anticipate,” “believe,” “estimate,” “expect,” “going forward” and similar expressions, as they relate to us or our management, are intended to identify forward-looking statement. Such statements reflect the current views of our management with respect to future events and are subject to certain risks, uncertainties and assumptions, including the risk factors described in this document. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected. We do not intend to update these forward-looking statements.

#### Risks relating to the PRC

China’s economic, political and social conditions as well as government policies could significantly affect our business

As of December 31, 2012, the majority of our business, assets and operations are located in China. The economy of China differs from the economies of most developed countries in many respects, including government involvement, level of development, economy growth rate, control of foreign exchange, and allocation of resources.

The economy of China has been transitioning from a planned economy to a more market-oriented economy. The PRC Government has implemented economic reform measures emphasizing utilization of market forces in the development of the economy of China and a high level of management autonomy. Some of these measures will benefit the overall economy of China, but may have a negative effect on us. For example, our operating results and financial condition may be adversely affected by changes in taxation, changes in power tariff for our power plants, changes in the usage and costs of State controlled transportation services, and changes in State policies affecting the power industry.

Interpretation of PRC laws and regulations involves significant uncertainties

The PRC legal system is based on written statutes and their interpretation by the Supreme People's Court. Prior court decisions may be cited for reference but have limited value as precedents. Since 1979, the PRC Government has been developing a comprehensive system of commercial laws, and considerable progress has been made in introducing laws and regulations dealing with economic matters such as foreign investment, corporate organization and governance, commerce, taxation and trade. However, because these laws and regulations are relatively new, and because of the limited volume of published cases and judicial interpretation and their lack of force as precedents, interpretation and enforcement of these laws and regulations involve significant uncertainties. In addition, as the PRC legal system develops, we cannot assure that changes in such laws and regulations, and their

interpretation or their enforcement will not have a material adverse effect on our business operations.

We are subject to certain PRC regulations governing PRC companies that are listed overseas. These regulations contain certain provisions that are required to be included in the articles of association of these PRC companies and are intended to regulate the internal affairs of these companies. The PRC Company Law and these regulations, in general, and the provisions for protection of shareholders' rights and access to information, in particular, are less developed than those applicable to companies incorporated in Hong Kong, the US, the UK and other developed countries or regions. Such limited investor protections are compensated for, to a certain extent, by the Mandatory Provisions for the Articles of Association of Companies to be Listed Overseas and certain additional requirements that are imposed by the Listing Rules of The Hong Kong Stock Exchange with a view to reduce the magnitude of differences between the Hong Kong Company Law and PRC Company Law. The articles of association of all PRC companies listed in Hong Kong must incorporate such Mandatory Provisions and these additional requirements. Although our Articles of Association have incorporated such provisions and requirements, there can be no assurance that our shareholders will enjoy protections to which they may be entitled in other jurisdictions.

#### Risks relating to our operations in Singapore

Our operations in Singapore are subject to a number of risks, including, among others, risks relating to electricity pricing, dispatching, fuel supply, project development, capital expenditure, environmental regulations, government policies, and Singapore's economic, political and social conditions. Any of these risks could materially and adversely affect our business, prospects, financial condition and results of operations.

Fluctuation in market demand and intensified competition may adversely affect Tuas Power's business and results of operations.

Our operations in Singapore depend on market demand and are subject to competition. Power demand grew moderately in 2012 over 2011. The future growth is highly dependent on sustained recovery in the Singapore's and global economy. The liberalization of Singapore's power market and the further deregulation of its power industry have resulted in more intense competition among the power generation companies in Singapore. Tuas Power Group, or Tuas Power, one of our wholly-owned business units, is one of the three largest power generation companies in Singapore. If Tuas Power is unable to compete successfully against other power generation companies in Singapore, its business, prospects, financial condition and results of operations may be adversely affected. Existing incumbents, including Tuas Power Generation Pte Ltd ("TPG"), and a new entrant have embarked on repowering and new-build capacities in line with the planned development of Singapore's first Liquefied Natural Gas ("LNG") Regasification Terminal.

Regulatory changes of the vesting regime in Singapore could expose Tuas Power to electricity price volatility and adversely affect its business and results of operations.

Tuas Power derives its revenue mainly from sale of electricity to the National Electricity Market of Singapore (the "NEMS") through a bidding process and vesting contracts under which a significant portion of power sales is predetermined by the Energy Market Authority (the "EMA"). The vesting contract regime in Singapore is targeted at mitigation of market power in the wholesale electricity spot market. The regime achieves this objective by assigning a quantity of vesting contracts to generating companies, thereby limiting their incentives to exercise whatever level of market power they may possess. Vesting contracts are a form of bilateral contract imposed/vested on the major power generation companies in Singapore. Vesting contract price is set by the EMA, which is Singapore's power market regulator. Vesting contract price is set at the long run marginal cost of the most efficient base-loaded technology plant employed in Singapore and is reviewed every two years. On a quarterly basis, the EMA allows for the vesting contract price to be adjusted to account for inflation and changes in fuel prices. Such mechanism helps protect the profit

margins of the power generating companies in the Singapore market such as Tuas Power to a large degree. The quantity of each power generation company's capacity reserved for vesting contracts depends on the proportion of such power generation company's capacity to total capacity in the NEMS system. The contract quantity and price are recalculated every three months. For the period from January 1, 2012 to December 31, 2012, power sold through vesting contracts represented approximately 53% of Tuas Power's total power sold. As an important governmental policy in Singapore's power market, vesting contracts may continue as long as the EMA considers that high market concentration persists and that power generation companies may potentially exercise their market power. A review was carried out in 2012 and vesting contract levels will be reduced in 2013 and 2014 in view of increased competition from new plants being built by players other than the dominant generating companies.

The fuel cost of Tuas Power is exposed to volatility of international fuel price and foreign currency risk

The fuel for Tuas Power consists of oil and gas. Since the procurement price of gas is closely linked to oil price, the fuel cost of Tuas Power is exposed to the volatility of international oil price. In addition, the commitments for the purchase of fuel are denominated in U.S. dollars, which further exposes Tuas Power to foreign currency risk. Any increase in fuel price due and appreciation of the U.S. dollar against the Singapore dollar will translate into an increase in fuel cost for Tuas Power. Some of this increase can be pass through electricity sale contracts while fuel and

foreign exchange hedging strategies done appropriately will mitigate the impact of such increase. No assurance can be given that such increase will not adversely affect results of its operation. Tuas Power is highly dependent upon the import of gas via pipelines from Indonesia. Any disruption of such supply would impact the normal operation of Tuas Power significantly. Although Tuas Power has further contracted to buy liquefied natural gas for its incremental needs in the future. There can be no assurance that, in the event of fuel supply shortfalls, Tuas Power's operations will not be adversely affected.

#### ITEM 4 Information on the Company

##### A. History and development of the Company

Our legal and commercial name is Huaneng Power International, Inc. Our head office is at Huaneng Building, 6 Fuxingmennei Street, Xicheng District, Beijing, People's Republic of China and our telephone number is (8610) 63226999. We were established in June 1994 as a company limited by shares organized under the laws of the People's Republic of China.

On April 19, 2006, we carried out the reform to convert all non-tradable domestic shares to tradable domestic shares. According to the reform plan, Huaneng Group and HIPDC offered three shares to each holder of A Shares for every ten shares held by them. The total number of shares offered in connection with the reform was 150,000,000 shares. As a result, all non-tradable domestic shares were permitted to be listed on stock exchange for trading with certain selling restrictions. The period of selling restrictions is sixty months for the non-tradable shares held by Huaneng Group and HIPDC, and one year for most non-tradable shares held by others starting from April 19, 2006. All such selling restrictions have been released by April 19, 2011. The reform did not affect the rights of shareholders of our overseas listed foreign shares.

In 2010, we increased our share capital through non-public issuances of new shares, including A shares and H shares. With the approval from shareholders and relevant PRC governmental authorities, we were authorized to issue (i) not exceeding 1,500 million new A shares by way of placement to not more than 10 designated investors including Huaneng Group, which would subscribe for no more than 500 million new A shares, and (ii) no more than 500 million new H Shares to China Hua Neng Hong Kong Company Limited ("Hua Neng HK"). On December 23, 2010, we completed the non-public issuance of 1,500 million new A shares (ordinary shares with a par value of RMB1 per share) to 10 designated investors, including Huaneng Group, at the issuance price of RMB5.57 per share. The shares subscribed by Huaneng Group are subject to a lock-up period of 36 months, and the shares subscribed by other designated investors are subject to a lock-up period of 12 months. On December 28, 2010, we completed the placement of 500 million H shares (ordinary shares with a par value of RMB1 per share) to Hua Neng HK at the subscription price of HK\$4.73 per share. After these non-public issuances, we have a total share capital of approximately 14.06 billion shares.

On December 31, 2009, we entered into an equity transfer contract with Shandong Electric Power Corporation ("Shandong Power") and Shandong Luneng Development Group Company Limited ("Luneng Development") to acquire various interests and preliminary stage projects in nine entities. As of December 31, 2010, the operating results of four of the nine entities were consolidated into ours. In 2011, we have completed the acquisition and the operating results of all the nine entities were consolidated into ours.

On January 4, 2011, we entered into an equity transfer agreement relating to the acquisition of Fushun Suzihe Hydropower Development Company Limited ("Fushun Suzihe Hydropower") with its existing shareholders, pursuant to which we agreed to acquire the entire equity interest in Fushun Suzihe Hydropower with an aggregate consideration of RMB50 million. Fushun Suzihe Hydropower has a planned hydropower capacity of 37.5 MW (3 x 12.5 MW), which is under construction and is expected to commence operation by 2012. In September 2012, unit I of Suzihe

Hydropower passed trial run.

On June 29, 2011, we entered into an equity transfer agreement relating to the transfer of Huaneng Jilin Biological Power Generation Limited Company (“Jilin Biological”) with Huaneng Jilin Power Generation Co., Ltd. and Huaneng Group, pursuant to which we agreed to transfer the entire equity interest in Jilin Biological with an aggregate consideration of approximately RMB106 million.

On August 9, 2011, we entered into a capital increase agreement with China Huaneng Finance Limited Liability Company (“Huaneng Finance”), pursuant to which we subscribed for its own part of the newly increased registered capital of Huaneng Finance for a consideration of RMB600 million. The equity interest held by us in Huaneng Finance remains unchanged, representing 20% of the equity interests of Huaneng Finance.

On October 25, 2011, we entered into a capital increase agreement with Huaneng Group, GreenGen Co., Ltd. (“GreenGen”) and Tianjin Jinneng Investment Company (“Tianjin Jinneng”), pursuant to which our company would

make a capital contribution of RMB264 million to the registered capital of Huaneng (Tianjin) Coal Gasification Power Generation Co., Ltd., which was jointly funded by GreenGen and Tianjin Jinneng immediately prior to the capital increase. We hold 35.97% of the equity interests in Coal Gasification Co after the completion of the capital increase.

On January 11, 2013, we entered into an equity transfer agreement with Huaneng Group, pursuant to which we agreed to acquire a 50% interest in China Huaneng Group Fuel Co., Ltd. (“Fuel Company”) from Huaneng Group for a consideration of approximately RMB108 million. On the same day, we entered into a capital increase agreement with Huaneng Group and the Fuel Company, pursuant to which we agreed to make a capital injection of RMB1.4 billion into the Fuel Company after the completion of the acquisition.

As resolved at the 2010 annual general meeting held on May 17, 2011, our company has been given a mandate to issue within the PRC short-term notes of a principal amount not exceeding RMB10 billion (in either one or multiple tranches) within 12 months from the date on which the shareholders’ approval was obtained. On September 19, 2011, we issued one tranche of short-term notes in the amount of RMB5 billion with a maturity period of 366 days, a unit face value of RMB100 and an interest rate of 6.04%. On April 17, 2012, we issued a second tranche of short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.41%.

As resolved at the 2010 annual general meeting held on May 17, 2011, our company has been given a mandate to apply to the competent authority for a quota of the non-public issuance of debt financing instruments with a principal amount not exceeding RMB10 billion within 12 months from the date of obtaining an approval at the general meeting (to be issued within such period on a rolling basis). On September 8, 2011, we received the approval from the competent authority. On November 7, 2011, we completed the issuance of the first tranche of non-public issuance of debt financing instruments in the amount of RMB5 billion with a maturity period of 5 years, a unit face value of RMB100 and an interest rate of 5.74%. On January 5, 2012, we completed the issuance of the second tranche of the non-public issuance of debt financing instruments in the amount of RMB5 billion with a maturity period of 3 years, a unit face value of RMB100 and an interest rate of 5.24%.

As resolved at the 2010 annual general meeting on May 17, 2011, our company has been given a mandate to apply to the National Association of Financial Market Institutional Investors for a quota to issue super short-term debentures of a principal amount not exceeding RMB20 billion. On May 9, 2012, we received a notification on acceptance of registration from the National Association of Financial Market Institutional Investors, accepting the registration of our super short-term debentures. On June 5, 2012, July 10, 2012, August 17, 2012 and September 13, 2012, respectively, we issued four tranches of the super short-term debentures, each in the amount of RMB5 billion with a maturity period of 270 days, a unit face value of RMB100 and an interest rate of 3.35%, 3.32%, 3.70% and 3.99%, respectively.

As resolved at the 2011 annual general meeting on June 12, 2012, our company has been given a mandate to issue within the PRC short-term notes of a principal amount not exceeding RMB15 billion within 12 months from the date on which the shareholders’ approval was obtained. On November 6, 2012, we issued the first tranche of the short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.42%. On December 7, 2012, we issued the second tranche of the short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.58%.

As resolved at the 2010 Annual General Meeting on May 17, 2011, our company has been given a mandate to issue in one or multiple tranches financing instruments of RMB-denominated debt instruments of a principal amount up to RMB5 billion in or outside PRC within 12 months from the date of approval at the general meeting. On April 19, 2012, we received an approval regarding the issuance of RMB-denominated debt instruments in Hong Kong in the



sum of RMB5 billion issued by the NDRC, approving our company to issue the RMB-denominated debt instruments in Hong Kong in an aggregate amount of up to RMB5 billion, with an effective period of one year from the date of approval. On January 30, 2013, our company and the managers entered into a subscription agreement in relation to the proposed issuance of RMB1.5 billion bonds due 2016 with an interest rate of 3.85% (“RMB Bonds”). The RMB Bonds are listed and traded on the Hong Kong Stock Exchange effective from February 6, 2013.

As resolved at the 2011 annual general meeting on June 12, 2012, our company has been given a mandate to apply to the National Association of Financial Market Institutional Investors for a quota to issue super short-term notes with a principal amount not exceeding RMB30 billion on a rolling basis. On January 29, 2013, we received a Notification on Acceptance of Registration from the National Association of Financial Market Institutional Investors, accepting the registration of the super short-term notes. On February 27, 2013, we issued the first tranche of the super short-term notes in the amount of RMB5 billion with a maturity period of 270 days, a unit face value of RMB100 and an interest rate of 3.80%. On April 3, 2013, we issued the second tranche of the super short-term notes in the amount of RMB5 billion with a maturity period of 270 days, a unit face value is RMB100 and an interest rate of 3.90%.

See “Item 5 Operating and Financial Review and Prospects — Liquidity and Cash Resources” for a description of our principal capital expenditures since the beginning of the last three financial years.

#### B. Business overview

We are one of the China’s largest independent power producers. As of March 31, 2013, we had controlling generating capacity of 63,857 MW, and a total generating capacity of 57,273 MW on an equity basis.

#### Operations in China

We are engaged in developing, constructing, operating and managing power plants throughout China. Our domestic power plants are located in 19 provinces, provincial-level municipalities and autonomous regions. We also have a wholly-owned power plant in Singapore.

In 2012, we made new progress on many aspects including power generation, energy saving, environmental protection and project development. We exploited the favorable timing of a fall in coal price, overcame difficulties posed by sluggish demand for electricity and intensified market competition, reacted proactively, strengthened the management, thereby recorded remarkable growth in operating results and maintained its leading position in industry with regard to the relevant energy saving indicators. We managed to fulfill the duties of providing sufficient, reliable and green energy to the society. The operation of Tuas Power in Singapore was stable. Our profitability and ability for sustainable development have been enhanced.

In the year of 2012, new generating units with a total installed capacity of 4,854 MW were put into commercial operations. In 2012, our total domestic power generation from all operating power plants on a consolidated basis amounted to 302.433 billion kWh, representing a 3.55% decrease from 2011. The annual average utilization hours of our thermal generating units reached 5,114 hours, 149 hours above the average rate of the thermal generating units in China. Our fuel cost per unit of power sold by domestic power plants decreased by 7.60% from the previous year to RMB249.82 per MWh.

We believe our significant capability in the development and construction of power projects, as exemplified in the completion of our projects under construction ahead of schedule, and our experience gained in the successful acquisitions of power assets in recent years will enable us to take full advantage of the opportunities presented in China's power market and made available to us through our relationship with HIPDC and Huaneng Group.

With respect to the acquisition or development of any project, we will consider, among other factors, changes in power market conditions, and adhere to prudent commercial principles in the evaluation of the feasibility of the project. In addition to business development strategies, we will continue to work on our profit enhancement through relentlessly strengthening cost control, especially in respect of fuel costs and construction costs, so as to hedge against fluctuations in fuel price and increase competitiveness in the power market.

#### Operations in Singapore

Tuas Power, one of our wholly-owned business units, operates in Singapore and is engaged in the business of generation, wholesale and retail of power and other relating utilities. Tuas Power comprises of Tuas Power Ltd ("TPL"), the investment holding company, and seven subsidiaries. Among those subsidiaries, TPG is the electricity generation company that owns 100% of Tuas Power Supply Pte Ltd ("TPS"), which is the retail arm of TPG. We have consolidated Tuas Power's results of operations since March 2008. The total assets and revenue of Singapore operations represented approximately 12% and 15%, respectively, of our total assets and revenue as of and for the year ended December 31, 2012. In 2012, the power generated by Tuas Power in Singapore accounted for 25.24% of the total power generated in Singapore, representing a decrease of 1.88 percentage points from 2011.

#### Development of power plants

The process of identifying potential sites for power plants, obtaining government approvals, completing construction and commencing commercial operations is usually lengthy. However, because of our significant experience in developing and constructing power plants, we have been able to identify promising power plant projects and to obtain all required PRC Government approvals in a timely manner.

#### Opportunity identification and feasibility study

We initially identify an area in which additional electric power is needed by determining its existing installed capacity and projected demand for electric power. The initial assessment of a proposed power plant involves a preliminary feasibility study. The feasibility study examines the proposed power plant's land use requirements, access to a power grid, fuel supply arrangements, availability of water, local requirements for permits and licenses and the ability of potential customers to afford the proposed power tariff. To determine projected demand, factors such as economic growth, population growth and industrial expansion are used. To gauge the expected supply of electricity, the capacities of existing plants and plants under construction or development are studied.

#### Approval process

Prior to July 2004, any project proposal and supporting documents for new power plants must first be submitted to the NDRC for approval and then be submitted to the State Council. In July 2004, the State Council of the PRC reformed the fixed asset investment regulatory system in China. Under the new system, new projects in the electric power industry that do not use government funds will no longer be subject to the examination and approval procedure. Instead, they will only be subject to a confirmation and registration process. Coal-fired projects will be subject to confirmation by the NDRC. Wind power projects with installed capacity of 50 MW or above shall be subject to confirmation and registration with the relevant department of the central government while wind power project with installed capacity lower than 50 MW shall be subject to confirmation and registration with relevant local government departments. Wind power projects confirmed by local government departments at provincial level shall also be filed with the NDRC and China National Energy Administration.

Joint venture power projects are subject to additional governmental approvals. Approval by Ministry of Commerce is also required when foreign investment is involved.

In January 2007, the Office of the National Energy Leading Group and the NDRC with the approval of the State Council jointly issued the opinions to accelerate shutdowns of small coal-fired generating units. Power generation companies are encouraged to close small coal-fired generating units and replace them with newly built large units, and their new projects may be granted priority in the confirmation and registration process on the basis of their proactive implementation of the opinions.

#### Permits and contracts

In developing a new power plant, we and third parties are required to obtain permits before commencement of the project. Such permits include operating licenses and similar approvals related to plant site, land use, construction, and environment. To encourage the cooperation and support of the local governments of the localities of the power plants, it has been and will be our policy to seek investment in such power plants by the relevant local governments.

#### Power plant construction

We have generally acted as the general contractor for the construction of our power plants. Equipment procurement and installation, site preparation and civil works are subcontracted to domestic and foreign subcontractors through a competitive bidding process. All of our power plants were completed on or ahead of schedule, enabling certain units to enter service and begin generating income earlier than the estimated in-service date.

#### Import duties

China's general import-tariff level has been declining since China acceded to the WTO in November 2001. China's average import-tariff rate was reduced annually from 15.3% in 2001 to 9.9% in 2005 and 2006. Starting from January 1, 2007, the average import-tariff rate was further reduced to 9.8%. In general, China's accession to WTO continues to bring its import-tariff to a level consistent with the average level of all other WTO members. Under the relevant PRC laws and regulations, foreign invested enterprises, or "FIE", will be entitled to import duty exemption in respect of self-use imported equipment and raw materials for investment projects that fall into the encouraged category under the Catalogue for the Guidance of Foreign Investment Industries (the "Catalogue"). Pursuant to the current Catalogue effective on January 30, 2012, construction and operation of power stations using integrated gasification combined cycle, circulating fluidized bed with a generating capacity of 300MW or above, pressurized fluidized bed combustor with a generating capacity of 100MW or above and other clean combustion technologies belong to the category of encouraged projects. Therefore, our construction projects that meet the conditions for encouraged projects under the current catalogue are eligible for import-duty exemption for imported generating units.

Pursuant to the Interim Rules to Promote Structural Adjustment of Industries issued in December 2005 and Guidance Catalogue for Structural Adjustment of Industries effective on June 1, 2011, our power plants construction projects with independent legal person status belonging to an encouraged category of investments are eligible for exemption from import duty and related value-added tax with regard to the imported equipments used in such projects, subject to the approval of the relevant government authorities.

#### Plant start-up and operation

We have historically operated and intend to continue to operate our power plants. Our power plants have established management structures based on modern management techniques. We select the superintendent for a new power plant from the senior management of our operating plants early in the construction phase of the new plant, invest in the

training of operational personnel, adopt various rational management techniques and structure its plant bonus program to reward efficient and cost-effective operation of the plant in order to ensure the safety, stability and high level of availability of each power plant. Our senior management meets several times a year with the superintendents of the power plants as a group, fostering a team approach to operations, and conducts annual plant performance reviews with the appropriate superintendent, during which opportunities to enhance the power plant's performance and profitability are evaluated.

After a coal-fired generating unit is constructed, the contractor tests its installation and systems. Following such tests, the contractor puts the unit through a continuous 168-hour trial run at full load. After successfully passing the continuous 168-hour test and obtaining approval from the local governments, the unit may commence its commercial operation. Trial run of a wind power project consists of two phases: (i) trial run of single wind power generating unit and (ii) trial run of the entire wind power project as a whole. After successfully passing the trial run, the wind power project may commence its commercial operation.

#### Development of Power Plants in Singapore

The Singapore electricity industry had traditionally been vertically integrated and owned by the government. Since 1995, steps have been taken to liberalize the power industry, including the incorporation of the Public Utilities Board ("PUB") in 1995, establishment of Singapore Electricity Pool ("SEP") in 1998, formation of Energy Market Authority ("EMA") in 2001, and the evolution of the SEP into the New Electricity Market of Singapore ("NEMS")

in 2003. The EMA is a statutory body responsible for the economic, technical and competition regulation of the gas and electricity industry in Singapore. In carrying out its functions as the regulator of the power sector, EMA is empowered under the Electricity Act to issue and enforce licences, codes of practices and performance standards. Energy Market Company Pte Ltd. (the “EMC”), a subsidiary of the EMA, is the market company licensed to operate the wholesale market, or the NEMS.

In Singapore, a company is required to hold a generation license issued by the EMA if it generates electricity by means of one or more generating units with capacity of 10 MW or above. If connected to the power grid, the generating unit(s) must be registered with the EMC and will have to compete with other power generation companies to secure dispatch in the NEMS.

To ensure adequate electricity supply in Singapore, the EMA targets a minimum reserve margin (the excess of generating capacity over peak electricity demand) of 30% based on a loss of load probability (a measure of the probability that a system demand will exceed capacity during a given period, often expressed as the estimated number of days over a year) of three days per year. The 30% required reserve margin is to cater for scheduled maintenance as well as forced outages of generating units in the system. If the reserve margin falls below the required 30% due to demand growth and/or plant retirements, it would be an indication that new generation investments in generation units are needed to maintain system security.

The EMA intends to keep the increase and decrease in generating capacity to be commercially driven as far as practicable. As a precaution against the risk of insufficient generating capacity in the system to maintain system security, the EMA has planned to put in place a capacity assurance scheme to incentivize new generation planting in case new generating capacity that is required to maintain system security is not forthcoming from the market.

By most measures of market power, the Singapore market is highly concentrated as the three largest power generation companies account for approximately 80% of total power capacity. It is therefore unlikely that the EMA will allow the three largest power generation companies to increase their licensed capacity and these generation companies will have to rely on the optimization of their existing capacity within license cap to improve efficiency and forestall new entry.

As of March 31, 2013, major players including Tuas Power, as well as new players, have commenced repowering of existing plants and addition of new greenfield capacities.

#### Pricing policy

Prior to April 2001, the on-grid tariffs for our planned output were designed to enable us to recover all operating and debt servicing costs and to earn a fixed rate of return. Since April 2001, however, the PRC Government has started to gradually implement a new on-grid tariff-setting mechanism based on the operating terms of power plants as well as the average costs of comparable power plants.

On July 3, 2003, the State Council approved the tariff reform plan and made it clear that the long-term objective of the reform is to establish a standardized and transparent tariff-setting mechanism.

Pursuant to the NDRC circular issued in June 2004, on-grid tariffs for newly built power generating units commencing operation from June 2004 should be set on the basis of the average cost of comparable units adding tax and reasonable return in the regional grid. It provides challenges and incentives for power generation companies to control costs for building new generating units.

On March 28, 2005, the NDRC issued the Interim Measures on Regulation of On-grid Tariff, the Interim Measures on Regulation of Transmission and Distribution Tariff, and the Interim Measures on Regulation of End-user Tariff, or collectively the Interim Measures, to provide guidance for the reform of tariff-setting mechanism in the transition period. Under the Interim Measures, tariff is classified into on-grid tariff, transmission and distribution tariff and end-user tariff. Transmission and distribution tariff will be instituted by the government. End-user tariff will be based on on-grid tariff and transmission and distribution tariff. The government is responsible to regulate and supervise power tariffs in light of the principles of efficiency, incentives, and investment encouragement and taking into consideration of affordability.

In December 2004, the NDRC proposed and the State Council approved to establish a linkage mechanism between coal and power prices, pursuant to which, the NDRC may adjust power tariffs if the change of the average coal price reaches 5% within a period of six months compared with the preceding same period. The change in a period, if less than 5%, will be carried forward to the future periods until the accumulated amounts reach 5%. With a target to encourage power generation companies to reduce cost and improve efficiency, only around 70% of coal price increases will be allowed to pass to end-users through an increase of power tariffs, and power generation companies will bear the remaining 30%. In May 2005, the NDRC activated the coal-electricity price linkage mechanism for the first time to increase on-grid tariffs and end-user tariffs in the northeastern region, central region, eastern region, northwestern region and southern region. We accordingly increased the on-grid tariffs of our power plants in the northeastern region, central region, eastern region and northwestern region on May 1, 2005 and in the southern region on July 15, 2005. In June 2006, the coal-electricity price linkage mechanism was reactivated by the NDRC to increase on-grid tariffs and end-user tariffs in the northeastern region, central region, eastern region, northwestern region and

southern region. We accordingly increased the on-grid tariffs of most of our power plants in the same regions on June 30, 2006.

In May 2007, NDRC and the State Environment Protection Administration jointly promulgated Interim Administrative Measures on Electricity Price of Coal-fired Generating Units installed with Desulphurization Facilities and the Operations of Such Facilities, which provided that a premium for desulphurization may be charged on the price of the electricity generated by generating units installed with desulphurization facilities on and from the date on which such desulphurization facilities are tested and accepted by relevant environment protection regulator. Such pricing policy is also applicable to the old generating units which are installed with desulphurization facilities. The new measures are more stringent on the regulation of the coal-fired power plants with desulphurization facilities, setting forth the categories under which the price including a desulphurization premium will be offset or otherwise penalized based on the ratio of utilization of the relevant desulphurization facilities on annual basis. As of December 31, 2012, all of our existing coal-fired generating units have installed and operated the desulphurization facilities and enjoyed deslphurization premium.

In June 2008, NDRC issued Notice of Raising the Power Tariff, pursuant to which, the power tariff in provincial grids nationwide was increased by an average of RMB0.025 per kWh. In August 2008, NDRC issued Notice of Raising the On-grid Tariffs of the Thermal Power Plants, pursuant to which, the on-grid tariff of thermal power plants, including plants fueled by coal, oil, gas and co-generation, was increased by an average of RMB0.02 per kWh.

On February 25, 2009, NDRC, SERC and China National Energy Administration jointly promulgated the Notice regarding Cleaning up the Concessional Tariff Scheme, pursuant to which, (i) the concessional tariff scheme at local level is banned, and (ii) certain measures, such as direct purchase by large end-users and adopting peak and off-peak power pricing policy, will be carried out to reduce enterprises' power cost. In addition, the notice emphasizes the supervision and inspection over the setting of power tariff. On October 11, 2009, in order to promote a fair market condition and the optimization of electric power resources, NDRC, SERC and China National Energy Administration jointly promulgated the Circular on Regulating the Administration of Electric Power Transaction Tariff to regulate the tariff setting mechanism for the on-grid tariff, transmission and distribution tariff and end-user tariff and clean up the local preferential power tariffs provided to high energy consumption companies. Pursuant to a notice issued by NDRC, with effect from November 20, 2009, certain adjustments on the on-grids tariffs have been made in various regions of China in order to resolve the inconsistencies in tariffs, rationalize the tariff structure and promote the development of renewable energy.

In 2010, the PRC Government started to implement the direct power purchase policy. As of December 31, 2012, some of the provinces where we operate power plants are approved by the NDRC to implement the direct power purchase by large power end-users. In addition, during 2010 SERC issued several circulars and notices to regulate the transprovincial and interregional transaction of power and/or power generation right, in which the power purchase price shall be freely determined by negotiation through market pricing mechanism. In December 2012, SERC issued another circular to further regulate the transprovincial and interregional transaction of power and/or power generation right.

In May 2011, NDRC issued a notice, increasing the on-grid tariffs of thermal power plants to partially compensate the increased costs incurred by thermal power plants resulted from increases in coal prices. Different adjustments on tariffs were made in different provinces. In November 2011, PRC Government made further nationwide adjustments on power tariffs, including an average of RMB0.026 per kWh increase in on-grid tariff for thermal power plants. In December 2012, NDRC issued a notice, which provided that, from January 1, 2013, NDRC shall provide a RMB0.008 per kWh denitrification premium for all coal-fired generating units equipped with denitrification facilities that are inspected and accepted by authorized national or provincial authority.



In March 2012, the PRC Government issued a notice, which mandated the confirmation method for the power generation projects, subsidy standards and fund appropriation standards relating to the application for subsidy for renewable energy power price of power generation projects. In December 2012, the PRC Government issued the Notice on the Guidelines of Enhancing the Reform of Marketization of Coal Used for Power Generation to further reform coal pricing mechanism. Effective January 1, 2013, all key coal purchase contracts between power generation companies and coal suppliers were terminated and contracts are directly negotiated between power generation companies and coal suppliers without the interference of local governments. According to the notice, the NDRC will no longer issue inter-provincial guidance of railway transportation capacity plan. In addition, dual-track coal pricing system, which included the government regulated mandatory annual contract pricing and spot market prices for the remaining coal production output of each coal supplier, was abolished due to the narrowing gap between the government regulated coal contract price and the spot market price. Pursuant to the notice, future coal contract price will be determined by the market and freely negotiated between power generation companies and coal suppliers. Furthermore, coal-electricity price linkage mechanism will continue to be implemented and constantly improved. Once coal price fluctuates for more than 5% on an annual basis, on-grid tariff would be adjusted accordingly. The notice also mandates that power generation companies absorb 10% of the coal price fluctuations as compared to 30% before. Given the narrow gap between the key contract coal price and the spot market price, the overall on-grid tariff was not adjusted.

In terms of power tariff for wind power projects, pursuant to the applicable policies and regulations, the PRC is categorized into four wind resource zones, and the onshore wind power projects approved after August 1, 2009 and in the same zone are subject to the same standard on-grid tariff applicable to that zone. In addition, the power grid companies are generally required to purchase all of the electricity generated by wind power generating units.

#### Pricing Policy in Singapore

All licensed power plants in Singapore sell their plant output into the NEMS under a half-hourly competitive bidding process, during which a clearing price is determined based on the projected system demand. All successful bids/power plants that are cleared in each half hour will be dispatched automatically by control signals from the Power

System Operator, a division of the EMA, and in turn will receive the cleared price as determined earlier. The cleared price paid to the power plants is the nodal price at their point of injection, and the Market Clearing Engine, the computer software that creates dispatch schedules and determines market clearing prices, automatically produces a different price at each node on the network.

As there is no certainty in the price or the dispatch levels for any power plants, operators of power plants may enter into short or long-term financial arrangements with other counterparties or their own subsidiary company involved in the electricity retail market (to end consumers of electricity) to secure stability in their revenue stream and manage the commercial risks associated with operations in a competitive market.

In addition, the major power generation companies, including Tuas Power, are obliged to hold vesting contracts. Vesting contracts are a form of bilateral contract imposed/vested on the generation companies who had been licensed by the EMA before the start of the NEMS. Market Support Services Licensee is the counterparty to all of the vesting contracts, and the vesting contracts are settled between the parties through the EMC's settlement system. The quantity of each power generation company's capacity covered by vesting contracts depends on the proportion of its capacity to total capacity in the NEMS system. Vesting contract price is set by the EMA at the long run marginal cost and is adjusted by the EMA on a periodic basis for changes in the long run marginal cost and on a quarterly basis for inflation and changes in fuel prices. Such mechanism helps protect the profit margins of the power generation companies in the Singapore market to a large degree. The contract quantity and price are currently recalculated every three months.

The electricity that retailers on-sell to contestable consumers (currently defined as customers with average monthly usage of 10,000kWh and above) has to be purchased from the NEMS. The retailers pay for their electricity purchases at the Uniform Singapore Energy Price, which is a weighted average of nodal prices and is determined on a half-hourly basis in the NEMS.

#### Power sales

Each of our power plants has entered into a written agreement with the local grid companies for the sales of its power output. Generally, the agreement has a fixed term of one year and provides that the annual utilization hours of the power plant will be determined with reference to the average annual utilization hours of the similar generating units connected to the same grid.

In 2003, SERC and the State Administration of Commerce and Industry jointly promulgated a model contract form (the "Model Contract Form") for use by power grid companies and power generation companies in connection with electricity sale and purchase transactions. The Model Contract Form contains provisions on the parties' rights and obligations, amount of electricity subject to purchase, payment method and liabilities for breach of contract, etc. We believe that the publication of the Model Contract Form has facilitated the negotiation and execution of electricity purchase contracts between power grid companies and power generation companies in a fair, transparent and efficient manner. In 2012, all of the agreements entered into between our power plants and the local grid companies were based on the Model Contract Form.

Power sales through competitive bidding are one of the targets of power market reform. The PRC Government started in 1999 to experiment with a program to effect power sales through competitive bidding in some provinces, and has been gradually expanding the program with a view to creating a market-oriented electric power industry. Pursuant to the opinions regarding promotion of electric power system reform in the period of "The Eleventh Five-Year Plan" adopted by the State Council in November 2006, the SERC will speed up the reform to establish an electric power market suitable to China's circumstances. Furthermore, the PRC Government started in 2009 to experiment with a program for direct power purchase by large power end-users, and has promulgated relevant rules governing the price

and method of direct power purchase transaction as well as the market entrance and exit mechanism. In accordance with the above policies, we are conducting research on the program for direct power purchase by large power end-users. However, since the detailed implementation rules governing the program at local level are different among the regions in terms of market entrance condition, scope of experiment, and price and method of direct power purchase, these rules are subject to approvals by relevant central governmental authorities. As of December 31, 2012, some of the provinces where we operate power plants are approved by the NDRC to implement the direct power purchase by large power end-users.

Establishing regional power markets and increasing the use of the bidding method are the general trend in China's power market reform, which is conducive to creating a competition environment that is fair, transparent and equitable. Power sales through bidding process in small amounts have been experimented in the power market in the Northeastern region and Eastern region. However, during the three years ended December 31, 2012, the use of the bidding method in power sales had not been substantively implemented yet.

In 2008, with the purpose of improving energy usage efficiency, the government implemented an electricity optimized-dispatch policy in Henan Province, Sichuan Province, Jiangsu Province, Guangdong Province and Guizhou Province on a pilot basis, as a result of which, the utilization hours of low energy consumption and low pollution generating units have been improved. We believe that our large generating units with high efficiency and low emission in Henan, Jiangsu and Guangdong provinces are competitive in the market.

The following table sets forth the average power tariff (RMB/MWh) of electric power sold by our power plants in China, for each of the five years ended December 31, 2012 and the approved power tariff for 2013.

	Year Ended December 31,					
	2008 Average Tariff (1)	2009 Average Tariff (1)	2010 Average Tariff(1)	2011 Average Tariff(1)	2012 Average Tariff(1)	2013 Approved Tariff(1)
Liaoning Province						
Dalian Power Plant	338.05	368.66	375.44	382.84	409.18	414.20
Dandong Power Plant	340.82	366.30	376.61	383.08	405.73	414.20
Yingkou Power Plant	360.45	383.58	387.78	394.82	409.35	414.20
Yingkou Co-generation Power Plant	--	375.00	386.29	391.92	397.59	414.20
Wafangdian Wind Power Plant	--	--	--	610.00	610.82	610.00
Changtu Taiping Wind Power Plant	--	--	--	--	610.00	610.00
Suzihe Hydropower(2)	--	--	--	--	364.25	--
Inner Mongolia Autonomous Region						
Huade Wind Power Plant	--	--	510.00	528.45	520.00	510.00
Hebei Province						
Shang'an Power Plant	356.52	372.41	378.59	408.20	434.63	
Phase I						445.50
Phase II						430.00
Kangbao Wind Power Plant	--	--	--	--	536.72	540.00
Gansu Province						
Pingliang Power Plant	238.89	261.02	275.91	306.36	336.12	334.30
Jiuquan Wind Power Plant	--	--	--	--	520.60	520.60
Beijing Municipality						
Beijing Co-generation Power Plant	--	482.42	474.21	481.35	494.00	519.30
Beijing CCGT(2)	--	--	--	--	--	--
Tianjin Municipality						
Yangliuqing Co-generation Power Plant	--	408.12	407.08	414.23	438.03	
Phase III						466.60
Phase IV						411.80
Shanxi Province						
Yushe Power Plant(3)						
Phase I	345.77	352.89	336.30	336.30	--	--
Phase II	289.32	316.62	333.36	363.66	396.56	396.70
Zuoquan Power Plant	--	--	--	--	383.25	385.70
Shandong Province						
Dezhou Power Plant	394.08	418.92	417.68	443.20	468.90	473.40
Jining Power Plant						
Phases I, II	356.56	397.40	398.11	--	--	--
Phases III	384.29	408.47	411.16	418.76	451.40	451.40
Co-generation	--	397.40	401.90	423.82	459.40	459.40
Xindian Power Plant						

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Phases I, II	371.86	--	--	--	--	--
Phase III	370.99	404.30	405.67	426.77	453.75	453.80
Weihai Power Plant						
Phase II	422.78	459.90	456.31	435.52	461.89	513.00
Phase III	--	--	--	--	--	454.90
Rizhao Power Plant Phase II	--	394.24	397.60	420.06	446.90	446.90
Zhanhua Co-generation	--	--	397.40	419.76	450.55	446.90
Henan Province						

	Year Ended December 31,					
	2008 Average Tariff (1)	2009 Average Tariff (1)	2010 Average Tariff (1)	2011 Average Tariff (1)	2012 Average Tariff (1)	2013 Approved Tariff (1)
Qinbei Power Plant	339.85	370.47	379.68	412.75	441.43	439.20
Jiangsu Province						
Nantong Power Plant	385.53	401.71	409.06	425.97	441.25	455.00
Nanjing Power Plant	375.47	407.58	414.19	442.54	442.17	455.00
Taicang Power Plant						
Phase I	401.60	412.19	415.37	424.09	430.43	458.10
Phase II	396.48	398.36	414.13	429.44	443.88	458.10
Huaiyin Power Plant						455.00
Phase I	--	--	--	--	--	--
Phase II	396.80	415.73	443.17	438.72	458.25	455.00
Phase III	396.80	415.73	443.17	438.72	458.25	455.00
Jinling Power Plant						
CCGT	528.73	544.97	568.00	587.53	581.35	581.00
Coal-fired	--	--	430.00	417.99	427.34	463.00
Qidong Wind Power Plant						
Phases I	--	487.70	487.70	519.08	487.70	487.70
Phases II	--	--	--	--	610.00	610.00
Shanghai Municipality						
Shidongkou I	377.35	425.76	435.52	441.11	457.18	467.10
Shidongkou II	377.04	411.80	416.36	422.25	442.13	452.10
Shidongkou power plant	--	--	445.70	457.20	463.85	485.30
Shanghai CCGT Power Plant	602.57	629.00	662.00	665.00	674.00	674.00
Chongqing Municipality						
Luohuang Power Plant						
Phases I, II	338.27	365.70	373.30	409.95	448.95	449.10
Phase III	354.89	381.07	388.30	411.91	448.95	449.10
Zhejiang Province						
Changxing Power Plant(4)	450.86	479.71	519.39	--	--	--
Yuhuan Power Plant	444.92	467.54	459.86	462.49	491.37	490.00
Hunan Province						
Yueyang Power Plant						
Phase I	388.53	434.39	433.09	467.74	506.75	501.40
Phase II	398.62	434.05	439.92	467.74	506.75	501.40
Phase III	--	--	--	461.98	507.03	501.40
Xiangqi Hydro	--	--	--	--	390.00	390.00
Hubei Province						
Enshi Hydro	--	--	--	437.03	360.00	360.00
Jiangxi Province						
Jinggangshan Power Plant						
Phase I	379.99	415.37	427.56	448.30	490.70	491.20
Phase II	--	406.60	408.51	446.55	482.19	485.20
Fujian Province						
Fuzhou Power Plant						
Phase I	401.22	412.24	413.22			
Phase I				426.56	455.89	460.30
Phase II				440.86	455.68	467.30

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Phase III				415.49	435.93	452.80
Guangdong Province						
Shantou Power Plant						
Phase I	522.42	547.00	540.70	546.51	565.78	565.51
Phase II	472.96	502.23	496.20	501.76	521.31	521.00

	Year Ended December 31,					
	2008 Average Tariff (1)	2009 Average Tariff (1)	2010 Average Tariff (1)	2011 Average Tariff (1)	2012 Average Tariff (1)	2013 Approved Tariff (1)
Haimen Power Plant	--	497.45	496.33	498.77	529.06	529.00
Yunnan Province						
Diandong Energy	--	--	--	345.43	359.58	360.60
Diandong Yuwang	--	--	--	345.31	361.70	360.60

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Notes:

- (1) Includes value-added tax.
- (2) The tariff of Suzihe Hydropower and Beijing CCGT for 2013 is pending approval.
- (3) The Phase I of Yushe was shut down in 2012.
- (4) The Unit I and Unit II of Changxing were shut down in January 2011.

#### Power sales in Singapore

According to the latest available update from EMA, the total licensed capacity in commercial operation in Singapore was 9,892MW. In 2012, the peak demand for electricity was 6,386MW and the annual average load was 5,156 MW. The power market in Singapore is competitive, and power generation companies sell their power output through bidding process and vesting contracts. For the year ended December 31, 2012, power sold through vesting contracts presented approximately 55% of the total power sold by the power generation companies.

Tuas Power is required to sell a substantial portion of its electric power output to the NEMS through a competitive bidding process. The gas-fired combined cycle units of Tuas Power enjoy advantages in the competitive biddings of the pool market given their relatively low cost and high efficiency. Tuas Power in turn receives the price cleared in the market for its output. The volatility in the sales price of the revenue associated with the sale of electricity in the NEMS is effectively managed via vesting contracts and direct retail sales which is carried out through a Tuas Power's subsidiary. Tuas Power sells all its electricity output into the NEMS, but the actual settlement tariffs deviate from the pool prices due to the effect of vesting contracts and retail sales. For the period from January 1, 2012 to December 31, 2012, power sold through vesting contracts and retail sales represented approximately 83% of Tuas Power's total power sold for the same period.

#### Fuel supply arrangements

In 2012, the majority of our power plants were fueled by coal, gas or oil.

#### Coal

Our coal supply for our coal-fired power plants is mainly obtained from numerous coal producers in Shanxi Province, Inner Mongolia Autonomous Region and Gansu Province. We also obtain coal from overseas suppliers.

In recent years, as part of its efforts to make a transition from a comprehensive planned economy to a "socialist market economy", the PRC has experimented with a variety of methods of setting coal prices. In 1996, the government



allowed coal prices to fluctuate within a range around a reference price for coal allocated under the State Plan to be used in electricity generation, and set maximum allowable prices in various coal-producing areas for coal used in electricity generation.

From 2002 to 2003, there was no longer official State Plan for coal supplies, but the government continued to coordinate the coal prices at the annual national coal purchase conferences attended by, among others, representatives of each of power companies, coal suppliers, and the railway authorities and sponsored and coordinated by NDRC. Power companies obtain allocations for coal on a plant-by-plant basis. Each of the power plants then signs supply contracts with the coal suppliers, and with the railway and shipping companies for the amount of coal and transportation allocated to them. From 2004 to 2008, although such annual coal purchase conferences continue to be held, only key contracts are negotiated and executed at such conferences. Starting from 2009, in furtherance of the coal purchase reform, NDRC ceased to coordinate annual coal purchase conference and took measures to reduce government's involvement in the coal supply negotiation. NDRC will no longer make allocation of coal supply to power companies, but instead will consolidate and publish overall framework for the coal demand and supply. The price and amount of coal supply will be determined based on the free negotiation between power companies, coal suppliers, and the railway authorities.

In 2008, the average of coal price increased significantly, which adversely affected our results of operations. In 2008, we purchased 88.2 million tons of coal and consumed 85.15 million tons of coal. Of the coal purchases in 2008, 55.4% was purchased under the key contracts and the remainder was purchased in the open market. The coal purchase price for our company, including transportation costs and miscellaneous expenses, averaged approximately RMB584.94 per ton. Our average unit fuel cost in 2008 increased by 46.54% from that in 2007. In 2008, we managed

to secure the coal supply by enhancing the coordination between purchase and transportation to stabilize the main supply channel and exploring coal supply resources outside China.

In 2009, the average of coal price decreased significantly. In 2009, we purchased 85.92 million tons of coal and consumed 89.07 million tons of coal. Of the coal purchased in 2009, 56.7% was purchased under the key contracts and the remainder was purchased in the open market. The coal purchase price for our company, including transportation costs and miscellaneous expenses, averaged approximately RMB525.14 per ton. Our average unit fuel cost in 2009 decreased by 13.50% from that in 2008. In 2009, we managed to secure coal supply by expanding our coal import from coal supply resources outside China, which also attributed to a decrease in our average unit fuel cost in 2009.

In 2010, the average of coal price increased significantly. We purchased 114.82 million tons of coal and consumed 113.23 million tons of coal. Of our total coal purchases, 52.50% was purchased under the key contracts and the remainder was purchased in the open market. The coal purchase price for our company, including transportation costs and miscellaneous expenses, averaged approximately RMB605.04 per ton. Our average unit fuel cost in 2010 increased by 14.72% from that in 2009.

In 2011, the average of coal price increased significantly. We purchased 144.72 million tons of coal and consumed 144.07 million tons of coal. In 2011, we adjusted the thresholds of key contracts in accordance with the NDRC's catalogue and criteria. Of our total coal purchases, 26.13% was purchased under the key contracts and the remainder was purchased in the open market. The coal purchase price for our company, including transportation costs and miscellaneous expenses, averaged approximately RMB637.22 per ton. Our average unit fuel cost in 2011 increased by 9.24% from that in 2010.

In 2012, the average of coal price decreased significantly. We purchased 133.47 million tons of coal and consumed 133.93 million tons of coal. Of our total coal purchases, 28.1% was purchased under the key contracts and the remainder was purchased in the open market. The coal purchase price for our company, including transportation costs and miscellaneous expenses, averaged approximately RMB598.27 per ton. Our average unit fuel cost in 2012 decreased by 7.6% from that in 2011.

In December 2012, the PRC Government issued a notice to further reform coal price, which mandated (1) the termination of all key coal purchase contracts between power generation companies and coal suppliers under the guidance of railway transportation capacity plan, and (2) the termination of the dual pricing system for coal pricing, from the beginning of 2013.

For coal supply in 2013, we have entered into contracts with coal suppliers at the beginning of 2013; and we have also entered into coal import contracts to supplement the coal supply for our power plants located in coastal regions, which is expected to further stabilize our fuel cost. However, due to the uncertainties in the coal market and coal transportation capacity, new challenges may arise with respect to the price and supply of coal, thus creating pressure on our cost control.

## Gas

Huaneng Shanghai Combined Cycle Gas Turbine Power Plant ("Shanghai CCGT") is a gas-fired power plant. The gas supply for Shanghai CCGT is transported through the pipeline of "West-East Gas Transport Project".

Huaneng Jinling Combined Cycle Gas Turbine Power Plant ("Jinling CCGT") is a gas-fired power plant. The gas supply for Jinling CCGT is transported through the pipeline of "West-East Gas Transport Project".

The gas co-generation expansion project of Beijing Co-generation Power Plant (“Beijing CCGT”) is a gas-fired power plant. The gas supply for Beijing CCGT is transported through the Shanganning pipeline.

Tuas Power has four 367.5 MW gas-fired combined cycle generating units. The gas supply for Tuas Power is provided by Gas Supply Pte Ltd and Sembcorp Pte Ltd. TPG has also entered into a contract with BG Singapore. Gas Marketing Pte Ltd for the supply of regasified LNG for its new combined cycle power block. TPG expects to receive regasified LNG in the second quarter of 2013.

#### Oil

Tuas Power decommissioned one 600 MW oil-fired steam unit in the fourth quarter of 2012, and maintained operation of one 600 MW oil-fired steam generating unit. The oil supply for sTuas Power is purchased from the open market.

#### Repairs and maintenance

Each of our power plants has a timetable for routine maintenance, regular inspections and repairs. Such timetables and the procedures for the repairs and maintenance of generating units comply with the relevant regulations promulgated by the former Ministry of Electricity Power.

Pursuant to our procedures, generating units are currently operating on a cycle of four to six years. In each cycle, there are four different levels of maintenance:

- (i) regular checks and routine maintenance are carried out throughout the period during which generating unit is in operation;
- (ii) a small-scale servicing is performed every year, which takes approximately 20 days;
- (iii) a medium-scale check-up is carried out between the two overhauls, the length of which depends on the actual condition of the generating unit at the time of the check-up and the inspections and improvements to be carried out; and
- (iv) a full-scale overhaul is conducted at the end of each operating cycle, which takes approximately 60 days.

### C. Organizational structure

We are 36.05% owned by HIPDC, which in turn is a subsidiary of Huaneng Group. Huaneng Group was established in 1988 with the approval of the State Council. Huaneng Group also holds a 15.29% equity interest in us either directly or through its wholly-owned subsidiaries. In 2002, Huaneng Group was restructured as one of the five independent power generation group companies to take over the power generation assets originally belonging to the State Power Corporation of China. Huaneng Group has a registered capital of RMB20 billion and is controlled and managed by the central government. Huaneng Group is principally engaged in development, investment, construction, operation and management of power plants; organising the generation and sale of power (and heat); and the development, investment, construction, production and sale of products in relation to energy, transportation, new energy and environmental protection industries.

HIPDC was established in 1985 as a joint venture with 51.98% of its equity interests currently owned by Huaneng Group. HIPDC is engaged in developing, investing, operating and constructing power plants in China. Some of the power plants currently owned and operated by us were originally built and later transferred to us by HIPDC. Both Huaneng Group and HIPDC have agreed to give us preferential rights in the power development business and power assets transfers. See “Item 7.A. Major shareholders for details”

The following organizational chart sets forth the organizational structure of HIPDC and us as of March 31, 2013:

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#### Notes:

- (1) Huaneng Group indirectly holds 100% equity interests in Pro-Power Investment Limited through its wholly-owned subsidiary, China Hua Neng Hong Kong Company Limited, and Pro-Power Investment Limited in turn holds 5% equity interests in HIPDC. As a result, Huaneng Group indirectly holds additional 5% equity interests in HIPDC.
- (2) Of the 15.29% equity interest, 11.06% was directly held by Huaneng Group, 3.36% was held by Huaneng Group through its wholly-owned subsidiary, China Hua Neng Hong Kong Company Limited, 0.04% was held by Huaneng Group through its wholly-owned subsidiary, Huaneng Capital Services Company Limited, and the remaining approximately 0.82% was held by Huaneng Group through its subsidiary, China Huaneng Finance Corporation Limited.

For a detailed discussion of the Company’s subsidiaries, see Note 9 to the Financial Statements.



## D. Property, plants and equipment

The following table presents certain summary information on our power plants as of March 31, 2013.

Plant or Expansion (Names as defined below)		Actual In-service Date	Current Installed Capacity (MW)	Ownership %	Attributable Capacity MW	Type of Fuel
Liaoning Province						
Dalian	Phase I	Unit I: Sep. 1988	2 x 350	100%	700	Coal
		Unit II: Dec. 1988				
	Phase II	Unit III: Jan. 1999	2 x 350	100%	700	Coal
		Unit IV: Jan. 1999				
Dandong		Unit I: Jan. 1999	2 x 350	100%	700	Coal
		Unit II: Jan. 1999				
Yingkou	Phase I	Unit I: Jan. 1996	2 x 320	100%	640	Coal
		Unit II: Dec. 1996				
	Phase II	Unit III: Aug. 2007	2 x 600	100%	1,200	Coal
		Unit IV: Oct. 2007				
Yingkou Co-generation		Unit I: Dec. 2009	2 x 330	100%	660	Coal
		Unit II: Dec. 2009				
Wafangdian wind power		24 turbines: Jun. 2011	48	100%	48	Wind
Changtu Taiping wind power	Phase I	33 turbines: Nov. 2012	49.5	100%	49.5	Wind
Suzihe Hydropower		Unit I: Aug. 2012	12.5	100%	12.5	Hydro
		Unit II: Jun. 2012	12.5	100%	12.5	Hydro
		Unit III: Jun. 2012	12.5	100%	12.5	Hydro
Inner Mongolia Autonomous Region						
Huade wind power	Phase I	33 turbines: Dec. 2009	49.5	100%	49.5	Wind
	Phase II	33 turbines: Jun. 2011	49.5	100%	49.5	Wind
Hebei Province						
Shang'an	Phase I	Unit I: Aug. 1990	2 x 350	100%	700	Coal

		Unit II: Dec. 1990				
	Phase II	Unit III: Oct. 1997	2 x 300	100%	600	Coal
		Unit IV: Oct. 1997				
	Phase III	Unit V: Jul. 2008	2 x 600	100%	1,200	Coal
		Unit VI: Aug. 2008				
Kangbao Wind Power	Phase I	33 turbines: Jan. 2011	49.5	100%	49.5	Wind
Gansu Province						
Pingliang		Unit I: Sep. 2000	3 x 325	65%	633.75	Coal
		Unit II: Jun. 2001				
		Unit III: Jun. 2003				
		Unit IV: Nov. 2003	1 x 330	65%	214.5	Coal
		Unit V: Feb. 2010	2 x 600	65%	780	Coal
		Unit VI: March 2010				
Jiuquan wind power		326 turbines: Dec. 2011	501.5	100%	501.5	Wind
Beijing Municipality						
Beijing Co-generation		Unit I: Jan. 1998	2 x 165	41%	135.3	Coal
		Unit II: Jan. 1998				
		Unit III: Dec. 1998	2 x 220	41%	180.4	Coal
		Unit IV: Jun. 1999				
		Unit V: Apr. 2004	75	41%	30.75	Coal
Beijing CCGT		Unit I: Dec. 2011	2 x 306.9	41%	251.66	Gas
		Unit II: Dec. 2011				
		Unit III: Dec. 2011	1 x 309.6	41%	126.94	Gas
Tianjin Municipality						
Yangliuqing Co-generation		Unit I: Dec. 1998	4 x 300	55%	660	Coal

Plant or Expansion (Names as defined below)		Actual In-service Date	Current Installed Capacity (MW)	Ownership %	Attributable Capacity MW	Type of Fuel
		Unit II: Sep. 1999				
		Unit III: Dec. 2006				
		Unit IV: May 2007				
Shanxi Province						
Yushe	Phase I	Unit I: Jun. 1994	2 x 100	60%	120	Coal
		Unit III: Dec. 1994				
	Phase II	Unit IV: Oct. 2004	2 x 300	60%	360	Coal
		Unit II: Nov. 2004				
Zuoquan		Unit I: Dec. 2011	2 x 673	80%	1,076.8	Coal
		Unit II: Jan. 2012				
Shandong Province						
Dezhou	Phase I	Units I: 1992	1 x 330	100%	330	Coal
		Unit II: 1992	1 x 320	100%	320	Coal
	Phase II	Units III: Jun. 1994	1 x 300	100%	300	Coal
		Unit IV: May 1995	1 x 320	100%	320	Coal
	Phase III	Units V: Jun. 2002	2 x 700	100%	1,400	Coal
		Unit VI: Oct. 2002				
Jining	Coal-fired	Unit V: Jul. 2003	2 x 135	100%	270	Coal
		Unit VI: Aug. 2003				
	Co-generation	Unit I: Nov. 2009	2 x 350	100%	700	Coal
		Unit II: Dec. 2009				
Xindian	Phase III	Unit V: Sep 2006	2 x 300	95%	570	Coal
		Unit VI: Nov. 2006				
Weihai	Phase II	Units III: Mar. 1998	2 x 320	60%	384	Coal
		Unit IV: Nov. 1998				
	Phase III	Unit V: Dec. 2012	2 x 680	60%	816	Coal
		Unit VI: Dec. 2012				



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Rizhao	Phase I	Unit I: Apr. 2000	2 x 350	44%	308	Coal
		Unit II: Apr. 2000				
	Phase II	Unit III: Dec. 2008	2 x 680	100%	1,360	Coal
		Unit IV: Dec. 2008				
Zhanhua		Unit I: Jul. 2005	2 x 165	100%	330	Coal
		Unit II: Jul. 2005				
Henan Province						
Qinbei	Phase I	Unit I: Nov. 2004	2 x 600	60%	720	Coal
		Unit II: Dec. 2004				
	Phase II	Unit III: Nov. 2007	2 x 600	60%	720	Coal
		Unit IV: Nov. 2007				
	Phase III	Unit V: Mar. 2012	2 x 1000	60%	1,200	Coal
		Unit VI: Feb. 2013				
Jiangsu Province						
Nantong	Phase I	Unit I: Sep. 1989	2 x 352	100%	704	Coal
		Unit II: Mar. 1990				
	Phase II	Unit III: Jul. 1999	2 x 350	100%	700	Coal
		Unit IV: Oct. 1999				
Nanjing		Unit I: Mar. 1994	2 x 320	100%	640	Coal
		Unit II: Oct. 1994				
Taicang	Phase I	Unit I: Dec. 1999	2 x 320	75%	480	Coal
		Unit II: Apr. 2000				
	Phase II	Unit III: Jan. 2006	2 x 630	75%	945	Coal
		Unit IV: Feb. 2006				
Huaiyin	Phase II	Unit III: Jan. 2005	2 x 330	63.64%	420	Coal
		Unit IV: Mar. 2005				
	Phase III	Unit V: May 2006	2 x 330	63.64%	420	Coal
		Unit VI: Sep. 2006				
Jinling	CCGT	Unit I: Dec. 2006	2 x 390	60%	468	Gas
		Unit II: Mar. 2007				



Plant or Expansion (Names as defined below)		Actual In-service Date	Current Installed Capacity (MW)	Ownership %	Attributable Capacity MW	Type of Fuel
	Coal-fired	Unit III: Dec. 2009	2 x 1,030	60%	1,236	Coal
		Unit IV: Aug. 2012				
Qidong	Phase I	61 turbines: Mar. 2009	91.5	65%	59.5	Wind
	Phase II	25 turbines: Jan. 2011	50	65%	32.5	Wind
		22 turbines: Jun. 2012	44	65%	28.6	Wind
Shanghai Municipality						
Shidongkou I		Unit I: Feb. 1988	4 x 325	100%	1,300	Coal
		Unit II: Dec. 1988				
		Unit III: Sep. 1989				
		Unit IV: May 1990				
Shidongkou II	Phase I	Unit I: Jun. 1992	2 x 600	100%	1,200	Coal
		Unit II: Dec. 1992				
	Phase II	Unit I: Oct. 2011	2 x 660	50%	660	Coal
		Unit II: Oct. 2011				
Shanghai CCGT		Unit I: May 2006	3 x 390	70%	819	Gas
		Unit II: Jun. 2006				
		Unit III: Jul. 2006				
Chongqing Municipality						
Luohuang	Phase I	Unit I: Sep. 1991	2 x 360	60%	432	Coal
		Unit II: Feb. 1992				
	Phase II	Unit III: Dec. 1998	2 x 360	60%	432	Coal
		Unit IV: Dec. 1998				
	Phase III	Unit V: Dec. 2006	2 x 600	60%	720	Coal
		Unit VI: Jan. 2007				
Zhejiang Province						
Changxing		Unit I: Jan. 1992	1 x 135	100%	260	Coal

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		Unit II: Aug. 1992	1 x 125			
Yuhuan	Phase I	Unit I: Nov. 2006	2 x 1,000	100%	2,000	Coal
		Unit II: Dec. 2006				
	Phase II	Unit III: Nov. 2007	2 x 1,000	100%	2,000	Coal
		Unit IV: Nov. 2007				
Hunan Province						
Yueyang	Phase I	Unit I: Sep. 1991	2 x 362.5	55%	398.75	Coal
		Unit II: Dec. 1991				
	Phase II	Unit III: Mar. 2006	2 x 300	55%	330	Coal
		Unit IV: May 2006				
	Phase III	Unit V: Jan. 2011	2 x 600	55%	660	Coal
		Unit VI: Aug. 2012				
Xiangqi Hydro		Unit I: Dec. 2011	4 x 20	100%	80	Hydro
		Unit II: May 2012				
		Unit III: Jul. 2012				
		Unit IV: Aug. 2012				
Hubei Province						
Enshi Hydro		Unit I: Dec. 2011	3 x 5	100%	15	Hydro
		Unit II: Dec. 2011				
		Unit III: Dec. 2011				
Jiangxi Province						
Jinggangshan	Phase I	Unit I: Dec. 2000	2 x 300	100%	600	Coal
		Unit II: Aug. 2001				
	Phase II	Unit III: Nov. 2009	2 x 660	100%	1,320	Coal
		Unit IV: Dec. 2009				
Fujian Province						
Fuzhou	Phase I	Unit I: Sep. 1988	2 x 350	100%	700	Coal
		Unit II: Dec. 1988				
	Phase II	Unit III: Oct. 1999	2 x 350	100%	700	Coal

Plant or Expansion (Names as defined below)		Actual In-service Date	Current Installed Capacity (MW)	Ownership %	Attributable Capacity MW	Type of Fuel
		Unit IV: Oct. 1999				
	Phase III	Unit V: Jul. 2010	2 x 660	100%	660	Coal
		Unit VI: Oct. 2011				
Guangdong Province						
Shantou	Phase I	Unit I: Jan. 1997	2 x 300	100%	600	Coal
		Unit II: Jan. 1997				
	Phase II	Unit III: Oct. 2005	1 x 600	100%	600	Coal
Haimen		Unit I: Jul. 2009	2 x 1,036	100%	2,072	Coal
		Unit II: Oct. 2009				
		Unit III: Mar. 2013	2 x 1,036	80%	1,657.6	Coal
		Unit IV: Mar. 2013				
Yunnan Province						
Diandong	Phase I	Unit I: Feb. 2006	2 x 600	100%	1,200	Coal
		Unit II: Jul. 2006				
	Phase II	Unit III: Nov. 2006	2 x 600	100%	1,200	Coal
		Unit IV: May 2007				
Yuwang	Phase I	Unit I: Jul. 2009	2 x 600	100%	1,200	Coal
		Unit II: Feb. 2010				
Singapore						
Tuas	Phase I	Unit I: Mar. 1999	1 x 600	100%	600	Oil
		Unit II: Dec. 1999(1)				
	Phase II	Unit III: Nov. 2001	4 x 367.5	100%	1,470	Gas
		Unit IV: Jan. 2002				
		Unit V: Feb. 2005				
		Unit VI: Sep. 2005				
	Tembusu Phase I	Feb. 2013	1 x 101	100%	101	Coal & biomass

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Note:

(1) The Unit II of Phase I of Tuas power plant was shut down in the forth quarter of 2012.

The following table presents the availability factors and the capacity factors of our coal-fired operating power plants in China for the years ended December 31, 2010, 2011 and 2012.

Coal-fired Power Plant	Availability factor (%)			Capacity factor (%)		
	2010	2011	2012	2010	2011	2012
<b>Liaoning Province</b>						
Dalian	96.67	97.63	98.20	64.51	55.49	48.62
Dandong	98.69	96.51	94.96	63.02	52.25	52.08
Yingkou	99.94	98.15	94.21	61.11	53.84	48.67
Yingkou Co-generation	96.57	86.78	97.76	63.45	54.25	58.93
<b>Hebei Province</b>						
Shang'an	96.66	95.86	99.94	66.13	66.05	68.54
<b>Gansu Province</b>						
Pingliang	97.39	92.52	92.36	44.66	56.33	42.38
<b>Beijing Municipality</b>						
Beijing	93.32	95.27	93.01	63.55	66.02	62.46
<b>Tianjin Municipality</b>						
Yangliuqing	91.6	91.13	90.61	61.25	66.17	62.70
<b>Shanxi Province</b>						
Yushe	92.37	95.24	92.92	69.76	59.65	64.61
Zuoquan	--	--	92.88	--	--	56.16
<b>Shandong Province</b>						
Dezhou	92.16	95.46	95.19	70.05	62.07	65.66
Jining	90.61	97.92	88.84	62.41	38.89	58.78
Weihai	94.05	93.38	100.00	70.59	57.92	65.31
Xindian	91.63	93.73	100.00	69.57	63.04	69.51
Rizhao II	92.16	98.52	91.43	68.42	70.55	62.65
Zhanhua Co-generation	100.00	94.44	93.89	83.78	54.91	59.47

Coal-fired Power Plant	Availability factor (%)			Capacity factor (%)		
	2010	2011	2012	2010	2011	2012
Henan Province						
Qinbei	94.69	92.69	95.51	66.41	72.04	62.80
Jiangsu Province						
Nantong	94.61	97.10	95.28	73.44	75.79	68.16
Nanjing	92.98	94.56	93.95	68.94	71.02	68.07
Taicang	88.93	96.26	93.31	69.84	75.53	69.93
Huaiyin	96.76	95.99	89.00	59.66	63.74	61.68
Jinling II	--	87.83	95.21	--	70.56	76.20
Shanghai Municipality						
Shidongkou I	97.58	100.00	96.80	68.73	75.96	67.52
Shidongkou II	95.21	95.41	91.82	52.15	64.66	64.20
Chongqing Municipality						
Luohuang	96.79	91.81	88.72	54.20	67.28	52.57
Zhejiang Province						
Changxing(1)	93.75	-	-	73.26	-	-
Yuhuan	95.61	93.24	93.08	68.30	76.39	68.64
Hunan Province						
Yueyang	98.54	97.49	95.21	49.85	63.66	43.55
Jiangxi Province						
Jinggangshan	97.13	87.46	94.74	49.06	56.39	52.42
Fujian Province						
Fuzhou	97.52	94.39	92.77	61.38	72.89	60.26
Guangdong Province						
Shantou	96.49	91.95	93.19	66.94	67.40	60.97
Haimen	93.95	93.15	94.75	66.18	74.22	68.84
Yunnan Province						
Diandong	--	93.28	93.07	--	55.40	40.36
Yuwang	--	95.34	96.81	--	55.30	47.25

Note:

(1) The Unit I and Unit II of Changxing were shut down in January 2011.

The details of our operating power plants and construction projects as of March 31, 2013 are described below.

#### Power Plants in Liaoning Province

##### Dalian Power Plant

Huaneng Dalian Power Plant (“Dalian Power Plant”) is located on the outskirts of Dalian, on the coast of Bohai Bay. Dalian Power Plant, including Phase I and Phase II, has an installed capacity of 1,400 MW and consists of four 350 MW coal-fired generating units which commenced operations in 1988 and 1999 respectively. We hold 100% equity interest in Dalian Power Plant.

The coal supply for Dalian Power Plant is obtained from several coal producers located mostly in Northern Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port and shipped by special 27,000 ton

automatic unloading ships to the wharf at the Dalian Power Plant. The wharf is owned and maintained by the Dalian Port Authority and is capable of handling 30,000 ton vessels. Dalian Power Plant typically stores 200,000 tons of coal on site.

In 2012, Dalian Power Plant obtained 44.5% of its total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Dalian Power Plant in 2012 was RMB574.91 (2011: RMB510.07) per ton.

Dalian Power Plant sells its electricity to Liaoning Electric Power Company.

#### Dandong Power Plant

Huaneng Dandong Power Plant (“Dandong Power Plant”) is located on the outskirts of the city of Dandong in Liaoning. Dandong Power Plant had originally been developed by HIPDC which, pursuant to the Reorganization Agreement, transferred all its rights and interests therein to us effective December 31, 1994. In March 1997, we began the construction of Dandong Power Plant, which comprises two 350 MW coal-fired generating units. We hold 100% equity interest in Dandong Power Plant.



The coal supply for Dandong Power Plant is obtained from several coal producers in Northern Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port and shipped by barge to the Dandong port in Dandong, where it is unloaded and transported to Dandong Power Plant using special coal handling facilities. The wharf is owned and maintained by Dandong Power Plant and is capable of handling 28,000 ton vessels. Dandong Power Plant typically stores 220,000 tons of coal on site.

In 2012, Dandong Power Plant obtained 55.6% of its total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Dandong Power Plant in 2012 was RMB523.36 (2011: RMB517.07) per ton.

Dandong Power Plant sells its electricity to Liaoning Electric Power Company.

#### Yingkou Power Plant

Huaneng Yingkou Power Plant (“Yingkou Power Plant”) is located in Yingkou City in Liaoning Province. Yingkou Power Plant Phase I has an installed capacity of 640 MW and consists of two 320 MW supercritical coal-fired generating units which commenced operations in January and December 1996, respectively. Yingkou Power Plant Phase II has an installed capacity of 1,200MW and consists of two 600 MW coal-fired generating units which commenced operations in August and October 2007, respectively. We hold 100% equity interest in Yingkou Power Plant.

The coal supply for Yingkou Power Plant is mainly obtained from Shanxi Province. Yingkou Power Plant typically stores 400,000 tons of coal on site. In 2012, Yingkou Power Plant obtained 21.8% of its total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Yingkou Power Plant in 2012 was RMB542.15 (2011: RMB531.75) per ton.

Yingkou Power Plant sells its electricity to Liaoning Electric Power Company.

#### Yingkou Co-generation Power Plant

Huaneng Yingkou Co-generation Power Plant (“Yingkou Co-generation Power Plant”) is located in Yingkou City in Liaoning Province. Yingkou Co-generation Power Plant has an installed capacity of 660 MW and consists of two 330 MW generating units which commenced operation in December 2009. We hold 100% equity interest in Yingkou Co-generation Power Plant.

The coal supply for Yingkou Co-generation Power Plant is mainly obtained from Inner Mongolia Autonomous Region. Yingkou Co-generation Power Plant typically stores 140,000 tons of coal on site. In 2012, Yingkou Co-generation Power Plant obtained all of its total consumption of coal from internal sources. The weighted average cost of coal for Yingkou Co-generation Power Plant in 2012 was RMB391.24 (2011: RMB406.81) per ton.

Yingkou Co-generation Power Plant sells its electricity to Liaoning Electric Power Company.

#### Wafangdian Wind Power Plant

Dalian Wafangdian Wind Power Plant (“Wafangdian Wind Power Plant”) is located in Dalian City in Liaoning Province. The installed capacity of phase I of Wafangdian Wind Power Plant is 48 MW and consists of 24 turbines. It commenced operation in June 2011. We hold 100% equity interest in Wafangdian Wind Power Plant.

Wafangdian Wind Power Plant sells its electricity to Liaoning Electric Power Company.

#### Suzihe Hydropower Plant

Liaoning Suzihe Hydropower Plant (“Suzihe Hydropower Plant”) is located in Liaoning Province. The installed capacity of Suzihe Hydropower Plant is 37.5 MW and consists of three 12.5 MW generating units. Unit I (12.5 MW) of Suzihe Hydropower commenced operation in August 2012. We hold 100% equity interest in Suzihe Hydropower Plant.

#### Changtu Taiping Wind Power Plant

Huaneng Liaoning Changtu Taiping Wind Power Plant (“Changtu Taiping Wind Power Plant”) is located in Liaoning Province. The installed capacity of Changtu Taiping Wind Power Plant is 49.5 MW and consists of 33 wind power turbines of 1.5 MW each. Phase I of the Changtu Taiping Wind Power Plant commenced operation in November 2012. We hold 100% of the equity interest in Changtu Taiping Wind Power Plant.

#### Power Plant in Inner Mongolia Autonomous Region

##### Huade Wind Power Plant

Huaneng Huade Wind Power Plant (“Huade Wind Power Plant”) is located in Huade, Inner Mongolia Autonomous Region. Phase I of Huade Wind Power Plant has an installed capacity of 49.5 MW and consists of 33 wind power turbines which commenced operation in 2009. Phase II of Huade Wind Power Plant has an installed capacity of 49.5 MW and consists of 33 wind power turbines which commenced operation in June 2011. We hold 100% equity interest in Huade Wind Power Plant.

Huade Wind Power Plant sells its electricity to Inner Mongolia Power (Group) Co., Ltd.

#### Power Plants in Hebei Province

##### Shang'an Power Plant

Huaneng Shang'an Power Plant ("Shang'an Power Plant") is located on the outskirts of Shijiazhuang. Shang'an Power Plant has been developed in three separate expansion phases. The Shang'an Power Plant Phase I has an installed capacity of 700 MW and consists of two 350 MW coal-fired generating units which commenced operations in 1990. Shang'an Power Plant Phase II shares with the Shang'an Power Plant Phase I certain facilities, such as coal storage facilities and effluence pipes, which have been built to accommodate the requirements of plant expansions. The Shang'an Power Plant Phase II utilizes two 300 MW coal-fired generating units, which commenced operation in 1997. The Shang'an Power Plant Phase III has an installed capacity of 1,200 MW and consists of two 600 MW supercritical coal-fired generating units which commenced operations in July and August 2008, respectively. Unit 5 of Shang'an Power Plant is the first 600MW supercritical air-cooling unit which commenced operation in the PRC. We hold 100% equity interest in Shang'an Power Plant.

The coal supply for Shang'an Power Plant is obtained from numerous coal producers in Central Shanxi Province, which is approximately 64 kilometers from Shang'an Power Plant. The coal is transported by rail from the mines to the Shang'an Power Plant. We own and maintain the coal unloading facilities which are capable of unloading 10,000 tons of coal per day. Shang'an Power Plant typically stores 300,000 tons of coal on site.

In 2012, Shang'an Power Plant obtained 18.2% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Shang'an Power Plant in 2012 was RMB574.97 (2011: RMB590.19) per ton.

Shang'an Power Plant sells its electricity to Hebei Electric Power Company.

##### Kangbao Wind Power Plant

Huaneng Kangbao Wind Power Plant ("Kangbao Wind Power Plant") consists of 33 wind power turbines with a total installed capacity of 49.5 MW. In January 2011, the Phase I of Kangbao Wind Power Plant with a total generation capacity of 49.5MW completed the trial run. We hold 100% equity interest in Kangbao Wind Power Plant.

Kangbao Wind Power Plant sells its electricity to Beijing-Tianjin-Tanggu Electric Power Company.

#### Power Plant in Gansu Province

##### Pingliang Power Plant

Huaneng Pingliang Power Plant ("Pingliang Power Plant") is located in Pingliang City of Gansu Province. Pingliang Power Plant consists of three 325 MW and one 330 MW coal-fired generating units which commenced operation in 2000, 2001 and June and November 2003 respectively. The installed capacity of Unit I, Unit II and Unit III of Pingliang Power Plant were expanded from 300 MW to 325 MW in January 2010, respectively. The installed capacity of Unit IV of Pingliang Power Plant was expanded from 300 MW to 330 MW in January 2011. Pingliang Power Plant Phase II consists of two 600 MW generating units with a total installed capacity of 1200 MW, which commenced operation in February 2010 and March 2010, respectively. We hold 65% equity interest in Pingliang Power Plant.

The coal supply for Pingliang Power Plant is obtained from local coal mines. Pingliang Power Plant typically stores 230,000 tons of coal on site. In 2012, Pingliang Power Plant obtained 75.7% of its coal supplies from the key contracts. The weighted average cost of coal for Pingliang Power Plant in 2012 was RMB434.45 (2011: RMB444.54) per ton.

Pingliang Power Plant sells its electricity to Gansu Electric Power Company.

#### Jiuquan Wind Power Project

Jiuquan Wind Power Project (“Jiuquan Wind Power Project”) consists of three wind power plants, Ganhekou Wind Power Plant II, Qiaowan Wind Power Plant II and Qiaowan Wind Power Plant III. It has 326 wind power turbines with a total installed capacity of 501.5 MW. In December 2011, all three wind power plants completed the trial run. We hold 100% equity interest in Jiuquan Wind Power Project.

Jiuquan Wind Power Plant sells its electricity to Gansu Electric Power Company.

#### Power Plant in Beijing Municipality

##### Beijing Co-generation Power Plant

Huaneng Beijing Co-generation Power Plant (“Beijing Co-generation Power Plant”) is located in Beijing Municipality. Beijing Co-generation Power Plant has an installed capacity of 845 MW and consists of two 165 MW generating units, two 220 MW generating units and one 75 MW generating units which commenced operation in

January 1998, January 1998, December 1998, June 1999 and April 2004, respectively. We hold 41% equity interest in Beijing Co-generation Power Plant and believe we exercise effective control over Beijing Co-generation Power Plant.

The coal supply for Beijing Co-generation Power Plant is mainly obtained from Inner Mongolia Autonomous Region. Beijing Co-generation Power Plant typically stores 165,000 tons of coal on site. In 2012, Beijing Co-generation Power Plant obtained 79.0% of its total consumption of coal pursuant to the key contracts. The weighted average cost of coal for Beijing Co-generation Power Plant in 2012 was RMB591.00 (2011: RMB569.31) per ton.

Beijing Co-generation Power Plant sold its electricity to North China Electric Power Company in 2011.

#### Beijing Co-generation Power Plant Expansion Project

The gas co-generation expansion project of Beijing Co-generation Power Plant (“Beijing CCGT”) consists of one set of “two on one” F-grade gas and steam combined cycle generating unit with a power generation capacity of 923.4 MW, heat supply capacity of 650 MW and heat supply area of approximately 13,000,000 square metres. High-standard denitrification, noise reduction, water treatment and other environmental protection facilities will be constructed concurrently. In December 2011, Beijing CCGT completed its trial run. We hold 41% equity interest in Beijing Co-generation Power Plant. Beijing CCGT sells its electricity to North China Electric Company.

Being the first project commencing construction among the four major co-generation centres in Beijing, Beijing CCGT firstly introduced the most efficient world-class F-grade gas turbine in the PRC thus setting a new record of the maximum heat supply capacity, minimum power consumption for power generation and highest annual thermal efficiency for the same type of generating units in the PRC and attaining a leading and international class design standard in the PRC.

#### Power Plant in Tianjin Municipality

##### Yangliuqing Co-generation Power Plant

Tianjin Huaneng Yangliuqing Co-generation Power Plant (“Yangliuqing Co-generation Power Plant”) is located in Tianjin Municipality. Yangliuqing Co-generation Power Plant has an installed capacity of 1,200 MW and consists of four 300 MW coal-fired co-generation units which commenced operation in December 1998, September 1999, December 2006 and May 2007, respectively. We hold 55% equity interest in Yangliuqing Co-generation Power Plant.

The coal supply for Yangliuqing Co-generation Power Plant is mainly obtained from Shanxi Province and Inner Mongolia Autonomous Region. Yangliuqing Co-generation Power Plant typically stores 300,000 tons of coal on site. In 2012, Yangliuqing Co-generation Power Plant obtained 56.8% of its total consumption of coal pursuant to the key contracts and the remainders in the open market. The weighted average cost of coal for Yangliuqing Co-generation Power Plant in 2012 was RMB558.73 (2011: RMB568.94) per ton.

Yangliuqing Co-generation Power Plant sold its electricity to North China Electric Company in 2011.

#### Power Plant in Shanxi Province

##### Yushe Power Plant

Huaneng Yushe Power Plant (“Yushe Power Plant”) is located in Yushe County of Shanxi Province. Yushe Power Plant Phase I has an installed capacity of 200 MW and consists of two 100 MW coal-fired generating units which commenced operations in August and December 1994, respectively. Two 300 MW coal-fired generating units of

Yushe Power Plant Phase II commenced operations in October and November 2004, respectively. Yushe Power Plant Phase I was shut down in 2011. We hold 60% equity interest in Yushe Power Plant.

The coal supply for Yushe Power Plant is obtained from several coal producers located mostly in Shanxi Province. Yushe Power Plant typically stores 500,000 tons of coal on site. In 2012, Yushe Power Plant obtained approximately 10.1% of its total consumption of coal from the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Yushe Power Plant in 2012 was RMB438.04 (2011: RMB501.78) per ton.

Yushe Power Plant sells its electricity to Shanxi Electric Power Company.

#### Zuoquan Power Plant

Shanxi Huaneng Zuoquan Power Plant (“Zuoquan Power Plant”) is located in Zuoquan County of Shanxi Province. Zuoquan Power Plant has an installed capacity of 1,346 MW and consists of two 673 MW coal-fired generating units which commenced operations in December 2011 and January 2012, respectively. We hold 80% equity interest in Zuoquan Power Plant.

Zuoquan Power Plant typically stores 200,000 tons of coal on site. In 2012, Zuoquan Power Plant obtained all of its total consumption of coal from internal sources. The weighted average cost of coal for Zuoquan Power Plant in 2012 was RMB501.23 per ton.

Zuoquan Power Plant sells its electricity to Shanxi Electric Power Company.

## Power Plants in Shandong Province

### Dezhou Power Plant

Huaneng Dezhou Power Plant (“Dezhou Power Plant”) is located in Dezhou City, near the border between Shandong and Hebei Provinces, close to an industrial zone that is an important user of electric power for industrial and commercial purposes. Dezhou Power Plant comprises of three phases, with Phase I consisting of one 320MW and one 330MW coal-fired generating units, Phase II consisting of two 300 MW coal-fired generating units, and Phase III consisting of two 700 MW coal-fired generating units. The installed capacity of Unit IV was upgraded from 300 MW to 320 MW in January 2009. We hold 100% equity interest in Dezhou Power Plant.

Dezhou Power Plant is approximately 200 km from Taiyuan, Shanxi Province, the source of the plant’s coal supply. The plant is located on the Taiyuan-Shijiazhuang-Dezhou rail line, giving it access to transportation facilities for coal. Dezhou Power Plant typically stores 400,000 tons of coal on site. In 2012, Dezhou Power Plant obtained approximately 66.5% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Dezhou Power Plant in 2012 was RMB614.01 (2011: RMB614.07) per ton. The plant is connected to the main trunk rail line at Dezhou by a dedicated 3.5 km spur line owned by us.

Dezhou Power Plant sells its electricity to Shandong Electric Power Company.

### Jining Power Plant

Huaneng Jining Power Plant (“Jining Power Plant”) is located in Jining City, near the Jining load centre and near numerous coal mines. Yanzhou coal mine, which is adjacent to the plant, alone has annual production of approximately 20 million tons. Jining Power Plant typically stores 100,000 tons of coal on site.

Jining Power Plant currently consists of two coal-fired generating units, with an aggregate installed capacity of 270 MW. In addition, Jining Power Plant (Co-generation) has an installed capacity of 700 MW and consists of two 350 MW generating units which commenced operation in November and December 2009, respectively. We hold 100% equity interest in Jining Power Plant.

In 2012, Jining Power Plant obtained approximately 38.6% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Jining Power Plant in 2012 was RMB602.62 (2011: RMB682.33) per ton.

Jining Power Plant sells its electricity to Shandong Electric Power Company.

### Xindian Power Plant

Huaneng Xindian Power Plant (“Xindian Power Plant”) is located in Zibo City of Shandong Province. Xindian Power Plant has an installed capacity of 450 MW and consists of two 225 MW coal-fired generating units which commenced operations in December 2001 and January 2002, respectively, and were shut down in September 2009. Xindian Power Plant Phase III Expansion consists of two 300 MW generating units with a total installed capacity of 600 MW, which were put into operation in September and November 2006, respectively. We hold 95% equity interest in Xindian Power Plant.

The coal supply for Xindian Power Plant is obtained from several coal producers located mostly in Shanxi Province. Xindian Power Plant typically stores 250,000 tons of coal on site. In 2012, Xindian Power Plant obtained 27.4% of its

total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Xindian Power Plant in 2012 was RMB603.15 (2011: RMB678.70) per ton.

Xindian Power Plant sells its electricity to Shandong Electric Power Company.

#### Weihai Power Plant

Huaneng Weihai Power Plant (“Weihai Power Plant”) is located approximately 16 km southeast of Weihai City, on the shore of the Bohai Gulf. Its location provides access to cooling water for operations and transportation of coal as well as ash and slag disposal facilities. We hold 60% equity interest in Weihai Power Plant, the remaining 40% interest of which is owned by Weihai Power Development Bureau (“WPDB”).

Weihai Power Plant Phase I consists of two 125 MW generating units (Units I and II), and Phase II consists of two 320 MW generating units (Units III and IV). Unit I began commercial operation in May 1994 and was shut down in December 2008, and Unit II began commercial operation in January 1995 and was shut down in November 2008. Unit III and Unit IV commenced operation in March and November 1998, respectively. Each of the Units III and IV was upgraded from 300 MW to 320 MW in January 2009. Weihai Power Plant Phase III consisting of two 680 MW generating units commenced operation in December 2012. The coal supply for Weihai Power Plant is obtained from Shanxi Province and Inner Mongolia. Weihai Power Plant typically stores 160,000 tons of coal on site. In 2012, Weihai Power Plant obtained approximately 17.3% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Weihai Power Plant in 2012 was RMB576.93 (2011: RMB675.35) per ton.



Weihai Power Plant sells its electricity to Shandong Electric Power Company.

#### Rizhao Power Plant

Huaneng Rizhao Power Plant (“Rizhao Power Plant”) is located in Rizhao City of Shandong Province. Rizhao Power Plant currently has an aggregate installed capacity of 2,060 MW. Rizhao Power Plant Phase I has an installed capacity of 700 MW and consists of two 350 MW coal-fired generating units which commenced operations both in April 2000. We hold 44% equity interests in Phase I of Rizhao Power Plant.

We hold 100% equity interest in Phase II of Rizhao Power Plant, which commenced operation in December 2008 and consists of two 680 MW supercritical coal-fired generating units. The coal supply for Phase II of Rizhao Power Plant is obtained from Shanxi Province. Phase II of Rizhao Power Plant typically stores 200,000 tons of coal on site. In 2012, Phase II of Rizhao Power Plant obtained 15.9% of its total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Phase II of Rizhao Power Plant in 2012 was RMB625.27 (2011: RMB647.13) per ton.

Rizhao Power Plant sells its electricity to Shandong Electric Power Company.

#### Zhanhua Co-generation Power Plant

Shandong Zhanhua Co-generation Limited Company (“Zhanhua Co-generation Power Plant”) is located in Zhanhua City of Shandong Province. Zhanhua Co-generation Power Plant currently has an aggregate installed capacity of 330 MW, consisting of two generating units which commenced operations in July 2005. We hold 100% equity interest in Zhanhua Co-generation Power Plant.

The coal supply for Zhanhua Co-generation Power Plant is mainly obtained from Inner Mongolia Autonomous Region. Zhanhua Co-generation Power Plant typically stores 90,000 tons of coal on site. In 2012, Zhanhua Co-generation Power Plant obtained 32.1% of its total consumption of coal pursuant to the key contracts. The weighted average cost of coal for Zhanhua Co-generation Power Plant in 2012 was RMB583.66 (2011: RMB707.90) per ton.

Zhanhua Co-generation Power Plant sells its electricity to Shandong Electric Power Company.

#### Power Plant in Henan Province

##### Qinbei Power Plant

Huaneng Qinbei Power Plant (“Qinbei Power Plant”) is located in Jiyuan City of Henan Province. Its installed capacity is 2,400 MW which consists of four 600 MW supercritical coal-fired generating units. Two units commenced operations in November and December 2004, and the other two units commenced operation in November 2007. In March 2012 and February 2013, two 1,000 MW domestic ultra-supercritical coal-fired generating units of the Phase III of Qinbei Power Plant commenced operation, respectively. We hold 60% equity interest in Qinbei Power Plant.

The coal supply for Qinbei Power Plant is obtained from Shanxi Province. Qinbei Power Plant typically stores 270,000 tons of coal on site. In 2012, Qinbei Power Plant obtained 4.2% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Qinbei Power Plant in 2012 was RMB629.69 (2011: RMB676.05) per ton.

Qinbei Power Plant sells its electricity to Henan Electric Power Company.

### Construction Project in Henan Province

Mianchi Cogeneration Power Plant project. In September 2012, Henan Huaneng Mianchi Cogeneration Power Plant project was approved by the National Development and Reform Commission. The Project is planned to consist of two sets of 300MW coal-fired cogeneration units. We hold 51% equity interest in this project.

### Power Plants and Projects in Jiangsu Province

#### Nantong Power Plant

Huaneng Nantong Power Plant (“Nantong Power Plant”) is located in the city of Nantong. Nantong Power Plant, including Phase I and Phase II, has an installed capacity of 1,404 MW and consists of two 352 MW and two 350 MW coal-fired generating units which commenced operations in 1989, 1990 and 1999, respectively. We hold 100% equity interest in Nantong Power Plant.

The coal supply for Nantong Power Plant is obtained from several coal producers located mostly in Northern Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port and then shipped to the Nantong Power Plant. Nantong Power Plant typically stores 300,000 tons of coal on site.

In 2012, Nantong Power Plant obtained 26.2% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Nantong Power Plant in 2012 was RMB610.16 (2011: RMB677.62) per ton.

Nantong Power Plant sells its electricity to Jiangsu Electric Power Company.

### Nanjing Power Plant

Huaneng Nanjing Power Plant (“Nanjing Power Plant”) has an installed capacity of 640 MW consisting of two 320 MW coal-fired generating units which commenced operations in March and October 1994, respectively. We hold 100% equity interest in Nanjing Power Plant.

The coal supply for the Nanjing Power Plant is obtained from several coal producers located in the Shanxi and Anhui Provinces. The coal is transported by rail from the mines to Yuxikou Port and Pukou Port and shipped to the plant’s own wharf facilities. The wharf is capable of handling 6,000 ton vessels. Nanjing Power Plant typically stores 120,000 tons of coal on site and consumes 5,000 tons of coal per day when operating at maximum generating capacity.

In 2012, Nanjing Power Plant obtained approximately 29.2% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Nanjing Power Plant in 2012 was RMB643.15 (2011: RMB680.87) per ton.

Nanjing Power Plant sells its electricity to Jiangsu Electric Power Company.

### Taicang Power Plant

Huaneng Taicang Power Plant (“Taicang Power Plant”) is located in the vicinity of Suzhou, Wuxi and Changzhou, which is the most affluent area in Jiangsu Province. Taicang Power Plant is an ancillary facility of the China-Singapore Suzhou Industrial Park. Taicang Power Plant Phase I consists of two 300 MW coal-fired generating units, which commenced operation in December 1999 and April 2000 respectively. Taicang Phase II Expansion consists of two 600 MW coal-fired generating units, which commenced operation in January and February 2006, respectively. In April 2008, the installed capacities of the four units of Taicang Power Plant were upgraded to 320 MW, 320 MW, 630 MW and 630 MW, respectively, which increased the total installed capacity of Taicang Power Plant to 1,900 MW. We hold 75% equity interest in Taicang Power Plant.

The coal supply for Taicang Power Plant is primarily from Shenhua in Inner Mongolia and Datong in Shanxi Province. Taicang Power Plant typically stores 350,000 tons of coal on site. In 2012, Taicang Power Plant obtained approximately 33.3% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Taicang Power Plant in 2012 was RMB581.59 (2011: RMB619.63) per ton.

Taicang Power Plant sells its electricity to Jiangsu Electric Power Company.

### Huaiyin Power Plant

Huaneng Huaiyin Power Plant (“Huaiyin Power Plant”) is located in the Centre of the Northern Jiangsu Power Grid. The plant’s two 220 MW coal-fired generating units commenced operation in November 1993 and August 1994, respectively. In order to reduce energy consumption and increase capacity, one generating unit of Huaiyin Power Plant was upgraded in October 2001, which increased the maximum generating capacity of that unit to 220 MW. In 2002, upgrading of the second generating unit was completed, and the actual generating capacity of Huaiyin Power Plant is 440 MW. The other two 330 MW coal-fired generating units of Huaiyin Power Plant Phase II Expansion have commenced operations in January and March 2005, respectively. Huaiyin Power Plant Phase III consists of two 330 MW coal-fired generating units, and was put into operations in May and September 2006, respectively. We hold 100% equity interest in Phase I and 63.64% equity interest in Phase II and Phase III of Huaiyin Power Plant. Unit I and Unit II of Huaiyin Power Plant were shut down in December 2007 and January 2009, respectively.

The coal supply for the Huaiyin Power Plant is primarily from Anhui Province, Henan Province and Shanxi Province. Huaiyin Power Plant typically stores 180,000 tons of coal on site. In 2012, Huaiyin Power Plant obtained approximately 5.1% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Huaiyin Power Plant in 2012 was RMB668.58 (2011: RMB733.50) per ton.

Huaiyin Power Plant sells its electricity to Jiangsu Electric Power Company.

#### Jinling Power Plant

Huaneng Nanjing Jinling Power Plant (“Jinling Power Plant”) is located in Nanjing, Jiangsu. Jinling Power Plant (CCGT) consists of two 390 MW gas-fired generating units, which commenced operation in December 2006 and March 2007, respectively. We hold 60% equity interest in Jinling Power Plant (CCGT). The gas supply for Jinling Power Plant (CCGT) is transported through the pipeline of “West-East Gas Transport Project”.

Jinling Power Plant (Coal-fired) consists of two 1,030 MW domestic ultra-supercritical coal-fired generating units, which commenced operation in December 2009 and August 2012, respectively. We hold 60% equity interest in Phase I and Phase II of Jinling Power Plant (Coal-fired). The coal supply for Jinling Power Plant (Coal-fired) is primarily from Shanxi Province and Inner Mongolia Autonomous Region. Jinling Power Plant (Coal-fired) typically stores 300,000 tons of coal on site. In 2012, Jinling Power Plant (Coal-fired) obtained approximately 14.6% of its total

consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Jinling Power Plant (Coal-fired) in 2012 was RMB645.63 (2011: RMB714.86) per ton.

Jinling Power Plant sells its electricity to Jiangsu Electric Power Company.

#### Qidong Wind Power Plant

Huaneng Qidong Wind Power Plant (“Qidong Wind Power Plant”) is located in Nantong City, Jiangsu. Qidong Wind Power Phase I has an installed capacity of 91.5 MW and commenced operation in March 2009. The first stage and second stage of the Phase II Project of Qidong Wind Power Plant with a total generation capacity of 50 MW and 44 MW respectively commenced operation in January 2011 and June 2012, respectively. We hold 65% equity interest in Qidong Power Plant.

Qidong Wind Power Plant sells its electricity to Jiangsu Electric Power Company.

#### Construction Project in Jiangsu Province

Taicang Coal Pier Project. In December 2010, Suzhou Port Taicang Terminal Zone Huaneng Coal Pier Construction Project has been approved by the National Development and Reform Commission of the PRC. Currently, we hold 100% equity interest in this project. The project is planned to construct one berth of 100,000 dead weight tonnage (“DWT”) and one berth of 50,000 DWT for coal discharging, four berths of 5,000 DWT each and six berths of 1,000 DWT each for coal loading, as well as corresponding ancillary facilities, with an aggregate annual throughput capacity of 27 million tonnes, comprising discharging capabilities of 13 million tonnes and loading capabilities of 14 million tonnes.

Jinling Combined Cycle Cogeneration Project. In June 2011, Huaneng Jinling Combined Cycle Cogeneration Project has been approved by Jiangsu Province Development and Reform Commission. We hold 51% equity interest in this project. The project is planned to construct two 200 MW class (E grade) combined cycle gas turbine cogeneration units and the corresponding support facilities.

Nantong Power Plant Phase III Project. In September 2011, Nantong Power Plant Phase III Project has been approved by Jiangsu Province Development and Reform Commission. We hold 35% equity interest in this project. The project is planned to construct two 1,000 MW coal-fired generating units.

Rudong Wind Power Phase I Project. In April 2012, Huaneng Rudong Wind Power Generation Company Limited Wind Farm Phase I Project was approved by the Jiangsu Province Development and Reform Commission. We hold 90% equity interest in this project. The Project is planned to be constructed with a generation capacity of 48MW.

Suzhou Gasfired Co-generation Project. In October 2012, Huaneng Suzhou gasfired Co-generation Project was approval from the Jiangsu Province Development and Reform Commission. We hold 100% equity interest in this project. The Project is planned to consist of two sets of 200MW class (E-class) combined cycle gas turbine cogeneration units.

#### Power Plants in Shanghai Municipality

##### Shidongkou I

Huaneng Shanghai Shidongkou First Power Plant (“Shidongkou I”) is located in the northern region of the Shanghai Power Grid. The plant comprises four 325 MW coal-fired generating units, which commenced operation in February

and December 1988, September 1989 and May 1990 respectively, and has a total installed capacity of 1,300 MW. The installed capacities of Unit II and Unit III were expanded from 300 MW to 325 MW in September 2007 and January 2008, respectively. The installed capacities of Unit I and Unit V were expanded from 300 MW and 320 MW to 325 MW and 325 MW in January 2010, respectively. We hold 100% equity interest in Shidongkou I.

The coal supply for Shidongkou I is primarily from Shanxi Province, Anhui Province and Henan Province. Shidongkou I Power Plant typically stores 150,000 tons of coal on site. In 2012, Shidongkou I obtained 11.5% of its total consumption of coal in the open market. The weighted average cost of coal for Shidongkou I in 2012 was RMB551.96 (2011: RMB663.81) per ton.

Shidongkou I sells its electricity to Shanghai Municipal Electric Power Company.

#### Shidongkou II

Huaneng Shanghai Shidongkou Second Power Plant (“Shidongkou II”) is located in the northern suburbs of Shanghai. Shidongkou II has an installed capacity of 1,200 MW and consists of two 600 MW coal-fired super-critical units which commenced operations in June and December 1992, respectively. We hold 100% equity interest in Phase I of Shidongkou II. Phase II of Shidongkou II has an installed capacity of 1,320 MW and consists of two 660 MW coal-fired super-critical units which commenced operations in October 2011. We hold 50% equity interest in Phase II of Shidongkou II.

The coal supply for Shidongkou II is obtained from several coal producers located mostly in Northern Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port or Tianjin port and shipped to the plant’s

own wharf facilities. The wharf is capable of handling 35,000 ton vessels. Shidongkou II typically stores 180,000 tons of coal on site.

In 2012, Shidongkou II obtained 55.1% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Shidongkou II in 2012 was RMB569.93 (2011: RMB624.52) per ton.

Shidongkou II sells its electricity to Shanghai Municipal Electric Power Company.

#### Shanghai CCGT

Huaneng Shanghai Combined Cycle Gas Turbine Power Plant (“Shanghai CCGT”) is located in Baoshan District of Shanghai Municipality. Shanghai CCGT consists of three 390 MW gas-fired combined-cycle generating units with a total installed capacity of 1,170 MW, which were put into operation in May, June and July 2006, respectively. We hold 70% equity interest in Shanghai CCGT.

The gas supply for Shanghai CCGT is transported through the pipeline of “West-East Gas Transport Project”. Shanghai CCGT generates electricity during the peak load periods and sells its electricity to Shanghai Municipal Electric Power Company.

#### Power Plant in Chongqing Municipality

##### Luohuang Power Plant

Huaneng Luohuang Power Plant (“Luohuang Power Plant”) is located in Chongqing Municipality. Each of Phase I and Phase II of Luohuang Power Plant has an installed capacity of 720 MW and consists of two 360 MW coal-fired generating units. The two units in Phase I commenced operation in September 1991 and February 1992 respectively, and the two units in Phase II commenced operation in December 1998. Luohuang Power Plant Phase III consist of two 600 MW coal-fired generating units with an installed capacity of 1,200 MW, which were put into operations in December 2006 and January 2007, respectively. We hold 60% equity interest in Luohuang Power Plant.

The coal supply for Luohuang Power Plant is obtained from Chongqing Municipality. Luohuang Power Plant typically stores 450,000 tons of coal on site. In 2012, Luohuang Power Plant obtained 49.7% of its coal supplies from the key contracts and the remainder from the open market. The weighted average cost of coal for Luohuang Power Plant in 2012 was RMB601.94 (2011: RMB599.51) per ton.

Luohuang Power Plant sells its electricity to Chongqing Municipal Electric Power Company.

#### Construction Projects in Chongqing Municipality

Chongqing Liang Jiang Gas-Fired Combined Cooling-Heating-Power Project. In December 2011, Chongqing Liang Jiang Gas-Fired Combined Cooling-Heating-Power Project has been approved by Chongqing Municipal Development and Reform Commission. We hold 100% equity interest in this project. The project is planned to construct five 300 MW (F grade) combined cycle gas turbine cogeneration units with a total installed capacity of 1,500 MW.

#### Power Plants in Zhejiang Province

##### Changxing Power Plant

Huaneng Changxing Power Plant (“Changxing Power Plant”) is located at the intersection of Zhejiang Province, Jiangsu Province and Anhui Province. Changxing Power Plant is a key power plant in northern Zhejiang area. It has one 125 MW and one 135 MW coal-fired generating units which commence operation in January and August 1992, respectively. In January 2011, we closed down the two generation units with a total generation capacity of 260 MW at Changxing Power Plant.

#### Yuhuan Power Plant

Huaneng Yuhuan Power Plant (“Yuhuan Power Plant”) is located in Taizhou of Zhejiang Province. Yuhuan Power Plant Phase I consists of two 1,000 MW ultra-supercritical coal-fired generating units with a total installed capacity of 2,000 MW. Unit I and Unit II were put into operations in November 2006 and December 2006, respectively. Yuhuan Power Plant Phase II consists of two 1,000 MW ultra-supercritical coal-fired generating units with a total installed capacity of 2,000 MW, which commenced operations in November 2007. We hold 100% equity interest in Yuhuan Power Plant.

The coal supply for Yuhuan Power Plant is primarily obtained from Shanxi Province and Inner Mongolia Autonomous Region. Yuhuan Power Plant typically stores 500,000 tons of coal on site. In 2012, Yuhuan Power Plant obtained all of its total consumption of coal from internal sources. The weighted average cost of coal for Yuhuan Power Plant in 2012 was RMB714.59 (2011: RMB751.45) per ton.

Yuhuan Power Plant sells its electricity to Zhejiang Electric Power Company.

#### Construction Projects in Zhejiang Province



Zhejiang Tongxiang Gas-Fired Co-generation project. In July 2012, Zhejiang Huaneng Tongxiang Gas-Fired Co-generation project has been approved by Zhejiang Province Development and Reform Commission. We hold 95% equity interest in this project. The project is planned to consist of two sets of 200 MW class combined cycle gas turbine cogeneration units.

Changxing project. In March 2012, Huaneng Changxing Power Plant “Replacing Small Units with Large Ones” Project has been approved by Zhejiang Province Development and Reform Commission. We hold 100% equity interest in this project. The project is planned to consist of two sets of 660 MW ultra-supercritical coal-fired generating units.

#### Power Plant in Hunan Province

##### Yueyang Power Plant

Huaneng Yueyang Power Plant (“Yueyang Power Plant”) is located in Yueyang City of Hunan Province. Yueyang Power Plant Phase I has an installed capacity of 725 MW and consists of two 362.5 MW sub-critical coal-fired generating units which commenced operation in September and December 1991 respectively. Yueyang Power Plant Phase II consists of two 300MW coal-fired generating units with installed capacity of 600 MW, which were put into operation in March and May 2006, respectively. Huaneng Yueyang Power Plant Phase III (“Yueyang Power Plant Phase III”) is planned to consist of two 600 MW generating units with a total installed capacity of 1,200 MW. In January 2011 and August 2012, Unit 5 and Unit 6 of Yueyang Power Plant Phase III, two 600MW coal-fired generating unit commenced operation, respectively. We hold 55% equity interest in Yueyang Power Plant.

The coal supply for Yueyang Power Plant is obtained from Datong in Shanxi Province. Yueyang Power Plant typically stores 500,000 tons of coal on site. In 2012, Yueyang Power Plant obtained 25.7% of its total consumption of coal pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Yueyang Power Plant in 2012 was RMB642.07 (2011: RMB716.11) per ton.

Yueyang Power Plant sells its electricity to Hunan Electric Power Company.

##### Yongzhou Xiangqi Hydropower Station

Huaneng Yongzhou Xiangqi Hydropower Station (“Xiangqi Hydropower Station”) is located in Xiangqi County of Hunan Province. Xiangqi Hydropower Station consists of four 20 MW hydraulic generating units with a total installed capacity of 80 MW. In December 2011, unit I of Xiangqi Hydropower Station with an installed capacity of 20 MW passed trial run. Unit I and Unit II of Yongzhou Xiangqi Hydropower Station with an installed capacity of 20 MW each commenced operation in December 2011 and May 2012, respectively. Unit III and Unit IV of Xiangqi Hydropower Station with an installed capacity of 20 MW each commenced operation in May and August 2012, respectively. We hold 100% equity interest in Xiangqi Hydropower Station.

Xiangqi Hydropower Station sells its electricity to Hunan Electric Power Company.

#### Power Plant in Hubei Province

##### Enshi Hydropower Station

Hubei Enshi Maweigou Hydropower Station (“Enshi Hydropower Station”) is located in Enshi City of Hubei Province. We entered into an equity transfer agreement to acquire Enshi Hydropower Station on September 30, 2011. Enshi Hydropower Station is planned to consist of eleven 5 MW hydraulic generating units with a total installed capacity of 55 MW. In December 2011, an installed capacity of 15 MW of Enshi Hydropower Station commenced operation. We

hold 100% equity interest in Enshi Hydropower Station.

Enshi Hydropower Station sells its electricity to Hubei Electric Power Company.

Power Plant in Jiangxi Province

Jinggangshan Power Plant

Huaneng Jinggangshan Power Plant (“Jinggangshan Power Plant”) is located in Ji’an City of Jiangxi Province. Jinggangshan Power Plant has an installed capacity of 1,920 MW and consists of two 300 MW coal-fired generating units which commenced operation in December 2000 and August 2001 respectively, and two 660 MW generating units which commenced operation in November and December 2009, respectively. We hold 100% equity interest in Jinggangshan Power Plant.

The coal supply for Jinggangshan Power Plant is obtained from Henan Province, Anhui Province and Jiangxi Province. Jinggangshan Power Plant typically stores 255,000 tons of coal on site. In 2012, Jinggangshan Power Plant obtained 7.1% of its total coal consumption pursuant to the key contracts and the remainder in the open market. The weighted average cost of coal for Jinggangshan Power Plant in 2012 was RMB787.28 (2011: RMB773.83) per ton.

Jinggangshan Power Plant sells its electricity to Jiangxi Electric Power Company.

Power Plant in Fujian Province

#### Fuzhou Power Plant

Huaneng Fuzhou Power Plant (“Fuzhou Power Plant”) is located on the south bank of the Min River, southeast of the city of Fuzhou. Fuzhou Power Plant has been developed in three phases. The Fuzhou Power Plant Phase I and Phase II utilize four 350 MW coal-fired generating units with an installed capacity of 1,400 MW, and commenced operations in 1988 and 1999, respectively. The Fuzhou Power Plant Phase III consists of two 600 MW generating units with a total installed capacity of 1,200 MW, and commenced operations in 2010 and 2011, respectively. The capacity of Unit V and Unit VI of the Fuzhou Power Plant Phase III was expanded to 660 MW respectively since January 2012. We hold 100% equity interest in Fuzhou Power Plant.

The coal supply for Fuzhou Power Plant is obtained from several coal producers located mostly in Northern Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port and by ship down to the east coast of China and up to the Min River to a wharf located at Fuzhou Power Plant. We own and maintain the wharf, which is capable of handling vessels of up to 20,000 tons and of unloading 10,000 tons to 15,000 tons of coal per day. Fuzhou Power Plant typically stores 180,000 tons of coal on site.

In 2012, the Fuzhou Power Plant obtained 30.0% of its total consumption of coal pursuant to the key contracts and the remainder was obtained in the open market. The weighted average cost of coal for Fuzhou Power Plant in 2012 was RMB656.37(2011: RMB722.44 ) per ton.

Fuzhou Power Plant sells its electricity to Fujian Electricity Power Company.

#### Power Plants in Guangdong Province

##### Shantou Power Plant

Huaneng Shantou Coal-Fired Power Plant (“Shantou Power Plant”) had originally been developed and constructed by HIPDC which transferred all its rights and interests therein to us effective on December 31, 1994. Located on the outskirts of the city of Shantou, Shantou Power Plant was set up with the support of the Shantou municipal government and the Guangdong provincial government. Shantou Power Plant Phase I consists of two 300 MW coal-fired generating units with boilers, which commenced operation in January 1997. Shantou Power Plant Phase II consists of one 600 MW coal-fired generating unit and commenced operation in October 2005. We hold 100% equity interest in Shantou Power Plant.

The coal supply for Shantou Power Plant is obtained from several coal producers located mostly in the northern area of Shanxi Province. The coal is transported by rail from the mines to Qinhuangdao port and by ship down the east coast of China to the wharf located at Shantou Power Plant, which is maintained by the Shantou Port Authority and is capable of handling 35,000 ton vessels. The Shantou Power Plant typically stores 300,000 tons of coal on site.

In 2012, the Shantou Power Plant obtained 36.0% of its total consumption of coal pursuant to the key contracts and the remainder was purchased in the open market. The weighted average costs of coal for Shantou Power Plant in 2012 was RMB656.52 (2011: RMB730.40) per ton.

Shantou Power Plant sells its electricity to Guangdong Electric Power Company.

##### Haimen Power Plant

Huaneng Haimen Power Plant (“Haimen Power Plant”) is located in Shantou City, Guangdong Province. Haimen Power Plant has an installed capacity of 4,144 MW and consists of four 1,036 MW generating units. The first two generating

units commenced operation in July 2009 and October 2009, respectively. We hold 100% equity interest in the first two generating units. The other two generation units commenced operation at the beginning of 2013. We hold 80% equity interest in the other two generating units.

The coal supply for Haimen Power Plant is mainly imported from Indonesia. Haimen Power Plant typically stores 400,000 tons of coal on site. In 2012, Haimen Power Plant obtained all of its total consumption of coal from internal sources. The weighted average cost of coal for Haimen Power Plant in 2012 was RMB672.22 (2011: RMB710.72) per ton.

Haimen Power Plant sells its electricity to Guangdong Electric Power Company.

#### Construction Project in Guangdong Province

Shantou Port Haimen Terminal Zone Huaneng Coal Transit Base Project. Shantou Port Haimen Terminal Zone Huaneng Coal Transit Base Project (“Haimen Terminal Project”) was approved by the National Development and Reform Commission of the PRC in February 2012. Currently, we hold 100% equity interest in this project. Haimen Terminal Project is planned to transform and newly construct a 70,000 Dead Weight Tonnage (“DWT”) coal unloading berth each, newly construct a 50,000 DWT coal loading berth and a 3,000 DWT multi-purpose berth, with a planned annual throughput capacity of 22.7 million tons, including ship unloading capacity of 21.5 million tons and ship loading capacity of 1.2 million tons.

#### Power Plants in Yunnan Province

#### Diandong Power Plant

Yunnan Diandong Energy Limited Company (“Diandong Power Plant”) is located in Qujing City, Yunnan Province. Diandong Power Plant has an installed capacity of 2,400 MW and consists of four 600 MW generating units which commenced operation in February 2006, July 2006, November 2006 and May 2007, respectively. We hold 100% equity interest in Diandong Power Plant.

The coal supply for Diandong Power Plant is mainly obtained from Yunnan and Guizhou Provinces. Diandong Power Plant typically stores 1,200,000 tons of coal on site. In 2012, Diandong Power Plant obtained 44.6% of its total consumption of coal pursuant to the key contracts and the remainders in the open market. The weighted average cost of coal for Diandong Power Plant in 2012 was RMB508.51 (2011: RMB516.89) per ton.

Diandong Power Plant sells its electricity to Yunnan Electric Power Company.

#### Yuwang Power Plant

Yunnan Diandong Yuwang Energy Limited Company (“Yuwang Power Plant”) is located in Qujing City, Yunnan Province. Yuwang Power Plant has an installed capacity of 1,200 MW and consists of two 600 MW generating units which commenced operation in July 2009 and February 2010, respectively. We hold 100% equity interest in Yuwang Power Plant.

The coal supply for Yuwang Power Plant is mainly obtained from Yunnan and Guizhou Provinces. Yuwang Power Plant typically stores 600,000 tons of coal on site. In 2012, Yuwang Power Plant obtained 50.8% of its total consumption of coal pursuant to the key contracts and the remainders in the open market. The weighted average cost of coal for Yuwang Power Plant in 2012 was RMB454.63 (2011: RMB483.72) per ton.

Yuwang Power Plant sells its electricity to Yunnan Electric Power Company.

#### Construction Project in Yunnan Province

Yunnan Chuxiong Gas Co-generation New Project. Huaneng Yunnan Chuxiong Gas Co-generation New Project (“Yunnan Chuxiong Project”), which is wholly owned by us, was approved by the Development and Reform Commission of the Yunnan Province in February 2012. We hold 100% equity interest in this project. Yunnan Chuxiong Project is planned to build two 300 MW class combined cycle gas turbine cogeneration units.

Diandong Mine Project. Diandong Mine Project consists of Bailongshan Coal Mine and Yuwang Coal Mine with an area of approximately 131.4 square kilometers. It has a recoverable reserve of approximately 1.788 billion tons. Diandong Mine Project is planned to commence operation gradually from 2014 to 2018, with an aggregate planned production capacity of approximately 6.0 million tons per year.

#### Power Plant in Singapore

##### Tuas Power

Tuas Power is one of the three largest power generation companies in Singapore, which is located at 60 Tuas South Avenue 9, the west coast of Singapore. With a licensed generating capacity of 2,670MW, it currently has an operating installed generating capacity of 2,171 MW, comprising of four 367.5MW gas-fired combined cycle generating units, one 101MW co-generation unit and one 600 MW oil-fired steam generating unit. One new 405.9MW gas-fired combined cycle generating unit is expected to begin commercial operations in 2013 to replace the 600MW oil-fired

steam generating unit decommissioned in the fourth quarter of 2012.

The oil supply of Tuas Power is obtained through auction in the open market. The gas supply is obtained from Gas Supply Pte Ltd and Sembcorp Pte Ltd.

#### Construction Project in Singapore

Combined Cycle Power Plant No. 5. TPG has started the development of a new 405.9MW Combined Cycle Power Plant No. 5 (“CCP5”). The Natural-Gas Fired CCP5, comprising an Alstom GT26 gas turbine, a generator, a steam turbine and a heat recovery steam generator, all arranging in a single shaft configuration, will enhance its portfolio of generation capability. With the development, the Phase I Oil-Fired Steam Unit No. 2 has been decommissioned and taken out of service in the fourth quarter of 2012 to maintain Tuas Power’s total licensed generating capacity. Construction of CCP5 has commenced in early 2011 and the unit has been scheduled for synchronization to the grid in late March 2013, and commercial operation is expected to begin by early October 2013.

Tembusu Multi-Utilities Complex. Tembusu multi-utilities complex is expected to consist of a co-generation plant, a desalination plant and a wastewater treatment facility, with a total installed capacity of 165 MW. The complex will be developed in multiple phases in order to meet customers’ demand. Phase 1 consists of 1 x 450 t/h coal-biomass co-fired circulated fluidized bed boiler, 2 x 200 t/h diesel/natural gas fired boilers and 1 x 101MW steam turbine-generator, and other components of plant. Phase 1 commenced operation in February 2013. Phase 2A consists of 1 x 450 t/h coal-biomass co-fired circulated fluidized bed boiler, 1 x 200 t/h diesel/natural gas fired boiler and 1 x 32MW steam turbine-generator, and other components of plant. The construction work for Phase 2A is in progress and scheduled to be completed by the first quarter of 2014. TPL owns 100% equity interest in this project.

## Competition and Dispatch

All power plants in China are subject to dispatch conducted by various dispatch centres. A dispatch centre is required to dispatch electricity pursuant to the Regulations on the Administration of Electric Power Dispatch Networks and Grids, issued by the State Council with effect from November 1, 1993, and in accordance with its agreements with power plants subject to its dispatch. Power generation companies are also required to enter into on-grid dispatch agreements with power grid companies. As a result, there is competition for favorable dispatch treatment in the PRC electric power industry, especially during the off-peak load periods. More efficient power plants usually operate at higher output than less efficient power plants. We believe that in order to increase system stability, large and efficient power plants such as ours will be preferred as base load plants to generate power for the grids to which they connect. We believe that our dispatch arrangements with the local power corporations and dispatch centres, superior quality equipment, lower coal consumption rate, higher efficiency of plant operation, lower emission levels and larger capacity represent competitive advantages in the markets in which we operate.

Since 2002, we have been facing competition from four other major power generation groups: China Power Investment Corporation, China Huadian Power Corporation, China Guodian Power Corporation and China Datang Power Corporation, which were created following the break-up of the former State Electric Corporation in 2002. Although we were not affected by this reform measure as we have developed good working relationship with the dispatch centres and the relevant government departments in the areas where our power plants are located, there can be no assurance that such good working relationship will not be adversely affected as more power generation companies compete for favorable dispatch treatment.

As power generation companies were separated from power grid companies and more competitors entered into the market, the SERC issued the Interim Measures Regarding Promotion of Openness, Fairness and Equitableness of Power Dispatch, requiring power dispatch centers to treat all competitors indiscriminately in respect of dispatch administration and information disclosure except in cases where safe and stable operation of the electric power system requiring different treatment.

In 2008, with the purpose of improving energy usage efficiency, the government implemented an electricity optimized-dispatch policy in Henan Province, Sichuan Province, Jiangsu Province, Guangdong Province and Guizhou Province on a pilot basis, and plans to roll out to others if the trial operation is successful. In addition, as of December 31, 2012, in all regions in which we operate power plants, the government's power administrative departments take differential power generation plan policies to improve the planned utilization hours of the environment-protecting and energy-saving units.

## Competition and Dispatch in Singapore

The Singapore power market is highly concentrated, as the three largest power generation companies account for approximately 80% of total generating capacity. Tuas Power competes in the NEMS using its portfolio of gas fired and oil fired generating units. It was able to achieve a market share of approximately 25.24% in the NEMS for 2012. Its major competitors include Senoko Energy (formerly Senoko Power) which is owned by a Japanese/French consortium led by Marubeni Group, YTL PowerSeraya which is owned by YTL Group of Malaysia, SembCorp Cogen and Keppel Merlimau Cogen. A new entrant, GMR Energy (Singapore) Pte Ltd, is expected to enter the market in late 2013. Tuas Power's generating units are relatively new with a track record of steady operation and high reliability. The technical and economic parameters of Tuas Power's units make Tuas Power one of the leaders in Singapore's power industry.

In the NEMS, power generation companies compete to generate and sell electricity every half-hour by offering their capacity (specifying price/quantity pairs). The EMC, the operator of Singapore's wholesale electricity market,

determines the least-cost dispatch quantities and the corresponding market-clearing or spot prices based on the offers made by power generation companies. The spot prices in the NEMS reflect the least-cost market solution for the dispatch of energy and provision of operating reserves. In general, this means that each power generation company that submitted an offer below the spot price will be dispatched, and a power generation company that submitted an offer above the spot price will not be dispatched. The spot price that power generation companies receive is a nodal price, which may vary according to their location on the network. Nodal prices would be higher in areas where higher transmission losses are incurred in getting the electricity to the load facilities.

#### Environmental Regulation

We are subject to the PRC Environmental Protection Law, the regulations of the State Council issued thereunder, the PRC Law on the Prevention and Treatment of Water Pollution, the PRC Law on the Prevention and Treatment of Air Pollution, the Emission Standard of Air Pollutants for Thermal Power Plants thereunder and the PRC Law on Ocean Environment Protection (collectively the “National Environmental Laws”) and the environmental rules promulgated by the Local Governments in whose jurisdictions our various power plants are located (the “Local Environmental Rules”). According to the National Environmental Laws, the State Environmental Protection Bureau sets national environmental protection standards and local environmental protection bureaus may set stricter local standards. Enterprises are required to comply with the stricter of the two standards.



At present, new projects are subject to the environmental evaluation approval. The project proposal is required to be submitted to the State Environmental Protection Administration (“SEPA”) for approval.

Effective July 1, 2003, all power plants in China became subject to the pollutant discharge levy system, pursuant to which discharge fees are levied based on the actual amount of pollutants discharged. As a result, all of our power plants are now required to pay discharge fees in such manner. Since 2008, certain provinces have raised the rates of waste disposal fees. In 2010, 2011 and 2012, we paid to the local governments total discharge fees of approximately RMB492 million, RMB530 million and RMB543 million respectively.

In 2011, the PRC Government promulgated a New Emission Standards of Air Pollutants for Thermal Power Plants, which implement more stringent standards on discharge of polluting substances by thermal power plants. These restrictive standards govern both the total sulfur dioxide and nitrous oxide emissions from the power plant and the emission density of each chimney, and also require thermal power plants to equip all units with denitrification facilities by the end of 2015.

In order to meet with the requirement of the New Emission Standards, we have installed flue gas desulphurization (“FGD”) facilities and denitrification facilities with all of our newly constructed generating units. We have also carried out sulfur disposal reform on the existing generating units. As of the end of 2012, we have installed and operated desulphurization facilities on all our existing coal-fired generating units.

In order to reduce fly ash, we use very high-efficiency electrostatic precipitators. Each power plant is also equipped with a waste water treatment facility to treat water used by the power plant before it is released into the river or the sea. We pay discharge fees on the basis of measurements made at discharge points of each plant where waste is released. All of the disposal equipment and facilities for sulfur dioxide, fly ash, waste water and noise in our existing power plants completely satisfy the existing national standard.

We believe we have implemented systems that are adequate to control environmental pollution caused by our facilities. In addition to the measures identified above, each power plant has its own environment protection office and staff responsible for monitoring and operating the environmental protection equipment. The environmental protection departments of the local governments monitor the level of emissions and base their fee assessments on the results of their tests.

We believe our environmental protection systems and facilities for the power plants are adequate for us to comply with the currently effective national and local environmental protection regulations. It is expected that the PRC Government will impose additional and stricter regulations to implement the emission plan which would require additional expenditure in compliance with environmental regulations.

#### Environmental Regulation in Singapore

Tuas Power’s generation operations are mainly subjected mainly to Singapore’s Environmental Protection and Management Act and Environmental Public Health Act. The former sets out requirements pertaining to control of pollution and management of hazardous substance while the latter focuses mainly on proper waste management.

To address the environmental concerns and regulatory requirements, Tuas Power has in place an environmental management system. All generating units are equipped with pollution control facilities. Stage I steam plants burns low sulfur content fuel oil and employs electro-precipitator to control sulfur dioxide and particulates emission respectively. Stage II combined-cycle plants burns natural gas and are fitted with low-nitrogen oxide burners to control nitrogen oxide emission. Source emission testing is performed annually and the results are submitted to the Pollution Control Department.

Tuas Power has a dedicated wastewater treatment plant to treat its oily wastewater and process wastewater prior to discharge into the sea. The treatment processes are automated to prevent accidental adverse discharge and critical parameters are monitored on a real-time basis. Trade effluent testing is performed annually and the results are shared with the Pollution Control Department.

Land contamination is prevented through well-designed storage and containment procedures. Specific areas for storage of waste and hazardous substances are designated within the power plant.

Waste generated in Tuas Power plants is identified and managed accordingly. Waste with residual value, such as waste oil, is resold to licensed collectors for reuse while other waste is disposed through licensed disposal contractors.

Hazardous substances which have potential to cause environmental pollution are controlled within the power plant compound. Operators who handle these chemicals are competent and the storage concept of these substances is designed to prevent and mitigate the impact of any abnormal release. Regular audits are conducted to ensure these hazardous substances are managed properly and the findings and recommendations for improvements are reported to the Pollution Control Department.

Insurance

We currently maintain property all risks insurance and machinery breakdown insurance for all of our power plants, and construction all risks insurance or erection all risks insurance for all of our newly built and expansion projects as well as large-scaled upgrading projects. Our current insurance coverage on our property, plant and equipment (including construction all risk insurance) is mainly maintained with Yongcheng Property and Casualty Insurance Company, and co-insured by PICC Property and Casualty Company Ltd. and China Pacific Property Insurance Co., Ltd., which amounted to approximately RMB317 billion. In July 2012, we renewed the liabilities insurance for our directors and officers with a coverage of US\$10 million.

We do not maintain any third party liability insurance to cover claims in respect of bodily injury or property or environment damage arising from accidents on our property or relating to our operation other than the third party additional risk insurance included in construction all risk insurance or erection all risk insurance. We do not usually carry business interruption insurance either, which is not customarily carried by power companies in the PRC. We believe that our insurance coverage is adequate and is standard for the power industry in China. Please refer to the section entitled “Risk Factors – Risks relating to the Company and the PRC Power Industry – Operating power plants involves many risks and we may not have sufficient insurance coverage to cover the economic losses if any of our power plant’s ordinary operation is interrupted.”

Tuas Power purchases key insurance policies, such as industrial all risks insurance, business interruption insurance, product and public liability insurance, directors’ and officers’ liability insurance and pollution legal liability insurance. The insured value under industrial all risks is S\$2.72 billion. For the Tembusu Multi-Utilities Complex project, the owner controlled insurance programme covers erection/ construction all risks insurance with delay in start-up, third party liability insurance and marine cargo insurance with delay in start-up.

#### ITEM 4A Unresolved Staff Comments

None

#### ITEM 5 Operating and Financial Review and Prospects

##### A. General

The principal activities of the Company are investment, construction, operation and management of power plants. The Company provides stable and reliable electricity supply to customers through grid operators where the operating plants are located. The Company is committed to scientific development, increasing economic efficiency, enhancing returns for shareholders, conserving resources and protecting the environment. The Company also attaches importance to social responsibilities and makes active efforts to build a harmonious society.

Since its incorporation, the Company has continued to expand its operating scale, thus increasing its operating revenue. The Company has also been the industry leader in terms of competitiveness, effectiveness of resources utilization and environmental protection. Currently, the Company is one of the largest listed power producers in China. Its power generation operations are widely located, covering the Northeast China Grid, the Northern China Grid, the Northwest China Grid, the Eastern China Grid, the Central China Grid, the Southern China Grid and Singapore.

Facing the complicated and severe market conditions in 2012, the Company actively responded to the changes in power, coal and capital markets with strong support of all shareholders and through concerted efforts of all employees for market expansion and management improvement. The Company correctly analyzed market development, redoubled its efforts towards key operations, implemented thorough planning and sound controls, which contributed to new development of the Company in various aspects. In 2012, the Company maintained safe production and leading

positions in China's power industry on major technical and economic indicators, realized effective cost controls by exercising strict control measures, and enhanced development quality significantly by proactive refining of power generation structure. The Company also achieved new progress in energy saving, environment protection, technical renovation and other fronts, diligently fulfilled its social responsibilities as a provider of sufficient, reliable and clean power energy. The profit attributable to shareholders of the Company was RMB5.512 billion, representing an increase of 366.95% over 2011.

#### Critical accounting policies

The Company and its subsidiaries have identified the policies below as critical to our business operations and the understanding of our results of operations. The impact of and any associated risks related to these policies on the business operations are discussed throughout the Operating and Financial Review and Prospects where such policies affect our reported and expected financial results. For a detailed discussion on the application of these and other accounting policies, see Note 2 to the Financial Statements in Item 18 of this Annual Report on Form 20-F. Note that our preparation of this Annual Report on Form 20-F requires us to make estimates and assumptions that affect the reported amount of assets and liabilities, disclosure of contingent assets and liabilities at the date of our financial statements, and the reported amount of revenue and expenses during the reported periods. There can be no assurance that actual results will not differ from those estimates.

#### Depreciation of property, plant and equipment

Depreciation of property, plant and equipment is provided based on book value less estimated residual value over estimated useful life using straight-line method. For those impaired property, plant and equipment, depreciation is provided based on book value after deducting impairment provision over estimated useful life. The estimated useful lives are as follows:

	2012
Dam	8 – 50 years
Port facilities	20 – 40 years
Buildings	8 – 30 years
Electric utility plant in service	5 – 30 years
Transportation facilities	8 – 27 years
Others	5 – 14 years

At the end of each year, the Company and its subsidiaries review the estimated useful life, residual value and the depreciation method of the property, plant and equipment for adjustment when necessary.

Management of the Company determines the estimated useful lives of property, plant and equipment and respective depreciation. The accounting estimate is based on the expected wear and tear incurred during power generation. Wear and tear can be significantly different following renovation each time. When the useful lives differ from the original estimated useful lives, management will adjust the estimated useful lives accordingly. It is possible that the estimates made based on existing experience are different to the actual outcomes within the next financial period and could cause a material adjustment to the depreciation and carrying amount of property, plant and equipment.

In order to present a fairer and more appropriate view of the financial position and operating results of the Company and its subsidiaries where the depreciation period of each property, plant and equipment is aligned with its actual useful lives, the Company and its subsidiaries revised its accounting estimates on the useful lives and residual values of property, plant and equipment not fully depreciated in the PRC, based on the technical assessment report prepared by the Company's internal engineers and technicians, as well as the accounting estimation adopted by other major Chinese companies in the power industry. The Company obtained the approval in April 2012 in the Company's eighth meeting of the Seventh Session of the Board of Directors, and adopted the change from January 1, 2012.

The table below shows the details of estimated useful lives and net residual values of property, plant and equipment before and after January 1, 2012:

Category of property, plant and equipment	Before January 1, 2012			After January 1, 2012		
	Estimated useful lives (years)	Estimated residual value(%)	Annual depreciation rate(%)	Estimated useful lives (years)	Estimated residual value(%)	Annual depreciation rate(%)
Dam	8-40	3	2.43-12.13	8-50	0-3	2.00-12.13
Port facilities	20-40	5	2.38-4.75	20-40	5	2.38-4.75
Buildings	6-45	0-11	2.11-16.67	8-30	3-5	2.23-12.13
Electric utility plant in service	5-35	0-11	2.71-20.00	5-30	0-5	3.17-20.00
Transportation facilities	6-20	0-11	4.75-16.67	8-27	3-5	3.52-12.13
Others	3-18	0-11	5.56-33.33	5-14	0-5	6.79-20.00

The approximate effect of the change in estimates on profit before income tax expense in current and future years is as follows:

	2012	2013	2014	2015	2016	Later
Increase/(Decrease) in profit before income tax expense	1.1 billion	0.9 billion	0.6 billion	0.5 billion	0.6 billion	(6.1 billion)

#### Useful life of power generation licence

The Company and its subsidiaries acquired the power generation licence as part of the business combination with Tuas Power. The power generation licence is initially recognized at fair value at the acquisition date. It is of indefinite useful life and is not amortized. It is tested annually for impairment and carried at cost less accumulated impairment loss. Useful life of the power generation licence is reviewed by the Company and its subsidiaries each financial period to determine whether events and circumstances continue to support the indefinite useful life assessment. As of year end, management of the Company and its subsidiaries considered the estimated useful life for its power generation licence as indefinite. This estimate is based on the expected renewal of power generation licence without significant restriction and cost, together with the consideration on related future cash flows generated and the expectation of management in continuous operations. Based on existing knowledge, that outcomes within the next financial period that are different from assumptions could require a change on carrying amount of power generation licence.

#### Impairment of long-lived assets

The carrying amounts of property, plant and equipment, intangible assets with definite useful lives, land use rights and long-term equity investments not accounted for as financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and power generation licence are tested for impairment annually regardless of whether there are indications of impairment or more frequently if events or changes in circumstances indicate a potential impairment. An impairment loss is recognized if the carrying amount of an asset or cash-generating unit ("CGU") exceeds its recoverable amount.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less cost to sell. For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGUs.

Subject to an operating segment ceiling test, CGUs to which goodwill has been allocated are aggregated so that the level at which impairment testing is performed reflects the lowest level at which goodwill is monitored for internal reporting purposes.

Goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

Impairment losses are recognized in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (group of CGUs), and then to reduce the carrying amounts of the other assets in the CGU (group of CGUs) on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. Except for goodwill, all impaired nonfinancial assets are subject to review for possible reversal of impairment at each reporting date.

Key assumptions applied in the impairment tests include the expected tariff rates, demands of electricity in specific regions where these power plants are located, fuel cost and the expected throughput and price of related port. Management determined these key assumptions based on past performance and its expectations on market development. If different judgments were applied, estimates could differ significantly. Actual results could vary materially from these estimates.

#### Newly adopted accounting policies

The following new standards and amendments to standards are adopted for the first time to the financial year beginning January 1, 2012.

Amendments to IFRS 7, 'Financial instruments: disclosures'. The amendment was a result of amendment on disclosure requirements of transfers of financial assets released in October 2010 (effective for financial year beginning 1 July 2011). The amendments clarified and strengthened the disclosure requirements of transfers of financial assets which help users of financial statements evaluating related risk exposures and the effect of those risks on the financial position of the Company and its subsidiaries. The Company and its subsidiaries adopted the amendment from 1 January 2012. The amendment had no material impact on the consolidated financial statements of the Company.

#### New accounting pronouncements

For a detailed discussion of new accounting pronouncements, see Note 2(ab) to the Financial Statements.

## B. Operating results

Our financial statements are prepared under IFRS as issued by IASB. The following management's discussion and analysis is based on the financial information prepared under IFRS.

Year ended December 31, 2012 compared with year ended December 31, 2011

	For the Year Ended December 31		Increased/ (Decreased) %
	2012 RMB'000	2011 RMB'000	
Operating revenue	133,966,659	133,420,769	-
Tax and levies on operations	(672,040 )	(484,019 )	39
Operating expenses			
Fuel	(82,355,449 )	(90,546,192 )	(9)
Maintenance	(2,846,521 )	(2,528,850 )	13
Depreciation	(11,032,748 )	(11,866,705 )	(7)
Labor	(5,112,484 )	(4,621,667 )	11
Service fees on transmission and transformer facilities of HIPDC transformer HIPDC	(140,771 )	(140,771 )	-
Purchase of electricity	(7,101,878 )	(8,613,264 )	(18)
Others	(7,747,828 )	(5,871,699 )	32
Total operating expenses	(116,337,679)	(124,189,148)	(6)
Profit from operations	16,956,940	8,747,602	94
Interest income	175,402	166,183	6
Financial expenses, net			
Interest expense	(8,897,097 )	(7,736,186 )	15
Exchange (loss) / gain and bank charges , net	(166,778 )	76,474	(318)
Total financial expenses, net	(9,063,875 )	(7,659,712 )	18



	For the Year Ended		
	December 31		
	2012	2011	2012
	RMB'000	RMB'000	RMB'000
Share of profits of associates / jointly controlled entities	622,358	703,561	(12 )
Loss on fair value changes of financial assets / liabilities	(1,171 )	(727 )	61
Other investment income	187,131	93,460	100
Profit before income tax expense	8,876,785	2,050,367	333
Income tax expense	(2,510,370)	(868,927 )	189
Net Profit	6,366,415	1,181,440	439
Attributable to:			
Equity holders of the Company	5,512,454	1,180,512	367
Non-controlling interests	853,961	928	91,922
	6,366,415	1,181,440	439

For the year ended December 31, 2012, the Company's total power generation on a consolidated basis amounted to 302.433 billion kWh, representing a 3.55% decrease from the year ended December 31, 2011. The decrease in the Company's power generation was mainly attributable to the sluggish national demand for electricity and the significant growth in hydropower generation that seized the market share of coal-fired power.

The power generation of the Company's domestic power plants for the year ended December 31, 2012 was listed below (in billion kWh):

Domestic Power Plant	Power generation in 2012	Power generation in 2011	Change	
Liaoning Province				
Dalian	5.980	6.805	(12.12	%)
Dandong	3.202	3.204	(0.06	%)
Yingkou	7.867	8.678	(9.35	%)
Yingkou Co-generation	3.337	3.137	6.38	%)
Wafangdian Wind Power	0.102	0.066	54.55	%)
Suzihe Hydropower	0.013	N/A	N/A	
Changtu Wind Power	0.006	N/A	N/A	
Inner Mongolia Autonomous Region				
Huade Wind Power	0.203	0.136	49.26	%)
Hebei Province				
Shang'an	14.265	14.473	(1.44	%)
Kangbao Wind Power	0.062	0.0003	N/A	
Gansu Province				
Pingliang	9.214	12.214	(24.56	%)

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Jiuquan Wind Power	0.756	N/A	N/A	
Beijing Municipality				
Beijing Co-generation	4.636	4.887	(5.14	%)
Beijing Co-generation (Combined Cycle)	3.955	0.004	N/A	
Tianjin Municipality				
Yangliuqing Co-generation	6.609	6.956	(4.99	%)
Shanxi Province				
Yushe	3.405	4.180	(18.54	%)
Zuoquan	6.358	N/A	N/A	
Shandong Province				
Dezhou	15.400	14.518	6.08	%
Jining	5.097	4.852	5.05	%
Weihai	11.608	11.128	4.31	%
Xindian	3.256	3.313	(1.72	%)
Rizhao Phase II	7.484	8.173	(8.43	%)
Zhanhua Co-generation	1.724	1.587	8.63	%
Henan Province				
Qinbei	17.764	15.146	17.29	%
Jiangsu Province				
Nantong	8.406	9.086	(7.48	%)
Nanjing	3.827	3.981	(3.87	%)

Taicang	11.672	11.373	2.63	%
Huaiyin	7.152	7.370	(2.96)	%
Jinling CCGT	3.788	3.740	1.28	%
Jinling Coal-fired	11.538	11.884	(2.91)	%
Qidong Wind Power	0.357	0.286	24.83	%
Shanghai Municipality				
Shidongkou I	7.710	7.681	0.38	%
Shidongkou II	6.472	7.412	(12.68)	%
Shidongkou Power Generation	7.739	6.862	12.78	%
Shanghai CCGT	1.633	1.266	28.99	%
Chongqing Municipality				
Luohuang	12.191	15.560	(21.65)	%
Zhejiang Province				
Yuhuan	24.116	26.768	(9.91)	%
Hunan Province				
Yueyang	8.204	10.679	(23.18)	%
Xiangqi Hydropower	0.183	N/A	N/A	
Hubei Province				
Enshi Hydro	0.050	0.0001	N/A	
Jiangxi Province				
Jingangshan	8.842	9.485	(6.78)	%
Fujian Province				
Fuzhou	13.800	16.905	(18.37)	%
Guangdong Province				
Shantou Coal-fired	6.420	7.085	(9.39)	%
Haimen	12.529	15.213	(17.64)	%
Yunnan Province				
Diandong	8.509	11.648	(26.95)	%
Yuwang	4.992	5.813	(14.12)	%

In 2012, the power generated by Singapore operations accounted for 25.20% of the total power generated in Singapore, decreased by 1.92 percentage points from 2011.

In respect of the tariff, the average tariff of domestic power plants for the year ended December 31, 2012 was RMB454.19 per MWh, an increase of RMB24.09 per MWh from the year ended December 31, 2011.

In respect of fuel cost, the decrease of coal price and effective cost controls of the Company contributed to reduced fuel costs of the Company. Compared to last year, the unit fuel cost of power sold of the Company's domestic power plants decreased by 7.60% to RMB249.82 per MWh.

Combining the foregoing factors, the operating revenue of the Company and its subsidiaries for the year ended December 31, 2012 remained generally the same as last year at approximately RMB133.967 billion. For the year ended December 31, 2012, the Company and its subsidiaries recorded a net profit attributable to equity holders of the Company of RMB5.512 billion, representing an increase of 366.95% from the profit of RMB1.181 billion for the year ended December 31, 2011.

For the year ended 31 December 2012, the profit attributable to equity holders of the Company from domestic power plants was RMB4.471 billion, representing an increase of RMB4.572 billion compared to a loss of RMB101 million for the same period last year. The increase was primarily attributable to the carry-over effect of domestic electricity

tariff adjustment in 2011, the decrease of coal market price in 2012, and effective cost controls of the Company. The carry-over effect of domestic tariff adjustment in 2011 resulted from the adjustment of on-grid electricity tariff by the PRC NDRC in the first quarter of 2011. The reduced market price of coal was mainly because of the change of coal supply-demand situation within the PRC.

For the year ended 31 December 2012, the profit attributable to equity holders of the Company from Singapore operations was RMB1.041 billion, decreased by RMB241 million compared to the same period last year. This is mainly attributable to the increase of newly operated generation units of other power plant companies, which caused a decrease of Tuas Power's shares in the market, resulting in a decline in electricity sold. It was also attributable to the drop in the exchange rate of Singaporean dollars against RMB.

#### Operating revenue

Operating revenue mainly consists of revenue from power sold. For the year ended December 31, 2012, the consolidated operating revenue of the Company and its subsidiaries amounted to RMB133.967 billion, representing a 0.41% increase from RMB133.421 billion for the year ended December 31, 2011. Due to the carry-over effect of electricity tariff adjustment in 2011 and the reduced power generation in 2012, the operating revenue from domestic power plants increased by approximately RMB2.071 billion. The operating revenue of Singapore operations decreased by approximately RMB1.525 billion for the year ended December 31, 2012 from last year, which is mainly because of the

declined market share in Singapore resulted from the new generation units of other power plant companies, the decreased electricity sold and the reduced average conversion rate between Singaporean dollar and RMB.

The following table sets forth the average tariff rate of the Company's power plants, as well as percentage changes from 2011 to 2012.

Power Plant	Average tariff rate (VAT inclusive) (RMB/MWh)			Change
	2012	2011		
<b>Liaoning Province</b>				
Dalian	409.18	382.84	6.88	%
Dandong	405.73	383.08	5.91	%
Yingkou	409.35	394.82	3.68	%
Yingkou Co-generation	397.59	391.92	1.45	%
Wafangdian Wind Power	610.82	610.00	0.13	%
Suzihe Hydropower	364.25	N/A	N/A	
Changtu Wind Power	610.00	N/A	N/A	
<b>Inner Mongolia Autonomous Region</b>				
Huade Wind Power	520.00	528.45	(1.60)	%
<b>Hebei Province</b>				
Shang'an	434.63	408.20	6.47	%
Kangbao Wind Power	536.72	N/A	N/A	
<b>Gansu Province</b>				
Pingliang	336.12	306.36	9.71	%
Jiuquan Wind Power	520.60	N/A	N/A	
<b>Beijing Municipality</b>				
Beijing Co-generation	494.00	481.35	2.63	%
<b>Tianjin Municipality</b>				
Yangliuqing Co-generation	438.03	414.23	5.75	%
<b>Shanxi Province</b>				
Yushe	396.56	362.65	9.35	%
Zuoquan	383.25	N/A	N/A	
<b>Shandong Province</b>				
Dezhou	468.90	443.20	5.80	%
Jining	459.63	422.91	8.68	%
Xindian II	453.75	426.77	6.32	%
Weihai	461.89	435.52	6.05	%
Rizhao Phase II	446.90	420.06	6.39	%
Zhanhua Co-generation	450.55	419.76	7.34	%
<b>Henan Province</b>				
Qinbei	441.43	412.75	6.95	%
<b>Jiangsu Province</b>				
Nantong	441.25	425.97	3.59	%
Nanjing	442.17	442.54	(0.08)	%)
Taicang I	430.43	424.09	1.49	%
Taicang II	443.88	429.44	3.36	%
Huaiyin II	458.25	438.72	4.45	%
Jinling	466.14	459.37	1.47	%
Qidong Wind Power	542.65	519.08	4.54	%

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Shanghai Municipality				
Shidongkou I	457.18	441.11	3.64	%
Shidongkou II	442.13	422.25	4.71	%
Shanghai CCGT	674.00	665.00	1.35	%
Shidongkou Power Generation	463.85	457.20	1.45	%
Chongqing Municipality				
Luohuang	448.95	410.86	9.27	%
Zhejiang Province				
Yuhuan	491.37	462.49	6.24	%
Hunan Province				
Yueyang	506.87	465.74	8.83	%
Xiangqi Hydropower	390.00	N/A	N/A	
Hubei Province				
Enshi Hydro	360.00	N/A	N/A	
Jiangxi Province				
Jinggangshan	483.90	447.05	8.24	%
Fujian Province				

Fuzhou	445.64	425.38	4.76	%
Guangdong Province				
Shantou Coal-fired	542.97	522.91	3.84	%
Haimen	529.06	498.77	6.07	%
Yunnan Province				
Diandong Energy	359.58	345.43	4.10	%
Diandong Yuwang	361.70	345.31	4.75	%
Singapore				
Tuas Power	1,206.23	1,146.88	5.17	%

#### Tax and levies on operations

Tax and levies on operations mainly consists of taxes associated with value-added tax surcharges. According to relevant administrative regulations, these surcharges include City Construction Tax and Education Surcharges calculated at prescribed percentages on the amounts of the value-added tax paid. For the year ended December 31, 2012, the tax and levies on operations amounted to RMB672 million.

#### Operating expenses

For the year ended December 31, 2012, the total operating expenses of the Company and its subsidiaries was RMB116.338 billion, representing a 6.32% decrease from RMB124.189 billion for the year ended December 31, 2011.

The operating costs and expenses in domestic power plants of the Company decreased by RMB6.723 billion, which was primarily attributable to the reduced market price of coal in the PRC and effective cost controls of the Company. The operating expenses of Singapore operations decreased by RMB1.129 billion for the year ended December 31, 2012 from last year. The decrease was mainly because of the decreased purchase of electricity as a result of the intense competition, increase of newly operated generation units of other power plant companies and declined retail electricity sold in Singapore.

#### Fuel

Fuel cost represents the majority of the operating expense for the Company and its subsidiaries. For the year ended December 31, 2012, fuel cost of the Company and its subsidiaries decreased by 9.05% to RMB82.355 billion from RMB90.546 billion for the year ended December 31, 2011. The fuel costs of domestic power plants decreased by RMB8.524 billion from last year, which was primarily attributable to the reduced market price of coal in the PRC and effective cost controls of the Company.

For the year ended December 31, 2012, the average unit price (excluding tax) of fuel coal was RMB526.25 per ton, representing a 4.09% decrease from RMB548.72 per ton for the year ended December 31, 2011. The fuel cost per unit of power sold by the Company's domestic coal-fired power plant decreased by 7.60% from RMB270.37/MWh in 2011 to RMB249.82/MWh in 2012.

Fuel costs of Singapore operations remained generally the same as last year.

#### Maintenance

For the year ended December 31, 2012, the maintenance expenses of the Company and its subsidiaries amounted to RMB2.847 billion, representing a 12.56% increase from RMB2.529 billion for the year ended December 31, 2011.

The operation of new generating units accounted for approximately RMB229 million of the increase. The maintenance expenses of Singapore operations decreased by approximately RMB50 million.

#### Depreciation

For the year ended December 31, 2012, depreciation expenses of the Company and its subsidiaries decreased by 7.03% to RMB11.033 billion from RMB11.867 billion for the year ended December 31, 2011. The decrease of the depreciation expenses within the PRC was primarily attributable to the Company's change in the estimated useful life and estimated residual value of its property, plant and equipment that are not fully depreciated within the PRC since the beginning of 2012. The depreciation expenses of the operations in Singapore remained generally the same as in 2011.

#### Labor

Labor costs consist of salaries to employees and contributions payable to relevant state authorities for employees' housing fund, medical insurance, pension and unemployment insurance, as well as training costs and others. For the year ended December 31, 2012, the labor costs of the Company and its subsidiaries amounted to RMB5.112 billion, representing a 10.62% increase from RMB4.622 billion for the year ended December 31, 2011. The increase was mainly attributable to the operation of new generation units of the Company, the higher level of Chinese social insurance standards, and the increase of employees' performance-related salaries. The operation of new generating units contributed RMB127 million of the increase. The labor costs of Singapore operations increased by approximately RMB1 million.

Other operating expenses (including purchase of electricity and service fees paid to HIPDC)



Other operating expenses include environmental protection expenses, land fee, insurance premiums, office expenses, amortization, Tuas Power's purchase of electricity and others. For the year ended December 31, 2012, other operating expenses (including purchase of electricity) of the Company and its subsidiaries was RMB14.990 billion, representing an increase of RMB364 million from RMB14.626 billion for the year ended December 31, 2011. The operations of new generating units contributed approximately RMB219 million to the increase of other operating expenses for the year ended December 31, 2012. Other operating expenses of Singapore operations decreased by RMB1.419 billion, of which purchase of electricity decreased by RMB1.511 billion, which was mainly because of the decreased retail electricity cost as a result of the declined retail electricity sold in Singapore.

#### Financial expenses

Financial expenses consist of interest expense, bank charges and net exchange differences.

#### Interest expense

For the year ended December 31, 2012, the interest expense of the Company and its subsidiaries was RMB8.897 billion, representing a 15.01% increase from RMB7.736 billion for the year ended December 31, 2011. The increase of interest expenses of domestic operations was primarily attributable to the carry-over effect of RMB borrowing interest rates adjustment in 2011, and expensing instead of capitalizing interest upon commercial operation of new generating units. The operation of new generation units accounted for RMB0.8 billion of the increase. The interest expenses of Singapore operations were RMB481 million, which is generally the same as the year ended December 31, 2011.

#### Net exchange differences and bank charges

For the year ended December 31, 2012, the exchange losses plus bank charges of the Company and its subsidiaries amounted to RMB167 million, representing a net loss of RMB243 million compared with the net gains of RMB76 million for the year ended December 31, 2011. For the year ended December 31, 2012, the Company and its subsidiaries incurred exchange losses of RMB102 million, representing a net loss of RMB249 million from the net gains of RMB147 million for the year ended December 31, 2011. The head office of the Company recorded exchange gains of RMB8 million, representing a decrease of RMB221 million from the exchange gains of RMB229 million for the year ended December 31, 2011. The reasons for the decrease were the declined U.S. loan balance and slower declined conversion rate between U.S. dollars and RMB. The net exchange differences and bank charges of Singapore operations decreased by approximately RMB85 million.

#### Share of profit of associates / jointly control entities

For the year ended December 31, 2012, the share of profit of associates / jointly control entities was RMB622 million, representing a RMB82 million decrease from RMB704 million for the year ended December 31, 2011. The decrease was primarily due to the the overall decrease of associates' profit in 2012.

#### Income Tax Expense

For the year ended December 31, 2012, the Company and its subsidiaries recorded an income tax expense of RMB2.510 billion, representing an increase of RMB1.641 billion or 188.90% from RMB869 million for the year ended December 31, 2011. The income tax expense of domestic operations increased by RMB1.737 billion, which was primarily due to the increase of profit before income tax expense. The income tax expense of Singapore operations decreased by approximately RMB96 million, which was mainly attributable to the decrease of profit before income tax expense.

Net Profit, Profit attributable to the equity holders of the Company and Non-controlling interests

For the year ended December 31, 2012, the Company and its subsidiaries achieved a net profit of RMB6.366 billion, representing an increase of RMB5.185 billion or 438.87% from RMB1.181 billion for the year ended December 31, 2011. For the year ended December 31, 2012, the profit attributable to equity holders of the Company was RMB5.512 billion, representing an increase of RMB4.331 billion from RMB1.181 billion for the year ended December 31, 2011. The profit attributable to equity holders of the Company from domestic operations increased by RMB4.572 billion, which was mainly due to the carry-over effect of domestic electricity tariff adjustment in 2011, the decrease of coal market price in 2012, and effective cost controls of the Company. The profit attributable to equity holders of the Company from Singapore operations was RMB1.041 billion, representing a decrease of RMB241 million from the same period last year. This was primarily because of the decreased market share and electricity sold within Singapore due to the new generation units of other power plant companies in Singapore.

The profit attributable to non-controlling interests of the Company increased RMB1 million for the year ended December 31, 2011 to RMB854 million for the year ended December 31, 2012. This was mainly attributable to the increased profit of the Company.

Year ended December 31, 2011 compared with year ended December 31, 2010

	For the Year Ended December		
	31		
	2011	2010	Increased/ (Decreased)
	RMB'000	RMB'000	%
Operating revenue	133,420,769	104,318,120	28
Tax and levies on operations	(484,019 )	(147,641 )	228
Operating expenses			
Fuel	(90,546,192 )	(67,891,547 )	33
Maintenance	(2,528,850 )	(2,302,018 )	10
Depreciation	(11,866,705 )	(10,447,021 )	14
Labor	(4,621,667 )	(4,067,420 )	14
Service fees on transmission and transformer facilities of HIPDC transformer HIPDC	(140,771 )	(140,771 )	-
Purchase of electricity	(8,613,264 )	(5,557,219 )	55
Others	(5,871,699 )	(5,135,492 )	14
Total operating expenses	(124,189,148)	(95,541,488)	30
Profit from operations	8,747,602	8,628,991	1
Interest income	166,183	89,026	87
Financial expenses, net			
Interest expense	(7,736,186 )	(5,282,549 )	46
Exchange gain and bank charges , net	76,474	87,964	(13)
Total financial expenses, net	(7,659,712 )	(5,194,585 )	47
Share of profits of associates / jointly controlled entities	703,561	568,794	24
(Loss) / Gain on fair value changes of financial assets / liabilities	(727 )	11,851	(106)
Other investment income	93,460	60,013	56
Profit before income tax expense	2,050,367	4,164,090	(51)
Income tax expense	(868,927 )	(842,675 )	3
Net Profit	1,181,440	3,321,415	(64)
Attributable to:			
Equity holders of the Company	1,180,512	3,347,985	(65)
Non-controlling interests	928	(26,570 )	(103)
	1,181,440	3,321,415	(64)

The Company completed its acquisitions of Diandong Energy, Diandong Yuwang, Luoyuanwan Harbor, Luoyuanwan Pier, Ludao Pier, Fushun Suzihe Hydropower and Enshi Hydropower in 2011. These seven entities are consolidated into the consolidated financial statements of the Company for the year ended December 31, 2011.

For the year ended December 31, 2011, the Company's total power generation on a consolidated basis amounted to 313.554 billion kWh, representing a 22.03% increase from the year ended December 31, 2010. The increase in the Company's power generation was mainly attributable to the newly acquired power plants and the commencement of new generating units.

The power generation of the Company's domestic power plants for the year ended December 31, 2011 is listed below (in billion kWh):

Domestic Power Plant	Power generation in 2011	Power generation in 2010	Change	
Liaoning Province				
Dalian	6.805	7.912	(13.99	%)
Dandong	3.204	3.864	(17.08	%)
Yingkou	8.678	9.850	(11.09	%)
Yingkou Co-generation	3.137	3.669	(14.50	%)
Wafangdian Wind Power	0.066	N/A	N/A	
Inner Mongolia Autonomous Region				
Huade Wind Power	0.136	0.130	4.62	%
Hebei Province				
Shang'an	14.473	14.098	2.66	%
Gansu Province				
Pingliang	12.214	8.945	36.55	%
Beijing Municipality				

Beijing Co-generation	4.891	4.704	3.89	%
Tianjin Municipality				
Yangliuqing Co-generation	6.956	6.439	8.03	%
Shanxi Province				
Yushe	4.180	4.889	(14.50)	%
Shandong Province				
Dezhou	14.518	16.143	(10.07)	%
Jining	4.852	5.271	(7.95)	%
Weihai	11.128	4.212	164.20	%
Xindian	3.313	3.657	(9.41)	%
Rizhao Phase II	8.173	8.152	0.26	%
Zhanhua Co-generation(1)	1.587	0.206	670.39	%
Henan Province				
Qinbei	15.146	13.961	8.49	%
Jiangsu Province				
Nantong	9.086	8.643	5.13	%
Nanjing	3.981	3.759	5.91	%
Taicang	11.373	11.624	(2.16)	%
Huaiyin	7.370	8.048	(8.42)	%
Jinling CCGT	3.740	2.434	53.66	%
Jinling Coal-fired	11.884	6.458	84.02	%
Qidong Wind Power	0.286	0.214	33.64	%
Shanghai Municipality				
Shidongkou I	7.681	7.566	1.52	%
Shidongkou II	7.412	6.510	13.86	%
Shidongkou Power Generation	6.862	5.002	37.19	%
Shanghai CCGT	1.266	1.650	(23.27)	%
Chongqing Municipality				
Luohuang	15.560	12.535	24.13	%
Zhejiang Province				
Changxing(2)	N/A	1.077	N/A	
Yuhuan	26.768	23.440	14.20	%
Hunan Province				
Yueyang	10.679	5.786	84.57	%
Hubei Province				
Enshi Hydro(3)	0.0001	N/A	N/A	
Jiangxi Province				
Jinggangshan	9.485	8.252	14.94	%
Fujian Province				
Fuzhou	16.905	8.802	92.06	%
Guangdong Province				
Shantou Coal-fired	7.085	7.036	0.70	%
Haimen	15.213	12.012	26.65	%
Yunnan Province				
Diandong Energy(4)	11.648	10.962	6.26	%
Diandong Yuwang(4)	5.813	6.185	(6.02)	%

Notes:

- (1) Zhanhua Co-generation has been consolidated into the consolidated financial statements of the Company since December 2010. Its power generation in 2010 listed above is its power generation in December 2010.
- (2) Changxing Power Plant in Zhejiang Province has been closed.
- (3) Enshi Hydropower in Hubei Province has been consolidated into the consolidated financial statements of the Company since December 30, 2011.
- (4) The power generation of Diandong Power Plant and Yuwang Power Plant for 2010 are for reference only and not accounted in the total power generation of the Company for 2010.

In 2011, the power generated by Singapore operations accounted for 27.12% of the total power generated in Singapore, increased by 1.91 percentage points from 2010.

In respect of the tariff, the average tariff of domestic power plants for the year ended December 31, 2011 was RMB430.10 per MWh, an increase of RMB8.44 per MWh from the year ended December 31, 2010.

In respect of fuel supply and cost controls, the increase of coal price and power generation contributed to an increase in fuel cost of the Company. Compared to the last year, the unit fuel cost of power sold of the Company's domestic power plants increased by 9.24% to RMB270.37 per MWh.

Combining the foregoing factors, the operating revenue of the Company and its subsidiaries for the year ended December 31, 2011 increased by 27.90% from last year. For the year ended December 31, 2011, the Company and its subsidiaries recorded a net profit attributable to equity holders of the Company of RMB1.181 billion, decreased by 64.74% compared to the net profit attributable to equity holders of the Company of RMB3.348 billion for the year ended December 31, 2010.

For the year ended 31 December 2011, the profit attributable to equity holders of the Company from domestic operations was RMB-0.101 billion, decreased by RMB2.758 billion compared to last year. The decrease was primarily due to the increase in fuel price in China and the increase of RMB borrowing interest rates. The increase of fuel price was mainly because of the increase of coal demand in the market and the increase of coal price. The increase of RMB borrowing interest rates was resultant from consecutive raise of benchmark lending interest rates by the PBOC during 2010 and 2011.

For the year ended 31 December 2011, the profit attributable to equity holders of the Company from Singapore operations was RMB1.282 billion, increased by 85.45% compared to last year. This is mainly because the constrained supply of natural gas in Singapore contributed to higher demand for electricity that caused temporary higher electricity price, resulting in higher profit derived compared to last year.

#### Operating revenue

Operating revenue mainly consists of revenue from power sold. For the year ended December 31, 2011, the consolidated operating revenue of the Company and its subsidiaries amounted to RMB133.421 billion, representing a 27.90% increase from RMB104.318 billion for the year ended December 31, 2010. The increase in operating revenue of domestic operations was primarily attributable to the increased power generations and expanded operations. The operation of new generating units contributed approximately RMB14.598 billion to the increase. The operating revenue of Singapore operations increased by approximately RMB6.195 billion for the year ended December 31, 2011 from last year, which is mainly because of the temporary higher power tariff caused by higher demand for power due to the constrained supply of natural gas.

The following table sets forth the average tariff rate of the Company's power plants, as well as percentage changes from 2010 to 2011.

Power Plant	Average tariff rate (VAT inclusive) (RMB/MWh)			Change
	2011	2010		
Liaoning Province				
Dalian	382.84	375.44	1.97	%
Dandong	383.08	376.61	1.72	%
Yingkou	394.82	387.78	1.82	%
Yingkou Co-generation	391.92	386.29	1.46	%
Wafangdian Wind Power	610.00	N/A	N/A	
Inner Mongolia Autonomous Region				
Huade Wind Power	528.45	510.00	3.62	%
Hebei Province				

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Shang'an	408.20	378.59	7.82	%
Gansu Province				
Pingliang	306.36	275.91	11.04	%
Beijing Municipality				
Beijing Co-generation	481.35	474.21	1.50	%
Tianjin Municipality				
Yangliuqing Co-generation	414.23	407.08	1.76	%
Shanxi Province				
Yushe	362.65	334.11	8.54	%
Shandong Province				
Dezhou	443.20	417.68	6.11	%
Jining	422.91	401.53	5.32	%
Xindian II	426.77	405.67	5.20	%
Weihai	435.52	456.31	(4.56)	%)
Rizhao Phase II	420.06	397.60	5.65	%
Zhanhua Co-generation	419.76	397.40	5.63	%
Henan Province				
Qinbei	412.75	379.68	8.71	%
Jiangsu Province				
Nantong	425.97	409.06	4.14	%



Nanjing	442.54	414.19	6.84	%
Taicang I	424.09	415.37	2.10	%
Taicang II	429.44	414.13	3.70	%
Huaiyin II	438.72	443.17	(1.01)	%)
Jinling	459.37	453.38	1.32	%
Qidong Wind Power	519.08	487.70	6.43	%
Shanghai Municipality				
Shidongkou I	441.11	435.52	1.28	%
Shidongkou II	422.25	416.36	1.41	%
Shanghai CCGT	665.00	662.00	0.45	%
Shidongkou Power Generation	457.20	445.70	2.58	%
Chongqing Municipality				
Luohuang	410.86	382.70	7.36	%
Zhejiang Province				
Changxing	N/A	519.39	N/A	
Yuhuan	462.49	459.86	0.57	%
Hunan Province				
Yueyang	465.74	435.71	6.89	%
Hubei Province				
Enshi Hydro	437.03	N/A	N/A	
Jiangxi Province				
Jinggangshan	447.05	413.30	8.17	%
Fujian Province				
Fuzhou	425.38	413.22	2.94	%
Guangdong Province				
Shantou Coal-fired	522.91	521.34	0.30	%
Haimen	498.77	496.33	0.49	%
Yunnan Province				
Diandong Energy	345.43	N/A	N/A	
Diandong Yuwang	345.31	N/A	N/A	
Singapore				
Tuas Power	1,146.88	927.89	23.60	%

#### Tax and levies on operations

Tax and levies on operations mainly consists of taxes associated with value-added tax surcharges. According to relevant administrative regulations, these surcharges include City Construction Tax and Education Surcharges calculated at prescribed percentages on the amounts of the value-added tax paid. These surcharges also applied to direct foreign investments entities that have been approved by the government since December 2010, and certain power plants of the Company are subject to these taxes since then. For the year ended December 31, 2011, the tax and levies on operations amounted to RMB484 million.

#### Operating expenses

For the year ended December 31, 2011, the total operating expenses of the Company and its subsidiaries was RMB124.189 billion, representing a 29.98% increase from RMB95.541 billion for the year ended December 31, 2010.

The increase of operating expenses of domestic operations was primarily attributable to the increase in fuel prices, expanded operations and the increase of power generation. The operation of new generating units contributed

RMB13.986 billion to the increase in operating expenses. The operating expenses of Singapore operations increased by RMB5.433 billion for the year ended December 31, 2011 from last year. The increase was mainly because of the rise of the purchase price for natural gas and oil in Singapore due to global oil price increase, increase of fuel costs caused by the increase of power generation, and increase of power purchase costs as a result of the increase of retail electricity sold.

#### Fuel

Fuel cost represents the majority of the operating expense for the Company and its subsidiaries. For the year ended December 31, 2011, fuel cost of the Company and its subsidiaries increased 33.37% to RMB90.546 billion from RMB67.892 billion for the year ended December 31, 2010. The increase of fuel cost of domestic power plants was primarily attributable to the increase in fuel price and power generation. The operation of new generating units accounted for RMB11.179 billion of the increase in fuel cost.

For the year ended December 31, 2011, the average unit price (excluding tax) of fuel coal was RMB548.72 per ton, representing a 6.09% increase from RMB517.20 per ton for the year ended December 31, 2010. Due to the increase in coal price, the fuel cost per unit of power sold by the Company's domestic power plants increased 9.24% to RMB270.37 per MWh.

Fuel costs of Singapore operations increased by approximately RMB2.186 billion for the year ended December 31, 2011 from last year, which was mainly attributable to the rise of purchase price for natural gas and oil in Singapore due to global oil price increase, as well as the increase of power generation.

#### Maintenance

For the year ended December 31, 2011, the maintenance expenses of the Company and its subsidiaries amounted to RMB2.529 billion, representing a 9.85% increase from RMB2.302 billion for the year ended December 31, 2010. The operation of new generating units accounted for approximately RMB234 million of the increase. The maintenance expenses of Singapore operations increased by approximately RMB40 million.

#### Depreciation

For the year ended December 31, 2011, depreciation expenses of the Company and its subsidiaries increased by 13.59% to RMB11.867 billion from RMB10.447 billion for the year ended December 31, 2010. The increase was primarily attributable to the Company's expansion.

#### Labor

Labor costs consist of salaries to employees and contributions payable to relevant state authorities for employees' housing fund, medical insurance, pension and unemployment insurance, as well as training costs and others. For the year ended December 31, 2011, the labor costs of the Company and its subsidiaries amounted to RMB4.622 billion, representing a 13.63% increase from RMB4.067 billion for the year ended December 31, 2010. The increase was mainly attributable to the expanded operations and commencement of operations of new generating units of the Company. The operation of new generating units contributed RMB296 million of the increase. The labor costs of Singapore operations increased by approximately RMB39 million.

#### Other operating expenses (including purchase of electricity and service fees paid to HIPDC)

Other operating expenses include environmental protection expenses, land fee, insurance premiums, office expenses, amortization, Tuas Power's purchase of electricity and others. For the year ended December 31, 2011, other operating expenses (including purchase of electricity and service fees paid to HIPDC) of the Company and its subsidiaries was RMB14.626 billion, representing a 35.00% increase from RMB10.833 billion for the year ended December 31, 2010. The operations of new generating units contributed approximately RMB588 million to the increase of other operating expenses for the year ended December 31, 2011. Other operating expenses of Singapore operations increased by RMB3.124 billion, in which purchase of electricity increased by RMB3.056 billion, which was mainly caused by the increase of power purchase quantity and unit price.

#### Financial expenses

Financial expenses consist of interest expense, bank charges and net exchange differences.

#### Interest expense

For the year ended December 31, 2011, the interest expense of the Company and its subsidiaries was RMB7.736 billion, representing a 46.45% increase from RMB5.283 billion for the year ended December 31, 2010. The increase of interest expenses of domestic operations was primarily attributable to the increase of RMB borrowing interest rates, expensing instead of capitalizing interest upon commercial operation of new generating units, and expanded operations of the Company. The operation of new generation units accounted for RMB1.390 billion of the increase.

The interest expenses of Singapore operations increased by approximately RMB54 million.

#### Net exchange differences and bank charges

For the year ended December 31, 2011, the exchange gains less bank charges of the Company and its subsidiaries amounted to RMB76 million, decreased by RMB12 million compared to RMB88 million for the year ended December 31, 2010. For the year ended December 31, 2011, the exchange gains of the Company and its subsidiaries was RMB147 million, representing an increase of approximately RMB13 million from RMB134 million for the year ended December 31, 2010. The net exchange differences and bank charges of Singapore operations increased by approximately RMB23 million.

#### Share of profit of associates / jointly control entities

For the year ended December 31, 2011, the share of profit of associates / jointly control entities was RMB704 million, a RMB135 million increase from RMB569 million for the year ended December 31, 2010. The increase was primarily due to the overall increase of the profit of associates and jointly control entities for the year ended December 31, 2011, which includes profit of RMB 76 million from investment in Time Shipping.

#### Income Tax Expense

For the year ended December 31, 2011, the Company and its subsidiaries recorded an income tax expense of RMB869 million, representing an increase by 3.12% from RMB843 million for the year ended December 31, 2010. The income tax expense of domestic operations decreased by RMB109 million which was primarily due to the

decrease of profit before income tax expense. The income tax expense of Singapore operations increased by approximately RMB136 million, which was mainly attributable to the increase of profit before income tax expense.

The increase in weighted average effective tax rate was primarily attributable to decrease in tax credit relating to purchases of domestically manufactured equipment and increase in tax losses of certain subsidiaries with no deferred income tax assets recognized.

Net Profit, Profit attributable to the equity holders of the Company and Non-controlling interests

For the year ended December 31, 2011, the Company and its subsidiaries achieved a net profit of RMB1.181 billion, representing a decrease of RMB2.140 billion from RMB3.321 billion for the year ended December 31, 2010. For the year ended December 31, 2011, the profit attributable to equity holders of the Company was RMB1.181 billion, representing a decrease of RMB2.167 billion from RMB3.348 billion for the year ended December 31, 2010. The profit attributable to equity holders of the Company from domestic operations decreased by RMB2.758 billion, which was mainly due to the increase of fuel price and RMB borrowing interest rates. The profit attributable to equity holders of the Company from Singapore operations increased by RMB591 million to RMB1.282 billion. This was primarily because the constrained supply of natural gas in Singapore contributed to higher demand for electricity and temporary higher electricity price, therefore resulting in higher profit compared to last year.

The profit attributable to non-controlling interests of the Company was RMB1 million for the year ended December 31, 2011, compared to a loss of RMB27 million for the year ended December 31, 2010. This was mainly attributable to the fact that the companies in which the Company holds low shareholding performed better than those in which the Company holds high shareholding.

## C. Financial position

### General

The assets and liabilities of the Company and its subsidiaries experienced significant change during the year 2012, due to continued investments in construction projects.

### Assets

As of December 31, 2012, total assets of the Company and its subsidiaries were RMB259.100 billion, remaining generally the same compared with RMB257.416 billion as of December 31, 2011. Non-current assets increased by 0.91% to RMB223.014 billion, primarily due to the continued investment in associates and jointly controlled entities. Current assets decreased by 0.91% to RMB36.086 billion, primarily due to the decrease of inventories. Total assets of the domestic power plants increased by RMB192 million to RMB226.814 billion.

As of December 31, 2012, total assets of Singapore operations were RMB32.287 billion. Non-current assets increased by 11.58% to RMB27.065 billion, which was primarily attributable to increased investment in construction projects. Current assets decreased by 20.13% to RMB5.221 billion, which was mainly due to the decreased accounts receivable balance as a result of declined revenue.

### Liabilities

As of December 31, 2012, total liabilities of the Company and its subsidiaries were RMB193.140 billion, representing generally the same level from RMB197.858 billion as of December 31, 2011.

As of December 31, 2012, the interest-bearing debts of the Company and its subsidiaries totaled approximately RMB167.398 billion. The interest-bearing debts consisted of long-term loans (including those maturing within a year), long-term bonds, short-term borrowings and short-term bonds. The interest-bearing debts denominated in foreign currencies were approximately RMB4.994 billion.

As of December 31, 2012, total liabilities of Singapore operations were RMB19.458 billion, representing generally the same level with RMB19.213 billion as of December 31, 2011.

#### Shareholders' equity

Excluding the impact of profit and profit appropriations, the equity of the Company and its subsidiaries increased at the end of the year compared to the beginning of the year, resulting from the post-tax impact of increased fair value of tradable stocks held by the Company amounting to RMB99 million, the post-tax impact of decreased fair value for cash flow hedge of the domestic and Singapore operations amounting to RMB325 million, and the increase of RMB535 million in currency translation differences as well as the increase of RMB1,155 million in non-controlling interests.

#### Major financial position ratios

	2012	2011
Current ratio	0.39	0.38
Quick ratio	0.31	0.30
Ratio of liability and shareholders' equity	3.44	3.89
Multiples of interest earned	1.86	1.14

Formula of the financial ratios:

Current ratio = balance of current assets as of year end / balance of current liabilities as of year end

Quick ratio = (balance of current assets as of year end - inventories as of the year end) / balance of current liabilities as of year end

Ratio of liabilities and shareholders' equity = balance of liabilities as of year end / balance of shareholders' equity (excluding non-controlling interests) as of year end

Multiples of interest earned = (profit before income tax expense + interest expense) / interest expenditure (inclusive of capitalized interest)

The current ratio and quick ratio remained at relatively low level as of December 31, 2012 and 2011, and increased slightly at the year end of 2012 from the year end of 2011. The decrease in the ratio of liabilities and shareholders' equity at the year end of 2012 from the year end of 2011 was primarily due to increased shareholders' equity as a result of profit increase of the Company. The multiples of interest earned increased, primarily attributable to the increase of net profit for the year ended December 31, 2012.

#### D. Liquidity and cash resources

The primary sources of funding for the Company and its subsidiaries have been cash provided by internal funds from operating activities, short-term and long-term loans and proceeds from issuances of bonds, and the primary use of funds have been for working capital, capital expenditure and repayments of short-term and long-term borrowings.

As of December 31, 2012, net current liabilities of the Company and its subsidiaries were approximately RMB57.5 billion. Based on the Company's proven financing record, readily available banking facilities and sound credibility, the Company believes it is able to duly repay outstanding debts, obtain long-term financing and secure funding necessary for its operations. The Company has also capitalized on its good credit record to make short-term borrowings at relatively lower interest rates, thus reducing its interest expenses.

#### Cash flows from operating activities

	For the Year Ended December 31,		
	2012	2011	2010
	RMB'000	RMB'000	RMB'000
Cash flows from operating activities			
Profit before income tax expense	8,876,785	2,050,367	4,164,090
Non-cash items adjustments	20,430,486	18,873,447	14,998,694
Changes in working capital	(175,854 )	533,905	(39,532 )
Interest received	109,635	95,951	54,738
Income tax paid	(2,312,970 )	(604,515 )	(1,111,266 )
Net cash provided by operating activities	26,928,082	20,949,155	18,066,724

Net cash provided by operating activities is the main source of cash for the Company. For the year ended December 31, 2012, net cash provided by operating activities of the Company and its subsidiaries was RMB26.928 billion, of which RMB2.185 billion was from its operating activities in Singapore.

## Cash flows used in investing activities

	For the year ended December 31,		
	2012 RMB'000	2011 RMB'000	2010 RMB'000
Cash flows used in investing activities			
Purchase of property, plant and equipment	(15,474,614)	(16,673,632)	(20,704,224)
Proceeds from disposals of property, plant and equipment	949,469	85,601	105,816
Prepayments of land use rights	(81,382 )	(68,370 )	(2,879 )
Increase in other non-current assets	(51,615 )	(46,657 )	(24,614 )
Cash dividend received	728,754	447,654	315,205
Capital injections in associates	(947,574 )	(995,804 )	(533,630 )
Cash paid for acquiring available-for-sale financial assets	(500,000 )	(310,000 )	(12,113 )
Cash paid for acquiring trading securities	-	(101,707 )	-
Cash consideration paid for acquisitions	(149,048 )	(4,121,280 )	(850,763 )
Cash consideration prepaid for acquisitions	-	-	(4,178,214 )
Cash from acquisitions of subsidiaries	-	349,245	90,524
Cash paid for acquiring associates	-	(302,250 )	(174,000 )
Cash paid for acquiring a jointly controlled entity	-	-	(1,058,000 )
Short-term loan repayment from an associate	100,000	-	-
Others	116,406	72,369	46,354
Net cash used in investing activities	(15,309,604)	(21,664,831)	(26,980,538)



Net cash used in investing activities amounted to approximately RMB15.310 billion, RMB21.665 billion and RMB26.981 billion in 2012, 2011 and 2010. The cash used in investing activities in 2012, 2011 and 2010 was mainly attributable to the acquisitions and capital expenditure for construction projects.

#### Cash flows from financing activities

	For the year ended December 31,		
	2012	2011	2010
	RMB'000	RMB'000	RMB'000
Cash flows from financing activities			
Issuance of short-term bonds	34,930,000	9,959,600	9,959,850
Repayments of short-term bonds	(11,000,000)	(5,000,000 )	(15,000,000)
Drawdown of short-term loans	48,294,295	63,517,251	63,190,307
Repayments of short-term loans	(64,832,425)	(64,216,571)	(44,611,278)
Drawdown of long-term loans	19,425,661	22,877,988	9,215,500
Repayments of long-term loans	(32,483,848)	(20,677,814)	(11,682,182)
Proceed received from issuance of shares	-	-	10,280,169
Issuance of long-term bonds	4,985,000	4,985,000	-
Repayment of a loan from former shareholder of a subsidiary	-	(600,000 )	-
Interest paid	(8,941,814 )	(8,144,957 )	(5,997,296 )
Net capital injection from non-controlling interests of the subsidiaries	665,333	219,215	283,521
Government grants	266,949	78,869	50,410
Dividends paid to shareholders of the Company	(702,867 )	(2,807,084 )	(2,528,050 )
Dividends paid to non-controlling interest of the subsidiaries	(460,607 )	(120,130 )	(249,043 )
Cash paid for acquisition of non-controlling interests of a subsidiary	-	(4,266 )	-
Others	37,423	2,547	151,415
Net cash (used in) / provided by financing activities	(9,816,900 )	69,648	13,063,323

Net cash outflow used in financing activities in 2012 amounted to RMB9.817 billion, which was primarily attributable to the decreased drawdown of loans in 2012, as a result of the increase in cash provided by operating activities.

Net cash inflow provided by financing activities in 2011 amounted to RMB69.648 million primarily because (i) the proceeds from loans and short-term bonds exceeded repayments of loans and short-term bonds by approximately RMB5.86 billion and (ii) the proceeds from issuance of long-term bonds amounted to RMB4.99 billion and (iii) net capital injection from minority shareholders of the subsidiaries amounted to RMB0.219 billion, the net cash inflow was partially offset by the dividends and interest of approximately RMB11.072 billion.

Net cash inflow provided by financing activities in 2010 amounted to RMB13.063 billion primarily because (i) the proceeds from loans and short-term bonds exceeded repayments of loans and short-term bonds by approximately RMB11.07 billion and (ii) the proceeds from issuance of shares amounted to RMB10.28 billion and (iii) net capital injection from minority shareholders of the subsidiaries amounted to RMB0.284 billion, the net cash inflow was partially offset by the dividends and interest of approximately RMB8.774 billion.

#### Cash and cash equivalents

	For the year ended December 31,		
	2012	2011	2010
	RMB'000	RMB'000	RMB'000

Effect of exchange rate	151,027	(227,627 )	49,946
Net increase / (decrease) in cash and cash equivalents	1,952,605	(873,655 )	4,199,455
Cash and cash equivalents, beginning of the year	8,552,782	9,426,437	5,226,982
Cash and cash equivalents as of the end of the year	10,505,387	8,552,782	9,426,437

As of December 31, 2012, the cash and cash equivalents of the Company and its subsidiaries denominated in RMB, Singapore dollar, U.S. dollar, Japanese Yen, and HK dollar were RMB7.934 billion, RMB2.143 billion, RMB0.546 billion, RMB0.4 million, and RMB0.5 million, respectively.

As of December 31, 2011, the cash and cash equivalents of the Company and its subsidiaries denominated in RMB, Singapore dollar, U.S. dollar, Japanese Yen, and HK dollar were RMB5.040 billion, RMB2.936 billion, RMB0.694 billion, RMB0.25 million, and RMB0.001million, respectively.

As of December 31, 2010, the cash and cash equivalents of the Company and its subsidiaries denominated in RMB, Singapore dollar, U.S. dollar, Japanese Yen, and HK dollar were RMB4.362 billion, RMB1.888 billion, RMB1.157 billion, RMB7 million, and RMB2.012 billion, respectively.

## Capital expenditure and cash resources

## Capital expenditures on acquisitions

The Company and its subsidiaries made no significant capital expenditure for acquisition in 2012.

## Capital expenditures on construction and renovation projects

The capital expenditures for the year ended December 31, 2012 were RMB15.608 billion, mainly used in construction and renovation projects, including RMB1.167 billion for Qinbei expansion project, RMB0.647 billion for Diandong Energy expansion project, RMB0.576 billion for Zuoquan Power expansion project, RMB0.521 billion for Weihai expansion project, RMB0.470 billion for Jiuquan Wind Power project, RMB0.774 billion for Haimen power project, RMB0.430 billion for Jinling Coal-fired project, RMB0.286 billion for Shanghai Power expansion project, RMB0.397 billion for Beijing Co-generation expansion project, RMB0.360 billion for Taicang Harbor expansion project, RMB0.254 billion for Changxing expansion project, RMB0.233 billion for Dalian Power expansion project, RMB0.282 billion for Haimen Harbor expansion project, RMB0.284 billion for Pingliang expansion project, RMB0.200 billion for Shang'an expansion project, RMB0.267 billion for Xiangqi Hydropower expansion project, RMB0.247 billion for Chongqing Luohuang expansion project, and RMB0.254 billion for Jinggangshan expansion project. The expenditures on construction projects in Singapore were RMB2.429 billion. The expenditures on other projects were RMB5.530 billion.

The capital expenditures on construction and renovation amounted to approximately RMB16.789 billion and RMB20.732 billion in 2011 and 2010, respectively.

The capital expenditures above are sourced mainly from internal capital, cash flows provided by operating activities, and debt financings.

The Company expects to have significant capital expenditures in the next few years. During the course, the Company will make active efforts to improve project planning process on commercially viable basis. The Company will also actively develop newly planned projects to pave the way for its long-term growth. The Company expects to finance the above capital expenditures through internal funding, cash flows provided by operating activities, and debt financing.

The following table sets forth the major capital expenditure cash requirements, usage plans and cash resources of the Company for the next two years.

Project	Capital expenditure arrangements		Contractual arrangements		Financing methods	Funding resources arrangements	Financing costs and note on usage
	2013	2014	2013	2014			
	(RMB in billions)						
Thermal power projects	10.558	9.953	10.558	9.953	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the

							PBOC
Hydropower projects	0.317	0.092	0.317	0.092	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the PBOC
Wind power projects	1.459	2.096	1.459	2.096	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the PBOC
Port projects	2.629	0.900	2.629	0.900	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the PBOC
Coal mining projects	1.842	-	1.842	-	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the PBOC
Renovation projects	4.300	4.500	4.300	4.500	Debt financing	Internal cash resources & bank loans, etc.	Within the floating range of benchmark lending interest rates of the PBOC

#### Cash resources and anticipated financing costs

The Company expects to finance its capital expenditure and acquisitions primarily through internal capital, cash flow from operating activities and debt financing.

Good operating results and sound credit status provide the Company with strong financing capabilities. As of December 31, 2012, the Company and its subsidiaries had undrawn banking facilities of over RMB90 billion, granted by Bank of China, China Construction Bank and China Development Bank.

As resolved at the 2009 annual general meeting held on June 22, 2010, the Company has been given a mandate to issue within the PRC short-term notes of a principal amount not exceeding RMB10 billion (in either one or multiple tranches) within 12 months from the date on which the shareholders' approval was obtained. On January 13, 2011, we issued the tranche of the short-term notes for 2011 in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 3.95%.

As resolved at the 2010 annual general meeting held on May 17, 2011, our company has been given a mandate to issue within the PRC short-term notes of a principal amount not exceeding RMB10 billion (in either one or multiple tranches) within 12 months from the date on which the shareholders' approval was obtained. On September 19, 2011, we issued one tranche of short-term notes in the amount of RMB5 billion with a maturity period of 366 days, a unit face value of RMB100 and an interest rate of 6.04%. On April 17, 2012, we issued a second tranche of short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.41%.

As resolved at the 2010 annual general meeting held on May 17, 2011, our company has been given a mandate to apply to the competent authority for quota of the non-public issuance of debt financing instruments with a principal amount of not exceeding RMB10 billion within 12 months from the date of obtaining an approval at the general meeting (to be issued within such period on a rolling basis). On September 8, 2011, we received the approval from the competent authority. On November 7, 2011, we completed the issuance of the first tranche of non-public issuance of debt financing instruments in the amount of RMB5 billion with a maturity period of 5 years, a unit face value of RMB100 and an interest rate of 5.74%. On January 6, 2012, we completed the issuance of the second tranche of the non-public issuance of debt financing instruments in the amount of RMB5 billion with a maturity period of 3 years, a unit face value of RMB100 and an interest rate is 5.24%.

As resolved at the 2010 annual general meeting on May 17, 2011, our company has been given a mandate to apply to the National Association of Financial Market Institutional Investors for a quota to issue super short-term debentures of a principal amount not exceeding RMB20 billion. On May 9, 2012, we received a notification on acceptance of registration from the National Association of Financial Market Institutional Investors, accepting the registration of our super short-term debentures. On June 5, 2012, July 10, 2012, August 17, 2012 and September 13, 2012, respectively we issued four tranches of the super short-term debentures, each in the amount of RMB5 billion with a maturity period of 270 days, a unit face value of RMB100 and an interest rate of 3.35%, 3.32%, 3.70% and 3.99%, respectively.

As resolved at the 2011 annual general meeting on June 12, 2012, our company has been given a mandate to issue within the PRC short-term notes of a principal amount not exceeding RMB15 billion within 12 months from the date on which the shareholders' approval was obtained. On November 6, 2012, we issued the first tranche of the short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.42%. On December 7, 2012, we issued the second tranche of the short-term notes in the amount of RMB5 billion with a maturity period of 365 days, a unit face value of RMB100 and an interest rate of 4.58%.

As resolved at the 2010 Annual General Meeting on May 17, 2011, our company has been given a mandate to issue in one or multiple tranches financing instruments of RMB-denominated debt instruments of a principal amount up to RMB5 billion in or outside PRC within 12 months from the date of approval at the general meeting. On April 19, 2012, we received an approval regarding the issuance of RMB-denominated debt instruments in Hong Kong in the sum of RMB5 billion issued by the NDRC, approving our company to issue the RMB-denominated debt instruments in Hong Kong in an aggregate amount of up to RMB5 billion, with an effective period of one year from the date of approval. On January 30, 2013, our company and the managers entered into a subscription agreement in relation to the proposed issuance of RMB1,500 million bonds due 2016 with an interest rate of 3.85% ("RMB Bonds"). On February 6, 2013, the listing of and dealing in the RMB Bonds became effective.

As resolved at the 2011 annual general meeting on June 12, 2012, our company has been given a mandate to apply to the National Association of Financial Market Institutional Investors for a quota to issue super short-term notes with a principal amount not exceeding RMB30 billion on a rolling basis. On January 29, 2013, we received a Notification on Acceptance of Registration from the National Association of Financial Market Institutional Investors, accepting the registration of the super short-term notes. On February 27, 2013, we issued the first tranche of the super short-term notes in the amount of RMB5 billion with a maturity period of 270 days, a unit face value of RMB100 and an interest rate of 3.80%. On April 3, 2013, we issued the second tranche of the super short-term notes in the amount of RMB5 billion with a maturity period of 270 days, a unit face value is RMB100 and an interest rate of 3.90%.

As of December 31, 2012, short-term loans of the Company and its subsidiaries totaled RMB27.442 billion (2011: RMB43.979 billion). Loans from bank were charged at interest rates ranging from 5.04% to 6.56% per annum (2011: 4.00% to 8.52%). Short-term bonds by the Company and its subsidiaries totaled RMB35.450 billion as of December 31, 2012 (2011: RMB10.262 billion).

As of December 31, 2012, long-term loans of the Company and its subsidiaries totaled approximately RMB81.621 billion (2011: approximately RMB93.985 billion), consisting of loans denominated in RMB of approximately RMB61.713 billion (2011: approximately RMB73.734 billion), in U.S. dollars of approximately US\$0.693 billion (2011: approximately US\$0.779 billion), and in Euro of approximately Euro 77 million (2011: approximately Euro 86 million). Included in the above, U.S. dollar denominated borrowings were approximately US\$678 million (2011: US\$743 million) floating-rate borrowings. Singapore dollar denominated borrowings were S\$2.930 billion and all floating-rate borrowings. For the year ended December 31, 2012, long-term bank loans of the Company and its subsidiaries bore annual interest rates from 0.54% to 7.05% (2011: 0.51% to 8.65%).

As of December 31, 2012, the borrowings for the Singapore operations were all long-term loans approximately in aggregate of RMB14.929 billion, including borrowings denominated in Singapore dollar in the amount of S\$2.930 billion with interest rates from 2.15% to 4.25% per annum, and borrowings denominated in U.S. dollar in the amount of US\$3 million with interest rate of 2.74% per annum.

The Company and its subsidiaries will closely monitor any change in the exchange rate and interest rate markets and cautiously assess the currency and interest rate risks.

Combining the current development of the power generation industry and the growth of the Company, the Company will make continuous efforts to not only meet cash requirements of daily operations, constructions and acquisitions, but also establish an optimal capital structure to minimize the cost of capital and manage financial risks through effective financial management activities, thus maintaining sustainable and stable returns to the shareholders.

#### Other financing requirements

The objective of the Company is to bring long-term, steadily growing returns to shareholders. In line with this objective, the Company follows a proactive, stable and balanced dividend policy. In 2012, in accordance with the profit appropriation plan of the board of directors of the Company (subject to the approval of the shareholders' meeting), the Company expects to pay a cash dividend of approximately RMB2,952 million in 2013.

#### Maturity profile of borrowings

The following table sets forth the maturity profile of the Company's borrowings as of December 31, 2012.

Maturity Profile (RMB in billions)	2013	2014	2015	2016	2017
Principal proposed to be repaid	71.949	19.591	12.914	10.039	10.431
Interest proposed to be repaid	6.708	4.706	3.387	3.031	2.514
Total	78.657	24.297	16.301	13.070	12.945

Note:

(1) The amount of the principal to be repaid in 2013 is relatively large because this includes expected repayment of short-term loans and short-term bonds.

E. Trend information

The major trend of the electricity power market

The central economic work conference held at the end of 2012 and the national people's congress held in March 2013 set down the growth target of 7.5% for China's GDP in 2013. According to the report released by China Electricity Council ("CEC") at the end of February 2013, China's GDP is expected to grow by 7.5% to 9% in 2013; national power consumption is estimated to reach 5,280 to 5,380 billion KWH, representing an increase of 6.5% to 8.5% from same period last year. Based on GDP growth of 7.5% and national power consumption of 5,330 billion KWH as recommended by CEC, power consumption in the primary industry is estimated to continue low growth of 4.0% to 6.0%; power consumption in the secondary industry is projected to grow by 5.5% to 7.5%, representing a higher growth rate than that 2012; power consumption in the tertiary industry and households is expected to maintain annual growth of 11% in 2013. Total installed generation capacity in the PRC is expected to reach 1.23 billion KW by the end of 2013, including newly installed generation capacity of 87 million KW. The utilization of power generation equipment in the PRC is expected to reach 4,700 to 4,800 hours, with utilization hours of coal-fired equipment at 5,050 to 5,150 hours. The power supply and demand are expected to be generally balanced throughout the country in 2013. Power supply in Northeast China will experience increase of excessive generation capacity, and supply is expected to exceed demand in the power market in Northwest China. Meanwhile, certain provinces in East and North China could experience inconsiderable power supply shortage during certain peak periods because of limited cross-



region power transmission capacity, breakdown of certain generation units for denitrification renovation, short supply of natural gas, as well as consideration for uncertainties in respect of high temperature and water supply.

Based on the forecast of CEC, if GDP in the PRC grows by 7.5% in 2013, the power consumption nationwide will reach 5,280 billion KWH, representing an increase of 6.5% from 2012; the utilization of power generation equipment across the country will reach 4,700 hours, and utilization of coal-fired equipment will reach 5,050 hours. Normally, the power generation of the Company may vary from the forecast released by the report due to the regional distribution of the Company's power plants.

#### The trend of the fuel supply

In 2013, coal demand in the PRC is hardly to experience high growth given the expected steady growth of domestic economy and insignificant recovery of world economy, while coal supply will continue to grow. Coal imports will continue at significant amount on the back of government's encouragement and therefore affect coal price in domestic market. It is estimated that domestic coal market will see generally abundant supply in 2013, and coal price is expected to experience slight fluctuation from the second half of 2012.

#### The trend of capital market and foreign exchange

In 2013, the PBOC will continually implement steady monetary policies and make predicative fine-tuning to monetary policies from time to time. In respect of the credit market, liquidity is still tight with higher financing costs. In respect of monetary policies, the PBOC will continue expanded application of open market operations, commence using open market short-term liquidity operations, and make on-going efforts for liberalization of RMB interest rates. The deposit reserve requirement ratio and benchmark interest rates for borrowings and lending are unlikely to change in the foreseeable future, and the monetary policy will maintain consistent.

#### F. Employee benefits

As of December 31, 2012, the Company and its subsidiaries had 36,326 domestic and overseas employees. The Company and its subsidiaries provided employees with competitive remuneration and linked such remuneration to operating results as working incentives for the employees. Currently, the Company and its subsidiaries do not have any non-cash remuneration packages.

Based on the development plans of the Company and its subsidiaries and the requirements of individual positions, together with consideration of specific characteristics of individual employees, the Company and its subsidiaries tailored various training programs for their employees on management skills, technical skills and marketing skills. These programs enhanced both the knowledge and operational skills of the employees.

#### G. Guarantees and pledges on loans and restricted assets

As of December 31, 2012, the Company provided guarantee for Tuas Power's long-term bank borrowings of approximately RMB14.896 billion, and provided guarantee for Shanghai Time Shipping Co., Ltd.'s long-term borrowings of approximately RMB6 million.

As of December 31, 2012, the details of secured loans of the company and its subsidiaries are as follows:

(1) The Company pledged certain accounts receivables for certain short-term loans borrowed in 2012. As of December 31, 2012, the balance of the secured loans was RMB6.250 billion, and the pledged accounts receivables amounted to approximately RMB6.319 billion.

(2) As of December 31, 2012, a short-term bank loan of RMB0.27 billion was secured by the electricity tariff collection right of the subsidiaries of the Company.

(3) As of December 31, 2012, the short-term loans secured by the discounted notes receivable of the Company and its subsidiaries were RMB21 million.

(4) As of December 31, 2012, a long-term loan of RMB97 million of the Company and its subsidiaries was secured by territorial waters use right with book value of RMB84.40 million.

(5) As of December 31, 2012, a long-term loan of RMB149 million of the Company and its subsidiaries were secured by certain property, plant and equipment of the Company and its subsidiaries.

(6) As of December 31, 2012, a long-term loan of RMB12.358 billion of the Company and its subsidiaries was secured by electricity tariff collection right.

(7) As of December 31, 2012, a long-term loan of RMB15.48 million of a subsidiary of the Company was secured by the current and future assets of the subsidiary.

(8) As of December 31, 2012, notes receivable of the Company and its subsidiaries of approximately RMB3 million was secured to a bank as collateral against notes payable of RMB2 million.

As of December 31, 2012, restricted bank deposits amounted to RMB119 million.

As of December 31, 2012, a provision of RMB157 million was made due to a legal claim by a vendor of our subsidiary. The outcome of this legal claim is not expected to give rise to any significant loss beyond the amount provided as of December 31, 2012.

#### H. Off-balance sheet arrangements

As of December 31, 2012, there was no off-balance sheet arrangements which have or reasonably likely to have an effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

#### I. Performance of significant investments and their prospects

The Company acquired 25% equity interest in Shenzhen Energy Group Co., Ltd. (“Shenzhen Energy Group”) for RMB2.39 billion on April 22, 2003. In 2011, Shenzhen Energy Group divided into a remainder company Shenzhen Energy Group and a newly established company Shenzhen Energy Management Company, the Company held 25% equity interest in both of these companies. The Company acquired 200 million shares from Shenzhen Energy, a subsidiary of Shenzhen Energy Group, in December 2007. Shenzhen Energy allot shares with its capital surplus in 2011. As of December 31, 2012, the Company held 240 million shares of Shenzhen Energy. These investments brought a profit of RMB190 million to the Company for the year ended December 31, 2012 under IFRS. This investment is expected to provide steady returns to the Company.

The Company held directly 60% equity interest in Sichuan Hydropower as of December 31, 2006. In January 2007, Huaneng Group increased its capital investment in Sichuan Hydropower by RMB615 million, thus reducing the Company’s equity interest in Sichuan Hydropower to 49% and making Huaneng Group the controlling shareholder of Sichuan Hydropower. This investment brought a profit of RMB230 million for the year ended December 31, 2012 under IFRS. This investment is expected to provide steady returns to the Company.

#### J. Tabular disclosure of contractual obligations and commercial commitments

A summary of payments due by period of our contractual obligations and commercial commitments as of December 31, 2012 is shown in the tables below. A more complete description of these obligations and commitments is included in the Notes to Financial Statements as referenced below.

Contractual Cash Obligations (RMB in millions)	2013	2014-2015	2016-2017	Thereafter	Total
Long-term Loans from a Shareholder(1)	800	-	-	-	800
Long-term Bank Loans(1)	8,257	21,415	12,218	38,496	80,387
Other Long-term Loans(1)	-	417	-	18	435
Long-term bonds(2)	-	5,700	5,000	12,300	23,000
Interest Payments	7,348	8,491	5,605	7,805	29,250
Operating Lease – Head Office(3)	90	22	-	-	112
Operating Lease - Nanjing Power Plant(3)	2	4	4	71	81
Operating Lease - Dezhou Power Plant(3)	34	68	68	214	384
Operating Lease - Shang’an Power Plant(3)	2	4	4	52	62
Operating Lease – Fuel Company(3)	9	8	-	-	17
Operating Lease - Tuas Power Generation Pte Ltd. (3)	22	45	46	1,057	1,170
	16,564	36,174	22,945	58,957	55,311

## Other Commercial Commitments

(RMB in millions)	2013	2014-2015	2016-2017	Thereafter	Total
Long – term gas purchase contract(4)	7,185	2,230	1,587	4,762	15,764
Other commitments(3)	16,748	-	-	-	16,748
	23,933	2,230	1,587	4,762	32,512

## Notes:

(1) See Note 22 to the Financial Statements, “Long-term Loans”.

(2) See Note 23 to the Financial Statements, “Long-term Bonds”.

(3) See Note 37 to the Financial Statements, “Commitments”.

(4) The numbers shown in the table above were calculated based on the minimum purchases stipulated in the long-term gas contracts disclosed in Note 37 to financial statements. As the Company and its subsidiaries are not required to commit purchases of one of the contracts until 2014, no unit cost information available for daily purchase quantities of 72.4 BBtu and 72.4 BBtu and 49.9 BBtu during respective period categories of 2014; 2015 – 2023; and 2024 – 2028.

The Company and its subsidiaries have various defined contribution plans in accordance with the local conditions and practices in the provinces in which they operate. The Company and its subsidiaries pay fixed contributions into separate entities (funds) and will have no further payments obligations if the funds do not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.

Disclosures of the pension plans including the contribution amounts are included in Note 35 to the Financial Statements.

K. Sensitivity analysis to impairment test

Goodwill impairment

Goodwill is tested for impairment by the management at the end of each year. In 2012, based on the impairment tests, except for the goodwill arising from acquisition of Pingliang Power Co., Ltd., no goodwill was impaired. Due to the continuous lower profitability of Pingliang Power Co., Ltd., full impairment of related goodwill amounted to RMB108 million was provided based on the result of impairment test.

For goodwill allocated to CGUs in PRC, changes of tariff and fuel price could have affected the results of goodwill impairment assessment. As of December 31, 2012, if tariff had decreased by 1% or 5% from management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against goodwill by approximately RMB595 million and RMB1,757 million, respectively. If fuel price had increased by 1% or 5% from the management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against goodwill by approximately RMB374 million and RMB1,734 million, respectively.

Property, plant and equipment impairment

The Company and its subsidiaries test whether property, plant and equipment suffered any impairment whenever any impairment indication exists.

Changes of assumptions in tariff and fuel price will affect the impairment assessments result of property, plant and equipment. As of December 31, 2012, if tariff had decreased by 1% or 5% from management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against property, plant and equipment by approximately RMB277 million and RMB2,885 million, respectively. If fuel price had increased by 1% or 5% from the management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against property, plant and equipment by approximately RMB205 million and RMB1,710 million, respectively.

L. Business plan

Our main task in 2013 is to focus on consolidating and enhancing economic efficiency and development quality, fully implement its efficiency improvement project, improve profitability, and accelerate its building up of the world's first-class listed power producer. We will strive to attain an annual utilization hour of 5,070 hours with our domestic generating units, and realize an annual power generation of 320 billion kWh at our domestic power plants. We will adhere to its objective of safe production with "zero accident", increase effort in marketing, proactively deal with every opportunity and challenge arose from market-oriented reform for fuel, highlight impact of technology innovation on the promotion of energy saving and emission reduction, reinforce operation and fund management by means of complete budget and comprehensive planning, further compress controllable costs, intensify fund management and further cut down funding costs.

To ensure the annual power generation target is reached, we will further define duties of the regional marketing personnel, further explore potential of the management, take advantage of the national dual-pricing system of thermal coal, take an active role to encourage tariff increase in regions with lower tariff and recorded persistent loss, further improve work collaboration, strive to increase efficiency power generation during the period with favorable market

condition, abundant demand and high margins, continue to optimize the operation of our generating units, endeavor to raise utilization rate and capacity rate of high efficiency and large generating units, boost generation amount by high efficiency generating units. We will build up its strength to cope with competition in the fuel market by all means, take advantages of the market-oriented reform for coal, the adjustment of coal supply structure, the synergies developed in the industry chain interconnecting power, coal, port and shipping, improve its procurement of coal and establish linkage and support for coal resources and transportation, manage costs and retain gains, insist on market-oriented operation, carry out procurement based on competitive price comparison, grasp every market opportunity and boost up returns. We will also focus on establishing superior energy saving and environmental friendly coal-fired power plants, emphasize to secure and upgrade the energy efficiency of its 1,000 MW and 600 MW ultra-supercritical water-cooled generating units, 600 MW supercritical water-cooled and air-cooled generating units, put forth reform regarding energy saving and emission reduction of the generating units in operation, carry out denitrification, desulphurization and capacity upgrade and electrostatic precipitation for generating units step by step, in order to ensure the goals set out in the environmental responsibility statement are being accomplished.

ITEM 6 Directors, Senior Management and Employees

A. Directors, members of the supervisory committee and senior management

Directors

The table below sets forth certain information concerning our directors as of March 31, 2013. The current term for all of our directors is three years, which will expire in May 2014.

Name	Age	Position with us
Cao Peixi	57	Chairman of the Board of Directors
Huang Long	59	Vice Chairman of the Board of Directors
Li Shiqi	56	Director
Huang Jian	50	Director
Liu Guoyue	49	Director, President
Fan Xi Xia	50	Director, Vice President
Shan Qunying	59	Director
Guo Hongbo	44	Director
Xu Zujian	58	Director
Xie Rongxing	50	Director
Shao Shiwei	67	Independent Director
Wu Liansheng	42	Independent Director
Li Zhensheng	68	Independent Director
Qi Yudong	46	Independent Director
Zhang Shouwen	46	Independent Director

CAO Peixi, aged 57, is the Chairman of the Company. He is also the President of Huaneng Group and the Chairman of HIPDC and Huaneng Renewables Co., Ltd. He was the Vice President and President of China Huadian Corporation; and Chairman of Huadian Power International Corporation Limited. He graduated from Shandong University specializing in electrical engineering. He holds a postgraduate degree of master in engineering issued by the Party School of the Central Committee and is a researcher-level senior engineer.

HUANG Long, aged 59, is the Vice Chairman of the Company as well as the Vice President of Huaneng Group and the Director of HIPDC, a Director of SinoSing Power Pte. Ltd., the Chairman of Tuas Power Ltd., the Chairman of Tuas Power Supply Pte Ltd. and Tuas Power Utilities Pte Ltd., and a Director of Shenzhen Energy Group Co., Ltd. He has served as Vice President and Secretary of the Board of Directors of the Company. He graduated with a M.S. Degree from North Carolina State University in the U.S., specializing in communications and auto-control. He is a senior engineer.

LI Shiqi, aged 56, is a Director of the Company and President of HIPDC. He also serves as Chairman and Executive Vice Chairman of Huaneng Capital Services Co., Ltd.. Mr. Li graduated from People's University of China majoring in Finance. He is a senior accountant.

HUANG Jian, aged 50, is a Director of the Company, the Assistant to President of Huaneng Group, Executive Vice Chairman of Huaneng Capital Services Co., Ltd., Chairman of Huaneng Hainan Power Ltd. and the Chairman of Huaneng Carbon Assets Management Company Limited. He was the Deputy Chief Economist and Chief of Financial Planning of Huaneng Group. Mr. Huang graduated from the accounting department of Institute of Fiscal Science of the Ministry of Finance with a postgraduate degree of master in economics. He is a senior accountant.

LIU Guoyue, aged 49, is a Director and President of the Company, the Chairman of Shanghai Times Shipping Limited Company, a director of Xi'an Thermal Research Institute Limited Company, the Chairman of Huaneng International Power Fuel Co., Ltd., a director of Tuas Power Ltd., Tuas Power Supply Pte Ltd. and Tuas Power Utilities Pte Ltd.. He served as Vice President of the Company. He graduated from North China Electric Power University, specializing in thermal engineering. He holds a doctor's degree in engineering. He is a senior engineer.

FAN Xiaxia, aged 50, is a Director and Vice President of the Company and Vice Chairman of Huaneng Shidaowan Nuclear Power Co., Ltd.. He served as Assistant to President of the Company and General Manager of the Company's Zhejiang Branch Yuhuan Power Plant Preparatory Office. He graduated from Economic Management School of Tsinghua University with an EMBA degree. He is a senior engineer.

SHAN Qunying, aged 59, is a Director of the Company, Chairman of Hebei Xingtai Power Generation Limited Company, Vice Chairman of Guodian Construction Investment Inner Mongolia Energy Limited Company and Vice Chairman of Hebei Construction



Investment Energy Investment Limited Company. He had been the Energy & Communication Division Chief of Hebei Provincial Construction Investment Company and the Vice President of Hebei Construction & Investment Group Co., Ltd. He graduated from Management Institute of Tianjin University holding an EMBA degree. He is a senior engineer.

GUO Hongbo, aged 44, is a Director of the Company and the President and Vice Chairman of Liaoning Energy Investment (Group) Limited Liability Company. He has been Deputy Manager, Administrative Deputy General Manager and Director of Liaoning Energy Investment (Group) Limited Liability Company. Mr Guo graduated from Jilin University specializing in administrative management, holding a postgraduate degree of master in management. He is a researcher-level senior engineer.

XU Zujian, aged 58, is a Director of the Company, Vice President of Jiangsu Province Guoxin Asset Management Group Limited Company, Chairman of Jiangsu Investment Management Co. Ltd. and Zking Property & Casualty Insurance Co., Ltd.. He was Vice President of Jiangsu Provincial International Trust & Investment Corporation, and President of Jiangsu Provincial Investment & Management Limited Liability Company. He graduated from Liaoning Finance University majoring in infrastructure finance, holding a bachelor's degree. He is a senior economist.

XIE Rongxing, aged 50, is a Director of the Company, Vice President of Fujian Provincial Investment and Development Group Co., Ltd., Vice Chairman of Fujian Cotton Ertan Hydropower Development Co., Ltd., Vice Chairman of Xiamen China International Electric Power Development Co., Ltd., Vice Chairman of Zhonghai Fujian Gas Power Co., Ltd., director of Fujian Fuqing Nuclear Power Co., Ltd., director of Fujian Sanming Nuclear Power Co., Ltd. and Vice Chairman of Fujian Shuikou Power Group Co., Ltd.. He served as the Vice President of Fujian Investment & Development Group Company. He graduated from Hubei Financial College majoring in financial credit for construction projects. He was an MBA from North Virginia University. He is an economist.

SHAO Shiwei, aged 67, is an Independent Director of the Company. He is also an Independent Director of Shanghai Electric Power Co., Ltd., Shanghai Magus Technology Co., Ltd., Shanghai Zhixin Electric Co., Ltd. and Leshan Electric Power Co., Ltd.. He had been the Chairman and President of Huadong Grid Network Company and Chairman of the Supervisory Committee of Shanghai Electric Power Co., Ltd. He graduated from Tianjin University specializing in power plant, power grid and power system. He is a professor-level senior engineer.

WU Liansheng, aged 42, is an Independent Director of the Company, a Professor, and associate Director of the MBA Center of the Guanghua Management Institute of Beijing University, an Independent Director of China National Building Materials Company Limited, an Independent Director of Western Mining Co., Ltd; an Independent Director of Wanda International Cinemas Co., Ltd. and an independent Director of Xinhua Co., Ltd.. He previously served in the Guanghua Management Institute of Beijing University as Lecturer, Associate Professor, Deputy Head and Head of the Department of Accounting. He was an Independent Director of Rongsheng Development Joint Stock Limited Company. He graduated from Zhongnan University of Finance and Economic with a PhD in Management (Accounting).

LI Zhensheng, aged 68, is an Independent Director of the Company. He is an Independent Director of Qingdao TGOOD Electric Co., Ltd. He was the Chief Economist and Consultant of State Grid Corporation. Mr. Li graduated from Hebei University of Technology with a bachelor's degree. He is also a professor-level senior engineer.

QI Yudong, aged 46, is the Independent Director of the Company and the Assistant to Principal of Capital University of Economics and Business. He is also the Director and Professor (Grade II) of China Centre for the Research of Industrial Economics, mentor to PhD and post-doctoral tutor (finance direction). He is the External Supervisor and concurrently Chairman of the Audit Committee of the Supervisory Committee of Hua Xia Bank Co., Ltd., and an Independent Director and concurrently the Chairman of the Remuneration Committee of China Garments Co., Ltd..

He previously served as the Director of School of Business Administration of Capital University of Economics and Business. He graduated from the graduate school of Chinese Academy of Social Sciences, majoring in economic science, with a PhD in Economics.

ZHANG Shouwen, aged 46, is an Independent Director of the Company and the Professor and Doctoral Mentor in the Law School of Peking University, Director of Economic Law Institute of Peking University, Vice President and concurrently Secretary General of the Economic Law Research Society of China Law Society, Vice President of Beijing Law Research Society, Independent Director of Joyoung Company Limited, Independent Director of Guoxin Securities Co., Ltd and Independent Director of Donghua Software AG. He served as lecturer and deputy Professor of Law School of Peking University. He graduated from Peking University Law School with a PhD in Laws.

#### Supervisors

The table below sets forth certain information concerning our supervisors as of March 31, 2013. The current term for all of our supervisors is three years, which will expire in May 2014.

Name	Age	Position with us
Guo Junming	47	Chairman of the Supervisory Committee
Hao Tingwei	50	Vice Chairman of the Supervisory Committee
Zhang Mengjiao	48	Supervisor
Gu Jianguo	46	Supervisor
Wang Zhaobin	57	Supervisor
Zhang Ling	52	Supervisor

GUO Junming, aged 47, is the Chairman of the Company's Supervisory Committee, the Chief Accountant of Huaneng Group, a Director of HIPDC, Chairman of Huaneng Capital Services Limited Company. He was the Deputy Chief Accountant and Manager of the Finance Department of Huaneng Group. He graduated from Shanxi Finance and Economic Institute specializing in business finance and accounting and holds a bachelor's degree. He is a senior accountant.

HAO Tingwei, aged 50, is the Vice Chairman of the Supervisory Committee of the Company. He is a Director and Vice President of Dalian Construction Investment Corporation, Director of Liaoning Hongyanhe Nuclear Power Co., Ltd., vice chairman of Dalian Taishan Thermal Power Co., Ltd. He previously served as the Vice President of Dalian Municipal Construction Investment Company. He graduated from Dalian Polytechnic University, specialising in Electronics. He holds a post-graduate degree.

ZHANG Mengjiao, aged 48, is the Supervisor of the Company. She is the Manager of the Finance Department of HIPDC, and Supervisor of Huaneng Anyuan Generation Co., Ltd., Huaneng DuanZhai Coal & Electricity Co., Ltd., Huaneng Chaohu Power Generation Co., Ltd., and Shaunxi Coal Industry Co., Ltd.. She is also the Chairman of the Supervisory Committee of Huaneng Shaunxi Power Generation Co., Ltd.. She was the Deputy Manager of the Finance Department of the Company. She graduated from Xiamen University, specializing in accounting. She has a master's degree in economics and is a senior accountant.

GU Jianguo, aged 46, is a Supervisor of the Company, Chairman of Nantong Investment & Management Limited Company and Vice President of Nantong State-owned Assets Investment Holdings Co., Ltd.. Mr. Gu has served as Director and President of Nantong Investment Management Limited Company. He graduated from Nanjing Aviation University holding a master's degree. He is an economist.

WANG Zhaobin, aged 57, is a Supervisor, chairman of the labour union and Manager of the Administration Department of the Company. He previously served as the manager of the Administration Department and the Manager of the Corporate Culture Department of the Company. He graduated from China Beijing Municipal Communist Party

School, specializing in economic management, holding a bachelor's degree. He is a corporate culture specialist.

ZHANG Ling, aged 52, is a Supervisor and Manager of the Audit and Supervisory Department of the Company. She had served as Manager of the Equity Management Department of the Company. She graduated from Zhongnan University of Finance and Economics specializing in financial accounting with a bachelor's degree in management. She is a senior accountant.

#### Other Executive Officers

GU Biquan, aged 55, is the Vice President and Chief Legal Adviser of the Company. He was the Secretary to the Board of Directors of the Company. He graduated from Beijing Broadcasting Television University, specializing in electronic engineering. He is an engineer.

ZHOU Hui, aged 49, is the Vice President and Chief Accountant of the Company. She was the Chief Accountant of the Company. She graduated from Renmin University of China with a postgraduate degree of master in economics. She is a senior accountant.

ZHAO Ping, aged 50, is the Vice President of the Company. He was the Chief Engineer of the Company. He graduated from Tsinghua University, specializing in thermal engineering, with a postgraduate degree of master in science and an EMBA degree. He is a researcher-level senior engineer.

DU Daming, aged 46, is the Vice President and Secretary to the Board of Directors of the Company. He was the Chief of the Administration Office of Huaneng Group and Chief of the Office of the Board of Directors of the Company. He graduated from North China Electric Power University, specializing in electric system and its automation, with a postgraduate degree of master in science. He is a senior engineer.

WU Senrong, aged 51, is the Vice President of the Company. He was the Manager of Human Resources Department and Head of Discipline and Inspection Team of the Company. He graduated from the School of Economics and Management of Tsinghua University, specializing in business administration for senior management, with a bachelor's degree and an EMBA degree. He is a researcher-level senior engineer.

LI Shuqing, aged 49, is the Vice President of the Company. He was the General Manager of Huaneng Shanghai Branch. He graduated from Shanghai Electric Power Institute, specializing in thermodynamics, with a bachelor's degree in science. He is a senior engineer.

SONG Zhiyi, aged 52, is the Vice President of the Company. He was the General Manager of Huaneng Northeast Branch and Head of Construction Department of Huaneng Group. He graduated from the Guanghua Management Institute of Beijing University, specializing in business administration, with a bachelor's degree and a MBA degree. He is a senior engineer.

LI Jianmin, aged 51, is the Vice President of the Company. He was the General Manager of Huaneng Zhejiang Branch (Yuhuan Power Plant) and General Manager of Huaneng Hebei Branch. He graduated from Northeast Electricity College, specializing in power plant and electricity system, with a bachelor's degree in science. He is a researcher-level senior engineer.

HE Yong, aged 54, is the Chief Engineer of the Company. He was the Manager of Safety and Production Department and Deputy Chief Engineer of the Company. He graduated from Wuhan University, specializing in corporate management, with a postgraduate degree of master in management. He is a researcher-level senior engineer.

#### B. Compensation for Directors, Supervisors and Executive Officers

The table below sets forth the compensation on individual basis for the directors, supervisors and other executive officers for the year ended December 31, 2012:

Name	Position with the Company	Remuneration Paid by the Company in 2012 (1) (RMB in thousand)
Directors		
Mr. Cao Peixi	Chairman of the Board of Directors	-
Mr. Huang Long	Vice Chairman of the Board of Directors	-

Name	Position with the Company	Remuneration Paid by the Company in 2012 (1) (RMB in thousand)
Mr. Li Shiqi	Director	-
Mr. Huang Jian	Director	-
Mr. Liu Guoyue	Director and President	940
Mr. Fan Xi Xia	Director and Vice President	940
Mr. Shan Qunying	Director	48
Mr. Liu Shuyuan(2)	Director	-
Mr. Guo Hongbo(2)	Director (appointed in February 2012)	48
Mr. Xu Zujian	Director	48
Ms. Huang Mingyuan(3)	Director (resigned in June 2012)	24
Mr. Xie Rongxing(3)	Director (appointed in June 2012)	24
Mr. Shao Shiwei	Independent Director	74
Mr. Wu Liansheng	Independent Director	74
Mr. Li Zhensheng	Independent Director	74
Mr. Qi Yudong	Independent Director	74
Mr. Zhang Shouwen	Independent Director	74
<b>Sub-total:</b>		<b>2,442</b>
<b>Supervisors</b>		
Mr. Guo Junming	Chairman of the Supervisory Committee	-
Mr. Hao Tingwei	Vice Chairman of the Supervisory Committee	48
Ms. Zang Mengjiao	Supervisor	-
Mr. Gu Jianguo	Supervisor	48
Mr. Wang Zhaobin	Supervisor	715
Ms. Zhang Ling	Supervisor	648
<b>Sub-total</b>		<b>1,459</b>
<b>Other Executive officers</b>		
Mr. Gu Biquan	Vice President	808
Mr. Lin Gang(4)	Vice President	125
Ms. Zhou Hui	Vice President and Chief Accountant	808
Mr. Zhao Ping	Vice President	807
Mr. Du Daming	Vice President and Secretary to the Board of Directors	806
Mr. Gao Shulin(5)	Chief Economist	662
Mr. Wu Senrong(5)	Vice President	144
Mr. Li Shuqing	Vice President	802
Mr. Song Zhiyi(5)	Vice President	137
Mr. Li Jianmin(5)	Vice President	136

Mr. He Yong(5)	Chief Engineer	137
Sub-total:		5,374
Total		9,275

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Notes:

- (1) The remuneration paid by the Company in 2012 includes the basic salaries, performance salaries and pension, please see Note 36 to the Item 18 Financial Statements, “Directors’, supervisors’ and senior management’s emoluments”.
- (2) On February 21, 2012, Mr. Guo Hongbo was appointed as director of the Company on resignation of Mr. Liu Shuyuan.
- (3) On June 12, 2012, Mr. Xie Rongxing was appointed as director of the Company on resignation of Ms. Huang Mingyuan.
- (4) Mr. Lin Gang left office in February 2012.
- (5) Mr. Gao Shulin left office on October 23, 2012. On the same day, Mr. Wu Senrong was appointed as a Vice President, Mr. Song Zhiyi was appointed as a Vice President, Mr. Li Jianmin was appointed as a Vice President and Mr. He Yong was appointed as a Chief Engineer of the company, respectively.

The total remuneration paid to our directors, supervisors and executive officers is comprised of basic salaries, performance salaries and pension. Of these, performance salaries account for approximately 60% of the total remuneration, which are determined on the basis of their performance. In addition, directors and supervisors who are also officers or employees of us receive certain other benefits, such as subsidized or free health care services, housing and transportation, which are customarily provided by large enterprises in the PRC to their employees. Each of the Company’s independent directors receives annual after-tax cash compensation of RMB60,000. We do not have any service contract with any director that provides for benefits upon termination of employment.

### C. Board practice

As of the end of 2003, we, in accordance with the resolutions passed at a shareholders’ general meeting, have set up four special committees, namely, the Audit Committee, the Strategy Committee, the Nomination Committee, and the Remuneration and Appraisal Committee, and formulated the working regulations for such committees in accordance with the relevant rules and regulations. All committees operate in accordance with the working rules and utilize their members’ specific background, experience and industry expertise to provide advice to us, so as to enhance our operation efficiency and to make the decision-making process more rationalized.

The main duties of the Audit Committee are to assist our board in performing its statutory and fiduciary duties of supervising our accounting, financial reports, internal controls and compliance, including but not limited to, assisting our board in supervising (i) the integrity of our financial statements; (ii) our compliance with the applicable



laws and regulations; (iii) the qualification and independence of our independent auditors; (iv) the performances of our independent auditors and internal auditing department and (v) the compliance of connected transactions to be implemented by the Company.

The main duties of the Strategy Committee are to advise on, and conduct research in relation to, its long-term development strategies and decisions regarding significant investments.

The main duties of the Nomination Committee are to conduct study and provide advice in relation to the requirements for selection of directors and managers and the relevant procedures; to search for the qualified candidates of directors and managers, and to examine the candidates of directors and managers and advise matters in relation thereto.

The main duties of the Remuneration and Appraisal Committee are to conduct research on the appraisal guidelines for directors and managers, to carry out performance appraisals and provide advice accordingly, and to conduct research on the remuneration policy and proposal regarding the directors and senior management.

The members of Audit Committee are Mr. Wu Liansheng (Chairman), Mr. Shao Shiwei, Mr. Li Zhensheng, Mr. Qi Yudong and Mr. Zhang Shouwen.

The members of Strategy Committee are Mr. Huang Long (Chairman), Mr. Li Shiqi, Mr. Huang Jian, Mr. Liu Guoyue, Mr. Fan Xiaxia, Mr. Shao Shiwei and Mr. Li Zhensheng.

The members of Nomination Committee are Mr. Shao Shiwei (Chairman), Mr. Fan Xiaxia, Mr. Shan Qunying, Mr. Xie Rongxing (Mr. Xie was elected as a member on June 12, 2012. Ms. Huang Mingyuan was a member prior to June 12, 2012), Mr. Wu Liansheng, Mr. Qi Yudong and Mr. Zhang Shouwen.

The members of Remuneration and Appraisal Committee are Mr. Qi Yudong (Chairman), Mr. Liu Guoyue, Mr. Guo Hongbo (Mr. Guo was elected as a member on March 20, 2012. Mr. Liu Shuyuan was a member prior to February 21, 2012), Mr. Xu Zujian, Mr. Shao Shiwei, Mr. Wu Liansheng and Mr. Li Zhensheng.

#### D. Employees

As of December 31, 2012, we employed 36,326 people. Of these, 287 are headquarters management staff, 8,560 are power plant personnel directly involved in the management and operation of the power plants and the remainder are maintenance personnel, ancillary service workers and others. Over 64% our work force graduated from university or technical college. As of December 31, 2010 and 2011, we had approximately 33,811 and 35,903 employees respectively.

We conduct continuing education programs for our employees at the head office and at each power plant. We provide training in foreign language, computer, accounting and other areas to our professionals and technicians in their relevant fields. Employees are trained in accordance with the different requirements for professional and managerial positions.

We have reformed the labor system by introducing individual labor contracts. Currently, all employees are employed under employment contracts, which specify the employee's position, responsibilities, remuneration and grounds for termination. Short-term employment contracts have fixed terms of typically one to five years, at the end of which they may be renewed with the agreement of both the Company and the employees.

The contract system imposes discipline, provides incentives to adopt better work methods and provides us with a greater degree of management control over our work force. We believe that, by linking remuneration to productivity,

the contract system has also improved employee morale.

Each of our power plants also has a trade union and the employees of our headquarters are also members of a trade union. These trade unions protect employee's rights, aim to fulfill our economic objectives, encourage employees to participate in management decisions and mediate disputes between us and union members. We have not been subject to any strikes or other labor disturbances interfering with our operations, and we believe that our relations with our employees are good.

Total remuneration of our employees includes salaries, bonuses and allowances. The employees also receive certain benefits in the form of education and health services subsidized by the Company and other miscellaneous subsidies.

In compliance with the relevant regulations, we and our employees participate in the local government pension plan under which all the employees are entitled to the pensions payments upon retirement. See Note 35 to the Financial Statements.

The Company also participates in the social insurance program administered by the social security institution, under which all the employees are entitled to certain social insurance benefits, subject to adjustments in accordance with relevant PRC regulations. The Company is in compliance with all social insurance regulations and has no outstanding overdue for any social insurance contribution.

E. Share ownership

None of our directors, supervisors or senior management owns any of our shares.

## ITEM 7 Major Shareholders and Related Party Transactions

### A. Major shareholders

Our outstanding ordinary shares consist of A Shares and H Shares, each with a par value of RMB1.00 per share. The following table set forth certain information regarding our major shareholders as of March 31, 2013.

Shareholder	Number of shares	Approximate percentage in the total issued domestic share capital %	Approximate percentage in the total issued share capital %
Huaneng International Power Development Corporation	5,066,662,118	48.25	36.05
China Huaneng Group(1)	1,676,964,842	15.97	11.93
Hebei Provincial Construction Investment Company	603,000,000	5.74	4.29
China Hua Neng Hong Kong Company Limited	472,000,000	_(2)	3.36

#### Notes:

(1) Of the 1,676,964,842 shares, 12,876,654 A shares are held by Huaneng Group through its wholly-owned subsidiary, Huaneng Capital Services Company Limited, and 143,620,000 A shares are held by Huaneng Group through its subsidiary, China Huaneng Finance Corporation Limited.

(2) The 472,000,000 shares are H shares and represented 13.27% of the total issued H shares of the Company and 3.36% of the total issued share capital of the Company.

In 2006, all of our shareholders of non-tradable domestic shares except HIPDC transferred a total of approximately 1.1 billion shares to Huaneng Group, representing 9.24% of our total issued shares. Among others, HPCIC transferred approximately 301 million shares to Huaneng Group, and decreased its shareholdings in us to 5.00%.

On April 19, 2006, we carried out our reform plan to convert all non-tradable domestic shares into tradable domestic shares. According to the plan, Huaneng Group and HIPDC transferred a total of 150 million shares to our shareholders of A Shares. As a result, the direct shareholdings of Huaneng Group and HIPDC decreased to 8.75% and 42.03%, respectively.

In June and July of 2008, through its wholly-owned subsidiary, China Hua Neng Hong Kong Company Limited, Huaneng Group acquired 20 million H shares from open market. As a result, the shareholding of Huaneng Group increased to 8.92%.

In 2010, we increased our share capital through non-public issuances of new shares, including A shares and H shares. With the approval from shareholders and relevant PRC governmental authorities, we were authorized to issue (i) not

exceeding 1,500 million new A shares by way of placement to not more than 10 designated investors including Huaneng Group, which would subscribe for no more than 500 million new A shares, and (ii) no more than 500 million new H Shares to China Hua Neng Hong Kong Company Limited (“Hua Neng HK”). On December 23, 2010, we completed the non-public issuance of 1,500 million new A shares (ordinary shares with a par value of RMB1 per share) to 10 designated investors, including Huaneng Group, at the issuance price of RMB5.57 per share. The other nine investors are CCB International Asset Management (Tianjin) Company Limited, China Life Insurance Asset Management Company Limited, New China Life Assurance Company Limited, Harbin Power Equipment Company Limited, China Three Gorges Corporation, Liaoning Energy Investment (Group) Limited Liability Company, Dongfang Electric Co., Ltd., Dacheng Fund Management Co., Ltd. and China National Offshore Oil Corporation. The shares subscribed by Huaneng Group are subject to a lock-up period of 36 months, and the shares subscribed by other designated investors are subject to a lock-up period of 12 months. On December 28, 2010, we completed the placement of 500 million H shares (ordinary shares with a par value of RMB1 per share) to Hua Neng HK at the subscription price of HK\$4.73 per share.

On December 31, 2010, Huaneng Capital Services Company Limited (“Huaneng Capital”), a wholly owned subsidiary of Huaneng Group, acquired 12,876,654 A shares of our company through the trading system at the Shanghai Stock Exchange, representing 0.09% of the total issued share capital of our company. Prior to the acquisition, Huaneng Group directly and indirectly controls 7,141,786,667 shares in our company, representing approximately 50.81% of the total issued share capital of our company. After the acquisition, Huaneng Group directly and indirectly controls 7,154,663,321 share of our company, representing approximately 50.90% of the total issued share capital of our company. Huaneng Group proposes to continue the acquisition of the A shares of our company in the secondary market through Huaneng Capital or other concerted party(ies) or in its own name within the 12-month period starting from December 31, 2010. The aggregate of such acquisition will not exceed 2% (inclusive of the shares acquired this time) of the issued share capital of our company.

On December 23, 2011, Huaneng Group acquired 143,620,000 A Shares of our company through China Huaneng Finance Corporation Limited, a controlling subsidiary of Huaneng Group, via the block trading system at the Shanghai Stock Exchange. After the acquisition, Huaneng Group directly and indirectly controls 7,298,283,321 shares of our company, representing approximately 51.93% of the total issue share capital of our company.

Before we were established in 1994, HIPDC and other seven promoters entered into the Shareholders' Agreement dated May 31, 1994 (the "Shareholders' Agreement") which, among other things, grants to HIPDC the right to vote all the shares owned by each of the other promoters so as to enable HIPDC to have majority voting rights in general meetings for so long as we are in existence. In addition, directors designated by HIPDC will have majority representation on our board of directors and each of the other promoters will have one representative designated by it appointed as a member of our board of directors. The Shareholders' Agreement also provides that for so long as we are in existence (i) HIPDC and the other signatories to the Shareholders' Agreement will maintain their combined shareholdings to ensure their collective majority control of us, (ii) HIPDC has certain priority rights to purchase the shares held by the other signatories to the Shareholders' Agreement and (iii) if HIPDC does not exercise its priority rights to purchase such shares, each of the signatories to the Shareholders' Agreement other than HIPDC has a priority right to purchase such shares on a pro rata basis and (iv) no shares may be sold or transferred unless their transferees agree to abide by the terms of the Shareholders' Agreement. As a result of the Shareholders' Agreement, HIPDC held 70.09% of the total voting rights of the outstanding shares and, subject to the Shareholders' Agreement, had the power to control the election of all of our directors and to direct our management and policies.

On May 12, 2006, HIPDC and other promoters (including the shareholders who assumed the rights and obligations of original promoters as a result of share transfer) entered into an amendment to the Shareholders' Agreement, pursuant to which, each promoter shall be entitled to exercise its own voting rights at the shareholders' general meeting. Consequently, HIPDC currently holds 36.05% of our total voting rights. Since HIPDC's parent company, Huaneng Group, currently holds, directly or through its wholly-owned subsidiaries, 15.87% of our total voting rights. HIPDC is able to exert control over us when acting in concert with Huaneng Group.

Huaneng Group and HIPDC had previously given a non-compete undertaking to us during our initial public offering of A shares in 2001, in order to support our business development, to integrate relevant quality assets and to avoid business competition. In September 2010, we received from Huaneng Group an undertaking on relevant matters for further avoidance of business competition. While Huaneng Group will continue to perform its undertakings previously given, Huaneng Group further undertakes that: (i) it shall treat us as the only platform for ultimate integration of the conventional energy business of Huaneng Group; (ii) with respect to the conventional energy business assets of Huaneng Group located in Shandong Province, Huaneng Group undertakes that it will take approximately 5 years to improve the profitability of such assets and when the terms become appropriate, it will inject those assets into us. We have a right of first refusal to acquire from Huaneng Group the newly developed, acquired or invested projects which are engaged in the conventional energy business of Huaneng Group located in Shandong Province; (iii) with respect to the other non-listed conventional energy business assets of Huaneng Group located in other provincial administrative regions, Huaneng Group undertakes that it will take approximately 5 years, and upon such assets meeting the conditions for listing, it will inject such assets into us in order to support our sustainable and stable development; and (iv) Huaneng Group will continue to perform each of its undertakings to support the development of its subordinated listed companies.

## B. Related party transactions

### Guarantees

The table below sets forth information on guarantees provided by Huaneng Group, HIPDC and the Company to the related parties in 2012 for the purposes of financing their operation, construction and renovation.

Guarantor	Guarantee	Interest Rate (%)	Largest Amount Outstanding in 2012 (RMB)	Amount
				Outstanding As of December 31, 2012 (RMB)
Huaneng Group (Ultimate Parent of the Company)	The Company	6.36	114,713,316	81,875,225
	The Company	LIBOR + 0.075	139,537,243	99,425,857
	Yangliuqing Power Company(1)	2.15	377,482,391	351,206,862
HIPDC	The Company	6.60	34,294,424	-
	The Company	6.60	25,029,616	-
	The Company	6.54	53,903,535	-
	The Company	5.20	4,000,000,000	4,000,000,000
	The Company	5.00	2,000,000,000	2,000,000,000

The Company	Tuas Power Company(1)	SIBOR+1.65	12,990,722,849	12,990,722,849
	Tuas Power Company(1)	SIBOR+1.65	1,905,415,879	1,905,415,879
Diandong Energy(1)	The Company	6.56	500,000,000	-

Note:

(1) These entities are subsidiaries of the Company.

#### Loans

The table below sets forth the loans made by Huaneng Group, subsidiaries of Huaneng Group, and the Company to the related parties in 2012 for the purposes of financing their operation, construction and renovation.

#### Loans

Lender	Borrower	Interest Rate (%)	Largest Amount Outstanding in 2012 (RMB)	Outstanding Balance as of December 31, 2012 (RMB)
Huaneng Group	Yushe Power Company(1)	4.60	225,000,000	225,000,000
(Ultimate Parent of the Company)	Yushe Power Company(1)	4.30	75,000,000	75,000,000
	Qinbei Power Company(1)	4.60	375,000,000	375,000,000
	Qinbei Power Company(1)	4.30	125,000,000	125,000,000
Huaneng Finance (Subsidiary of Huaneng Group)	The Company	6.56	100,000,000	-
	The Company	6.56	400,000,000	-
	The Company	6.10	400,000,000	-
	The Company	5.54	267,000,000	267,000,000
	Weihai Power Company(1)	6.31	100,000,000	-
	Weihai Power Company(1)	6.31	200,000,000	-
	Weihai Power Company(1)	5.70	200,000,000	200,000,000
	Weihai Power Company(1)	5.70	100,000,000	100,000,000
	Huaiyin II Power Company(1)	5.23	100,000,000	-
	Huaiyin II Power Company(1)	5.40	100,000,000	100,000,000
	Huaiyin II Power Company(1)	6.10	200,000,000	-

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	Huaneng (Suzhou Industrial Park) Power Generation Co., Ltd.(1)	6.56	160,000,000	-
	Huaneng (Suzhou Industrial Park) Power Generation Co., Ltd.(1)	6.00	160,000,000	160,000,000
	Taicang Port(1)	6.71	80,000,000	-
	Taicang Port(1)	6.56	40,000,000	-
	Qinbei Power Company(1)	5.40	200,000,000	200,000,000
	Yushe Power Company(1)	6.56	100,000,000	-
	Yushe Power Company(1)	6.56	130,000,000	-
	Yushe Power Company(1)	5.40	100,000,000	100,000,000
	Yushe Power Company(1)	5.70	130,000,000	130,000,000
	Xindian Power Company(1)	6.31	75,000,000	-
	Xindian Power Company(1)	5.70	75,000,000	75,000,000
	Luohuang Power Company(1)	5.40	200,000,000	200,000,000
	Yangliuqing Power Company(1)	6.10	100,000,000	-
	Yangliuqing Power Company(1)	5.70	100,000,000	-
	Yangliuqing Power Company(1)	5.49	100,000,000	-
	Yangliuqing Power Company(1)	5.40	50,000,000	50,000,000
	Yangliuqing Power Company(1)	5.84	150,000,000	150,000,000
	Diandong Energy(1)	6.10	200,000,000	-
	Rizhao Power Company(1)	6.56	200,000,000	-
Xi'an Thermal (Subsidiary of Huaneng Group)	Qinbei Power Company(1)	6.89	70,000,000	-



China Huaneng Group Clean Energy Technology Research Institute Co. Ltd. (Subsidiary of Huaneng Group)	The Company	5.40	120,000,000	120,000,000
	The Company	6.56	100,000,000	-
The Company	Weihai Power Company(1)	6.60	400,000,000	-
	Weihai Power Company(1)	7.22	400,000,000	400,000,000
	Weihai Power Company(1)	6.00	600,000,000	600,000,000
	Weihai Power Company(1)	5.70	400,000,000	400,000,000
	Weihai Power Company(1)	5.70	300,000,000	300,000,000
	Weihai Power Company(1)	7.22	100,000,000	-
	Weihai Power Company(1)	7.22	300,000,000	-
	Weihai Power Company(1)	6.94	600,000,000	-
	Huaiyin II Power Company(1)	5.71	200,000,000	200,000,000
	Huaiyin II Power Company(1)	6.01	1,800,000,000	1,800,000,000
	Huaiyin II Power Company(1)	5.32	2,000,000,000	-
	Huaiyin II Power Company(1)	7.32	200,000,000	-
	Taicang I Power Company(1)	7.22	400,000,000	-
	Taicang II Power Company(1)	5.70	900,000,000	900,000,000
	Taicang II Power Company(1)	5.70	100,000,000	100,000,000
	Taicang II Power Company(1)	5.70	150,000,000	150,000,000
	Taicang II Power Company(1)	7.22	420,000,000	-
	Taicang II Power Company(1)	7.22	400,000,000	-
	Taicang II Power Company(1)	4.99	900,000,000	-
	Tongxiang CCGT	5.70	40,000,000	40,000,000
	Qinbei Power Company(1)	5.70	500,000,000	500,000,000
	Qinbei Power Company(1)	5.70	300,000,000	300,000,000
	Qinbei Power Company(1)	5.70	1,600,000,000	1,600,000,000
	Qinbei Power Company(1)	5.70	500,000,000	500,000,000
	Qinbei Power Company(1)	5.70	200,000,000	200,000,000
	Qinbei Power Company(1)	6.94	400,000,000	-
	Qinbei Power Company(1)	5.12	600,000,000	-
	Yushe Power Company(1)	5.70	235,000,000	235,000,000
	Yushe Power Company(1)	5.70	130,000,000	130,000,000
	Yushe Power Company(1)	7.22	100,000,000	100,000,000
	Yushe Power Company(1)	6.60	280,000,000	280,000,000

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Yushe Power Company(1)	6.00	100,000,000	100,000,000
Yushe Power Company(1)	6.00	200,000,000	200,000,000
Yushe Power Company(1)	6.94	280,000,000	-
Yushe Power Company(1)	7.22	100,000,000	-
Yushe Power Company(1)	7.22	135,000,000	-
Xindian Power Company(1)	6.60	350,000,000	-
Xindian Power Company(1)	6.60	50,000,000	-
Xindian Power Company(1)	6.60	100,000,000	100,000,000
Xindian Power Company(1)	6.00	1,100,000,000	1,100,000,000
Xindian Power Company(1)	6.00	100,000,000	100,000,000
Xindian Power Company(1)	5.70	220,000,000	220,000,000
Xindian Power Company(1)	5.70	400,000,000	400,000,000
Xindian II Power Company(1)	7.22	260,000,000	-
Xindian II Power Company(1)	7.22	20,000,000	-
Xindian II Power Company(1)	4.99	1,000,000,000	-
Pingliang Power Company(1)	5.70	300,000,000	300,000,000
Pingliang Power Company(1)	5.70	820,000,000	820,000,000

Pingliang Power Company(1)	5.70	150,000,000	150,000,000
Pingliang Power Company(1)	5.70	100,000,000	100,000,000
Pingliang Power Company(1)	5.70	150,000,000	150,000,000
Pingliang Power Company(1)	5.70	550,000,000	550,000,000
Pingliang Power Company(1)	5.70	180,000,000	180,000,000
Pingliang Power Company(1)	4.99	1,060,000,000	-
Qidong Wind Power(1)	5.70	372,500,000	372,500,000
Shanghai Power Company(1)	7.22	500,000,000	-
Shanghai Power Company(1)	7.22	1,000,000,000	-
Shanghai Power Company(1)	7.22	2,250,000,000	-
Daditaihong(1)	6.60	110,000,000	95,000,000
Daditaihong(1)	6.00	200,000,000	200,000,000
Daditaihong(1)	5.70	60,000,000	60,000,000
Daditaihong(1)	6.00	88,000,000	88,000,000
Daditaihong(1)	6.00	140,000,000	140,000,000
Daditaihong(1)	7.22	200,000,000	-
Daditaihong(1)	6.31	110,000,000	-
Daditaihong(1)	7.22	228,000,000	-
Yueyang Power Company(1)	5.70	100,000,000	100,000,000
Yueyang Power Company(1)	5.70	1,150,000,000	1,150,000,000
Yueyang Power Company(1)	5.70	200,000,000	200,000,000
Yueyang Power Company(1)	5.12	595,000,000	-
Yueyang Power Company(1)	5.12	505,000,000	-
Luohuang Power Company(1)	6.00	400,000,000	400,000,000
Luohuang Power Company(1)	5.70	360,000,000	360,000,000
Luohuang Power Company(1)	5.32	1,300,000,000	-
Beijing Power Company(1)	7.22	400,000,000	-
Yangliuqing Power Company(1)	5.70	460,000,000	460,000,000
Yangliuqing Power Company(1)	7.22	300,000,000	-
	7.22	100,000,000	-

Yangliuqing Power Company(1)				
Yingkou Co-generation(1)	3.72	700,000,000	700,000,000	
Yingkou Co-generation(1)	5.20	700,000,000	700,000,000	
Xiangqi Hydropower Company(1)	6.60	5,000,000		-
Xiangqi Hydropower Company(1)	6.00	100,000,000	100,000,000	
Xiangqi Hydropower Company(1)	5.70	25,000,000	25,000,000	
Xiangqi Hydropower Company(1)	5.70	160,000,000	160,000,000	
Xiangqi Hydropower Company(1)	7.22	200,000,000		-
Zuoquan Power Company(1)	6.00	1,270,000,000	1,270,000,000	
Zuoquan Power Company(1)	5.70	300,000,000	300,000,000	
Zuoquan Power Company(1)	5.70	600,000,000	600,000,000	
Zuoquan Power Company(1)	7.22	600,000,000	600,000,000	
Zuoquan Power Company(1)	5.70	200,000,000	200,000,000	
Zuoquan Power Company(1)	7.22	240,000,000		-
Zuoquan Power Company(1)	7.22	380,000,000		-
Zuoquan Power Company(1)	7.22	600,000,000		-
Zuoquan Power Company(1)	6.23	35,000,000		-
Zuoquan Power Company(1)	7.22	200,000,000		-
Zuoquan Power Company(1)	7.22	700,000,000		-

Zuoquan Power Company(1)	7.22	500,000,000	-
Kangbao Wind Power(1)	6.00	18,900,000	18,900,000
Kangbao Wind Power(1)	5.70	17,000,000	17,000,000
Kangbao Wind Power(1)	7.22	18,900,000	-
Wafangdian Wind Power(1)	6.60	100,000,000	-
Wafangdian Wind Power(1)	5.70	72,500,000	72,500,000
Wafangdian Wind Power(1)	5.70	100,000,000	100,000,000
Zhanhua Co-generation(1)	6.60	200,000,000	200,000,000
Zhanhua Co-generation(1)	6.60	750,000,000	750,000,000
Zhanhua Co-generation(1)	5.70	300,000,000	300,000,000
Zhanhua Co-generation(1)	7.22	750,000,000	-
Zhanhua Co-generation(1)	7.22	300,000,000	-
Zhanhua Co-generation(1)	7.22	200,000,000	-
Hualu Sea Transportation(1)	6.00	35,000,000	35,000,000
Hualu Sea Transportation(1)	6.23	35,000,000	-
Hualu Sea Transportation(1)	6.60	20,000,000	20,000,000
Luoyuanwan Harbour(1)	7.22	780,000,000	-
Diandong Yuwang(1)	5.70	90,000,000	90,000,000
Diandong Yuwang(1)	5.70	300,000,000	300,000,000
Diandong Yuwang(1)	5.70	100,000,000	100,000,000
Diandong Yuwang(1)	5.70	100,000,000	100,000,000
Diandong Yuwang(1)	5.70	200,000,000	200,000,000
Diandong Energy(1)	5.70	400,000,000	400,000,000
Diandong Energy(1)	5.70	200,000,000	200,000,000
Diandong Energy(1)	5.70	800,000,000	800,000,000
Diandong Energy(1)	5.70	300,000,000	300,000,000
Diandong Energy(1)	5.70	200,000,000	200,000,000
Diandong Energy(1)	7.22	200,000,000	-
Suzihe Hydropower(1)	6.00	70,000,000	70,000,000
Suzihe Hydropower(1)	6.00	192,500,000	192,500,000
Suzihe Hydropower(1)	6.00	20,000,000	20,000,000
Suzihe Hydropower(1)	6.00	20,000,000	20,000,000
Suzihe Hydropower(1)	6.00	20,000,000	20,000,000
Suzihe Hydropower(1)	6.00	7,800,000	7,800,000
Suzihe Hydropower(1)	7.22	100,000,000	-
Fujian Port(1)	5.70	780,000,000	780,000,000
Fujian Port(1)	5.70	208,800,000	208,800,000
Fujian Port(1)	5.70	90,000,000	90,000,000
Fujian Port(1)	6.94	80,000,000	-
Enshi Hydropower(1)	5.70	10,000,000	10,000,000
Enshi Hydropower(1)	5.70	234,000,000	234,000,000
Enshi Hydropower(1)	5.70	10,000,000	10,000,000
Enshi Hydropower(1)	5.70	25,000,000	25,000,000
Enshi Hydropower(1)	5.70	10,000,000	10,000,000
Enshi Hydropower(1)	5.70	10,000,000	10,000,000

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Enshi Hydropower(1)	5.70	10,000,000	10,000,000
Liyuan Thermalpower(1)	5.60	24,786,000	24,786,000
Haimen Port(1)	5.70	50,000,000	50,000,000
Haimen Port(1)	5.70	60,000,000	60,000,000

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Note:

(1) These entities are subsidiaries of the Company.

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#### Lease Agreement

Pursuant to a leasing agreement and a supplemental agreement entered into by Huaneng Property Co., Ltd. (was known as Beijing Huaneng Mansion Construction and Management Co., Ltd.) and us on April 1, 2010 and July 1, 2011, respectively, Huaneng Construction agreed to lease the designated offices of Huaneng Mansion with a total area of 30,671.70 square meters to us till March 31, 2014, and the annual rent is RMB89.56 million. The leasing agreement was effective from April 1, 2010.

#### Acquisition of Shanghai Time Shipping Co., Ltd.

In 2010, we acquired from Huaneng Energy & Communications Holdings Co., Ltd. (“HEC”) its 50% equity interest in Shanghai Time Shipping Co., Ltd. (“Time Shipping”) for a consideration of RMB1.058 billion. As part of the transaction, we agreed to assume the loan guarantees in an aggregate amount of not exceeding US\$43 million previously provided by HEC to Time Shipping. On March 21, 2012, we entered into a performance guarantee with relevant banks. The term of the guarantee shall be two years commencing from the due date for payment of the relevant loans.

#### Transactions with Huaneng Group

On January 5, 2012, we entered into the Framework Agreement with Huaneng Group, our ultimate controlling shareholder, for a term commencing on January 1, 2012 expiring on December 31, 2012. Pursuant to the Huaneng Group Framework Agreement, we will conduct the following transactions with Huaneng Group and its subsidiaries and associates: (i) purchase of ancillary equipment and parts; (ii) purchase of coal and transportation services; (iii) sale of products; (iv) leasing of facilities, land and office spaces; (v) technical services, engineering contracting services and other services; (vi) provision of entrusted sale services and (vii) trust loans and entrusted loan. On January 11, 2013, we renewed the Huaneng Group Framework Agreement with Huaneng Group, for a term commencing on January 1, 2013 and expiring on December 31, 2013.

#### Transactions with Huaneng Finance

On January 5, 2012, we entered into the Huaneng Finance Framework Agreement with Huaneng Finance, a subsidiary of Huaneng Group, for a term commencing on January 1, 2012 and expiring on December 31, 2014. Pursuant to the Huaneng Finance Framework Agreement, we will enter into the following transactions with Huaneng Finance: (i) placing cash deposits by us with Huaneng Finance; (ii) provision of discounting services by Huaneng Finance to us; and (iii) provision of loan advancement by Huaneng Finance to us. Such transactions will be conducted on an on-going basis and will constitute continuing connected transactions under the Hong Kong Listing Rules. During the period from 2012 to 2011, the maximum outstanding balance of the deposits to be placed with Huaneng Finance under the Huaneng Finance Framework Agreement, on a daily basis, will not exceed RMB6 billion. As of December 31, 2012, we placed with Huaneng Finance current deposits of approximately RMB3,662.37 million, which bore interest rates ranging from 0.35% to 1.49% per annum.

#### Transactions with Jiangsu Guoxin

On January 5, 2012, we entered into a framework agreement with Jiangsu Province Guoxin Asset Management Group Company Limited (“Jiangsu Guoxin”) for a term commencing on January 1, 2012 and expiring on December 31, 2012, pursuant to which our company and its subsidiaries will provide entrusted sale services to Jiangsu Guoxin. On January 11, 2013, we renewed the agreement with Jiangsu Guoxin for a term commencing on January 1, 2013 and expiring on December 31, 2013.

Transactions regarding Shaanxi Qinling

On July 31, 2012, Huaneng Shanghai Shidongkou Power Company Limited (“Shanghai Shidongkou”), one of our subsidiaries, and Huaneng Shaanxi Qinling Power Co. Ltd (“Shaanxi Qinling”), a wholly owned subsidiary of Huaneng Group, entered into a transfer agreement, pursuant to which Shanghai Shidongkou agreed to pay to Shaanxi Qinling RMB262 million as a compensation for the closure of relevant small generating units of Qinling Power Plant, which is owned by Qinling Company, for the construction of Phase II of Shidongkou Second Power Plant in “replacing small units with larger ones” project of Shanghai Shidongkou.

Transactions regarding Fuel Company

On January 11, 2013, we entered into an equity transfer agreement with Huaneng Group, pursuant to which we agreed to acquire a 50% interest in the Fuel Company from Huaneng Group for a consideration of approximately RMB108,316,350. On the same day, we entered into a capital increase agreement with Huaneng Group and Fuel Company, pursuant to which we agreed to make a capital injection of RMB1.4 billion into the Fuel Company after the completion of the acquisition.

Transactions with Huaneng Group, China Nuclear and Hainan Nuclear

On March 19, 2013, we entered into a capital increase agreement with Huaneng Group, China Nuclear Power International, Inc. (“China Nuclear”) and Hainan Nuclear Power Co., Ltd. (“Hainan Nuclear”), pursuant to which the existing shareholders of Hainan Nuclear (including our company and Huaneng Group) would make a capital



contribution to the registered capital of Hainan Nuclear in accordance with their respective proportion of shareholding in Hainan Nuclear. Following completion of the capital increase, our company hold 30% of the equity interests of Hainan Nuclear. After the completion of the capital increase, Huaneng Group proposes to transfer at no consideration its 19% interest in Hainan Nuclear to its wholly owned subsidiary Huaneng Nuclear Power Development Co., Ltd. (“Huaneng Nuclear”). Our company will not exercises its pre-emptive right to acquire the 19% interest in Hainan Nuclear.

#### Entrusted Management Arrangements with Huaneng Group and HIPDC

We have entered into certain entrusted management arrangements with Huaneng Group and HIPDC in relation to the management of thermal power plants. Services under such entrusted management arrangements include comprehensive planned management, annual planned management, power operation and sale management, production management of power plants, fuel management, construction management, financial management, human resources and labor wages management, comprehensive affairs management, shareholding management and reporting/co-ordination management. By entering into these entrusted management arrangements, we will further accumulate management experience as a result of the expansion of our operation scale and set a precedent for large-scale and multi-entities entrusted management in the PRC. These entrusted management arrangements will also enable us to obtain direct knowledge of the development status of more power markets, thereby exploring new development opportunities.

#### Coal purchases

In 2012, we paid RMB611.47 million, RMB970.33 million, RMB1,795.22 million, RMB1,658.40 million and RMB1,715.96 million, respectively, to Huaneng Energy & Communications Holdings Co., Ltd. (“HEC”) and its subsidiaries, Hulunbeier Energy Company Ltd. (“Hulunbeier Energy”), Rizhao Power Company, Gansu Huating Coal Power Co., Ltd. and other related parties of Huaneng Group for coal purchase. For a detailed discussion of related party transactions, see Note 34 to the Financial Statements.

#### C. Interests of experts and counsel

Not applicable.

### ITEM 8 Financial Information

#### A. Consolidated statements and other financial information

See pages F-1 to F-103.

#### Legal proceedings

Other than that disclosed under “Item 5 Operating and Financial Review and Prospects – G. Guarantees and pledges on loans and restricted assets”, we are not a defendant in any material litigation or arbitration and no litigation or claim of material importance is known to us or any member of the Board of Directors of us to be pending or threatened against us.

#### Dividend distribution policy

Our articles of association clearly defines our cash dividend policy, i.e. when our earnings and accumulative undistributable profits for the current year are positive, and on condition that our cash flow can satisfy our normal

operation and sustainable development, we shall adopt a cash dividend appropriation policy on principle that the cash dividend payout will not be less than 50% of the distributable profit realized in the then year's consolidated financial statement.

Our Board of Directors will determine the payment of dividends, if any, with respect to our shares on a per share basis. Any final dividend for a financial year shall be subject to shareholders' approval. The Board may declare interim and special dividends at any time under general authorization by a shareholders' ordinary resolution. A decision to declare or to pay any dividends in the future, and the amount of any dividends, will depend on our results of operations, cash flows, financial condition, future prospects and other factors which our Directors may determine as important.

For holders of our H shares, cash dividend payments, if any, shall be declared by our Board of Directors in Renminbi and paid in HK Dollars. The depositary will convert the HK Dollar dividend payments and distribute them to holders of ADSs in U.S. Dollars, less expenses of conversion.

Dividends may be paid only out of our distributable profits (less allocation to the statutory funds of 10% of our net income determined in accordance with PRC GAAP) and may be subject to any applicable PRC withholding tax. Our Articles of Association limit our distributable profits to the lower of the amount determined in accordance with PRC GAAP and IFRS. Subject to the above, we expect to carry a positive, balanced and stable dividend distribution policy.

Our board has proposed a cash dividend of RMB0.21 per ordinary share (tax inclusive) for the year ended December 31, 2012, which is equivalent to RMB8.4 per ADS. The total dividend to be paid amounted to approximately RMB2,952 million.

B. Significant changes

As of January 11, 2013, the Company entered into the Equity Transfer Agreement with Huaneng Group, pursuant to which the Company agreed to acquire a 50% interest in Fuel Company, a wholly owned subsidiary of Huaneng Group, from Huaneng Group for a consideration of approximately RMB108.32 million. On the same day, the Company entered into the Capital Injection Agreement with Huaneng Group and Fuel Company, pursuant to which the Company and Huaneng Group agreed to make a capital injection of RMB1.4 billion respectively into Fuel Company after the completion of the Acquisition. The closing date is the day on which the Company is registered at the competent administration for Industry and Commerce as the holder of 50% interest in Fuel Company. The Company shall pay to Huaneng Group the consideration in cash by one-off payment within 15 working days from the closing date. The business registration has not been completed as at the approval date of the financial report.

As of February 5, 2013, the Company issued unsecured public bond amounting to RMB1.5 billion bearing annual interest rate of 3.85%. The bond is denominated in RMB and issued at face value with maturity period of 3 years. The listing of the RMB bonds on Hong Kong Stock Exchange became effective on February 6, 2013.

As of February 27, 2013, the Company issued the first tranche of the super short-term debentures amounting to RMB5 billion bearing annual interest rate of 3.80%. The bond is denominated in RMB and issued at face value with maturity period of 270 days.

## ITEM 9 The Offer and Listing

### A. Offer and listing details and markets

The Company's ADSs have been listed on the New York Stock Exchange since October 6, 1994. The table below sets forth, for the periods indicated, the high and low closing prices of the ADSs on the New York Stock Exchange.

		Closing Price Per ADS	
		High (US\$)	Low (US\$)
2008		42.15	16.57
2009		34.43	21.60
2010		25.68	20.77
2011		23.87	15.67
2012		37.15	21.02
2011	First Quarter	23.51	21.41
	Second Quarter	23.87	20.74
	Third Quarter	21.40	15.67
	Fourth Quarter	21.37	15.83
2012	First Quarter	26.28	21.02
	Second Quarter	29.80	22.00
	Third Quarter	29.99	26.51
	Fourth Quarter	37.15	28.72
2012	October	31.84	28.72
	November	34.09	31.04
	December	37.15	35.22

2013	January	40.67	35.35
	February	40.65	38.45
	March	43.95	38.96

Source: Reuters

Each ADS represents 40 H shares. As of March 31, 2013, there were 130 registered holders of American Depositary Receipts evidencing ADS.

On January 21, 1998, we listed our H shares on the Hong Kong Stock Exchange. On February 26, 1998, we placed 250 million H Shares Placement at the price of HK\$4.40 per H share or US\$22.73 per ADS. In May, 2004, we affected a two-for-one stock split by way of stock dividend for all our outstanding shares including H shares. The table below sets forth, for the periods indicated, the high and low closing prices of H shares on the Hong Kong Stock Exchange.

	Closing Price Per H shares	
	High (HK\$)	Low (HK\$)
2008	8.22	2.96
2009	6.71	4.19
2010	5.04	4.10
2011	4.65	3.02

		Closing Price Per H shares	
		High (HK\$)	Low (HK\$)
2012		7.19	4.13
2011	First Quarter	4.55	4.14
	Second Quarter	4.65	4.03
	Third Quarter	4.15	3.12
	Fourth Quarter	4.20	3.02
2012	First Quarter	5.11	4.13
	Second Quarter	5.82	4.27
	Third Quarter	5.90	5.08
	Fourth Quarter	7.19	5.56
2012	October	6.27	5.56
	November	6.57	6.09
	December	7.19	6.82
2013	January	8.00	6.83
	February	7.98	7.58
	March	8.54	7.60

Source: Reuters

As of March 31, 2013, there were 508 registered holders of H Shares.

#### ITEM 10 Additional Information

##### A. Share capital

Not applicable.

##### B. Memorandum and articles of association

The following is a brief summary of certain provisions of our Articles of Association, as amended, the Company Law and certain other applicable laws and regulations of the PRC. Such summary does not purport to be complete. For further information, you and your advisors should refer to the text of our Articles of Association, as amended, and to the texts of applicable laws and regulations.

##### Objects and Purposes

We are a joint stock limited company established in accordance with the Standard Opinion for Joint Stock Limited Companies (the “Standard Opinion”) and certain other relevant laws and regulations of the PRC. We are registered with the PRC State Administration for Industry and Commerce with business license number Qi Gu Guo Zi No.

000496. Article 10 of our Articles of Association provides that our scope of businesses includes, among other things, investment, construction, operation and management of power plants; development, investment and operation of other export-oriented enterprises related to power plants; and production and supply of thermal heat.

#### Directors

Our directors shall be elected at our shareholders' general meeting. Because the shares do not have cumulative voting rights, a holder of a majority of the shares is able to elect all of the directors. Our directors shall be elected for a term of three years and may serve consecutive terms upon re-election, except that independent directors may only serve a maximum of two consecutive terms of six years. Our directors are not required to hold any shares in us, and there is no age limit requirement for the retirement or non-retirement of our directors.

Where a director is materially interested, directly or indirectly, in a contract, transaction or arrangement (including any proposed contract, transaction or arrangement) with us, he or she shall declare the nature and extent of his or her interests to the board of directors at the earliest opportunity, whether or not such contract, transaction or arrangement is otherwise subject to the approval of the board. A director shall not vote, and shall not be counted in the quorum of the meeting, on any resolution concerning any contract, transaction or arrangement where the director owns material rights or interests therein. A director is deemed to be interested in a contract, transaction or arrangement in which his associate (as defined by Article 133 of the Articles of Association) is interested.

Unless the interested director discloses his interests to the board and the contract, transaction or arrangement in which the director is materially interested is approved by the board at a meeting in which the director neither votes nor is counted in the quorum, such contract, transaction or arrangement may be revoked by us except with respect to a bona fide party thereto who does not have notice of the director's interests.

We are prohibited from making loans or providing guarantees to our directors and their associates except where such loan or guarantee is made or provided under a service contract as approved by our shareholders at the

shareholders' general meeting and to meet expenditure requirement incurred or to be incurred by the director for the purposes of the Company or for the purpose of enabling the director to perform his or her duties properly.

Matters relating to the remuneration of our directors shall be determined by the shareholders' general meeting.

#### Dividends

Distribution of dividends may be proposed by our board of directors for approval by an ordinary resolution of our shareholders at the shareholders' general meeting. The Articles of Association allows for cash dividends, stock dividends and combination of cash and stock dividends.

Dividends may only be distributed after allowance has been made for:

- recovery of losses, if any;
- allocations to the statutory surplus reserve fund; and
- allocations to a discretionary surplus reserve fund.

The allocation to the statutory surplus reserve fund is 10% of our net income determined in accordance with the PRC accounting rules. Where the accumulated statutory surplus reserve fund has reached 50% or more of our registered capital, no allocation is needed.

The Articles of Association require that cash dividends and other distribution with respect of H Shares be declared in Renminbi and paid by the Company in U.S. dollars or Hong Kong dollar in terms of the H Shares listed on the Hong Kong Stock Exchange. The Articles of Association further stipulate that for dividends and other distributions paid in currencies other than Renminbi, we shall use an exchange rate equal to the median closing exchange rate of Renminbi for such currencies announced by the PBOC for two working days in the week preceding the date on which such dividends or other distributions are declared.

We will appoint receiving agents to receive, on behalf of the holders of H Shares, any dividend distributions and all other money owing by us in respect of such shares (Receiving Agents). The Receiving Agents will comply with the laws and regulations of the applicable stock exchanges on which our shares are listed. Any Receiving Agent appointed on behalf of the holders of H Shares listed on the Hong Kong Stock Exchange will be a company registered as a trust corporation under the Trustee Ordinance of Hong Kong.

Dividends payments may be subject to PRC withholding tax.

#### Voting Rights and Shareholders' Meetings

Our board of directors shall convene a shareholders' annual general meeting once every year and within six months from the end of the preceding financial year. Our board shall convene an extraordinary general meeting within two months after the occurrence of any one of the following events:

- where the number of directors is less than the number required by the PRC Company Law or two-thirds of the number specified in our Articles of Association;
- where our unrecovered losses reach one-third of the total amount of our share capital;

- where shareholder(s) holding 10% or more of our issued shares so request(s);
- whenever our board deems necessary or our supervisory committee so requests; or
- other circumstances as provided in the Articles of Association.

Resolutions proposed by shareholder(s) holding 3% or more of the total number of voting shares shall be included in the agenda for the relevant annual general meeting if (i) they are submitted to the board of directors no later than 10 days before the annual general meeting is to be held and (ii) they are matters which fall within the scope of the functions and powers of shareholders' general meeting and have clear subject and concrete terms to be voted upon. The board of directors shall publish a supplementary notice of annual general meeting specifying the resolutions proposed to other shareholders. Upon publication of the supplementary notice, no alteration to the proposed resolutions or addition of other proposed resolutions will be accepted.

All shareholders' meetings must be convened by our board by written notice given to shareholders not less than 45 days before the meeting. Based on the written replies received by us 20 days before a shareholders' meeting, we shall calculate the number of voting shares represented by shareholders who have indicated that they intend to attend the meeting. Where the number of voting shares represented by those shareholders amount to more than one-half of our total voting shares, we shall convene the shareholders' general meeting. Otherwise, we shall, within five days before holding the shareholders' general meeting, inform the shareholders again of the motions to be considered and the date and venue of the meeting by way of public announcement. After the announcement is made, the shareholders' meeting may be convened. The accidental omission by us to give notice of a meeting to, or the non-receipt of notice of a meeting by, a shareholder will not invalidate the proceedings at that shareholders' meeting.



Shareholders at meetings have the power, among other things, to examine and approve our profit distribution plans and plans to recover losses, the annual budget, an increase or reduction of registered share capital, the reports of our board of directors and supervisory committee, the issuance of debentures, and the plans for merger, division, dissolution or liquidation; to elect or remove our directors and supervisors who are not elected as employees' representatives; and to review and amend our Articles of Association. In addition, the rights of a class of shareholders may not be modified or abrogated, unless approved by a special resolution of shareholders at a general shareholders' meeting and by a special resolution of shareholders of that class of shares at a separate meeting. Our Articles of Association enumerate, without limitation, certain amendments which would be deemed to be a modification or abrogation of the rights of a class of shareholders, including increasing or decreasing the number of shares of such class or the number of shares of a class with voting or distribution rights or privileges equal or superior to the shares of such class, removing or reducing rights to receive dividends in a particular currency, and creating shares with voting or distribution rights or privileges equal or superior to shares of such class.

Each share is entitled to one vote on all such matters submitted to a vote of our shareholders at the shareholders' general meetings, except for meetings of a special class of shareholders where only holders of shares of the affected class are entitled to vote on the basis of one vote per share of the affected class.

Shareholders are entitled to attend and vote at meetings either in person or by proxy. Proxies must be in writing and deposited at our legal address, or such other place as is specified in the meeting notice, not less than 24 hours before the time for holding the meeting at which the proxy proposes to vote or the time appointed for the passing of the relevant resolution(s). When the instrument appointing a proxy is executed by the shareholder's attorney-in-fact, such proxy when deposited must be accompanied by a notary certified copy of the relevant power of attorney or other authority under which the proxy was executed.

Except for those actions discussed below which require supermajority votes ("special resolutions"), resolutions of the shareholders are passed by a simple majority of the voting shares held by shareholders who are present in person or by proxy. Special resolutions must be passed by more than two-thirds of the voting shares held by shareholders who are present in person or by proxy.

The following decisions must be adopted by special resolution:

- an increase or reduction of our registered share capital or the issuance of shares, including stock distributions, of any class, warrants and other similar securities;
- issuance of debentures;
- our division, merger, dissolution, liquidation and change of the legal form;
- amendments to our Articles of Association;
- acquisition or disposal of material assets or providing guarantee in the amount exceeding 30% of our most recent audited total assets within one year;
- adjustments to our profit distribution policy; and
- any other matters our shareholders have resolved by way of an ordinary resolution at a general meeting to be of a nature which may have a material impact on us and should be adopted by special resolution.

In addition, amendments to the Articles of Association require the approval and consent of the relevant PRC authorities.

All other actions taken by the shareholders, including the appointment and removal of our directors and supervisors and the declaration of cash dividend payments, will be decided by an ordinary resolution of the shareholders.

Any shareholder resolution which is in violation of any laws or regulations of the PRC will be null and void.

#### Liquidation Rights

In the event of our liquidation, the ordinary shares held by overseas shareholders will rank *pari passu* with the ordinary shares held by the domestic shareholders, and any of our assets remaining after payments (in order of priority) of (a) the costs of liquidation (b) wages and social insurance fees payable to or for our employees for the past three years prior to the date of liquidation; (c) overdue taxes and tax surcharges, funds and other amounts payable pursuant to the applicable administrative regulations; and (d) bank loans, corporate bonds and other debts, will be divided among our shareholders in accordance with the class of shares and their proportional shareholdings.

#### Further Capital Call

Shareholders are not liable to make any further contribution to the share capital other than according to the terms, which were agreed by the subscriber of the relevant shares at the time of subscription.

#### Increases in Share Capital and Preemptive Rights

The Articles of Association require the approval by a special resolution of the shareholders prior to authorizing, allotting, issuing or granting shares, securities convertible into shares or options, warrants or similar rights to subscribe for any shares or such convertible securities. New issues of shares must also be approved by the relevant PRC authorities.

Shareholders do not have preemptive rights with respect to new issues of shares of the Company.

#### Reduction of Share Capital and Purchase by Us of Our Shares and General Mandate to Repurchase Shares

We may reduce our registered share capital only upon obtaining the approval of the shareholders by a special resolution and, in certain circumstances, of relevant PRC authorities. The number of H Shares, which may be purchased is subject to the Hong Kong Takeovers and Share Repurchase Codes.

#### Restrictions on Large or Controlling Shareholders

Our Articles of Association provide that, in addition to any obligation imposed by laws and administration regulations or required by the listing rules of the stock exchanges on which our shares are listed, a controlling shareholder shall not exercise his voting rights in a manner prejudicial to the interests of the shareholders generally or of some part of the shareholders:

- (1) to relieve a director or supervisor from his or her duty to act honestly in our best interests;
- (2) to approve the expropriation by a director or supervisor (for his or her own benefit or for the benefit of another person) of our assets in any way, including, without limitation, opportunities which may benefit us; or
- (3) to approve the expropriation by a director or supervisor (for his or her own benefit or for the benefit of another person) of the individual rights of other shareholders, including, without limitation, rights to distributions and voting rights (save according to a restructuring of our company which has been submitted for approval by the shareholders in a general meeting in accordance with our Articles of Association).

A controlling shareholder, however, will not be precluded by our Articles of Association or any laws and administrative regulations or the listing rules of the stock exchanges on which our shares are listed from voting on these matters.

A controlling shareholder is defined by our Articles of Association as a shareholder whose capital contribution represents 50% or more of the total capital of our company, or a shareholder whose shares represent 50% or more of the total issued share capital of our company, or a shareholder whose capital contribution or shares is less than 50% but obtain significant voting right to influence the result of the shareholder' general meeting or the resolutions passed thereby.

#### Disclosure

The Listing Agreement imposes a requirement on us to keep the Hong Kong Stock Exchange, our shareholders and other holders of our listed securities informed as soon as reasonably practicable of any information relating to us and our subsidiaries, including information on any major new developments which are not public knowledge, which:

- is necessary to enable them and the public to appraise the position of us and our subsidiaries;
- is necessary to avoid the establishment of a false market in its securities; and

- might be reasonably expected materially to affect market activity in and the price of its securities.

There are also requirements under the Listing Rules for us to obtain prior shareholders' approval and/or to disclose to shareholders details of certain acquisitions or disposals of assets and other transactions (including transactions with controlling shareholders).

#### Sources of Shareholders' Rights

The PRC's legal system is based on written statutes and is a system in which decided legal cases have little precedent value. Prior to the effectiveness of the Company Law, the PRC did not have a comprehensive body of laws governing joint stock limited companies. The rights and obligations of our shareholders are principally contained in our constitutive documents and the Standard Opinion, under which we were established. In December 1993, the Standing Committee of the 8th National People's Congress adopted the PRC Company Law, which superseded the Standard Opinion. In accordance with Article 229 of the Company Law, we must comply with the relevant requirements of the Company Law within an unspecified time period. As a result, we amended our Articles of Association pursuant to the Company Law on June 6, 1995. On October 27, 2005, the Company Law was amended by the Standing Committee of the 10th National People's Congress, and came into force on January 1, 2006.

Currently, the primary sources of shareholder's rights are our Articles of Association, as amended, the PRC Company Law and the Listing Rules of the Hong Kong Stock Exchange, which, among other things, impose certain

standards of conduct, fairness and disclosure on us, our directors and our controlling shareholder. To facilitate the offering and listing of shares of PRC companies overseas, and to regulate the behavior of companies whose shares are listed overseas, the State Council Securities Committee and the State Commission for Restructuring the Economic System issued on August 27, 1994 the Mandatory Provisions for Articles of Association of Company Listing Overseas (the “Mandatory Provisions”). These Mandatory Provisions become entrenched in that, once they are incorporated into the Articles of Association of a PRC company, any amendment to those provisions will only become effective after approval by the State-owned Assets Supervision and Administration Commission of the State Council. The Listing Rules require a number of additional provisions to the Mandatory Provisions to be included in the Articles of Association of PRC companies listing H Shares on the Hong Kong Stock Exchange (the “Additional Provisions”). The Mandatory Provisions and the Additional Provisions have been incorporated into our Articles of Association.

In addition, upon the listing of and for so long as the H Shares are listed on the Hong Kong Stock Exchange, we are subject to the relevant ordinances, rules and regulations applicable to companies listed on the Hong Kong Stock Exchange, including the Listing Rules of the Hong Kong Stock Exchange, the Securities (Disclosure of Interests) Ordinance (the “SDI Ordinance”), the Securities (Insider Dealing) Ordinance and the Hong Kong Codes on Takeovers and Mergers and Share Repurchases (the “Hong Kong Takeovers and Repurchase Codes”).

#### Enforceability of Shareholders’ Rights

There has not been any public disclosure in relation to the enforcement by holders of H Shares of their rights under constitutive documents of joint stock limited companies or the Company Law or in the application or interpretation of the PRC or Hong Kong regulatory provisions applicable to the PRC joint stock limited companies.

The Company Law, as amended in October 2005 and effective in January 2006, has granted shareholders with the rights to bring derivative suits. Within the Company Law, Shareholders holding more than 1 percent of the shares of the company for more than 180 consecutive days are entitled to request the supervisory committee (in terms of directors and senior management) or the board of directors (in terms of supervisors) to bring legal proceedings, or bring legal proceedings in their own name on behalf of the company where it is in emergency and the Company will be subject to irreparable loss if not to do so, against directors, supervisors or senior management who fail to comply with the laws and regulations or the company’s Articles of Association in the course of performing their duties and cause loss to the company;

Our Articles of Association provide that all differences or claims:

- between a holder of H Shares and us;
- between a holder of H Shares and any of our directors, supervisors, general managers or other senior officers; or
- between a holder of H Shares and a holder of domestic ordinary shares, arising from any provision of our Articles of Association, any right or obligation conferred or imposed by the Company Law or any other relevant law or administrative regulation which concerns our affairs

must, with certain exceptions, be referred to arbitration at either the China International Economic and Trade Arbitration Commission in the PRC or the Hong Kong International Arbitration Center. Our Articles of Association provide that such arbitration will be final and conclusive. In June 1999, an arrangement was made between the People’s Courts of the PRC and the courts of Hong Kong to mutually enforce arbitration awards rendered in the PRC and Hong Kong according to their respective laws. This new arrangement was approved by the Supreme Court of the PRC and the Hong Kong Legislative Council and became effective on February 1, 2000.

The holders of H Shares will not be able to bring actions on the basis of violations of the Listing Rules and must rely on the Hong Kong Stock Exchange to enforce its rules. The SDI Ordinance establishes certain obligations in relation to disclosure of shareholder's interests in Hong Kong listed companies, the violation of which is subject to prosecution by the Securities and Futures Commission of Hong Kong. The Hong Kong Takeovers and Repurchase Codes do not have the force of law and are only standards of commercial conduct considered acceptable for takeover and merger transactions and share repurchases in Hong Kong as established by the Securities and Futures Commission and the securities and futures industry in Hong Kong.

We have appointed CT Corporation System, New York, as our agent to receive service of process with respect to any action brought against us in certain courts in New York under the United States federal and New York State's securities laws. However, as the PRC does not have treaties providing for the reciprocal recognition and enforcement of judgments of courts within the United States, the United Kingdom, Japan or most other the Organization for Economic Cooperation and Development countries, administrative actions brought by regulatory authorities, such as the Commission, and other actions which result in foreign court judgments, could (assuming such actions are not required by PRC law and the Articles of Association to be arbitrated) only be enforced in the PRC on a reciprocal basis or according to relevant international treaty to which China is a party if such judgments or rulings do not violate the basic principles of the law of the PRC or the sovereignty, security and public interest of the society of the PRC, as determined by a People's Court of the PRC which has the jurisdiction for recognition and enforcement of judgments. We have been advised by our PRC counsel, Haiwen & Partners, that there is uncertainty as to the

enforceability in the PRC of actions to enforce judgments of United States courts arising out of or based on the ownership of H Shares or ADSs, including judgments arising out of or based on the civil liability provisions of United States federal or state securities laws.

#### Restrictions on Transferability and the Share Register

H Shares may be traded only among investors who are not PRC persons, and may not be sold to PRC investors. There are no restrictions on the ability of investors who are not PRC residents to hold H Shares.

As provided in the Articles of Associations we may refuse to register a transfer of H Shares listed on Hong Kong Stock Exchange unless:

- a fee (for each instrument of transfer) of HK dollar 2.50, or any higher fee as agreed by the Hong Kong Stock Exchange, has been paid to us;
  - the instrument of transfer only involves H Shares;
  - the stamp duty chargeable on the instrument of transfer has been paid;
- the relevant share certificate and upon the reasonable request of the board of directors, any evidence in relation to the right of the transferor to transfer the shares have been submitted;
- if it is intended to transfer the shares to joint owners, then the maximum number of joint owners must not exceed four;
  - we do not have any lien on the relevant shares.

We are required to maintain original share register for holders of H Shares in Hong Kong and a copy of the register at our legal address. Shareholders have the right to inspect and, for a reasonable charge, to copy the share register. No transfers of ordinary shares shall be recorded in our share register within 20 days prior to the date of a shareholders' general meeting or within 5 days prior to the record date established for the purpose of distributing a dividend.

We have appointed Hong Kong Registrars Limited to act as the registrar of our H Shares. This registrar maintains our register of holders of H Shares in Hong Kong and enters transfers of shares in such register upon the presentation of the documents described above.

#### C. Material contracts

See "Item 7. Major Shareholders and Related Party Transactions — B. Related Party Transactions" for certain arrangements we have entered into with HIPDC and Huaneng Group.

#### D. Exchange controls

The existing foreign exchange regulations have significantly reduced government foreign exchange controls for transactions under the current account, including trade and service related foreign exchange transactions and payment of dividends. We may not undertake current account foreign exchange transactions without prior approval from the State Administration of Foreign Exchange or its local branch offices by performing certain required procedures. The PRC Government has stated publicly that it intends to make the Renminbi freely convertible in the future. However, we cannot predict whether the PRC Government will continue its existing foreign exchange policy and when the PRC

Government will allow free conversion of Renminbi to foreign currency.

Foreign exchange transactions under the capital account, under most circumstances, including principal payments in respect of foreign currency-denominated obligations, continue to be subject to significant foreign exchange controls and require the approval of the State Administration of Foreign Exchange or its local branch offices. These limitations could affect our ability to obtain foreign exchange through debt or equity financing, or to obtain foreign exchange for capital expenditures.

The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. Renminbi appreciated by more than 20% against the U.S. dollar between July 2005 and July 2008. Between July 2008 and June 2010, this appreciation halted and the exchange rate between the Renminbi and the U.S. dollar remained within a narrow band. Since June 2010, Renminbi has been appreciated slowly against the U.S. dollar again. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future. There remains significant international pressure on the PRC Government to further liberalize its currency policy, which could result in further fluctuations in the value of the Renminbi against the U.S. dollar. However, there is no assurance that there will not be a devaluation of Renminbi in the future. If there is such a devaluation, our debt servicing cost will increase and the return to our overseas investors may decrease.

The following table sets forth information concerning exchange rates between the Renminbi and the U.S. dollar for the periods indicated:



Period	Noon Buying Rate			
	End (RMB per US\$1.00)	Average(1)	High	Low
2007	7.2946	7.6052	8.0300	7.7232
2008	6.8225	6.8193	7.2946	6.7800
2009	6.8259	6.8298	6.8395	6.8180
2010	6.6000	6.7696	6.8330	6.6000
2011	6.2939	6.4475	6.6364	6.2939
2012	6.2301	6.3093	6.3879	6.2221
October	6.2372	6.2627	6.2877	6.2372
November	6.2265	6.2338	6.2454	6.2221
December	6.2301	6.2328	6.2502	6.2251
2013 January	6.2186	6.2215	6.2303	6.2134
February	6.2213	6.2323	6.2438	6.2213
March	6.2108	6.2154	6.2246	6.2105
April (through April 12, 2013)	6.1914	6.1991	6.2078	6.1914

Source: For periods prior to December 31, 2008, the noon buying rates of the Federal Reserve Bank of New York; for periods subsequent to December 31, 2008, Federal Reserve Statistical Release, Board of Governors of the Federal Reserve System.

Note:

(1) Annual averages are calculated by using the average of the exchange rates on the last day of each month during the relevant year. Monthly averages are calculated by using the average of the daily rates during the relevant month.

#### E. Taxation

The following is a summary of (i) certain tax consequences from acquiring, owning and disposing the H Shares and ADSs based on tax laws of the PRC, the United States and the Income Tax Treaty between the PRC and the United States (the "Tax Treaty") as in effect on the date of this annual report, and is subject to changes in PRC or United States law, including changes that could have retroactive effect, and (ii) the principal PRC taxes to which we are subject to. The following summary does not take into account or discuss the tax laws of any countries or regions other than the PRC and the United States, nor does it take into account the individual circumstances of an investor. This summary does not purport to be a complete technical analysis or examination of all potential tax effects relevant to an investment in the H Shares or ADSs and current and prospective investors in all jurisdictions of the H Shares or ADSs are advised to consult their tax advisors as to PRC, United States or other tax consequences of the purchase, ownership and disposition of the H Shares or ADSs. This summary also does not purport to be a complete technical analysis or examination of all potential PRC taxes that may be levied upon us.

PRC tax considerations

Tax on dividends

Individual investors

According to the current PRC tax regulations, dividends paid by PRC companies to individual investors are ordinarily subject to a PRC withholding tax levied at a flat rate of 20%. For a foreign individual who has no domicile or does not stay in the territory of China or who has no domicile but has stayed in the territory of China for less than one year, the receipt of dividend from a company in China is normally subject to a withholding tax of 20% unless reduced or exempted by applicable laws and tax treaties.

#### Enterprises

In accordance with the New Enterprise Income Tax Law that became effective on January 1, 2008, dividends derived from the revenues accumulated from January 1, 2008 and are paid by PRC companies to non-resident enterprises are generally subject to a PRC withholding tax levied at a rate of 10% unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemptions. Dividends paid by PRC companies to resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose “de facto management body” is located in the PRC, are not subject to any PRC withholding tax, unless the dividends are derived from the publicly traded shares which have not been held continuously by the resident enterprises for twelve months. According to the Notice on the Issues Concerning Withholding the Enterprise Income Tax on the Dividends Paid by Chinese Resident Enterprise to H Share Holders Which Are Overseas Non-resident Enterprises issued by the State Administration of Taxation on November 6, 2008, Chinese resident enterprises are required to withhold PRC enterprise income tax at the rate of 10% on dividends paid for 2008 and later years payable to their respective H Shares holders who are non-resident enterprises.

#### Capital gains tax on sales of shares

In accordance with the New Enterprise Income Tax Law, capital gains realized by foreign enterprises which are non-resident enterprises in China upon the sale of overseas shares are generally subject to a PRC withholding tax levied at a rate of 10%, unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemptions. The capital gains realized by resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose “de facto management body” is located in the PRC, upon the sales of overseas shares are subject to the PRC corporate income tax.

#### Tax treaties

Non-PRC Investors residing in countries which have entered into double-taxation treaties with the PRC may be entitled to a reduction of the withholding tax imposed on the payment of dividends to such Foreign Holders of us. The PRC currently has double-taxation treaties with a number of countries, including Australia, Canada, France, Germany, Japan, Malaysia, the Netherlands, Singapore, the United Kingdom and the United States.

#### Stamp tax

Under the Provisional Regulations of The People's Republic of China Concerning Stamp Tax, which became effective in October, 1988, PRC stamp tax should not be imposed on the transfer of H Shares or ADSs of PRC publicly traded companies.

#### Taxation of the Company

##### Income tax

Prior to January 1, 2008, according to the relevant income tax law, foreign invested enterprises were, in general, subject to statutory income tax of 33% (30% enterprise income tax and 3% local income tax). If these enterprises are located in certain specified locations or cities, or are specifically approved by State Administration of Taxation, a lower tax rate would be applied. Effective from January 1, 1999, in accordance with the practice notes on the PRC income tax laws applicable to foreign invested enterprises investing in energy and transportation infrastructure businesses, a reduced enterprise income tax rate of 15% (after the approval of State Administration of Taxation) was applicable across the country. We applied this rule to all of our wholly owned operating power plants after obtaining the approval of State Administration of Taxation. In addition, certain power plants were exempted from enterprise income tax for two years starting from the first profit-making year, after offsetting all tax losses carried forward from the previous years (at most of five years), followed by a 50% reduction of the applicable tax rate for the next three years. The statutory income tax was assessed individually based on each of their results of operations.

On March 16, 2007, the Enterprise Income Tax Law of PRC, or the New Enterprise Income Tax Law, was enacted, and became effective on January 1, 2008. The New Enterprise Income Tax Law imposes a uniform income tax rate of 25% for domestic enterprises and foreign invested enterprises. Therefore, our power plants subject to a 33% income tax rate prior to January 1, 2008 are subject to a lower tax rate of 25% starting on January 1, 2008. With regard to our power plants entitled to a reduced enterprise income tax rate of 15% prior to January 1, 2008, their effective tax rate is being gradually increased to 25% within a five-year transition period commencing on January 1, 2008. Accordingly, the effective tax rate of our wholly-owned power plants will increase over time. In addition, although our power plants entitled to tax exemption and reduction under the income tax laws and regulations that are effective prior to the New Enterprise Income Tax Law will continue to enjoy such preferential treatments until the expiration of the same, newly established power plants will not be able to benefit from such tax incentives, unless they can satisfy specific qualifications, if any, provided by then effective laws and regulations on preferential tax treatment.

Pursuant to Measures for the Collection and Administration of Consolidated Payment of Enterprises Income Tax on Trans-Regional Operation, effective on January 1, 2013, the Company and its branches calculate and pay income tax on a combined basis according to relevant tax laws and regulations. The income tax of subsidiaries remains to be calculated individually based on their individual operating results.

##### Value-added tax

Since January 1, 1994, the government has implemented a turnover tax system applicable to FIEs. Under the turnover tax provisions, we have to collect from our electricity customers and pay to the PRC tax authorities a value-added tax (“VAT”) on our sales. The tax rate on sales of electricity by us is 17% of total sales. The amount of VAT payable by us is the VAT on sales reduced by the VAT paid by us on our purchases of coal, fuel and other inputs.

Effective from January 1, 2009, VAT payers are allowed to credit against output VAT in respect of input VAT on fixed assets purchased or self-manufactured based on the relevant VAT credit receipts in accordance with the revised VAT regulations and its implementation rules.

In addition, effective from August 1, 2012, according to the relevant regulations of Ministry of Finance of PRC and State Administration of Taxation, eight pilot regions including Shanghai, Beijing, Tianjin, Jiangsu Province, Anhui Province, Zhejiang Province, Fujian Province, Hubei Province and Guangdong Province are under the pilot program for the transformation from Business Tax to VAT. The tax rate of VAT applied in the lease of tangible movable properties, transportation industry and other modern services industry for the Company and its subsidiaries in the pilot regions are 17%, 11% and 6% respectively.

#### United States federal income tax considerations

The following is a summary of the material United States federal income tax considerations relating to the acquisition, ownership and disposition of our H shares or ADSs by a U.S. Holder (as defined below). This summary is based upon existing United States federal income tax law, which is subject to differing interpretations or change, possibly with retroactive effect. This summary does not discuss all aspects of United States federal income taxation

which may be important to particular investors in light of their individual investment circumstances, such as investors subject to special tax rules including: financial institutions, insurance companies, broker-dealers, traders in securities that elect mark-to-market treatment, partnerships and their partners, tax-exempt organizations (including private foundations), investors who are not U.S. Holders, investors who own (directly, indirectly, or constructively) 10% or more of the voting power or value of our stock, investors that hold H shares or ADSs as part of a straddle, hedge, conversion, constructive sale, or other integrated transaction for United States federal income tax purposes, or investors that have a functional currency other than the United States dollar, all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, this summary does not discuss any state, local, non-United States, or alternative minimum tax considerations. This summary only addresses investors that hold their H shares or ADSs as “capital assets” (generally, property held for investment) under the United States Internal Revenue Code of 1986, as amended (the “Code”). U.S. Holders should consult their tax advisors regarding the United States federal, state, local, and non-United States income and other tax considerations of an investment in H shares or ADSs.

For purposes of this summary, a U.S. Holder is a beneficial owner of H shares or ADSs that is, for United States federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created in or organized under the laws of, the United States or any State thereof or the District of Columbia;
- an estate the income of which is includible in gross income for United States federal income tax purposes regardless of its source; or
- a trust (a) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (b) a trust that has otherwise elected to be treated as a United States person under the Code.

If a partnership (including any entity treated as a partnership for United States federal income tax purposes) is a beneficial owner of H shares or ADSs, the tax treatment of a partner in such partnership will depend upon the status of the partner and the activities of the partnership. Partnerships and partners of a partnership holding our H shares or ADSs should consult their tax advisors regarding the United States federal income tax consequences applicable to them of an investment in H shares or ADSs.

For United States federal income tax purposes, U.S. Holders of ADSs will be treated as the beneficial owners of the underlying H shares represented by the ADSs. Accordingly, deposits or withdrawals of H shares for ADSs will not be subject to United States federal income tax.

#### Passive Foreign Investment Company Considerations

A non-United States corporation, such as our company, will be a “passive foreign investment company” (a “PFIC”), for United States federal income tax purposes for any taxable year, if either (a) 75% or more of its gross income for such year consists of certain types of “passive” income or (b) 50% or more of its average quarterly assets as generally determined on the basis of fair market value during such year produce or are held for the production of passive income. For this purpose, cash and assets readily convertible into cash are categorized as passive assets and the company’s unbooked intangibles are taken into account for determining the value of its assets. We will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, more than 25% (by value) of the stock.

We do not believe that we were classified as a PFIC for the taxable year ending 2012. The determination of whether we will be or become a PFIC will depend, in part, upon the composition of our income and our assets (which are subject to change from year to year) and the value of our H shares or ADSs (of which we cannot control). Although we do not expect that our business plans will change in a manner that will affect our PFIC status, no assurance can be given in this regard. Because there are uncertainties in the application of the relevant rules and PFIC status is a fact-intensive determination made on an annual basis, no assurance may be given with respect to our PFIC status for any taxable year.

The discussion below under “Dividends” and “Sale or Other Disposition” of H shares or ADSs assumes that we will not be classified as a PFIC for United States federal income tax purposes. See the discussion below under the heading “Passive Foreign Investment Company Rules” for a brief summary of the PFIC rules.

#### Dividends

The gross amount of any cash distributions (including the amount of any tax withheld) paid on our H shares or ADSs out of our current or accumulated earnings and profits, as determined under United States federal income tax principles, will be subject to tax as dividend income on the day actually or constructively received by a U.S. Holder, in the case of H shares, or by the depository bank, in the case of ADSs. Because we do not intend to determine our

earnings and profits on the basis of United States federal income tax principles, any distribution paid will generally be reported as a “dividend” for United States federal income tax purposes. A non-corporate recipient of dividend income will generally be subject to tax on dividend income from a “qualified foreign corporation” at a reduced capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that the holding period requirement is met.

A non-U.S. corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) generally will be considered to be a qualified foreign corporation (i) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information program or (ii) with respect to any dividend it pays on stock which is readily tradable on an established securities market in the United States. There is currently a tax treaty in effect between the United States and the People’s Republic of China (the “U.S.-PRC Treaty”) which the Secretary of Treasury of the United States determined is satisfactory for these purposes and we believe that we are eligible for the benefits of such treaty. Additionally, our ADSs trade on the New York Stock Exchange, an established securities market in the United States. There can be no assurance that the dividends we pay on our H shares or ADSs will meet the conditions required for the reduced tax rate in the current taxable year or future taxable years. Dividends received on H shares or ADSs will not be eligible for the dividends received deduction allowed to corporations. U.S. Holders should consult their tax advisors regarding the rate of tax that will apply to them with respect to dividends (if any) received from U.S.

Dividends paid in non-United States currency will be includible in income in a United States dollar amount based on the exchange rate prevailing at the time of receipt of such dividends by the depositary, in the case of ADSs, or by the U.S. Holder, in the case of H shares held directly by such U.S. Holder, regardless of whether the non-United States currency is actually converted into United States dollars at that time. Gain or loss, if any, recognized on a subsequent sale, conversion or other disposition of the non-United States currency will generally be United States source income or loss.

Dividends received on H shares or ADSs will generally be treated, for United States foreign tax credit purposes, as foreign source income and generally will constitute passive category income. A U.S. Holder may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of any non-United States withholding taxes imposed on dividends received on H shares or ADSs. U.S. Holders who do not elect to claim a foreign tax credit for foreign income tax withheld may instead claim a deduction, for United States federal income tax purposes, in respect of such withholdings, but only for a year in which the U.S. Holder elects to do so for all creditable foreign income taxes. U.S. Holders should consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

#### Sale or Other Disposition of H shares or ADSs

A U.S. Holder will generally recognize capital gain or loss upon the sale or other disposition of H shares or ADSs in an amount equal to the difference between the amount realized upon the disposition and the U.S. Holder’s adjusted tax basis in such H shares or ADSs. Any capital gain or loss will be long-term if the H shares or ADSs have been held for more than one year and will generally be United States source gain or loss for United States foreign tax credit purposes. A U.S. Holder that is eligible for the benefits of the U.S.-PRC Treaty may elect to treat the gain as non-United States source gain or loss. The deductibility of a capital loss may be subject to limitations. U.S. Holders should consult their tax advisors regarding the tax credit purposes if a non-U.S. withholding tax is imposed on a disposition of our H shares or ADSs, including the availability of the foreign tax credit under their particular circumstances.

U.S. Holders that receive currency other than the United States dollar upon the sale or other disposition of H shares will realize an amount equal to the United States dollar value of the non-United States currency on the date of such sale or other disposition, or if the shares are traded on an established securities market, in the case of cash basis and electing accrual basis taxpayers, the settlement date. U.S. Holders will recognize currency gain or loss if the United States dollar value of the currency received on the settlement date differs from the amount realized. U.S. Holders will have a tax basis in the currency received equal to the United States dollar amount at the spot rate on the settlement date. Generally, any gain or loss realized by U.S. Holders on a subsequent conversion or disposition of such currency will be United States source ordinary income or loss.

#### Passive Foreign Investment Company Rules

If we were to be classified as a PFIC in any taxable year, a special tax regime will apply to both (a) any “excess distribution” by us to a U.S. Holder (generally, the U.S. Holder’s ratable portion of distributions in any year which are greater than 125% of the average annual distribution received by such U.S. Holder in the shorter of the three preceding years or the U.S. Holder’s holding period for our H shares or ADSs) and (b) any gain realized on the sale or other disposition of the H shares or ADSs. Under this regime, any excess distribution and realized gain will be treated as ordinary income and will be subject to tax as if (a) the excess distribution or gain had been realized ratably over the U.S. Holder’s holding period, (b) the amount deemed realized in each year had been subject to tax in each year of that holding period at the highest marginal rate for such year (other than income allocated to the current period or any taxable period before we became a PFIC, which would be subject to tax at the U.S. Holder’s regular ordinary



income rate for the current year and would not be subject to the interest charge discussed below), and (c) the interest charge generally applicable to underpayments of tax had been imposed on the taxes deemed to have been payable in those years. In addition, dividends made to a U.S. Holder will not qualify for the lower rates of taxation applicable to long-term capital gains discussed above under “Dividends”.

The above results may be eliminated if a “mark-to-market” election is available and a U.S. Holder validly makes such an election. If the election is made, such holder generally will be required to take into account the difference, if any, between the fair market value and its adjusted tax basis in H shares or ADSs at the end of each taxable year as ordinary income or ordinary loss (to the extent of any net mark-to-market gain previously included in income). In addition, any gain from a sale or other disposition of H shares or ADSs will be treated as ordinary income, and any loss will be treated as ordinary loss (to the extent of any net mark-to-market gain previously included in income).

#### Backup Withholding and Information Reporting

U.S. Holders may be subject to information reporting to the United States Internal Revenue Service with respect to dividends on and proceeds from the sale or other disposition of our H shares or ADSs. Dividend payments with respect to our H shares or ADSs and proceeds from the sale or other disposition of H shares or ADSs are not generally subject to United States backup withholding (provided certain certification requirements are satisfied). U.S. Holders should consult their tax advisors regarding the application of the United States information reporting and backup rules to their particular circumstances.

Individuals who are U.S. Holders, and who hold “specified foreign financial assets”, including stock of a non-U.S. corporation that is not held in an account maintained by a U.S. “financial institution”, whose aggregate value exceeds \$50,000 during the tax year, may be required to attach to their tax returns for the year certain specified information. An individual who fails to timely furnish the required information may be subject to a penalty. U.S. Holders who are individuals are urged to consult their tax advisors regarding their reporting obligations under this legislation.

F. Dividends and paying agents

Not applicable.

G. Statement by experts

Not applicable.

H. Documents on display

We are subject to the information reporting requirements of the Securities Exchange Act of 1934 (the “Exchange Act”) and, in accordance with the Act, file certain reports and other information with the SEC. You may read and copy and report, statement or other information filed by us at the SEC’s public reference rooms in Washington, D.C., New York and Chicago, Illinois. Please call the SEC at 1-800-0330 for further information on the public reference rooms. Our reports and other information filed with the SEC are also available to the public from commercial document retrieval services and the website maintained by the SEC at <http://www.sec.gov>.

I. Subsidiary information

Not applicable.

ITEM 11 Quantitative and Qualitative Disclosures About Market Risk

Our primary market risk exposures are fluctuations fuel prices, foreign exchange rates and interest rates.

#### Equity price risk

The Company and its subsidiaries are exposed to equity security risk because of investments held by the Company and its subsidiaries and classified on the balance sheets as available-for-sale and trading securities.

Detailed information relating to the available-for-sale investments is disclosed in Note 10 to the financial statements. Being a strategic investment in nature, the Company has a supervisor in the supervisory committee of the investee and exercises influence in safeguarding the interest. The Company and its subsidiaries also closely monitor the pricing trends in the open market in determining their long-term strategic stakeholding decisions.

As at 31 December 2012, the Company and its subsidiaries are also exposed to equity security price risk arising from the investments classified as financial assets at fair value through profit or loss. These securities are listed in Hong Kong. To manage the risk, the Company and its subsidiaries closely monitor the market prices of these securities.

#### Foreign exchange rate risk

A portion of our Renminbi revenues are converted into other currencies to (i) repay our debts denominated in currencies other than RMB, and (ii) pay for imported equipment.

The exchange rate of Renminbi to foreign currencies may fluctuate and is affected by, among other things, changes in China's political and economic conditions. The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. Renminbi appreciated by more than 20% against the U.S. dollar between July 2005 and July 2008. Between July 2008 and June 2010, this appreciation halted and the exchange rate between the Renminbi and the U.S. dollar remained within a narrow band. Since June 2010, Renminbi has appreciated slowly against the U.S. dollar again. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future. There remains significant international pressure on the PRC Government to further liberalize its currency policy. We cannot assure you that any future movements in the exchange rate of the Renminbi against the U.S. dollar and other currencies will not adversely affect our results of operations and financial conditions.

SinoSing Power and its subsidiaries are exposed to foreign exchange risk on fuel purchase that is denominated primarily in U.S. dollars. They use forward exchange contracts to hedge almost all of its estimated foreign exchange exposure in respect of forecast fuel purchases over the following three months. The Company and its subsidiaries account for its forward foreign currency contracts as cash flow hedges.

The following table provides information, by maturity date, regarding our foreign currency sensitive financial instruments, which consist of bank balances and cash, short-term and long-term debt obligations, capital commitments and forward exchange contracts as of December 31, 2012 and average interest rates for the year ended December 31, 2012.

(RMB expressed in millions, except interest rate and exchange rate)

As of December 31, 2012

	Expected Maturity Date						Total carrying amount	Fair value
	2013	2014	2015	2016	2017	Thereafter		
<b>On-balance sheet financial instruments</b>								
<b>Bank balances and cash:</b>								
In U.S. Dollar	546	-	-	-	-	-	546	546
In Japanese Yen	0.404	-	-	-	-	-	0.404	0.404
In Hong Kong Dollar	0.504	-	-	-	-	-	0.504	0.504
<b>Debts</b>								
<b>Fixed rate bank loans</b>								
(U.S. Dollar)	33	33	16	-	-	-	82	81
Average interest rate	6.360 %	6.360 %	6.360 %					
<b>Fixed rate bank loans</b>								
(Euro)	78	78	78	78	78	247	637	526
Average interest rate	2.085 %	2.089 %	2.093 %	2.100 %	2.111 %	2.127 %		

Variable rate bank and other loans									
(U.S. Dollar)	436	436	416	396	2,576	15		4,275	4,275
Average interest rate	1.774 %	1.787 %	1.795 %	1.796 %	2.740 %	0.54	%		
Gas purchase commitments									
(U.S. Dollar)	6,391	642	-	-	-	-		7,033	7,033
Forward exchange contracts									
(Receive US\$/Pay S\$)								Total Notional Amount	Fair Value
	National	Amount	Expected	Maturity	Date				
	2013	2014	2015	2016	2017	Thereafter			
Contract amount	3,657	400	76	1	-	-		4,134	55
Average Contractual Exchange Rate	1.23	1.24	1.24	1.25	N/A	N/A		N/A	N/A

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Note:

(1) The interest rates for variable rate bank and other loans are calculated based on the individual year beginning indices.

The outstanding balance of the Company's loans denominated in foreign currencies has changed continually as a result of repayments of the loans by the Company according to agreed-upon repayment schedules. The loans denominated in U.S. dollar decreased from RMB4.91 billion as of December 31, 2011 to RMB4.36 billion as of December 31, 2012. The loans denominated in Euro decreased from RMB701 million as of December 31, 2011 to RMB637 million as of December 31, 2012.

Interest rate risk

We are exposed to interest rate risk primarily resulting from fluctuations in interest rates on our debts. Upward fluctuations in interest rates increase the cost of new variable rate debts and the interest cost of outstanding floating rate borrowings.

At present, the interest rate of the Company's loans denominated in RMB is subject to the change on the benchmark interest rate published and adjusted by the People's Bank of China. Different interest rate level corresponds to loans with different term. New loan contracts entered hereafter will be subject to current benchmark

interest rate. A portion of the Company's loans denominated in foreign currency are fixed rate loans, which are not subject to the changes in market interest rate. Due to the loan borrowed in relation to the acquisition of SinoSing Power, the portion of the loans denominated in foreign currency with floating interest rate increased, which subjects the finance cost of the Company to the fluctuation of market interest rate. In 2009, the Company entered into a floating-to-fixed interest rate swap agreement to hedge against cash flow interest rate risk of part of the loan. According to the interest rate swap agreement, the Company agrees with the counterparty to settle the difference between fixed contract rates and floating-rate interest amounts calculated by reference to the agreed notional amounts quarterly until 2019. The notional amount of the outstanding interest rate swap at December 31, 2012 was US\$336 million.

In 2009, Tuas Power completed its refinancing, through which all of its outstanding loans denominated in U.S. dollar were refinanced through loans denominated in Singapore dollars, matching the functional currency of its operation. The loans borrowed by Tuas Power are denominated in Singapore dollars, and the majority of them are with floating interest rate, which subjects the finance cost of the Company to the fluctuation of market interest rate. In 2011 and 2012, TPG also entered into a number of floating-to-fixed interest rate swap agreements to hedge against cash flow interest rate risk of the loan. According to these interest rate swap agreements, TPG agrees with the counterparty to settle the difference between fixed contract rates and floating-rate interest amounts calculated by reference to the agreed notional amount semi-annually until 2020. The notional amount of the outstanding interest rate swap at December 31, 2012 was S\$1,523 million.

The table below provides information about the Company and its subsidiaries' derivative financial instruments and other financial instruments that are sensitive to changes in interest rates, including interest rate swaps and debt obligations. For debt obligations, the table presents principal cash flows and related weighted average interest rates by expected maturity dates. For interest rate swaps, the table presents notional amounts and weighted average interest rates by expected (contractual) maturity dates. Notional amounts are used to calculate the contractual payments to be exchanged under the contract. Weighted average variable rates are based on implied forward rates in the yield curve at the reporting date.

(RMB expressed in millions, except interest rate)

As of December 31, 2012

	Expected Maturity Date						Total carrying amount	Fair value
	2013	2014	2015	2016	2017	Thereafter		
<b>Debts</b>								
Fixed rate shareholder's, bank and other loans	35,676	13,075	7,090	4,249	4,158	25,626	89,874	89,575
Average interest rate	5.918 %	5.957 %	5.977 %	5.982 %	5.982 %	5.982 %		
Variable rate bank and other loans	823	843	824	804	3,008	12,888	19,190	19,190
Average interest rate	2.074 %	2.082 %	2.089 %	2.095 %	2.154 %	2.153 %		
Short-term bonds	35,550	-	-	-	-	-	35,550	35,550
Average interest rate	4.382 %	-	-	-	-	-		

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Long-term bonds	-	5,672	5,000	4,987	-	7,226	22,885	23,086
Average interest rate	5.502 %	5.777 %	5.873 %	5.759 %	5.759 %	5.759 %		
							Total Notional	
	National Amount Expected Maturity Date						Amount	Fair Value
Debts	2013	2014	2015	2016	2017	Thereafter		
Interest Rate								
Derivatives (US\$)								
Variable to Fixed	201	201	201	201	201	1,106	2,111	210
Average receive rate	1.526 %	1.593 %	1.800 %	2.205 %	2.756 %	3.442 %		
Average pay rate	4.4 %	4.4 %	4.4 %	4.4 %	4.4 %	4.4 %		
Interest Rate								
Derivatives (S\$)								
Variable to Fixed	209	209	209	209	209	6,816	7,861	611
Average receive rate	0.494 %	0.593 %	0.529 %	0.611 %	0.748 %	1.069 %		
Average pay rate	2.452 %	2.452 %	2.452 %	2.452 %	2.452 %	2.452 %		

Note:

(1) The interest rates for variable rate bank and other loans are calculated based on the individual year beginning indices.

As of December 31, 2012, the Company's floating rate loans denominated in foreign currency amounted to RMB4,275 million, accounting for approximately 85.60% of the total foreign loans, most of which was denominated in U.S. dollars, and the average credit spread is 99 bps. In addition, SinoSing Power's loans denominated in Singapore dollar are floating rate loans and amounted to RMB14,914 million as of December 31, 2012. The interest rates of the loans denominated in U.S. dollar and Singapore dollar are relatively low at the current market condition and it is not expected that a significant fluctuation would occur within the foreseeable period, thus it is not expected to cause any material adverse effect on the finance cost of the Company. The Company has paid special attention to the trend of international interest rate market by keeping up with the market conditions and predicting the future trend, and has made efforts to explore the feasibility of risk management by application of derivative financial instruments. The Company expects to implement

the relevant plan according to its internal approval procedures and use interest rate swap and other derivative financial instruments to control its interest rate risk upon appropriate time.

#### Commodity price risk

We are exposed to fuel price risk on fuel purchases. SinoSing Power and its subsidiaries use fuel oil swap to hedge against such risk. The table below provides information about the fuel swap contracts that are sensitive to changes in fuel prices, including contract volumes, the weighted average contract prices, and the total contract amount by expected maturity dates.

	As of December 31, 2012						Total	Fair value
	2013	2014	Expected Maturity Date		2017	Thereafter		
Fuel swap contracts								
Contract Volumes (MT)	692,670	101,520	19,945	325	-	-	814,460	N/A
Weighted Average Price (US\$/MT)	611.38	607.12	581.07	548.78	N/A	N/A	N/A	N/A
Contract Amount (RMB million)	2,673	389	73	1	-	-	3,136	20

For other detailed information of the market risk, please refer to the Note 3(a)(i) to the “Financial Statements”.

#### ITEM 12 Description of Securities Other than Equity Securities

##### A. Debt Securities

Not applicable.

##### B. Warrants and Rights

Not applicable.

##### C. Other Securities

Not applicable.

##### D. American Depositary Shares

#### Depositary Fees and Charges

Under the terms of the Deposit Agreement for Huaneng Power International, Inc.’s American Depositary Shares (ADSs), an ADS holder may have to pay the following services fees to the Depositary:

Services	Fees
----------	------

Issuance of ADSs	\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) issued
Cancellation of ADSs	\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) canceled
Distribution of cash dividends or other cash distributions	\$2.00 (or less) per 100 ADSs (or portion of 100 ADSs) held
Distribution of ADSs pursuant to stock dividends, free stock distributions or exercises of rights	\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) held
Distribution of securities other than ADSs or rights to purchase additional ADSs	\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) held

An ADS holder will also be responsible to pay certain fees and expenses incurred by the Depositary and certain taxes and governmental charges such as:

- taxes and other governmental charges;
- such registration fees as may from time to time be in effect for the registration of transfers of H Shares generally on the H Share register of the Company or Foreign Registrar and applicable to transfers of H Shares to the name of the Depositary or its nominee or the Custodian or its nominee on the making of deposits or withdrawals;



- such cable, telex and facsimile transmission expenses as are expressly provided in the Deposit Agreement;
  - such expenses as are incurred by the Depositary in the conversion of foreign currency; and
- any other charge payable by the Depositary, any of the Depositary's agents, including the Custodian, or the agents of the Depositary's agents in connection with the servicing of H Shares or other Deposited Securities.

#### Depositary Payments for the Year 2012

In 2012, we received the payment of US\$143,538 (inclusive of withholding tax) from the Bank of New York Mellon, the Depositary for our ADR program, for the reimbursement of our expenses related to investors' relation activities, respectively.

PART II

ITEM 13 Defaults, Dividend Arrearages and Delinquencies

None.

ITEM 14 Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

ITEM 15 Controls and Procedures

Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of December 31, 2012 (the “Evaluation Date”), the end of the fiscal year covered by this annual report. Based on this evaluation, our principal executive officer and principal financial officer have concluded that, as of the Evaluation Date, our disclosure controls and procedures were effective.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f). The Company conducted an evaluation of the effectiveness of the design and implementation of our internal control over financial reporting based upon the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission as of the end of the period covered by this annual report. The evaluation is conducted under the supervision and with the participation of our management including chairman of the board, or principal executive officer, and chief accountant, or principal financial officer, of the Company. Based on that evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2012. The effectiveness of the Company’s internal control over financial reporting as of December 31, 2012 has been audited by KPMG, an independent registered public accounting firm, as stated in their report which appears herein.

Because of its inherent limitations, internal control over financial reporting may only provide reasonable assurance for preventing or detecting misstatements. In addition, projections of any evaluation of effectiveness of our internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Huaneng Power International, Inc.:

We have audited Huaneng Power International, Inc.’s internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The management of Huaneng Power International, Inc. is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the internal control over

financial reporting of Huaneng Power International, Inc. based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Huaneng Power International, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control – Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of Huaneng Power International, Inc. and its subsidiaries as of December 31, 2012, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year ended December 31, 2012 and our report dated March 19, 2013 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG

Hong Kong, China

March 19, 2013

#### Changes in Internal Control over Financial Reporting

During the year ended December 31, 2012, there have been no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16            Reserved

ITEM 16A          Audit Committee Financial Expert

The Board of Directors has determined that Mr. Wu Liansheng and Mr. Qi Yudong qualify as Audit Committee Financial Experts in accordance with the terms of Item 16A of Form 20-F. Mr. Wu Liansheng and Mr. Qi Yudong were respectively appointed as our independent non-executive directors on May 17, 2011. See “Item 6 Directors, Senior Management and Employees — A. Directors, members of the supervisory committee and senior management”.

ITEM 16B          Code of Ethics

Although, as of the date of this annual report, we do not have, in form, a code of ethics that applies to the Company’s principal executive officer, principal financial officer and principal accounting officer (collectively, the “Senior Corporate Officers”), we believe that, as a substantive matter, the Senior Corporate Officers are subject to a set of written requirements under the PRC law that are substantially similar to the ethical standards described under Item 16B(b) of Form 20-F. Joint stock companies that are incorporated in China and listed on both PRC and foreign stock exchanges are heavily regulated by the central government. To a large extent, these requirements, which are designed to promote honest and ethical conduct and compliance with applicable laws and regulations by the directors and senior executives of such companies, are not merely ethical requirements, but more importantly, statutory obligations that are legally binding on these individuals under the PRC Company Law, relevant rules and regulations promulgated by China Securities Regulatory Commission and the Mandatory Provisions of Articles of Association of Overseas Listed

Companies.

ITEM 16C Principal Accountant Fees and Services

PricewaterhouseCoopers has served as our independent registered public accounting firm for the fiscal year ended December 31, 2011, and KPMG has served as our independent registered public accounting firm for the fiscal year ended December 31, 2012, for which audited consolidated financial statements appear in this annual report on Form 20-F.

The following table shows information about fees payable by us to PricewaterhouseCoopers and KPMG in 2011 and 2012, respectively.

(RMB million)	For the year ended December 31,	
	2012	2011
Audit fees	20.0	25.2
Audit-related fees	0.1	1.0
Tax fees	0.3	-
All other fees	-	-
Total	20.4	26.2

Audit Services are defined as the standard audit work that needs to be performed each year in order to issue an opinion on the consolidated financial statements and internal control over financial reporting of the Company and its subsidiaries. It also includes other audit services which are those services that only the external auditors reasonably can provide, such as reviews of quarterly financial results.

Audit-related Services include those other assurances and related services provided by auditors, but not restricted to those that can only reasonably be provided by the external auditors signing the auditors' report, that are reasonably related to the performance of the audit or review of the Company's financial statements such as acquisition due diligence, consultations concerning financial accounting and reporting standards. The decrease of audit-related fees was mainly due to the decrease of the service fees related to the acquisitions.

Tax Services include the assistance with compliance and reporting of corporate income tax and value-added tax, assistance with our assessment of new or changing tax regimes, assessment of our transfer pricing policies and practices, and assistance with assessing relevant rules, regulations and facts going into our correspondence with tax authorities.

#### Audit Committee Pre-approval Policies and Procedures

The Audit Committee of the Company's Board of Directors is responsible, among other things, for the oversight of the external auditors subject to the requirements of the PRC Law and the Company's Articles of Association. The Audit Committee has adopted a policy regarding pre-approval of audit and permissible non-audit services to be provided by our independent auditors (the "Policy"). Under the Policy, proposed services either (i) may be pre-approved by the Audit Committee without consideration of specific case-by-case services ("general pre-approval"); or (ii) require the specific pre-approval of the Audit Committee ("specific pre-approval"). General pre-approval applies to services of recurring and predictable nature. These types of services, once approved by the Audit Committee in the beginning, will not require further approval in future, except when actual fees and expenses exceed pre-approved budget levels. In such a case, the Audit Committee may authorize one of its members to approve budget increases subject to the requirement that such member provide a report on his decision to approve or deny an application for budget increases to the Audit Committee at an Audit Committee meeting held immediately after such member grants or denies the approval.

Specific pre-approval applies to all other services. These services must be approved by the Audit Committee on a case-by-case basis after an application including proposed budget and scope of services to be provided by our independent auditors is submitted to the Audit Committee.

For 2012, all of the services provided by KPMG were pre-approved by the Audit Committee.

ITEM 16D Exemptions from the Listing Standards for Audit Committees

Not applicable.

ITEM 16E Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not applicable.

ITEM 16F Change in Registrant's Certifying Accountant

Not applicable.

ITEM 16G Corporate Governance

Comparison of New York Stock Exchange corporate governance rules and China corporate governance rules for listed companies: under the amended Corporate Governance Rules of New York Stock Exchange (“NYSE”), foreign issuers (including the Company) listed on the NYSE are required to disclose a summary of the significant differences between their domestic corporate governance rules and NYSE corporate governance rules that would apply to a U.S. domestic issuer. A summary of such differences is listed below:

NYSE corporate governance rules	Corporate governance rules applicable to the domestically listed companies in China and the Company’s governance practices
---------------------------------	--

Director Independence

A listed company must have a majority of independent directors on its board of directors.

No director qualifies as “independent” unless the board of directors affirmatively determines that the director has no material relationship with the listed company (either directly or as a partner, shareholder or officer of

It is required in China that any listed company must establish an independent director system and set forth specific requirements for the qualification of independent directors. For example, an independent director shall not hold any other position in the listed company other than being a director and shall not be influenced by the main

an organization that has a relationship with the company). In addition, a director must meet certain standards to be deemed independent. For example, a director is not independent if the director is, or has been within the last three years, an employee of the listed company, or an immediate family member is, or has been within the last three years, an executive officer of the listed company, or if the director has received, or has an immediate family member who has received, during any twelve-month period within the last three years, more than US\$120,000 in direct compensation from the listed company, other than director and committee fees and pension or other forms of deferred compensation for prior service (provided such compensation is not contingent in any way on continued service).

shareholders or the controlling persons of the listed company, or by any other entities or persons with whom the listed company has a significant relationship. The Company has complied with the relevant Chinese corporate governance rules and has implemented internal rules governing the independence and responsibilities of independent directors. The Company determines the independence of independent directors every year.

To empower non-management directors to serve as a more effective check on management, the non-management directors of each listed company must meet at regularly scheduled executive sessions without management.

No similar requirements.

#### Nominating/Corporate Governance Committee

Listed companies must have a nominating/corporate governance committee composed entirely of independent directors.

The board of directors of a listed company may, through the resolution of the shareholders' meeting, establish a nominating committee composed entirely of directors, of which the independent directors shall be the majority and the convener. The Company has established a nominating committee.

The nominating/corporate governance committee must have a written charter that addresses the committee's purposes and responsibilities which, at minimum, must be to: search for eligible people for the board of directors, select and nominate directors for the next session of the shareholders' annual meeting, study and propose corporate governance guidelines, supervise the evaluation of the board of directors and management, and evaluate the performance of

Relevant responsibilities of the nominating/corporate governance committee are similar to those stipulated by the NYSE rules, but the main responsibilities do not include the research and recommendation of corporate governance guidelines, the supervision of the evaluation of the board of directors and management, or the annual evaluation of the committee.



the committee every year.

#### Compensation Committee

Listed companies must have a compensation committee composed entirely of independent directors.

The board of directors of a listed company can, through the resolution of shareholders' meeting, have a compensation and evaluation committee composed entirely of directors, of whom the independent directors are the majority and act as the convener.

The compensation committee must have a written charter that addresses, at least, the following purposes and responsibilities:

The responsibilities are similar to those stipulated by the NYSE rules, but the committee is not required to produce a report on the executive compensation or make an annual performance evaluation of the committee. The board of directors of the Company has established a compensation and evaluation committee composed mainly of independent directors who act as the convener, and the committee has a written charter.

(1) review and approve the corporate goals associated with CEO's compensation, evaluate the

performance of the CEO in fulfilling these goals, and, either as a committee or together with the other independent directors (as directed by the board) based on such evaluation, determine and approve the CEO's compensation level;

(2) make recommendations to the board with respect to non-CEO executive officer compensation, and incentive-compensation and equity-based plans that are subject to board approval;

(3) produce a committee report on executive compensation as required by the SEC to be included in the annual proxy statement or annual report filed with the SEC.

The charter must also include the requirement for an annual performance evaluation of the compensation committee.

#### Audit Committee

Listed companies must have an audit committee that satisfies the requirements of Rule 10A-3 of Exchange Act. It must have a minimum of three members, and all audit committee members must satisfy the requirements for independence set forth in Section 303A.02 of NYSE Corporate Governance Rules as well as the requirements of Rule 10A-3(b)(1) of the Exchange Act.

The audit committee must have a written charter that specifies the purpose of the audit committee is, at minimum, to assist the board oversight of the integrity of financial statements, the company's compliance with legal and regulatory requirements, qualifications and independence of independent auditors and the performance of the listed company's internal audit function and independent auditors.

The board of directors of a listed company can, through the resolution of the shareholders' meeting, establish an audit committee composed entirely of directors, of which the independent directors are the majority and act as the convener, and, at minimum, one independent director is an accounting professional.

The responsibilities of the audit committee are similar to those stipulated by the NYSE rules, but according to the domestic practices, the Company is not required to make an annual performance evaluation of the audit committee, and the audit committee is not required to prepare an audit report to be included in the Company's annual proxy statement. The Board of Directors of the Company has established an audit committee that satisfies relevant domestic requirements and the audit committee has a written charter.

The written charter must also require the audit committee to prepare an audit committee report as required by the SEC to be included in the listed company's annual proxy statement as well as an annual performance evaluation of the audit committee.

The written charter must also specify the duties and responsibilities of the audit committee, which, at a minimum, must include those set out in Rule 10A-3(b)(2), (3), (4) and (5) of the Exchange Act, as well as other duties and responsibilities such as to obtain and review a report by the independent auditor at least annually, meet to review and discuss the listed company's annual audited financial statements and quarterly financial statements with management and independent auditor.

Each listed company must have an internal audit department.

China has a similar regulatory provision, and the Company has an internal audit department.

Shareholder approval of equity compensation plan

Shareholders must be given the opportunity to vote on all equity-compensation plans and material revisions

The relevant regulations of China require the board of directors to propose plans on the amount

thereto, except for, among others, plans that are made available to shareholders generally, such as typical dividend reinvestment plan, certain awards and plans in the context of mergers and acquisitions.

and types of director compensation for the shareholders' meeting to approve. The compensation plan of executive officers is subject to approval by the board and announced at the shareholders' meeting and disclosed to the public upon the approval of the board of directors.

#### Corporate governance guidelines

Listed companies must adopt and disclose corporate governance guidelines, involving director qualification standards, director responsibilities, director compensation, director continuing education, annual performance evaluation of the board of directors, etc.

CSRC has issued the Corporate Governance Rules, with which the Company has complied.

#### Code of ethics for directors, officers and employees

Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers. Each code of business conduct and ethics must require that any waiver of the code for executive officers or directors may be made only by the board or a board committee.

China does not have such requirement for a code for ethics. But, the directors and officers must perform their legal responsibilities in accordance with the Company Law of PRC, relative requirements of CSRC and Mandatory Provisions to the Charter of Companies Listed Overseas.

Each listed company's CEO must certify to the NYSE each year that he or she is not aware of any violation by the listed company of NYSE corporate governance listing standards and he or she must promptly notify the NYSE in writing of any non-compliance with any applicable provisions of Section 303A.

No similar requirements.

ITEM 16H Mine Safety Disclosure

Not applicable.

ITEM 17 Financial Statements

Not applicable.

ITEM 18 Financial Statements

See page F-1 through F-103 following Item 19.

ITEM 19 Exhibits

- 1.1 Articles of Association amended and adopted by the Shareholders' meeting on March 12, 2013.
- 3.1 Shareholders' Agreement dated May 31, 1994, incorporated by reference to Exhibit 9.1 of our Registration Statement on Form F-1, filed with the SEC on August 24, 1994. Amendment to Shareholders' Agreement dated May 12, 2006, incorporated by reference to Exhibit 3.1 of our annual report on Form 20-F for the year ended December 31, 2006, filed with the SEC on April 16, 2007.
- 8 A list of subsidiaries.
- 12.1 Certifications of Principal Executive Officer pursuant to Rule 13a-14(a) promulgated under the U.S. Securities Exchange Act of 1934.
- 12.2 Certifications of Principal Financial Officer pursuant to Rule 13a-14(a) promulgated under the U.S. Securities Exchange Act of 1934.
- 13.1 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Huaneng Power International, Inc.:

We have audited the accompanying consolidated balance sheet of Huaneng Power International, Inc. and its subsidiaries as of December 31, 2012, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Huaneng Power International, Inc. and its subsidiaries as of December 31, 2012, and the results of their operation and their cash flows for the year then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the internal control over financial reporting of Huaneng Power International, Inc. as of December 31, 2012, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 19, 2013 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG

Hong Kong, China

March 19, 2013

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To the shareholders of Huaneng Power International, Inc.

In our opinion, the consolidated balance sheet as of 31 December 2011 and the related consolidated statements of comprehensive income, changes in equity and cash flows for each of the two years in the period ended December 31, 2011 present fairly, in all material respects, the financial position of Huaneng Power International, Inc. (the "Company") and its subsidiaries at December 31, 2011, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2011 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and International Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

By: /s/ PricewaterhouseCoopers

PricewaterhouseCoopers

Hong Kong  
March 20, 2012

PricewaterhouseCoopers, 22/F, Prince's Building, Central, Hong Kong  
T: +852 2289 8888, F:+852 2810 9888, www.pwchk.com



Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Comprehensive Income  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB, except per share data)

	Note	For the year ended 31 December		
		2012	2011	2010
		RMB	RMB	RMB
Operating revenue	5	133,966,659	133,420,769	104,318,120
Tax and levies on operations		(672,040 )	(484,019 )	(147,641 )
Operating expenses				
Fuel	6	(82,355,449 )	(90,546,192 )	(67,891,547 )
Maintenance		(2,846,521 )	(2,528,850 )	(2,302,018 )
Depreciation		(11,032,748 )	(11,866,705 )	(10,447,021 )
Labor		(5,112,484 )	(4,621,667 )	(4,067,420 )
Service fees on transmission and transformer facilities of HIPDC	34(b)	(140,771 )	(140,771 )	(140,771 )
Purchase of electricity		(7,101,878 )	(8,613,264 )	(5,557,219 )
Others	6	(7,747,828 )	(5,871,699 )	(5,135,492 )
Total operating expenses		(116,337,679 )	(124,189,148 )	(95,541,488 )
Profit from operations		16,956,940	8,747,602	8,628,991
Interest income		175,402	166,183	89,026
Financial expenses, net				
Interest expense	6	(8,897,097 )	(7,736,186 )	(5,282,549 )
Exchange (loss)/gain and bank charges, net		(166,778 )	76,474	87,964
Total financial expenses, net		(9,063,875 )	(7,659,712 )	(5,194,585 )
Share of profits of associates/jointly controlled entities	8	622,358	703,561	568,794
Loss on fair value changes of financial assets/liabilities		(1,171 )	(727 )	11,851
Other investment income		187,131	93,460	60,013
Profit before income tax expense	6	8,876,785	2,050,367	4,164,090
Income tax expense	31	(2,510,370 )	(868,927 )	(842,675 )
Net profit		6,366,415	1,181,440	3,321,415

The accompanying notes are an integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Comprehensive Income (continued)  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB, except per share data)

	Note	For the year ended 31 December		
		2012 RMB	2011 RMB	2010 RMB
Other comprehensive income/(loss), net of tax				
Fair value changes of available-for-sale financial asset		98,516	(233,738 )	(258,204 )
Shares of other comprehensive income/(loss) of investees accounted under the equity method of accounting		30,070	(44,928 )	(35,156 )
Effective portion of cash flow hedges		(325,375 )	(409,377 )	(112,377 )
Translation differences of the financial statements of foreign operations		536,231	(665,745 )	457,670
Other comprehensive income/(loss), net of tax		339,442	(1,353,788 )	51,933
Total comprehensive income/(loss)		6,705,857	(172,348 )	3,373,348
Net profit attributable to:				
- Equity holders of the Company		5,512,454	1,180,512	3,347,985
- Non-controlling interests		853,961	928	(26,570 )
		6,366,415	1,181,440	3,321,415
Total comprehensive income/(loss) attributable to:				
- Equity holders of the Company		5,850,701	(171,909 )	3,397,720
- Non-controlling interests		855,156	(439 )	(24,372 )
		6,705,857	(172,348 )	3,373,348
Earnings per share attributable to the equity holders of the Company (expressed in RMB or US \$ per share)				
- Basic and diluted	32	0.39	0.08	0.28
Dividends paid	21	702,867	2,807,084	2,528,050
Proposed dividend	21	2,951,631	702,769	2,811,077
Proposed dividend per share (expressed in RMB or US \$ per share)	21	0.21	0.05	0.20

The accompanying notes are an integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
 Consolidated Balance Sheets  
 As at 31 December 2012 and 2011  
 (Prepared in accordance with International Financial Reporting Standards)  
 (Amounts expressed in thousands of RMB)

	Note	As at 31 December	
		2012	2011
		RMB	RMB
<b>ASSETS</b>			
Non-current assets			
Property, plant and equipment	7	177,013,627	177,968,001
Investments in associates/jointly controlled entities	8	14,596,771	13,588,012
Available-for-sale financial assets	10	3,052,822	2,301,167
Land use rights	11	4,297,183	4,341,574
Power generation licence	12	4,084,506	3,904,056
Mining rights	39	1,922,655	1,922,655
Deferred income tax assets	29	532,387	526,399
Derivative financial assets	13	13,723	16,389
Goodwill	14	14,417,543	13,890,179
Other non-current assets	15	3,082,894	2,540,104
Total non-current assets		223,014,111	220,998,536
Current assets			
Inventories	16	7,022,384	7,525,621
Other receivables and assets	17	2,990,395	4,600,250
Accounts receivable	18	15,299,964	15,377,843
Trading securities		93,753	96,154
Derivative financial assets	13	55,268	147,455
Bank balances and cash	33	10,624,497	8,670,015
Total current assets		36,086,261	36,417,338
Total assets		259,100,372	257,415,874

The accompanying notes are an integral part of these financial statements.

Huaneng Power International, Inc. and its subsidiaries  
Consolidated Balance Sheets (continued)  
As at 31 December 2012 and 2011  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

	Note	As at 31 December	
		2012	2011
		RMB	RMB
<b>EQUITY AND LIABILITIES</b>			
Capital and reserves attributable to equity holders of the Company			
Share capital	19	14,055,383	14,055,383
Capital surplus		17,719,077	17,816,495
Surplus reserves	20	7,085,454	7,013,849
Currency translation differences		(35,937 )	(570,973 )
Retained earnings			
-Proposed dividend	21	2,951,631	702,769
-Others		14,354,526	11,865,406
		56,130,134	50,882,929
Non-controlling interests		9,830,208	8,674,824
Total equity		65,960,342	59,557,753
Non-current liabilities			
Long-term loans	22	72,564,824	79,844,872
Long-term bonds	23	22,884,688	17,854,919
Deferred income tax liabilities	29	2,011,729	1,993,155
Derivative financial liabilities	13	837,005	578,198
Other non-current liabilities	24	1,247,464	989,357
Total non-current liabilities		99,545,710	101,260,501
Current liabilities			
Accounts payable and other liabilities	25	19,992,901	25,767,999
Taxes payable	26	1,275,430	1,018,541
Dividends payable		70,839	167,643
Salary and welfare payables		217,967	230,283
Derivative financial liabilities	13	88,641	35,549
Short-term bonds	27	35,449,763	10,262,042
Short-term loans	28	27,442,076	43,979,200
Current portion of long-term loans	22	9,056,703	14,140,270
Current portion of long-term bonds	23	-	996,093
Total current liabilities		93,594,320	96,597,620

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Total liabilities	193,140,030	197,858,121
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Total equity and liabilities	259,100,372	257,415,874
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These financial statements were approved for issue by the Board of Directors on 19 March 2013 and were signed on its behalf.

The accompanying notes are an integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Changes in Equity  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

	Attributable to equity holders of the Company						Subtotal	Surplus reserves	Currency translation differences	Retained earnings
	Share capital	Share premium	Hedging reserve	Capital surplus Available-for-sale financial assets revaluation reserve	Other capital reserve					
Balance as at 1 January 2010	12,055,383	8,506,769	128,044	896,919	509,471	10,041,203	6,096,100	(362,067)	14,333,329	
Profit for the year ended 31 December 2010	-	-	-	-	-	-	-	-	3,333,333	
Other comprehensive (loss)/income:										
Fair value changes from available-for-sale financial asset - gross	-	-	-	(344,271)	-	(344,271)	-	-	-	
Fair value changes from available-for-sale financial asset - tax	-	-	-	86,067	-	86,067	-	-	-	
Shares of other comprehensive loss of investees accounted under the equity method - gross	-	-	-	(37,843)	(3,272)	(41,115)	-	-	-	
Shares of other comprehensive loss of investees accounted under the equity method - tax	-	-	-	5,959	-	5,959	-	-	-	
Changes in fair value of effective portion of cash	-	-	(199,370)	-	-	(199,370)	-	-	-	



flow hedges - gross									
Changes in fair value of effective portion of cash flow hedges - tax	-	-	49,786	-	-	49,786	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - gross	-	-	(70,050 )	-	-	(70,050 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - tax	-	-	11,909	-	-	11,909	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - gross	-	-	79,339	-	-	79,339	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - tax	-	-	(13,488 )	-	-	(13,488 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - gross	-	-	42,952	-	-	42,952	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - tax	-	-	(13,455 )	-	-	(13,455 )	-	-	-
Currency translation differences	-	-	-	-	-	-	-	455,472	-
Total comprehensive (loss)/income for	-	-	(112,377)	(290,088)	(3,272 )	(405,737 )	-	455,472	3,3

the year ended 31  
December 2010

Issuance of ordinary shares	2,000,000	8,274,155	-	-	-	8,274,155	-	-	-
Capital injection	-	-	-	-	529,375	529,375	-	-	-
Transfer to surplus reserves	-	-	-	-	-	-	862,530	-	(862,530)
Dividends relating to 2009	-	-	-	-	-	-	-	-	(2,000,000)
Net capital injection from non-controlling interests of subsidiaries	-	-	-	-	-	-	-	-	-
Acquisitions of subsidiaries	-	-	-	-	-	-	-	-	-
Changes in ownership interest in subsidiaries without change of control	-	-	-	-	(8,250 )	(8,250 )	-	-	-
Balance as at 31 December 2010	14,055,383	16,780,924	15,667	606,831	1,027,324	18,430,746	6,958,630	93,405	14,055,383

The accompanying notes are an integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Changes in Equity (continued)  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

	Attributable to equity holders of the Company									
	Share capital	Share premium	Hedging reserve	Capital surplus		Other capital reserve	Subtotal	Surplus reserves	Currency translation differences	
				Available-for-sale financial assets revaluation reserve						
Balance as at 1 January 2011	14,055,383	16,780,924	15,667	606,831	1,027,324	18,430,746	6,958,630	93,405	14,118,188	
Profit for the year ended 31 December 2011	-	-	-	-	-	-	-	-	1,100,000	
Other comprehensive (loss)/income:										
Fair value changes from available-for-sale financial asset - gross	-	-	-	(311,647)	-	(311,647)	-	-	-	
Fair value changes from available-for-sale financial asset - tax	-	-	-	77,909	-	77,909	-	-	-	
Shares of other comprehensive loss of investees accounted under the equity method - gross	-	-	-	(19,592)	(30,233)	(49,825)	-	-	-	
Shares of other comprehensive loss of investees accounted under the equity method - tax	-	-	-	4,897	-	4,897	-	-	-	
Changes in fair value of effective	-	-	(22,676)	-	-	(22,676)	-	-	-	

portion of cash flow hedges - gross									
Changes in fair value of effective portion of cash flow hedges - tax	-	-	19,408	-	-	19,408	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - gross	-	-	(822,892)	-	-	(822,892 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - tax	-	-	139,892	-	-	139,892	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - gross	-	-	113,663	-	-	113,663	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - tax	-	-	(19,323 )	-	-	(19,323 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - gross	-	-	227,094	-	-	227,094	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - tax	-	-	(44,543 )	-	-	(44,543 )	-	-	-
Currency translation differences	-	-	-	-	-	-	-	(664,378)	-
Total comprehensive	-	-	(409,377)	(248,433)	(30,233 )	(688,043 )	-	(664,378)	1,1

(loss)/income for  
the year ended 31  
December 2011

Capital injection	-	-	-	-	79,163	79,163	-	-	-
Transfer to surplus reserves (Note 20)	-	-	-	-	-	-	55,219	-	(55,219)
Dividends relating to 2010 (Note 21)	-	-	-	-	-	-	-	-	(2,800)
Net capital injection from non-controlling interests of subsidiaries	-	-	-	-	-	-	-	-	-
Acquisitions of subsidiaries (Note 39)	-	-	-	-	-	-	-	-	-
Changes in ownership interest in subsidiaries without change of control	-	-	-	-	(5,371)	(5,371)	-	-	(1,000)
Balance as at 31 December 2011	14,055,383	16,780,924	(393,710)	358,398	1,070,883	17,816,495	7,013,849	(570,973)	12,245,242

The accompanying notes are an integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Changes in Equity (continued)  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

	Attributable to equity holders of the Company								RMB
	Share capital	Share premium	Hedging reserve	Capital surplus Available-for-sale financial assets revaluation reserve	Other capital reserve	Subtotal	Surplus reserves	Currency translation differences	
Balance as at 1 January 2012	14,055,383	16,780,924	(393,710)	358,398	1,070,883	17,816,495	7,013,849	(570,973)	12,5
Profit for the year ended 31 December 2012	-	-	-	-	-	-	-	-	5,51
Other comprehensive (loss)/income:									
Fair value changes from available-for-sale financial asset - gross	-	-	-	131,355	-	131,355	-	-	-
Fair value changes from available-for-sale financial asset - tax	-	-	-	(32,839)	-	(32,839)	-	-	-
Shares of other comprehensive income/(loss) of investees accounted under the equity method - gross	-	-	-	48,083	(5,992)	42,091	-	-	-
Shares of other comprehensive income/(loss) of investees accounted under the equity method - tax	-	-	-	(12,021)	-	(12,021)	-	-	-

Changes in fair value of effective portion of cash flow hedges - gross	-	-	(474,555)	-	-	(474,555 )	-	-	-
Changes in fair value of effective portion of cash flow hedges - tax	-	-	86,086	-	-	86,086	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - gross	-	-	(243,312)	-	-	(243,312 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to inventories - tax	-	-	41,363	-	-	41,363	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - gross	-	-	98,187	-	-	98,187	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to exchange gain and bank charges, net - tax	-	-	(16,692 )	-	-	(16,692 )	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - gross	-	-	226,910	-	-	226,910	-	-	-
Cash flow hedges recorded in shareholders' equity reclassified to interest expense - tax	-	-	(43,362 )	-	-	(43,362 )	-	-	-
Currency translation differences	-	-	-	-	-	-	-	535,036	-
	-	-	(325,375)	134,578	(5,992 )	(196,789 )	-	535,036	5,511

Total comprehensive (loss)/income for the year ended 31 December 2012									
Capital injection	-	100,840	-	-	-	100,840	-	-	-
Transfer to surplus reserves (Note 20)	-	-	-	-	-	-	71,605	-	(71,605)
Dividends relating to 2011 (Note 21)	-	-	-	-	-	-	-	-	(70,000)
Net capital injection from non-controlling interests of subsidiaries	-	-	-	-	-	-	-	-	-
Other capital transaction with non-controlling interests	-	-	-	-	(1,469)	(1,469)	-	-	-
Balance as at 31 December 2012	14,055,383	16,881,764	(719,085)	492,976	1,063,422	17,719,077	7,085,454	(35,937)	17,300,000

The accompanying notes are an integral part of these financial statements.



Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Cash Flows  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

Note	For the year ended 31 December		
	2012	2011	2010
	RMB	RMB	RMB
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Profit before income tax expense	8,876,785	2,050,367	4,164,090
Adjustments to reconcile profit before income tax expense to net cash provided by operating activities:			
Depreciation	11,032,748	11,866,705	10,447,021
Provision for impairment loss on property, plant and equipment	903,463	80,828	8,477
Provision for impairment loss on intangible assets	-	15,661	23,706
Provision for impairment loss on goodwill	107,735	291,734	5,276
Amortization of land use rights	135,140	128,465	112,706
Amortization of other non-current assets	86,275	81,276	64,964
Amortization of employee housing subsidies	2,247	3,104	17,234
(Reversal of)/Provision for doubtful accounts	(10,310 )	(19,747 )	2,750
Provision for/(reversal of) inventory obsolescence	12,155	(3,353 )	(155 )
Loss/(Gain) on fair value changes of financial assets/liabilities	1,171	727	(11,851 )
Other investment income	(187,131 )	(81,298 )	(63,578 )
Net loss/(gain) on disposals or write-off of property, plant and equipment	252,741	(7,911 )	(33,129 )
Unrealized exchange gain, net	(5,085 )	(349,186 )	(199,456 )
Share of profits of associates/jointly controlled entities	(622,358 )	(703,561 )	(568,794 )
Interest income	(175,402 )	(166,183 )	(89,026 )
Interest expense	8,897,097	7,736,186	5,282,549
Changes in working capital:			
Inventories	479,071	(1,807,503 )	(1,031,869 )

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Other receivables and assets	329,263	925,358	(797,412 )
Accounts receivable	303,586	(4,194,500 )	(650,910 )
Restricted cash	(1,877 )	4,238	103,597
Accounts payable and other liabilities	(3,222,999 )	4,155,406	955,293
Taxes payable	1,926,801	1,448,802	1,495,179
Salary and welfare payables	(34,835 )	(46,832 )	(40,817 )
Others	45,136	48,936	(72,593 )
Interest received	109,635	95,951	54,738
Income tax expense paid	(2,312,970 )	(604,515 )	(1,111,266 )
Net cash provided by operating activities	26,928,082	20,949,155	18,066,724

The accompanying notes are integral part of these financial statements.

Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Cash Flows (continued)  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

Note	For the year ended 31 December		
	2012 RMB	2011 RMB	2010 RMB
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Purchase of property, plant and equipment	(15,474,614)	(16,673,632)	(20,704,224)
Proceeds from disposals of property, plant and equipment	949,469	85,601	105,816
Prepayments of land use rights	(81,382 )	(68,370 )	(2,879 )
Increase in other non-current assets	(51,615 )	(46,657 )	(24,614 )
Cash dividends received	728,754	447,654	315,205
Capital injections in associates/jointly controlled entities	(947,574 )	(995,804 )	(533,630 )
Cash paid for acquiring available-for-sale financial assets	(500,000 )	(310,000 )	(12,113 )
Cash consideration paid for acquisitions	(149,048 )	(4,121,280 )	(850,763 )
Cash consideration prepaid for acquisitions	-	-	(4,178,214 )
Cash from acquisitions of subsidiaries	-	349,245	90,524
Cash paid for acquiring trading securities	-	(101,707 )	-
Cash paid for acquiring associates	-	(302,250 )	(174,000 )
Cash paid for acquiring a jointly controlled entity	-	-	(1,058,000 )
Cash received from disposal of a subsidiary	-	104,258	-
Short-term loan repayment from an associate	100,000	-	-
Short-term loan to an associate	-	(100,000 )	-
Others	116,406	68,111	46,354
Net cash used in investing activities	(15,309,604)	(21,664,831)	(26,980,538)

The accompanying notes are integral part of these financial statements.

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Huaneng Power International, Inc. and its subsidiaries  
Consolidated Statements of Cash Flows (continued)  
For the years ended 31 December 2012, 2011 and 2010  
(Prepared in accordance with International Financial Reporting Standards)  
(Amounts expressed in thousands of RMB)

Note	For the year ended 31 December		
	2012 RMB	2011 RMB	2010 RMB
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Issuance of short-term bonds	34,930,000	9,959,600	9,959,850
Repayments of short-term bonds	(11,000,000)	(5,000,000 )	(15,000,000)
Drawdown of short-term loans	48,294,295	63,517,251	63,190,307
Repayments of short-term loans	(64,832,425)	(64,216,571)	(44,611,278)
Drawdown of long-term loans	19,425,661	22,877,988	9,215,500
Repayments of long-term loans	(32,483,848)	(20,677,814)	(11,682,182)
Issuance of long-term bonds	4,985,000	4,985,000	-
Proceed received from issuance of shares	-	-	10,280,169
Repayment of a loan from former shareholder of a subsidiary	-	(600,000 )	-
Interest paid	(8,941,814 )	(8,144,957 )	(5,997,296 )
Net capital injection from non-controlling interests of the subsidiaries	665,333	219,215	283,521
Government grants	266,949	78,869	50,410
Dividends paid to shareholders of the Company	(702,867 )	(2,807,084 )	(2,528,050 )
Dividends paid to non-controlling interests of the subsidiaries	(460,607 )	(120,130 )	(249,043 )
Cash paid for acquisition of non-controlling interests of a subsidiary	-	(4,266 )	-
Others	37,423	2,547	151,415
Net cash (used in)/provided by financing activities	(9,816,900 )	69,648	13,063,323
Effect of exchange rate fluctuations on cash held	151,027	(227,627 )	49,946
<b>NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>1,952,605</b>	<b>(873,655 )</b>	<b>4,199,455</b>

Cash and cash equivalents as at beginning of the year		8,552,782	9,426,437	5,226,982
<b>CASH AND CASH EQUIVALENTS AS AT END OF THE YEAR</b>	<b>33</b>	<b>10,505,387</b>	<b>8,552,782</b>	<b>9,426,437</b>

The accompanying notes are integral part of these financial statements.

HUANENG POWER INTERNATIONAL, INC. AND ITS SUBSIDIARIES  
NOTES TO THE FINANCIAL STATEMENTS

(Prepared in accordance with International Financial Reporting Standards)

(Amounts expressed in thousands of RMB unless otherwise stated)

1 Company organization and principal activities

Huaneng Power International, Inc. (the “Company”) was incorporated in the People’s Republic of China (the “PRC”) as a Sino-foreign joint stock limited company on 30 June 1994. The registered address of the Company is Huaneng Building, 6 Fuxingmennei Street, Xicheng District, Beijing, the PRC. The Company and its subsidiaries are principally engaged in the generation and sale of electric power to the respective regional or provincial grid companies in the PRC and in the Republic of Singapore (“Singapore”). The Company conducts its business in Singapore through SinoSing Power Pte Ltd. (“SinoSing Power”) and its subsidiaries.

The directors consider Huaneng International Power Development Corporation (“HIPDC”) and China Huaneng Group (“Huaneng Group”) as the parent company and ultimate parent company of the Company, respectively. Both HIPDC and Huaneng Group are incorporated in the PRC. Neither Huaneng Group nor HIPDC produced financial statements available for public use.

2 Principal accounting policies

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (the “IASB”). These financial statements have been prepared under the historical cost convention, as modified by the revaluation of available-for-sale financial assets, trading securities and derivative financial assets and liabilities.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Company and its subsidiaries’ accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 4.

As at and for the year ended 31 December 2012, a portion of the Company and its subsidiaries’ funding requirements for capital expenditures were partially satisfied by short-term financing. Consequently, as at 31 December 2012, the Company and its subsidiaries have a negative working capital balance of approximately RMB57.5 billion. Taking into consideration of the expected operating cash flows of the Company and its subsidiaries and the undrawn available banking facilities, the Company and its subsidiaries are expected to refinance and/or restructure certain short-term borrowings into long-term borrowings and also consider alternative sources of financing, where applicable and when needed. Therefore, the directors of the Company are of the opinion that the Company and its subsidiaries will be able to meet its liabilities as and when they fall due within the next twelve months and have prepared these consolidated financial statements on a going concern basis.





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## Principal accounting policies (continued)

## (a) Basis of preparation (continued)

The following amendment to standards is adopted for the first time to the financial year beginning 1 January 2012.

- Amendments to IFRS 7, 'Financial instruments: disclosures'. The amendment was a result of amendment on disclosure requirements of transfers of financial assets released in October 2010 (effective for financial year beginning 1 July 2011). The amendments clarified and strengthened the disclosure requirements of transfers of financial assets which help users of financial statements evaluating related risk exposures and the effect of those risks on the financial position of the Company and its subsidiaries. The Company and its subsidiaries adopted the amendment from 1 January 2012. The amendment had no material impact on the consolidated financial statements of the Company.

## (b) Consolidation

The consolidated financial statements include the financial statements of the Company and all of its subsidiaries.

Subsidiaries are investees over which the Company and its subsidiaries have the power to exercise control, i.e., the power to govern the financial and operating policies and obtain benefits from the operating activities of the investees. When determining whether the Company and its subsidiaries exercise control over an investee, the impact from potential voting rights of the investee, such as currently convertible bonds and exercisable warrants, etc. is taken into account.

Subsidiaries are fully consolidated from the date when control is transferred to the Company and its subsidiaries. They are de-consolidated from the date when control ceases. Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Company and its subsidiaries' interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment. The portion of the shareholders' equity of the subsidiaries, which is not attributable to the parent company, is separately presented as non-controlling interests in the shareholders' equity in the consolidated financial statements.

When there is any inconsistency on the accounting policies or financial period adopted between subsidiaries and the Company, the financial statements of subsidiaries are adjusted according to the accounting policies or financial period adopted by the Company.

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2	Principal accounting policies (continued)
	(b) Consolidation (continued)
	(i) Business combinations

The acquisition method is used to account for the business combinations of the Company and its subsidiaries (including business combination under common controls). The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the the Company and its subsidiaries. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Company and its subsidiaries recognise any non-controlling interests in the acquiree either at fair value or at the non-controlling interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill (Note 2(i)). If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognised in profit or loss.

(ii) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the equity owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(iii) Associates and jointly controlled entities

Associates are investees over which the Company and its subsidiaries have significant influence on the financial and operating decisions. Jointly controlled entities are investees over which the Company and its subsidiaries have contractual arrangements to jointly share control with one or more parties and none of the participating parties has unilateral control over the investees.

Investments in associates/jointly controlled entities are initially recognized at cost and are subsequently measured using the equity method of accounting. The excess of the initial investment cost over the proportionate share of the fair value of identifiable net assets of investee acquired is included in the initial investment cost (Note 2(i)). Any shortfall of the initial investment cost to the proportionate share of the fair value of identifiable net assets of investee acquired is recognized in current period profit or loss and long-term investment cost is adjusted accordingly.

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## Principal accounting policies (continued)

## (b) Consolidation (continued)

## (iii) Associates and jointly controlled entities (continued)

When applying equity method, the Company and its subsidiaries adjust net profit or loss of the investees, including the fair value adjustments on the net identifiable assets of the associates/jointly controlled entities and the adjustments to align with the accounting policies of the Company and the Company's financial reporting periods. Current period investment income is then recognized based on the proportionate share of the Company and its subsidiaries in the investees' net profit or loss. Net losses of investees are recognized to the extent of book value of long-term equity investments and any other constituting long-term equity investments in investees that in substance form part of the investments in the investees. The Company and its subsidiaries continue to recognize investment losses and provision if they bear additional obligations which meet the recognition criteria.

The Company and its subsidiaries adjust the carrying amount of the investment and directly recognize into related other comprehensive income based on their proportionate share on the movements of the investees' other comprehensive income except net profit or loss, given there is no change in shareholding ratio.

When the investees appropriate profit or declare dividends, the book value of long-term equity investments are reduced correspondingly by the proportionate share of the distribution.

The Company and its subsidiaries determine at each reporting date whether there is any objective evidence that the investment in the associate/jointly controlled entities is impaired. If this is the case, the Company and its subsidiaries calculate the amount of impairment as the difference between the recoverable amount of the associate/jointly controlled entities and its carrying value and recognise the amount in 'share of profit of associates/jointly controlled entities' in the consolidated statement of comprehensive income.

Profits or losses resulting from transactions between the Company and its subsidiaries and the associates/jointly controlled entities are recognised in the Company and its subsidiaries financial statements only to the extent of interest of unrelated investor's interests in the associates and jointly controlled entities. Loss from transactions between the Company and its subsidiaries and the associates/jointly controlled entities is fully recognized and not eliminated when there is evidence for asset impairment.

Gains and losses arising from dilution of investments in associates/jointly controlled entities are recognized in the consolidated statement of comprehensive income.

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## Principal accounting policies (continued)

## (c) Separate financial statements of the Company

Investments in subsidiaries are accounted for at cost less impairment. Cost also includes direct attributable costs of investment. Investment income is recognized when the subsidiaries declare dividend.

## (d) Segment reporting

The Company and its subsidiaries determine the operating segment based on the internal organization structure, management requirement and internal reporting system and thereafter determine the reportable segment and present the segment information.

An operating segment represents a component of the Company and its subsidiaries that meets all the conditions below: (i) the component earns revenue and incurs expenses in its daily operating activities; (ii) chief operating decision maker of the Company and its subsidiaries regularly reviews the operating results of the component in order to make decisions on allocating resources and assessing performance; (iii) the financial position, operating results, cash flows and other related financial information of the component are available. When the two or more operating segments exhibit similar economic characteristics and meet certain conditions, the Company and its subsidiaries combine them as one reportable segment.

## (e) Foreign currency translation

## (i) Functional and presentation currency

Items included in the financial statements of each of the Company and its subsidiaries are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). The consolidated financial statements are presented in Renminbi (“RMB”), which is the Company’s functional and presentation currency.

## (ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the spot exchange rate on the transaction dates. On balance sheet date, foreign currency monetary items are translated into functional currency at the spot exchange rate on balance sheet date. Exchange differences are directly expensed in current period profit or loss unless they arise from foreign currency loans borrowed for purchasing or construction of qualifying assets which is eligible for capitalization or they arise from monetary items that qualify as hedging instruments in cash flow hedges which are recorded in other comprehensive income to the extent that the hedge is effective.

## (iii) Foreign Subsidiaries

The operating results and financial position of the foreign subsidiaries are translated into presentation currency as follows:



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## Principal accounting policies (continued)

## (e) Foreign currency translation (continued)

## (iii) Foreign Subsidiaries (continued)

Asset and liability items in each balance sheet of foreign operations are translated at the closing rates at the balance sheet date; equity items excluding retained earnings are translated at the spot exchange rates at the date of the transactions. Income and expense items in the statement of comprehensive income of the foreign operations are translated at average exchange rates approximating the rate on transaction dates. All resulting translation differences are recognized in other comprehensive income.

The cash flows denominated in foreign currencies and cash flows of overseas subsidiaries are translated at average exchange rates approximating the rates at the dates when cash flows incurred. The impact of the foreign currency translation on the cash and cash equivalents is presented in the statement of cash flows separately.

On the disposal of a foreign operation (that is, a disposal of the Company and its subsidiaries' entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a jointly controlled entity that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), all of the exchange differences accumulated in equity in respect of that operation attributable to the equity holders of the company are reclassified to profit or loss.

In the case of a partial disposal that does not result in the Company and its subsidiaries losing control over a subsidiary that includes a foreign operation, the proportionate share of accumulated exchange differences are re-attributed to non-controlling interests and are not recognised in profit or loss. For all other partial disposals (that is, reductions in the Company and its subsidiaries' ownership interest in associates or jointly controlled entities that includes a foreign operation that do not result in the Company and its subsidiaries losing significant influence or joint control), the proportionate share of the accumulated exchange difference is reclassified to profit or loss.

## (f) Property, plant and equipment

Property, plant and equipment consists of dam, port facilities, buildings, electric utility plant in service, transportation facilities, others and construction-in-progress ("CIP"). Property, plant and equipment acquired or constructed are initially recognized at cost and carried at the net value of cost less accumulated depreciation and accumulated impairment loss.

Cost of CIP comprises construction expenditures, other expenditures necessary for the purpose of preparing the CIP for its intended use and those borrowing costs incurred before the assets are ready for intended use that are eligible for capitalization. CIP is not depreciated until such time as the relevant asset is completed and ready for its intended use.

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## Principal accounting policies (continued)

## (f) Property, plant and equipment (continued)

Subsequent costs about property, plant and equipment are included in the asset's carrying amount only when it is probable that future economic benefits associated with the item will flow to the Company and its subsidiaries and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. Other subsequent expenditures not qualifying for capitalization are charged in the current period profit or loss when they are incurred.

Depreciation of property, plant and equipment is provided based on book value less estimated residual value over the estimated useful life using straight-line method. For those impaired property, plant and equipment, depreciation is provided based on book value after deducting impairment provision over the estimated useful life. The estimated useful lives are as follows:

	Estimated useful lives
Dam	8 – 50 years
Port facilities	20 – 40 years
Buildings	8 – 30 years
Electric utility plant in service	5 – 30 years
Transportation facilities	8 – 27 years
Others	5 – 14 years

At the end of each year, the Company and its subsidiaries review the estimated useful lives, residual values and the depreciation method of the property, plant and equipment and make adjustment when necessary. The useful lives and residual values of property, plant and equipment not fully depreciated in the PRC were revised in 2012 (Note 7).

Property, plant and equipment is derecognized when it is disposed of, or is not expected to bring economic benefit through use or disposal. The amount of disposal income arising from sale, transfer, disposal or write-off of the property, plant and equipment less book value and related tax expenses is recorded in 'operating expenses – others' in the statement of comprehensive income.

The carrying amount of property, plant and equipment is written down immediately to its recoverable amount when its carrying amount is greater than its recoverable amount (Note 2(j)).

## (g) Power generation licence

The Company and its subsidiaries acquired the power generation licence as part of the business combination with Tuas Power Ltd. ("Tuas Power"). The power generation licence is initially recognized at fair value at the acquisition date. The license has an indefinite useful life and is not amortized. The assessment that the license has an indefinite useful life is based on the expected renewal of power generation licence without significant restriction and cost, together with the consideration on related future cash flows generated and the expectation of continuous operations. It is tested annually for impairment and carried at cost less accumulated impairment loss. Useful life of the power generation licence is reviewed by the Company and its subsidiaries each financial period to determine whether events and circumstances continue to support the indefinite useful life assessment.





2 Principal accounting policies (continued)

(h) Mining rights

Mining rights are stated at cost less accumulated amortisation and impairment losses and are amortised based on the units of production method utilising only recoverable coal reserves as the depletion base.

(i) Goodwill

Goodwill arising from the acquisitions of subsidiaries, associates and joint ventures represents the excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the Company and its subsidiaries' share of the net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree at the date of acquisition.

(j) Impairment of non-financial assets

The carrying amounts of property, plant and equipment, intangible assets with definite useful lives, land use rights and long-term equity investments not accounted for as financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and indefinite-lived intangible assets are tested for impairment annually regardless of whether there are indications of impairment or more frequently if events or changes in circumstances indicate a potential impairment. An impairment loss is recognized if the carrying amount of an asset or cash-generating unit ("CGU") exceeds its recoverable amount.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less cost to sell. For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGUs.

Subject to an operating segment ceiling test, CGUs to which goodwill has been allocated are aggregated so that the level at which impairment testing is performed reflects the lowest level at which goodwill is monitored for internal reporting purposes.

Goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

Impairment losses are recognized in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (group of CGUs), and then to reduce the carrying amounts of the other assets in the CGU (group of CGUs) on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. Except for goodwill, all impaired non-financial assets are subject to review for possible reversal of impairment at each reporting date.

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## Principal accounting policies (continued)

## (k) Financial assets

Financial assets are classified in the following categories at initial recognition: at fair value through profit or loss, loans and receivables and available-for-sale. The classification depends on the intention and ability of the Company and its subsidiaries to hold the financial assets.

## (i) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and designated upon initial recognition as at fair value through profit or loss. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are classified as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if expected to be settled within 12 months; otherwise, they are classified as non-current.

## (ii) Loans and receivables

Loans and receivables refer to the non-derivative financial assets for which there is no quotation in the active market with fixed or determinable amount. They are included in current assets, except for maturities greater than 12 months after the balance sheet date which are classified as non-current assets. Loans and receivables are primarily included in as 'accounts receivable', 'other receivables and assets', 'loans to subsidiaries' and 'other non-current assets' in the balance sheets.

## (iii) Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are either designated in this category or not classified in any of the other categories. They are included in current assets when management intends to dispose of the available-for-sale financial assets within 12 months of the balance sheet date.

## (iv) Recognition and measurement

Regular purchases and sales of financial assets are recognized at fair value initially on trade-date – the date on which the Company and its subsidiaries commit to purchase or sell the asset. Transaction costs relating to financial assets at fair value through profit or loss are directly expensed in the profit or loss as incurred. Transaction costs for other financial assets are included in the carrying amount of the asset at initial recognition. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and all risks and rewards related to the ownership of the financial assets have been transferred to the transferee.

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## Principal accounting policies (continued)

## (k) Financial assets (continued)

## (iv) Recognition and measurement (continued)

Financial assets at fair value through profit or loss and available-for-sale are subsequently measured at fair value. When an active market exists for a financial instrument, fair value is determined based on quoted prices in the active market. When no active market exists, fair value is determined by using valuation techniques. Valuation techniques includes making reference to the prices used by knowledgeable and willing parties in a recent transaction, the current fair value of other financial assets that are same in substance, discounted cash flow method and option pricing model. When applying valuation techniques, the Company and its subsidiaries use market parameters to the fullest extent possible and use specific parameters of the Company and its subsidiaries as little as possible. Loans and receivables are carried at amortized cost using the effective interest method.

Changes in the fair value of financial assets at fair value through profit or loss are recorded in 'gain/(loss) on fair value changes of financial assets/liabilities'.

Except for impairment loss and translation differences on monetary financial assets, changes in the fair value of available-for-sale financial assets are recognized in other comprehensive income. When these financial assets are derecognized, the accumulated fair value adjustments recognized in equity are included in the statement of comprehensive income as 'other investment income'. Dividends on available-for-sale financial assets are recorded in 'other investment income' when the right of the Company and its subsidiaries to receive payments is established.

## (v) Impairment of financial assets

Except for financial assets at fair value through profit or loss, the Company and its subsidiaries perform assessment on the book value of financial assets at the balance sheet date. Provision for impairment is made when there is objective evidence showing that a financial asset is impaired.

For investments in associates and jointly controlled entities, the impairment loss is measured by comparing the recoverable amount of the investment with its carrying amount. The impairment loss is reversed if there has been a favourable change in the estimates used to determine the recoverable amount.

In the case of equity investments classified as available for sale, a significant or prolonged decline in the fair value of the investment below its cost is evidence that the assets are impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss, measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognized in profit or loss, is removed from equity and recognized in profit or loss. Impairment losses recognized in the profit or loss on equity instruments are not reversed through the profit or loss.

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## Principal accounting policies (continued)

## (k) Financial assets (continued)

## (v) Impairment of financial assets (continued)

When financial assets carried at amortized cost are impaired, the carrying amount of the financial assets is reduced to the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The impaired amount is recognized as assets impairment loss in the current period. If there is objective evidence that the value of the financial assets has recovered as a result of objective changes in circumstances occurring after the impairment loss was originally recognized, the originally recognized impairment loss is reversed through profit or loss. For the impairment test of receivables, please refer to Note 2(l).

## (vi) Derivative financial instruments and hedging activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. Gain or loss arising from subsequent change in the fair value of derivative financial instruments is recognized in profit or loss except for the effective portions of gain or loss on the derivative financial instruments designated as cash flow hedges which are recognized directly in other comprehensive income. Cash flow hedge represents a hedge against the exposure to variability in cash flows, which such cash flow is originated from a particular risk associated with highly probable forecast transactions and variable rate borrowings and which could affect the statement of comprehensive income.

The hedged items of cash flow hedge are the designated items with respect to the risks associated with future cash flow change of the Company and its subsidiaries. Hedging instruments are designated derivative for cash flow hedge whose cash flows are expected to offset changes in the cash flows of a hedged item.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedge item is more than 12 months.

The Company and its subsidiaries document their assessments, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in cash flows of hedged items. The Company and its subsidiaries apply ratio analysis method to evaluate the ongoing effectiveness of the cash flow hedge.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in the statement of comprehensive income within 'gain/(loss) on fair value changes of financial assets/liabilities'.

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## Principal accounting policies (continued)

## (k) Financial assets (continued)

## (vi) Derivative financial instruments and hedging activities (continued)

Amounts accumulated in equity are reclassified to the profit or loss in the periods when the hedged item affects profit or loss. The gain or loss relating to the effective portion of interest rate swaps hedging variable rate borrowings is recognized in the statement of comprehensive income within 'interest expense'. The gain or loss relating to the effective portion of exchange forward hedging foreign currency denominated payables is recognized in the statement of comprehensive income within 'exchange gain and bank charges, net'. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the asset. In case the Company and its subsidiaries expect all or a portion of net loss previously recognized directly in other comprehensive income will not be recovered in future financial periods, the irrecoverable portion will be reclassified into profit or loss. When a hedging instrument expires or is sold, terminated or exercised or when a hedge no longer meets the criteria for hedge accounting, the Company and its subsidiaries will discontinue hedge accounting. Any cumulative gain or loss existing in equity at that time remains in equity and is subsequently recognized when the forecast transaction is ultimately recognized in the profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the statement of comprehensive income within 'gain/(loss) on fair value changes of financial assets/liabilities'.

## (l) Loans and receivables

Loans and receivables, which primarily include accounts receivable, notes receivable, other receivables, loan to subsidiaries and other non-current assets, are recognized initially at fair value. Loans and receivables are subsequently measured at amortized cost less provision for doubtful debts using the effective interest method.

The Company and its subsidiaries establish an allowance for impairment that represents its estimate of incurred losses in respect of receivables. The main components of this allowance are a specific loss component that relates to individually significant exposures, and a collective loss component established for groups of similar assets in respect of losses that have been incurred but not yet identified. The collective loss allowance is determined based on historical data of payment statistics for similar financial assets.

When there is objective evidence that the Company and its subsidiaries will not be able to collect all amounts due according to the original terms of the receivables, impairment test is performed and related provision for doubtful accounts is made based on the shortfall between carrying amounts and respective present value of estimated future cash flows. The carrying amounts of the receivables are reduced through the use of allowance accounts, and the amount of the provision is recognized in the statement of comprehensive income within 'operating expenses – others'. When a receivable is uncollectible, it is written off against the allowance account for the receivable. Subsequent recoveries of amounts previously written off are credited against 'operating expenses – others' in the statement of comprehensive income.

2

## Principal accounting policies (continued)

## (m) Inventories

Inventories include fuel for power generation, materials for repairs and maintenance and spare parts, and are stated at lower of cost and net realizable values.

Inventories are initially recorded at cost and are charged to fuel costs or repairs and maintenance, respectively when used, or capitalized to property, plant and equipment when installed, as appropriate, using weighted average cost basis. Cost of inventories includes costs of purchase and transportation costs.

When the forecast transaction that is hedged results in the recognition of the inventory, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the inventory.

Provision for inventory obsolescence is determined by the excess of cost over net realizable value. Net realizable values are determined based on the estimated selling price less estimated conversion costs during power generation, selling expenses and related taxes in the ordinary course of business.

## (n) Related parties

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control or jointly control of the same third party; one party is controlled or jointly controlled by a third party and the other party is a associate or a joint venture of the same third party.

## (o) Cash and cash equivalents

Cash and cash equivalents listed in the statement of cash flows represents cash in hand, deposits held at call with banks, and other short-term (3 months or less), highly-liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

## (p) Borrowings

Borrowings are recognized initially at fair value less transaction costs and subsequently measured at amortized cost using the effective interest method. Borrowings are classified as current liabilities unless the Company and its subsidiaries have an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

## (q) Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time the assets are substantially ready for their intended use or sale.

The amount of specific borrowing costs capitalised is net of the investment income on any temporary investment of the funds pending expenditure on the asset.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

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2

## Principal accounting policies (continued)

## (r) Payables

Payables primarily include accounts payable and other liabilities, and are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

## (s) Taxation

## (i) Value-added tax (“VAT”)

The domestic power, heat and coal sales of the Company and its subsidiaries are subjected to VAT. VAT payable is determined by applying 17% (or 13% on heat) on the taxable revenue after offsetting deductible input VAT of the period.

According to the relevant regulations of Ministry of Finance of PRC and State Administration of Taxation, pilot regions including Shanghai, Beijing, and Tianjin are now under the Pilot Program for the transformation from Business Tax to VAT. The tax rate of VAT applied in the lease of tangible movable properties, transportation industry and other modern services industry for the Company and its subsidiaries in the pilot regions are 17%, 11% and 6% respectively.

## (ii) Business Tax (“BT”)

Port and transportation service of the Company and its subsidiaries, except the industries under the Pilot Program as stated in 2(s)(i) are subjected to BT at the applicable tax rate of 3%.

## (iii) Goods and service tax (“GST”)

The overseas power sales of the Company and its subsidiaries are subjected to goods and service tax of the country where they operate. GST payable is determined by applying 7% on the taxable revenue after offsetting deductible GST of the period.

## (iv) Current and deferred income tax

The income tax expense for the period comprises current and deferred income tax. Income tax expense is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

Deferred income tax assets and liabilities are recognized based on the differences between tax bases of assets and liabilities and respective book values (temporary differences). For deductible tax losses or tax credit that can be brought forward in accordance with tax law requirements for deduction of taxable income in subsequent years, it is considered as temporary differences and related deferred income tax assets are recognized. No deferred income tax liability is recognized for temporary difference arising from initial recognition of goodwill. For those temporary differences arising from initial recognition of an asset or liability in a non-business combination transaction that affects neither accounting profit nor taxable profit (or deductible loss) at the time of the transaction, no deferred income tax asset and liability is recognized.





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## Principal accounting policies (continued)

## (s) Taxation (continued)

## (iv) Current and deferred income tax (continued)

The Company and its subsidiaries recognize deferred income tax assets to the extent that it is probable that taxable profit will be available to offset the deductible temporary difference, deductible tax loss and tax credit.

On the balance sheet date, deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or liability is settled.

Deferred income tax assets and deferred income tax liabilities are offset when meeting all the conditions below:

- (1) The Company and its subsidiaries have the legal enforceable right to offset current income tax assets and current income tax liabilities;
- (2) Deferred income tax assets and deferred income tax liabilities are related to the income tax levied by the same tax authority of the Company and its subsidiaries.

## (t) Employee benefits

Employee benefits include all expenditures relating to the employees for their services. The Company and its subsidiaries recognize employee benefits as liabilities during the accounting period when employees render services and allocates to related cost of assets and expenses based on different beneficiaries.

In connection with pension obligations, the Company and its subsidiaries operate various defined contribution plans in accordance with the local conditions and practices in the countries and provinces in which they operate. A defined contribution plan is a pension plan under which the Company and its subsidiaries pay fixed contributions into a separate publicly administered pension insurance plan on mandatory and voluntary bases. The Company and its subsidiaries have no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. The contributions are recognized as employee benefit expenses when incurred. Prepaid contributions are recognized as assets to the extent that a cash refund or a reduction in the future payment is available.

## (u) Government grants

Government grants are recognized when the Company and its subsidiaries fulfill the conditions attaching to them and are able to receive them. When government grants are received in the form of monetary assets, they are measured at the amount received or receivable. When the grant is in the form of non-monetary assets, it is measured at fair value. When fair value cannot be measured reliably, nominal amount is assigned.

Asset-related government grant is recognized as deferred income and is amortized evenly in profit or loss over the useful lives of related assets.



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## Principal accounting policies (continued)

## (u) Government grants (continued)

Income-related government grant that is used to compensate subsequent related expenses or losses of the Company and its subsidiaries are recognized as deferred income and recorded in the profit or loss when related expenses or losses incurred. When the grant is used to compensate expenses or losses that were already incurred, they are directly recognized in current period profit or loss.

## (v) Revenue and income recognition

Revenue is recognized based the following methods:

Revenue and income are recognized when it is probable that the economic benefits associated with the transaction will flow to the Company and its subsidiaries and the amount of the revenue and income can be measured reliably.

## (i) Electricity sales revenue

Electricity sales revenue represents the fair value of the consideration received or receivable for electricity sold in the ordinary course of the activities of the Company and its subsidiaries (net of VAT or GST and after taking into account amounts received in advance). Revenue is earned and recognized upon transmission of electricity to the customers and the power grid controlled and owned by the respective regional or provincial grid companies.

## (ii) Coal sales revenue

Coal sales revenue represents the fair value of the consideration received or receivable for the sale of the coal in the ordinary course of the activities of the Company and its subsidiaries. Coal sales revenue is recognized when the coal is delivered to the customers and there is no unfulfilled obligation that could affect the customer's acceptance of the coal.

## (iii) Service revenue

Service revenue refers to amounts received from service of port loading and conveying. The Company and its subsidiaries recognize revenue when the relevant service is provided.

## (iv) Interest income

Interest income from deposits is recognized on a time proportion basis using effective interest method. Interest income from the finance lease is recognized on a basis that reflects a constant periodic rate of return on the net investment in the finance lease.

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## Principal accounting policies (continued)

## (w) Leases

Leases where all the risks and rewards incidental to ownership of the assets are in substance transferred to the lessees are classified as finance leases. All other leases are operating leases.

## (i) Operating leases (lessee)

Operating lease expenses are capitalized or expensed on a straight-line basis over the lease term.

## (ii) Finance lease (lessor)

The Company and its subsidiaries recognize the aggregate of the minimum lease receipts and the initial direct costs on the lease inception date as the receivable. The difference between the aggregate of the minimum lease receipts and the initial direct costs and sum of their respective present values is recognized as unrealized finance income. The Company and its subsidiaries adopt the effective interest method to allocate such unrealized finance income over the lease term. On balance sheet date, the Company and its subsidiaries present the net amount of finance lease receivable after deducting any unrealized finance income in non-current assets and current assets, respectively.

Please refer to Note 2(k)(v) for impairment test on finance lease receivables.

## (x) Purchase of electricity

The overseas subsidiary of the Company recognized electricity purchase cost when it purchases the electricity and transmits to its customers.

## (y) Financial guarantee contracts

The Company issues financial guarantee contracts that transfer significant insurance risk.

Financial guarantee contracts are those contracts that require the issuer to make specified payments to reimburse the holders for losses they incur because specified debtors fail to make payments when due in accordance with the original or modified terms of debt instruments.

## (z) Dividend distribution

Dividend distribution to the shareholders of the Company and its subsidiaries is recognized as a liability in the period when the dividend is approved in the shareholders' meeting.

## (aa) Contingencies

Contingent liabilities are not recognized in the financial statements. They are disclosed unless the possibility of an outflow of resources embodying economic benefits is remote. Contingent assets are not recognized in the financial statements but disclosed when an inflow of economic benefit is probable.



(ab) Standards and amendments to published standards that are not yet effective but relevant to the Company and its subsidiaries

The following standards and amendments to existing standards have been published that are mandatory for the accounting periods of the Company and its subsidiaries beginning on or after 1 July 2012 or later, but the Company and its subsidiaries have not early adopted:

- Amendments to IAS 1, ‘Presentation of Financial Statements’ require entities to present separately the items of other comprehensive income that would be reclassified to profit or loss in the future if certain conditions are met from those that would never be reclassified to profit or loss. The Company and its subsidiaries’ presentation of other comprehensive income will be modified accordingly when the amendments are adopted for the first time. The Company and its subsidiaries intend to adopt IAS 1 no later than the accounting period beginning on or after 1 July 2012.
- IFRS 9, ‘Financial instruments’ addresses the classification, measurement and recognition of financial assets and financial liabilities. IFRS 9 was issued in November 2009. It replaces the parts of IAS 39 that relate to the classification and measurement of financial instruments. IFRS 9 requires financial assets to be classified into two measurement categories: those measured as at fair value and those measured at amortised cost. The determination is made at initial recognition. The classification depends on the entity’s business model for managing its financial instruments and the contractual cash flow characteristics of the instrument. For financial liabilities, the standard retains most of the IAS 39 requirements. The main change is that, in cases where the fair value option is taken for financial liabilities, the part of a fair value change due to an entity’s own credit risk is recorded in other comprehensive income rather than current period profit or loss, unless this creates an accounting mismatch. The Company and its subsidiaries have not assessed full impact of IFRS 9 and intend to adopt IFRS 9 upon its effective date, which is for the accounting period beginning on or after 1 January 2015.
- IFRS 10, ‘Consolidated financial statements’ builds on existing principles by identifying the concept of control as the determining factor in whether an entity should be included within the consolidated financial statements of the parent company. The standard provides additional guidance to assist in the determination of control where this is difficult to assess. The Company and its subsidiaries have not assessed full impact of IFRS 10 and intend to adopt IFRS 10 no later than the accounting period beginning on or after 1 January 2013.
- IFRS 11, “Joint arrangements” is a more realistic reflection of joint arrangements by focusing on the rights and obligations of the arrangement rather than its legal form. There are two types of joint arrangement: joint operations and joint ventures. Joint operations arise where a joint operator has rights to the assets and obligations relating to the arrangement and hence accounts for its interest in assets, liabilities, revenue and expenses. Joint ventures arise where the joint operator has rights to the net assets of the arrangement and hence equity accounts for its interest. Proportionate consolidation of the joint ventures is no longer allowed. The Company and its subsidiaries have not assessed the full impact of IFRS 11 and intend to adopt IFRS 11 no later than the accounting period beginning on or after 1 January 2013.

## Principal accounting policies (continued)

(ab) Standards and amendments to published standards that are not yet effective but relevant to the Company and its subsidiaries (continued)

- IFRS 12 ‘Disclosures of interests in other entities’ includes the disclosure requirements for all forms of interests in other entities, including joint arrangements, associates, special purpose vehicles and other off-balance sheet vehicles. The Company and its subsidiaries have not assessed full impact of IFRS 12 and intend to adopt IFRS 12 no later than the accounting period beginning on or after 1 January 2013.
- IFRS 13 ‘Fair value measurement’ aims to improve consistency and reduce complexity by providing a precise definition of fair value and a single source of fair value measurement and disclosure requirements for use across IFRSs. The requirements do not extend the use of fair value accounting but provide guidance on how it should be applied where its use is already required or permitted by other standards within IFRSs. The Company and its subsidiaries have not assessed full impact of IFRS 13 and intend to adopt IFRS 13 no later than the accounting period beginning on or after 1 January 2013.
- Revised IAS 19 ‘Employee benefits’ changes the definition of short-term and long-term employee benefits to clarify the distinction between the two. For defined benefit plans, removal of the accounting policy choice for recognition of actuarial gains and losses is not expected to have material impact on the Company and its subsidiaries. The Company and its subsidiaries intend to adopt IAS 19 no later than the accounting period beginning on or after 1 January 2013.
- Amendments to IAS 28, “Investments in associates and joint ventures” expanded guidance on the application of IFRS 5 “Non-current assets held for sale and discontinued operations”, to an investment in an associate or joint venture and the treatment for the change in status of an associate to/from a joint venture. The Company and its subsidiaries have not assessed full impact of the amendments to IAS 28 and intend to adopt IAS 28 no later than the accounting period beginning on or after 1 January 2013.
- Amendments to IFRS 7 “Financial Instruments: Disclosures” and IAS 32 “Financial Instruments: Disclosure and Presentation” concerning offsetting financial assets and financial liabilities. The amendments to IFRS 7 introduce new disclosure requirements for recognised financial instruments that are set off under IAS 32 and for those subject to a master netting or similar agreement, irrespective of whether set off. The amendments to IAS 32 clarify the off-setting requirements and provide extra guidance to help interpret the requirements. The Company and its subsidiaries have not assessed full impact of the amendments to IFRS 7 and IAS 32 and intend to adopt IFRS 7 and IAS 32 no later than the accounting period beginning on or after 1 January 2013 and 1 January 2014 respectively.



3 Financial, capital and insurance risks management

(a) Financial risk management

Risk management, including the management on the financial risks, is carried out under the instructions of the Strategic Committee of Board of Directors and the Risk Management Team. The Company works out general principles for overall management as well as management policies covering specific areas. In considering the importance of risks, the Company identifies and evaluates risks at head office and individual power plant level, and requires analysis and proper communication for the information collected periodically.

SinoSing Power and its subsidiaries are subject to financial risks that are different from the entities operating within the PRC. They have a series of controls in place to maintain the cost of risks occurring and the cost of managing the risks at an acceptable level. Management continually monitors the risk management process to ensure that an appropriate balance between risk and control is achieved. SinoSing Power and its subsidiaries have their written policies and financial authorization limits in place which are reviewed periodically. These financial authorization limits seek to mitigate and eliminate operational risks by setting approval thresholds required for entering into contractual obligations and investments.

(i) Market risk

(1) Foreign exchange risk

Foreign exchange risk of the entities operating within the PRC primarily arises from loans denominated in foreign currencies of the Company and its subsidiaries. SinoSing Power and its subsidiaries are exposed to foreign exchange risk on accounts payable and other payables that are denominated primarily in US\$, a currency other than Singapore dollar (“S\$”), their functional currency. Please refer to Notes 22 and 25 for details. The Company and its subsidiaries manage exchange risk through closely monitoring interest and exchange market.

As at 31 December 2012, if RMB had weakened/strengthened by 5% (2011 and 2010: 5%) against US\$ and 3% (2011 and 2010: 3%) against EUR (“€”) with all other variables constant, exchange gain of the Company and its subsidiaries would have been RMB217 million (2011 and 2010: RMB243 million and RMB312 million) and RMB19 million (2011 and 2010: RMB21 million and RMB25 million) lower/higher, respectively. The ranges of such sensitivity disclosed above were based on the observation on the historical trend of related exchange rates during the previous year under analysis.

As at 31 December 2012, if S\$ had weakened/strengthened by 10% (2011 and 2010: 10%) against US\$ with all other variables constant, exchange gain of the Company and its subsidiaries would have been RMB25 million (2011 and 2010: RMB44 million and RMB121 million) lower/higher, respectively. The ranges of such sensitivity disclosed above were based on the management’s experience and forecast.

SinoSing Power and its subsidiaries also are exposed to foreign exchange risk on fuel purchases that are denominated primarily in US\$. They substantially hedge their estimated foreign currency exposure in respect of forecast fuel purchases over the following three months. They primarily use foreign currency contracts to hedge its foreign currency risk. As at the balance sheet date, they entered into foreign currency contracts with notional amounts of RMB nil (2011: RMB191.04 million) to hedge its financial liabilities exposure in US Dollar.



- 3 Financial, capital and insurance risks management (continued)
- (a) Financial risk management (continued)
- (i) Market risk (continued)
- (2) Price risk

The available-for-sale financial assets and trading securities of the Company and its subsidiaries are exposed to equity security price risk.

Detailed information relating to the available-for-sale financial assets is disclosed in Note 10. Being a strategic investment in nature, the Company has a supervisor in the supervisory committee of the investee and exercises influence in safeguarding the interest. The Company also closely monitors the pricing trends in the open market in determining its long-term strategic stakeholding decisions.

As at 31 December 2012, the Company and its subsidiaries are exposed to equity security price risk arising from the investments classified as financial assets at fair value through profit or loss. These securities are listed in Hong Kong. To manage the risk, the Company and its subsidiaries closely monitor the market prices of these securities. If prices of the trading securities had increased/decreased by 10% (2011 and 2010: 10%) with all other variables constant, the gain on fair value changes of financial assets/liabilities would have been higher/lower by RMB9.38 million (2011 and 2010: RMB9.62 million and RMB nil) respectively.

The Company and its subsidiaries are exposed to fuel price risk on fuel purchases. In particular, SinoSing Power and its subsidiaries use fuel oil swap to hedge against such a risk and designate them as cash flow hedges. Please refer to Note 13 for details.

- (3) Cash flow interest rate risk

The interest rate risk of the Company and its subsidiaries primarily arises from long-term loans. Loans borrowed at variable rates expose the Company and its subsidiaries to cash flow interest rate risk. The exposures of these risks are disclosed in Note 22 to the financial statements. The Company and its subsidiaries have entered into interest rate swap agreements with banks to hedge against a portion of cash flow interest rate risk.

As at 31 December 2012, if interest rates on RMB-denominated borrowings had been 50 basis points (2011 and 2010: 50 basis points) higher/lower with all other variables held constant, interest expense for the year would have been RMB432 million (2011 and 2010: RMB500 million and RMB334 million) higher/lower. If interest rates on US\$-denominated borrowings had been 50 basis points (2011 and 2010: 50 basis points) higher/lower with all other variables held constant, interest expense for the year would have been RMB11 million (2011: RMB11 million and 2010: RMB14 million) higher/lower. If interest rates on S\$-denominated borrowings had been 100 basis points (2011 and 2010: 100 basis points) higher/lower with all other variables held constant, interest expense for the year would have been RMB72 million (2011: RMB73 million and 2010: RMB89 million) higher/lower. The ranges of such sensitivity disclosed above were based on the observation on the historical trend of related interest rates during the previous year under analysis.

- 3 Financial, capital and insurance risks management (continued)
- (a) Financial risk management (continued)
- (i) Market risk (continued)
- (3) Cash flow interest rate risk (continued)

The Company has entered into a floating-to-fixed interest rate swap agreement to hedge against cash flow interest rate risk of a loan. According to the interest rate swap agreement, the Company agrees with the counterparty to settle the difference between fixed contract rates and floating-rate interest amounts calculated by reference to the agreed notional amounts quarterly until 2019. Tuas Power Generation Pte Ltd. (“TPG”) also entered into a number of floating-to-fixed interest rate swap agreements to hedge against cash flow interest rate risk of a loan. According to the interest rate swap agreements, TPG agrees with the counterparty to settle the difference between fixed contract rates and floating-rate interest amounts calculated by reference to the agreed notional amount semi-annually until 2020. Please refer to Note 13 for details.

(ii) Credit risk

Credit risk arises from bank deposits, accounts receivable, other receivables, other non-current assets and loans to subsidiaries. The maximum exposures of bank deposits, accounts and other receivables are disclosed in Notes 33, 18, 17 and 15 to the financial statements, respectively, while maximum exposures of loans to subsidiaries are presented on the balance sheets.

Bank deposits are placed with reputable banks and financial institutions, including which a significant portion is deposited with a non-bank financial institution which is a related party of the Company. The Company has a director on the Board of this non-bank financial institution and exercises influence. Corresponding maximum exposures of these bank deposits are disclosed in Note 34(a)(i) to the financial statements.

Most of the power plants of the Company and its subsidiaries operating within the PRC sell electricity generated to their sole customers, the power grid companies of their respective provinces or regions where the power plants operate. These power plants communicate with their individual grid companies periodically and believe that adequate provision for doubtful accounts have been made in the financial statements.

Singapore subsidiaries derive revenue mainly from sale of electricity to the National Electricity Market of Singapore operated by Energy Market Company Pte Ltd., which is not expected to have high credit risk. They also derive revenue mainly from retailing electricity to consumers with monthly consumption of more than 10,000kWh. These customers engage in a wide spectrum of manufacturing and commercial activities in a variety of industries. They hold cash deposits RMB200.31 million (2011: RMB164.56 million) and guarantees from creditworthy financial institutions to secure substantial obligations of the customers.

Regarding balances with subsidiaries, the Company and its subsidiaries obtain the financial statements of all subsidiaries and assess the financial performance and cash flows of those subsidiaries periodically to manage the credit risk of loans.



## 3 Financial, capital and insurance risks management (continued)

## (a) Financial risk management (continued)

## (iii) Liquidity risk

Liquidity risk management is to primarily ensure the ability of the Company and its subsidiaries to meet its liabilities as and when they are fall due. The liquidity reserve comprises the undrawn borrowing facility and cash and cash equivalents available as at each month end in meeting its liabilities.

The Company and its subsidiaries maintained flexibility in funding by cash generated by their operating activities and availability of committed credit facilities.

Financial liabilities due within 12 months are presented as the current liabilities in the balance sheets. The repayment schedules of the long-term loans and long-term bonds and cash flows of derivative financial liabilities are disclosed in Notes 22, 23 and 13, respectively.

## (b) Fair value estimation

## (i) Fair value measurements

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- Level 1- Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The following table presents the assets and liabilities of the Company and its subsidiaries that are measured at fair value at 31 December 2012.

	The Company and its subsidiaries			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Financial assets at fair value through profit or loss				
– Trading derivatives (Note 13)	-	1,286	-	1,286
– Trading securities*	93,753	-	-	93,753
Derivatives used for hedging (Note 13)	-	67,705	-	67,705
Available-for-sale financial assets				
– Equity securities (Note 10)	1,769,435	-	-	1,769,435
<b>Total assets</b>	<b>1,863,188</b>	<b>68,991</b>	<b>-</b>	<b>1,932,179</b>
<b>Liabilities</b>				

Financial liabilities at fair value through profit or loss				
– Trading derivatives (Note 13)	-	1,214	-	1,214
Derivatives used for hedging (Note 13)	-	924,432	-	924,432
Total liabilities	-	925,646	-	925,646

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- 3 Financial, capital and insurance risks management (continued)
- (b) Fair value estimation (continued)
- (i) Fair value measurements (continued)

The following table presents the assets and liabilities of the Company and its subsidiaries that are measured at fair value at 31 December 2011.

	The Company and its subsidiaries			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Financial assets at fair value through profit or loss				
– Trading derivatives (Note 13)	-	226	-	226
– Trading securities*	96,154	-	-	96,154
Derivatives used for hedging (Note 13)	-	163,618	-	163,618
Available-for-sale financial assets				
– Equity securities (Note 10)	1,638,080	-	-	1,638,080
<b>Total assets</b>	<b>1,734,234</b>	<b>163,844</b>	<b>-</b>	<b>1,898,078</b>
<b>Liabilities</b>				
Financial liabilities at fair value through profit or loss				
– Trading derivatives (Note 13)	-	142	-	142
Derivatives used for hedging (Note 13)	-	613,605	-	613,605
<b>Total liabilities</b>	<b>-</b>	<b>613,747</b>	<b>-</b>	<b>613,747</b>

\*In December 2011, SinoSing Power acquired 70,320,000 shares of Beijing Jingneng Clean Energy Co., Ltd. (“Beijing Jingneng”), a listed entity in Hong Kong. The fair value of such trading securities was determined based on quoted market price of HKD 1.66 per share as at 31 December 2012 (HKD 1.68 per share as at 31 December 2011).

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm’s length basis. The quoted market price used for financial assets held by the Company and its subsidiaries is the current bid price. These instruments are included in level 1. Instruments included in level 1 comprise equity investments in Beijing Jingneng and Yangtze Power classified as trading securities and available for sale, respectively.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.



If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.

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3	Financial, capital and insurance risks management (continued)
	(b) Fair value estimation (continued)
	(i) Fair value measurements (continued)

Specific valuation techniques used to value financial instruments include:

- The forward exchange contracts and fuel oil swaps are both valued using quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.

Instruments included in level 2 comprise forward exchange contracts, fuel oil swaps and interest rate swaps.

There were no significant transfers of financial assets between level 1 and level 2 fair value hierarchy classifications in 2012.

(ii) Fair value disclosures

The carrying value less provision for doubtful accounts of accounts receivable, other receivables and assets, accounts payable and other liabilities, short-term bonds and short-term loans are assumed to approximate their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Company and its subsidiaries for similar financial instruments.

The estimated fair value of long-term loans and long-term bonds (both including current maturities) was approximately RMB81.32 billion and RMB23.11 billion as at 31 December 2012 (2011: RMB93.67 billion and RMB18.95 billion), respectively. The aggregate book value of these liabilities was approximately RMB81.62 billion and RMB22.88 billion as at 31 December 2012 (2011: RMB93.99 billion and RMB18.85 billion), respectively.

(c) Capital risk management

The objectives of the Company and its subsidiaries when managing capital are to safeguard the ability of the Company and its subsidiaries in continuing as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Company and its subsidiaries monitor capital by using debt ratio analysis. This ratio is calculated as total liabilities (sum of current liabilities and non-current liabilities) divided by total assets as shown in the consolidated balance sheet. During 2012, the strategy of the Company and its subsidiaries remained unchanged from 2011. The debt ratio of the Company and its subsidiaries as at 31 December 2012 was 74.54% (2011: 76.86%).

3 Financial, capital and insurance risks management (continued)

(d) Insurance risk management

The Company and its subsidiaries issue contracts that transfer significant insurance risk.

The risk relates to the financial guarantees provided to banks by the Company on the borrowings of a subsidiary. The risk under this financial guarantee contract is the possibility that the insured event (default of a specified debtor) occurs and the uncertainty of the amount of the resulting claims. By the nature of a financial guarantee contract, this risk is predictable.

Experience shows credit risks from the specified debtors are relatively remote. The Company maintains a close watch on the financial position and liquidity of the subsidiary for which financial guarantee has been granted in order to mitigate such risks. The Company takes all reasonable steps to ensure that they have appropriate information regarding any claim exposures.

4 Critical accounting estimates and judgements

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Company and its subsidiaries make estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Accounting estimates on impairment of goodwill and power generation licence

The Company and its subsidiaries perform test annually whether goodwill and power generation licence have suffered any impairment in accordance with the accounting policies stated in Notes 2(j) and 2(g), respectively. The recoverable amounts of CGU or CGUs to which goodwill and the power generation licence have been allocated are determined based on value-in-use calculations. These calculations require the use of estimates (Notes 14 and 12). It is reasonably possible, based on existing knowledge, that outcomes within the next financial period that are different from assumptions could require a material adjustment to the carrying amounts of goodwill and power generation licence.

For goodwill allocated to CGUs in the PRC, changes of assumptions in tariff and fuel price could have affected the results of goodwill impairment assessment. As at 31 December 2012, if tariff had decreased by 1% or 5% from management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against goodwill by approximately RMB595 million and RMB1,757 million, respectively. If fuel price had increased by 1% or 5% from the management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against goodwill by approximately RMB374 million and RMB1,734 million, respectively.

For sensitivity analysis of goodwill and power generation licence of Tuas Power, please refer to Note 14 and 12.



## 4 Critical accounting estimates and judgements (continued)

## (b) Useful life of power generation licence

As at year end, management of the Company and its subsidiaries assessed that the estimated useful life for its power generation licence is indefinite. This assessment is based on the expected renewal of power generation licence without significant restriction and cost, together with the consideration on related future cash flows generated and the expectation of continuous operations. Based on existing knowledge, outcomes within the next financial period that are different from assumptions could require a change to the carrying amount of power generation licence.

## (c) Useful lives of property, plant and equipment

Management of the Company determined the estimated useful lives of property, plant and equipment and respective depreciation. The accounting estimate is based on the expected wears and tears incurred during power generation. Wears and tears can be significantly different following renovation each time. When the useful lives differ from the original estimated useful lives, management will adjust the estimated useful lives accordingly. It is possible that the estimates made based on existing experience are different to the actual outcomes within the next financial period and could cause a material adjustment to the depreciation and carrying amount of property, plant and equipment.

## (d) Estimated impairment of property, plant and equipment

The Company and its subsidiaries test whether property, plant and equipment suffered any impairment whenever any impairment indication exists. In accordance with Note 2(j), an impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount. It is reasonably possible, based on existing knowledge, that outcomes within the next financial period that are different from assumptions could require a material adjustment to the carrying amount of property, plant and equipment.

Changes of assumptions in tariff and fuel price will affect the result of property, plant and equipment impairment assessment. As at 31 December 2012, if tariff had decreased by 1% or 5% from management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against property, plant and equipment by approximately RMB277 million and RMB2,885 million, respectively. If fuel price had increased by 1% or 5% from the management's estimates with other variables constant with the expectations, the Company and its subsidiaries would have to further recognize impairment against property, plant and equipment by approximately RMB205 million and RMB1,710 million, respectively.

## (e) Approval of construction of new power plants

The receiving of the ultimate approvals from National Development and Reform Commission ("NDRC") on certain power plant construction projects of the Company and its subsidiaries is a critical estimate and judgment of the directors. Such estimates and judgments are based on initial approval documents received as well as their understanding of the projects. Based on historical experience, the directors believe that the Company and its subsidiaries will receive final approvals from NDRC on the related power plant projects. Deviation from the estimate and judgment could result in significant adjustment to the carrying amount of property, plant and equipment.



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## Revenue and segment information

Revenues recognized during the year are as follows:

	For the year ended 31 December		
	2012	2011	2010
Sales of power and heat	131,936,955	131,225,050	102,519,813
Sales of coal	651,551	972,317	861,875
Port service	330,518	319,388	229,700
Transportation service	101,205	104,253	10,914
Others	946,430	799,761	695,818
<b>Total</b>	<b>133,966,659</b>	<b>133,420,769</b>	<b>104,318,120</b>

Directors and certain senior management of the Company perform the function as chief operating decision maker (collectively referred to as the “senior management”). The senior management reviews the internal reporting of the Company and its subsidiaries in order to assess performance and allocate resources. The Company has determined the operating segments based on these reports. The reportable segments of the Company are the PRC power segment, Singapore segment and all other segments (mainly including port and transportation operations). No operating segments have been aggregated to form a reportable segment.

Senior management assesses the performance of the operating segments based on a measure of profit before income tax expense under China Accounting Standard for Business Enterprises (“PRC GAAP”) in related periods excluding dividend income received from available-for-sale financial assets and operating results of the centrally managed and resource allocation functions of headquarters. Other information provided, except as noted below, to the senior management of the Company is measured under PRC GAAP.

Segment assets exclude prepaid income tax, deferred income tax assets, available-for-sale financial assets and assets related to the centrally managed and resource allocation functions of headquarters that are not attributable to any operating segment (“corporate assets”). Segment liabilities exclude current income tax liabilities, deferred income tax liabilities and liabilities related to the centrally managed and resource allocation functions of headquarters that are not attributable to any operating segment (“corporate liabilities”). These are part of the reconciliation to total balance sheet assets and liabilities.

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## Revenue and segment information (continued)

All sales among the operating segments were performed at market price or close to market price, and have been eliminated as internal transactions when preparing consolidated financial statements.

	PRC power segment	Singapore segment	All other segments	Total
For the year ended 31 December 2012				
Total revenue	113,685,824	19,841,166	614,688	134,141,678
Inter-segment revenue	-	-	(175,019 )	(175,019 )
Revenue from external customers	113,685,824	19,841,166	439,669	133,966,659
Segment results	8,391,022	1,242,808	(51,308 )	9,582,522
Interest income	104,777	70,047	578	175,402
Interest expense	(8,006,824 )	(481,124 )	(126,882 )	(8,614,830 )
Depreciation and amortization	(10,280,131 )	(619,823 )	(147,239 )	(11,047,193 )
Net (loss)/gain on disposal of property, plant and equipment	(261,564 )	46	8,777	(252,741 )
Share of profits of associates/jointly controlled entities	608,958	-	(102,887 )	506,071
Income tax expense	(2,350,097 )	(212,188 )	(12,525 )	(2,574,810 )
For the year ended 31 December 2011				
Total revenue	111,618,962	21,366,067	691,110	133,676,139
Inter-segment revenue	-	-	(255,370 )	(255,370 )
Revenue from external customers	111,618,962	21,366,067	435,740	133,420,769
Segment results	622,256	1,579,205	29,544	2,231,005
Interest income	88,498	77,043	642	166,183
Interest expense	(6,852,893 )	(475,848 )	(100,489 )	(7,429,230 )
Depreciation and amortization	(11,114,793 )	(611,041 )	(141,242 )	(11,867,076 )
Net (loss)/gain on disposal of property, plant and equipment	(3,380 )	8,531	937	6,088
Share of profits of associates/jointly controlled entities	552,225	-	26,298	578,523
Income tax expense	(666,424 )	(308,254 )	(9,206 )	(983,884 )
For the year ended December 31, 2010				
Total revenue	88,895,807	15,171,281	426,072	104,493,160
Inter-segment revenue	-	-	(185,458 )	(185,458 )



Revenue from external customers	88,895,807	15,171,281	240,614	104,307,702
Segment results	3,809,097	853,370	3,845	4,666,312
Interest income	50,012	38,787	227	89,026
Interest expense	(4,590,503 )	(421,399 )	(39,672 )	(5,051,574 )
Depreciation and amortization	(9,690,057 )	(561,847 )	(52,726 )	(10,304,630 )
Net gain on disposal of property, plant and equipment	10,613	12,827	-	23,440
Share of profits of associates	493,046	-	12,763	505,809
Income tax expense	(739,005 )	(172,659 )	(1,432 )	(913,096 )

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## Revenue and segment information (continued)

	PRC power segment	Singapore segment	All other segments	Total
<b>31 December 2012</b>				
Segment assets	210,014,318	32,283,757	9,225,290	251,523,365
Including:				
Additions to non-current assets (excluding financial assets and deferred income tax assets)	30,557,482	2,396,858	1,261,944	34,216,284
Investments in associates	10,449,684	-	914,600	11,364,284
Investments in jointly controlled entities	640,000	-	1,056,637	1,696,637
Segment liabilities	(160,960,185)	(17,872,738)	(4,060,893)	(182,893,816)
<b>31 December 2011</b>				
Segment assets	210,274,298	30,791,094	8,707,163	249,772,555
Including:				
Additions to non-current assets (excluding financial assets and deferred income tax assets)	33,535,107	3,449,725	3,865,074	40,849,906
Investments in associates	9,851,537	-	1,018,397	10,869,934
Investments in jointly controlled entities	160,000	-	1,084,073	1,244,073
Segment liabilities	(166,068,006)	(17,526,440)	(3,332,315)	(186,926,761)

A reconciliation of revenue from external customers to operating revenue is provided as follows:

	For the year ended 31 December		
	2012	2011	2010
Revenue from external customers (PRC GAAP)	133,966,659	133,420,769	104,307,702
Reconciling item:			
Impact of IFRS adjustment*	-	-	10,418
Operating revenue per consolidated statement of comprehensive income	133,966,659	133,420,769	104,318,120

A reconciliation of segment result to profit before income tax expense is provided as follows:

	For the year ended 31 December		
	2012	2011	2010
Segment results (PRC GAAP)	9,582,522	2,231,005	4,666,312
Reconciling items:			
Loss related to the headquarters	(466,430 )	(129,683 )	(202,706 )
	124,092	81,939	66,241

Investment income from China Huaneng Finance Co.,  
Ltd. (“Huaneng Finance”)

Dividend income of available-for-sale financial assets	187,080	164,881	63,578
Impact of IFRS adjustments*	(550,479 )	(297,775 )	(429,335 )
Profit before income tax expense per consolidated statement of comprehensive income	8,876,785	2,050,367	4,164,090

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## Revenue and segment information (continued)

Reportable segments' assets are reconciled to total assets as follows:

	As at December 31, 2012	As at December 31, 2011
Total segment assets (PRC GAAP)	251,523,365	249,772,555
Reconciling items:		
Investment in Huaneng Finance	1,257,181	1,178,633
Deferred income tax assets	672,840	710,571
Prepaid income tax	14,850	101,959
Available-for-sale financial assets	3,102,822	2,351,167
Corporate assets	290,811	250,509
Impact of IFRS adjustments*	2,238,503	3,050,480
Total assets per consolidated balance sheet	259,100,372	257,415,874

Reportable segments' liabilities are reconciled to total liabilities as follows:

	As at December 31, 2012	As at December 31, 2011
Total segment liabilities (PRC GAAP)	(182,893,816)	(186,926,761)
Reconciling items:		
Current income tax liabilities	(788,624 )	(503,252 )
Deferred income tax liabilities	(1,776,203 )	(1,736,907 )
Corporate liabilities	(6,484,987 )	(7,038,611 )
Impact of IFRS adjustments*	(1,196,400 )	(1,652,590 )
Total liabilities per consolidated balance sheet	(193,140,030)	(197,858,121)

Other material items:

	Reportable segment total	Headquarters	Investment income from Huaneng Finance	Impact of IFRS adjustments*	Total
For the year ended 31 December 2012					
Interest expense	(8,614,830 )	(282,267 )	-	-	(8,897,097 )
Depreciation and amortization	(11,047,193)	(42,749 )	-	(166,468 )	(11,256,410)
Share of profits of associates/jointly controlled entities	506,071	-	124,092	(7,805 )	622,358
Income tax expense	(2,574,810 )	-	-	64,440	(2,510,370 )

For the year ended 31					
December 2011					
Interest expense	(7,429,230 )	(306,956 )	-	-	(7,736,186 )
Depreciation and amortization	(11,867,076)	(33,017 )	-	(179,457 )	(12,079,550)
Share of profits of associates/jointly controlled entities	578,523	-	81,939	43,099	703,561
Income tax expense	(983,884 )	-	-	114,957	(868,927 )

For the year ended 31					
December 2010					
Interest expense	(5,051,574 )	(230,975 )	-	-	(5,282,549 )
Depreciation and amortization	(10,304,630)	(25,582 )	-	(311,713 )	(10,641,925)
Share of profits of associates/jointly controlled entities	505,809	-	66,241	(3,256 )	568,794
Income tax expense	(913,096 )	-	-	70,421	(842,675 )

## 5 Revenue and segment information (continued)

\*The GAAP adjustments above primarily represented the classification adjustments and other adjustments. The GAAP adjustments other than classification adjustments were primarily brought forward from prior years. Such differences will be gradually eliminated following subsequent depreciation and amortization of related assets or the extinguishment of liabilities.

## Geographical information (Under IFRS):

## (i) External revenue generated from the following countries:

	For the year ended 31 December		
	2012	2011	2010
PRC	114,125,493	112,054,702	89,146,839
Singapore	19,841,166	21,366,067	15,171,281
Total	133,966,659	133,420,769	104,318,120

(ii) Non-current assets (excluding financial assets and deferred income tax assets) are located in the following countries:

	As of December 31, 2012	As of December 31, 2011
PRC	192,281,707	193,794,549
Singapore	26,459,701	23,618,372
Total	218,741,408	217,412,921

The information on the portion of external revenue of the Company and its subsidiaries which is generated from sales to major customers of the Company and its subsidiaries at amount equal to or more than 10% of external revenue is as follows:

	For the year ended 31 December							
	2012		2011				2010	
	Amount	Proportion	Amount	Proportion	Amount	Proportion	Amount	Proportion
Shandong Electric Power Corporation	16,492,367	12 %	15,151,313	11 %	12,486,065	12 %		
Jiangsu Electric Power Company	16,289,628	12 %	16,121,843	12 %	13,445,612	13 %		

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## Profit before income tax expense

Profit before income tax expense was determined after charging/(crediting) the following:

	For the year ended 31 December		
	2012	2011	2010
Interest expense on bank loans	7,213,544	7,049,379	4,739,126
Interest expense on long-term loans from Huaneng Group	39,301	36,220	34,674
Interest expense on other long-term loans	169,892	355,347	309,159
Interest expense on long-term bonds	1,316,637	783,156	736,986
Interest expense on short-term bonds	806,990	386,408	277,121
<b>Total interest expense</b>	<b>9,546,364</b>	<b>8,610,510</b>	<b>6,097,066</b>
Less: amounts capitalized in property, plant and equipment	(649,267 )	(874,324 )	(814,517 )
	8,897,097	7,736,186	5,282,549
Auditors' remuneration	31,030	33,935	36,448
Loss/(gain) on disposals/write-off of property, plant and equipment, net	252,741	(7,911 )	(33,129 )
Operating leases	269,833	299,574	287,065
Depreciation of property, plant and equipment	11,032,748	11,866,705	10,447,021
Impairment loss of intangible assets	-	15,661	23,706
Impairment loss of property, plant and equipment (Note 7)	903,463	80,828	8,477
Impairment loss of goodwill (Note 14)	107,735	291,734	5,276
Amortization of other non-current assets	86,275	81,276	64,964
Fuel	82,355,449	90,546,192	67,891,547
Reversal of doubtful accounts	(10,310 )	(19,747 )	2,750
Bad debts recovery	-	-	(50 )
Provision for/(reversal of) inventory obsolescence	12,155	(3,353 )	(155 )

Other operating expenses consist of impairment loss of property, plant and equipment and goodwill, environmental protection expenses, substituted power arrangement expenses, insurance, cost of coal sales and other miscellaneous expenses, etc.

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## Property, plant and equipment

	The Company and its subsidiaries							
	Dam	Port facilities	Buildings	Electric utility plants in service	Transportation facilities	Others	CIP	T
As at 1 January 2011								
Cost	-	1,315,393	3,743,183	197,907,242	631,198	3,692,177	32,258,041	239,547,2
Accumulated depreciation	-	(74,822 )	(1,344,449 )	(76,030,260 )	(272,322 )	(1,994,276 )	-	(79,716,1
Accumulated impairment loss	-	-	-	(4,606,508 )	-	-	-	(4,606,50
Net book value	-	1,240,571	2,398,734	117,270,474	358,876	1,697,901	32,258,041	155,224,5
Year ended 31 December 2011								
Beginning of the year								
Reclassification	-	-	(159,059 )	(61,661 )	(4,569 )	225,289	-	-
Acquisitions	105,030	1,019,572	577,354	11,905,540	-	224,649	4,819,652	18,651,79
Additions	-	2,430	59,681	279,368	111,729	141,552	16,287,011	16,881,77
Transfer from CIP	-	452	303,481	28,473,739	52,650	83,214	(28,913,536)	-
Disposals/Write-off	-	-	(1,667 )	(55,120 )	-	(19,905 )	-	(76,692
Disposal of a subsidiary	-	-	-	-	-	(4,731 )	(308,130 )	(312,861
Depreciation charge	-	(67,030 )	(152,936 )	(11,335,566 )	(37,179 )	(288,646 )	-	(11,881,3
Impairment charge	-	-	-	(50,854 )	-	(20,423 )	(9,551 )	(80,828
Currency translation differences	-	-	-	(233,140 )	-	(3,178 )	(202,108 )	(438,426
End of the year	105,030	2,195,995	3,025,588	146,192,780	481,507	2,035,722	23,931,379	177,968,0
As at 31 December 2011								
Cost	110,802	2,407,271	4,470,124	239,281,405	793,339	4,235,895	23,940,930	275,239,7
Accumulated depreciation	(5,772 )	(211,276 )	(1,444,536)	(88,717,256 )	(311,832)	(2,156,766)	-	(92,847,4
Accumulated impairment loss	-	-	-	(4,371,369 )	-	(43,407 )	(9,551 )	(4,424,32
Net book value	105,030	2,195,995	3,025,588	146,192,780	481,507	2,035,722	23,931,379	177,968,0
Year ended 31 December 2012								
Beginning of the year								
	105,030	2,195,995	3,025,588	146,192,780	481,507	2,035,722	23,931,379	177,968,0



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Reclassification	23,718	-	574,015	(593,933 )	-	(3,800 )	-	-
Additions	-	-	8,011	353,466	69,000	203,682	12,335,900	12,970,05
Transfer from CIP	471,622	72,358	145,306	15,675,975	42	129,018	(16,494,321)	-
Disposals/Write-off*	-	-	(9,139 )	(979,652 )	(8,064 )	(67,155 )	(1,263,081 )	(2,327,09
Depreciation charge	(8,881 )	(73,121 )	(173,926 )	(10,360,352 )	(38,336 )	(429,140 )	-	(11,083,7
Impairment charge	-	-	-	(866,666 )	-	(1,798 )	(34,999 )	(903,463
Currency translation differences	-	-	-	207,282	-	1,226	181,369	389,877
End of the year	591,489	2,195,232	3,569,855	149,628,900	504,149	1,867,755	18,656,247	177,013,6
As at 31 December 2012								
Cost	606,141	2,479,629	5,297,159	251,732,881	723,816	4,327,587	18,724,052	283,891,2
A c c u m u l a t e d depreciation	(14,652 )	(284,397 )	(1,727,304)	(97,189,822 )	(219,667)	(2,413,135)	-	(101,848,
A c c u m u l a t e d impairment loss	-	-	-	(4,914,159 )	-	(46,697 )	(67,805 )	(5,028,66
Net book value	591,489	2,195,232	3,569,855	149,628,900	504,149	1,867,755	18,656,247	177,013,6

\*In 2012, The Company and its subsidiaries transferred the Nantong power generation construction project related assets with carrying amount of RMB1,035 million to Jiangsu Nantong Power Generation Co., Ltd.. The transfer price received equals to the carrying amount. This transaction is represented in disposal/write-off of CIP in 2012.

#### Interest capitalization

Interest expense of approximately RMB649 million (2011 and 2010: RMB874 million and RMB815 million) arising on borrowings for the construction of property, plant and equipment were capitalized during the year and were included in 'Additions' in property, plant and equipment. A capitalization rate of approximately 6.40% (2011 and 2010: 5.86% and 5.08%) per annum was used.

#### Impairment

In 2012, impairment losses for certain property, plant and equipment of approximately RMB903.46 million have been recognized. The factors leading to the impairment were the continuous deterioration in utilization and the competition from non-coal fired power generation plants. The recoverable amounts are determined based on value in use of the related power generation units, which is a CGU. A discount rate of 7.24% was adopted in the model.

In 2011 and 2010, impairment losses of RMB80.83 million and RMB8.48 million were recognized for certain property, plant and equipment, respectively.

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## Property, plant and equipment (continued)

## Security

As at 31 December 2012, property, plant and equipment with net book value amounting to RMB225.46 million was secured to a bank as collateral against a long-term loan of RMB149.00 million (2011: net book value RMB561.46 million, long-term loans RMB403.65 million) (Note 22).

## Change in estimates

In order to present a fairer and more appropriate view of the financial position and operating results of the Company and its subsidiaries where the depreciation period of each property, plant and equipment is aligned with its actual useful lives, the Company and its subsidiaries revised its accounting estimates on the useful lives and residual values of property, plant and equipment not fully depreciated in the PRC in accordance with IFRS, based on the technical assessment report prepared by the Company's internal engineers and technicians, as well as the accounting estimation adopted by other major Chinese companies in the power industry. The Company obtained the approval in April 2012 in the Company's eighth meeting of the Seventh Session of the Board of Directors, and adopted the change from 1 January 2012.

The table below shows the details of estimated useful lives and net residual values of property, plant and equipment before and after 1 January 2012:

Category of property, plant and equipment	Before 1 January 2012			After 1 January 2012		
	Estimated useful lives (years)	Estimated residual value(%)	Annual depreciation rate(%)	Estimated useful lives (years)	Estimated residual value(%)	Annual depreciation rate(%)
Dam	8-40	3	2.43-12.13	8-50	0-3	2.00-12.13
Port facilities	20-40	5	2.38 - 4.75	20-40	5	2.38 - 4.75
Buildings	6-45	0-11	2.11-16.67	8-30	3-5	2.23-12.13
Electric utility plant in service	5-35	0-11	2.71-20.00	5-30	0-5	3.17-20.00
Transportation facilities	6-20	0-11	4.75-16.67	8-27	3-5	3.52-12.13
Others	3-18	0-11	5.56-33.33	5-14	0-5	6.79-20.00

The approximate effect of the change in estimates on profit before income tax expense in current and future years is as follows:

	2012	2013	2014	2015	2016	Later
Increase/(Decrease) in profit before income tax expense	1.1billion	0.9 billion	0.6 billion	0.5 billion	0.6 billion	(6.1 billion)



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## Investments in associates/jointly controlled entities

	2012	2011
Beginning of the year	13,588,012	11,973,216
Additional capital injections in associates	467,574	995,805
Additional capital injections in jointly controlled entities	480,000	-
Establishments of associates	-	38,250
Acquisitions of associates	-	264,000
Establishment of a jointly controlled entity	-	160,000
Share of other comprehensive income/(loss)	30,070	(44,928 )
Share of profits before income tax expense	809,509	957,843
Share of income tax expense	(187,151 )	(254,282 )
Dividends	(591,243 )	(501,892 )
End of the year	14,596,771	13,588,012

As at 31 December 2012, investments in associates/jointly controlled entities of the Company and its subsidiaries, all of which are unlisted except for Shenzhen Energy Corporation (“SEC”) which is listed on the Shenzhen Stock Exchange, were as follows:

Name	Country of incorporation	Registered capital	Business nature and scope of operation	Percentage of equity interest held	
				Direct	Indirect <sup>1</sup>
Associates:					
Shandong Rizhao Power Company Ltd. (“Rizhao Power Company”)	PRC	RMB1,245,587,900	Power generation	44%	-
Shenzhen Energy Group Co., Ltd. (“SEG”)	PRC	RMB230,971,224	Development, production and sale of regular energy, new energy and energy construction project, etc.	25%	-
SEC*	PRC	RMB2,202,495,332	Energy and investment in related industries	9.08%	-

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Shenzhen Energy Management Corporation**	PRC	RMB724,584,330	Management of energy projects	25%	-
Hebei Hanfeng Power Generation Limited Liability Company	PRC	RMB1,975,000,000	Power generation	40%	-
Chongqing Huaneng Lime Company Limited (“Lime Company”)	PRC	RMB50,000,000	Lime production and sale, construction materials, chemical engineering product	-	15%
Huaneng Finance	PRC	RMB5,000,000,000	Provision for financial service including fund deposit services, lending, finance lease arrangements, notes discounting and entrusted loans and investment arrangement within Huaneng Group	20%	-
Huaneng Sichuan Hydropower Co., Ltd.	PRC	RMB1,469,800,000	Development, investment, construction, operation and management of hydropower	49%	-

## 8 Investments in associates/jointly controlled entities (continued)

Name	Country of incorporation	Registered capital	Business nature and scope of operation	Percentage of equity interest held	
				Direct	Indirect <sup>1</sup>
Associates: (continued)					
Yangquan Coal Industry Group Huaneng Coal-fired Power Investment Co., Ltd.	PRC	RMB1,000,000,000	Investment, development, consulting and management services of coal and power generation projects	49%	-
Huaneng Shidaowan Nuclear Power Development Co., Ltd.	PRC	RMB1,000,000,000	Preparation for construction of pressurized water reactor power plant project	30%	-
Bianhai Railway Co., Ltd.	PRC	RMB389,000,000	Railway construction, freight transportation, materials supplies, agency service, logistics and storage at coastal industrial base in Yingkou, Liaoning	37%	-
Huaneng Shenbei Co-generation Limited Liability Company	PRC	RMB70,000,000	Production and sales of electricity and heat, construction and operation of power plants	40%	-

Hainan Nuclear Power Co., Ltd. ("Hainan Nuclear Power")	PRC	RMB1,265,756,000	Construction and operation of nuclear power plants, production and sales of electricity	30%	-
Shanxi Luan Group Zuoquan Wulihou Coal Co., Ltd.	PRC	RMB206,452,910	Coal production and sales	34%	-
Huaneng (Tianjin) Coal Gasification Power Generation Co., Ltd. ("Coal Gasification Co.")	PRC	RMB734,000,000	Power generation, facilities installation, heat supply	35.97%	-
Huaneng Jinling Combined Cycle Co-generation Co., Ltd. ("Jinling CCGT")***	PRC	RMB375,000,000	Construction, operation and management of power generation and related projects	51%	-
Jointly controlled entities: Shanghai Time Shipping Co., Ltd. ("Shanghai Time Shipping")	PRC	RMB1,200,000,000	International and domestic sea transportation	50%	-
Jiangsu Nantong Power Generation Co., Ltd.	PRC	RMB1,596,000,000	Operation and Management of power generation plants and related projects	-	35%

1 The indirect percentage of equity interest held represents the effective ownership interest of the Company and its subsidiaries.

\*The Company holds 240 million shares, representing 9.08% shareholding of SEC, which is a subsidiary of Shenzhen Energy Management Corporation, one of the Company's associates. Considering the equity interest effectively held by the Company directly and indirectly through Shenzhen Energy Management Corporation, and directors as well as supervisors appointed by the Company in SEC, the Company exercises significant influence on the operations of SEC and has classified it as an associate. As at 31 December 2012, the fair value of the Company's shares in SEC was RMB1,435 million (2011: RMB1,464 million).





## 8 Investments in associates/jointly controlled entities (continued)

\*\* In February 2013, SEC merged Shenzhen Energy Management Corporation through the combination of directional seasoned offering and cash payment to the shareholders of Shenzhen Energy Management Corporation, Shenzhen State-owned Assets Supervision and Administration Commission and the Company. After the merger, Shenzhen Energy Management Corporation was revoked. Before the merger, the Company held 25.02% shares in SEC, including 15.94% shares indirectly held through Shenzhen Energy Management Corporation. After the merger, the Company directly holds 661,161,106 shares, representing 25.02% shares in SEC. The merger does not have material impact to the Company's financial statements.

\*\*\* In accordance with relevant terms stipulated in the memorandum and articles of association of Jinling CCGT, all resolutions of the shareholders' meetings need at least 2/3 of the voting rights to pass and the resolutions of board of directors also need at least 2/3 of the board of directors members to agree whilst the Company possesses 5 out of the 11 board of directors seats according to the articles of association. Therefore the Company does not have the power to control and only exercises significant influence on the operating and financial decisions of Jinling CCGT. Consequently, the Company accounts for its investment in Jinling CCGT as an associate.

The gross amounts of operating results, assets and liabilities (excluding goodwill) of the associates of the Company and its subsidiaries were as follows:

	2012	2011
Assets	106,103,616	99,389,071
Liabilities	(66,107,245 )	(59,605,330)
Operating revenue	24,910,011	26,291,581
Profit attributable to equity holders of associates	1,773,519	1,662,704

The following amounts represent the 50% share of the assets, liabilities (excluding goodwill) and operating results of the jointly controlled entities of the Company and its subsidiaries.

	2012	2011
Assets		
Non-current assets	4,598,639	2,868,179
Current assets	662,671	442,772
	5,261,310	3,310,951
Liabilities		
Non-current liabilities	(1,820,998)	(1,178,902)
Current liabilities	(1,761,999)	(906,300 )
	(3,582,997)	(2,085,202)
Net assets	1,678,313	1,225,749

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Income	1,048,933	1,162,160
Less: expense	(1,026,369)	(1,086,124)
Net income	22,564	76,036

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## Investments in subsidiaries

As at 31 December 2012, the investments in subsidiaries of the Company and its subsidiaries, all of which are unlisted, were as follows:

## (i) Subsidiaries acquired from business combinations under common control

Name of subsidiary	Country of incorporation	Type of legal entity	Registered capital	Business nature and scope of operations	Percentage of equity interest held	
					Direct	Indirect <sup>1</sup>
Huaneng (Suzhou Industrial Park) Power Generation Co., Ltd.	PRC	Limited liability company	RMB 632,840,000	Power generation	75%	-
Huaneng Qinbei Power Co., Ltd.	PRC	Limited liability company	RMB 810,000,000	Power generation	60%	-
Huaneng Yushe Power Generation Co., Ltd. (“Yushe Power Company”)	PRC	Limited liability company	RMB 615,760,000	Power generation	60%	-
Huaneng Hunan Yueyang Power Generation Limited Liability Company (“Yueyang Power Company”)	PRC	Limited liability company	RMB 1,935,000,000	Power generation	55%	-
Huaneng Chongqing Luohuang Power Generation Limited Liability Company	PRC	Limited liability company	RMB 1,748,310,000	Power generation	60%	-
Huaneng Pingliang Power Generation Co., Ltd. (“Pingliang Power Company”)	PRC	Limited liability company	RMB 924,050,000	Power generation	65%	-
Huaneng Nanjing Jinling Power Co., Ltd.	PRC	Limited liability company	RMB 2,095,136,000	Power generation	60%	-
Huaneng Qidong Wind Power Generation Co.,	PRC	Limited liability	RMB 269,600,000	Development of wind	65%	-

Ltd.		company		power project, production and sales of electricity		
Tianjin Huaneng Yangliuqing Co-generation Limited Liability Company (“Yangliuqing Cogeneration”)	PRC	Limited liability company	RMB 1,537,130,909	Power generation, heat supply, facilities installation, maintenance and related services	55%	-
Huaneng Beijing Co-generation Limited Liability Company (“Beijing Cogeneration”) (i)	PRC	Limited liability company	RMB 1,600,000,000	Construction and operation of power plants and related construction projects	41%	-

The subsidiaries above and the Company are all controlled by Huaneng Group before and after the acquisitions.

1 The indirect percentage of equity interest held represents the effective ownership interest of the Company and its subsidiaries.

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## Investments in subsidiaries (continued)

(ii) Subsidiaries acquired from business combinations not under common control or acquired through other ways

Name of subsidiary	Country of incorporation	Type of legal entity	Registered capital	Business nature and scope of operations	Percentage of equity interest held	
					Direct	Indirect <sup>1</sup>
Huaneng Weihai Power Limited Liability Company	PRC	Limited liability company	RMB 761,838,300	Power generation	60%	-
Huaneng Taicang Power Co., Ltd.	PRC	Limited liability company	RMB 804,146,700	Power generation	75%	-
Huaiyin Power Company	PRC	Limited liability company	RMB 265,000,000	Power generation	100%	-
Huaneng Huaiyin II Power Limited Company	PRC	Limited liability company	RMB 930,870,000	Power generation	63.64%	-
Huaneng Xindian Power Co., Ltd.	PRC	Limited liability company	RMB 465,600,000	Power generation	95%	-
Huaneng Shanghai Combined Cycle Power Limited Liability Company	PRC	Limited liability company	RMB 699,700,000	Power generation	70%	-
Huaneng International Power Fuel Limited Liability Company	PRC	Limited liability company	RMB 200,000,000	Wholesale of coal	100%	-
	PRC		RMB		50%	-

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Huaneng Shanghai Shidongkou Power Generation Limited (“Shidongkou Power Company”) (ii)		Limited liability company	990,000,000	Power generation		
Huade County Daditaihong Wind Power Utilization Limited Liability Company	PRC	Limited liability company	RMB 5,000,000	Wind power development and utilization	100%	-
Huaneng Nantong Power Generation Limited Liability Company	PRC	Limited liability company	RMB 798,000,000	Power generation	70%	-
Huaneng Yingkou Port Limited Liability Company (“Yingkou Port”) (iii)	PRC	Limited liability company	RMB 720,235,000	Loading and conveying service	50%	-
Huaneng Hunan Xiangqi Hydropower Co., Ltd.	PRC	Limited liability company	RMB 180,000,000	Construction, operation and management of hydropower and related projects	100%	-
Huaneng Yingkou Power Generation Limited Liability Company	PRC	Limited liability company	RMB 830,000,000	Production and sales of electricity and heat	100%	-
Zhuozhou Liyuan Cogeneration	PRC	Limited liability company	RMB 5,000,000	Construction, operation and management	100%	-

Co., Ltd.

of  
cogeneration  
power  
plants and  
related  
projects

Huaneng Zuoquan Coal-fired Power Generation Limited Liability Company	PRC	Limited liability company	RMB 960,000,000	Construction, operation and management of power plants and related projects	80%	-
Huaneng Kangbao Wind Power Utilization Limited Liability Company	PRC	Limited liability company	RMB 5,000,000	Construction, operation and management of wind power generation and related projects	100%	-

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## Investments in subsidiaries (continued)

(ii) Subsidiaries acquired from business combinations not under common control or acquired through other ways (continued)

Name of subsidiary	Country of incorporation	Type of legal entity	Registered capital	Business nature and scope of operations	Percentage of equity interest held	
					Direct	Indirect <sup>1</sup>
Huaneng Jiuquan Wind Power Generation Co., Ltd.*	PRC	Limited liability company	RMB 1,667,000,000	Construction, operation and management of wind power generation and related projects	100%	-
Huaneng Yumen Wind Power Generation Co., Ltd.*	PRC	Limited liability company	RMB 349,580,000	Construction, operation and management of wind power generation and related projects	100%	-
Huaneng Wafangdian Wind Power Generation Co., Ltd.	PRC	Limited liability company	RMB 50,000,000	Construction, operation and management of wind power generation and related projects	100%	-
Huaneng Changtu Wind Power Generation Co., Ltd.	PRC	Limited liability company	RMB 50,000,000	Construction, operation and management of wind power generation and related projects	100%	-
Huaneng Rudong Wind Power Generation Co., Ltd.	PRC	Limited liability company	RMB 127,500,000	Construction and management of wind power generation projects	90%	-



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Huaneng Guangdong Haimen Port Limited Liability Company	PRC	Limited liability company	RMB 93,000,000	Loading warehousing and conveying services, providing facilities services	100%	-
Huaneng Taicang Port Limited Liability Company	PRC	Limited liability company	RMB 97,650,000	Port development and construction, coal mixture, machinery leasing and repair	85%	-
Kaifeng Xinli Power Generation Co., Ltd.	PRC	Limited liability company	RMB 146,920,000	Power generation	-	60%
Huaneng Zhanhua Cogeneration Limited Liability Company (“Zhanhua Cogeneration”)	PRC	Limited liability company	RMB 190,000,000	Production and sales of electricity and steam	100%	-
Shandong Hualu Sea Transportation Limited Company (“Hualu Sea Transportation”)	PRC	Limited liability company	RMB 100,000,000	Cargo transportation along domestic coastal areas	53%	-
Huaneng Qingdao Port Limited Company (“Qingdao Port”)**	PRC	Limited liability company	RMB 112,121,000	Loading and conveying warehousing (excluding dangerous goods), conveying, supply of water carriage materials	100%	-
Huaneng Qingdao Co-generation Limited Liability Company**	PRC	Limited liability company	RMB 187,879,000	Construction, operation and management of cogeneration	100%	-

Power plants  
and related  
projects,  
production  
and sale of  
electricity and  
heat

Yunnan Diandong Energy Limited Company("Diandong Energy") (Note 39)	PRC	Limited liability company	RMB 1,800,000,000	Power generation and coal exploitation	100%	-
Yunnan Diandong Yuwang Energy Limited Company ("Diandong Yuwang") (Note 39)	PRC	Limited liability company	RMB 1,236,320,000	Power generation and coal exploitation	100%	-

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## Investments in subsidiaries (continued)

(ii) Subsidiaries acquired from business combinations not under common control or acquired through other ways (continued)

Name of subsidiary	Country of incorporation	Type of legal entity	Registered capital	Business nature and scope of operations	Percentage of equity interest held	
					Direct	Indirect
Huaneng Luoyuan Ludao Pier Limited Company (“Ludao Pier”) (Note 39)	PRC	Limited liability company	RMB 70,000,000	Port water supply, cargo loading, warehousing and shipping agent	100%	-
Huaneng (Fuzhou) Luoyuanwan Pier Limited Company (“Luoyuanwan Pier”) (Note 39)	PRC	Limited liability company	RMB 85,000,000	Port management, cargo loading, information advisory; transporting and warehousing in the port, cargo transport and transfer centre operation; port investment and development	58.3%	-
Huaneng (Fujian) Harbour Limited Company (“Luoyuanwan Harbour”) (Note 39)	PRC	Limited liability company	RMB 652,200,000	Port management, cargo loading, water transport material supply; port investment and development	100%	-
Huaneng Suzihe Hydropower Development Limited Company	PRC	Limited liability company	RMB 50,000,000	Hydropower, aquaculture, agriculture irrigation	100%	-
Fujian Yingda Property Development Limited	PRC	Limited liability company	RMB 50,000,000	Real estate development, leasing, real estate agency services,	-	100%

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Company						
				warehousing, loading and conveying		
Fujian Xinhuanyuan Industrial Limited Company	PRC	Limited liability company	RMB 93,200,000	Mineral water production and sale	-	100%
Enshi City Mawei Valley Hydropower Development Co., Ltd. (“Enshi Hydropower”) (Note 39)	PRC	Limited liability company	RMB 101,080,000	Hydro-resource development, hydropower, aquaculture	100%	-
Huaneng Tongxiang Combined Cycle Cogeneration Co., Ltd.***	PRC	Limited liability company	RMB 300,000,000	Investment in related industries	95%	-
Huaneng Eastern Yunnan Energy Mine Construction Co., Ltd. (“Mine Construction Company”)**	PRC	Limited liability company	RMB 10,000,000	Constructing and operating of mine and related construction projects	-	100%
SinoSing Power	Singapore	Limited liability company	US\$ 1,400,020,585	Investment holding	100%	-
Tuas Power	Singapore	Limited liability company	S\$ 1,338,050,000	Electricity and gas supply and investment holding	-	100%
Tuas Power Supply Pte Ltd.	Singapore	Limited liability company	S\$ 500,000	Power sales	-	100%
TPG	Singapore	Limited liability company	S\$ 1,183,000,001	Power generation and related by products, derivatives; developing power supply resources, operating electricity and	-	100%

power sales

TP Asset Management Pte Ltd.	Singapore	Limited liability company	S\$2	Render of environment engineering services	-	100%
TPGS Green Energy Pte Ltd.	Singapore	Limited liability company	S\$1,000,000	Provision of utility services	-	75%

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## Investments in subsidiaries (continued)

(ii) Subsidiaries acquired from business combinations not under common control or acquired through other ways (continued)

Name of subsidiary	Country of incorporation	Type of legal entity	Registered capital	Business nature and scope of operations	Percentage of equity interest held	
					Direct	Indirect <sup>1</sup>
New Earth Pte Ltd.	Singapore	Limited liability company	S\$ 10,111,841	Consultancy in waste recycling	-	60%
New Earth Singapore Pte Ltd.	Singapore	Limited liability company	S\$ 17,816,050	Industrial waste management and recycling	-	63.47%
TP Utilities Pte Ltd.	Singapore	Limited liability company	S\$ 160,000,001	Provision of utility services	-	100%

<sup>1</sup> The indirect percentage of equity interest held represents the effective ownership interest of the Company and its subsidiaries.

\* In 2012, Huaneng Jiuquan Wind Power Generation Co., Ltd. was restructured into two entities, namely, Huaneng Jiuquan Wind Power Generation Co., Ltd. and Huaneng Yumen Wind Power Generation Co., Ltd..

\*\* In 2012, Qingdao Port was restructured into two entities, namely, Qingdao Port and Huaneng Qingdao Co-generation Limited Liability Company.

\*\*\* Huaneng Tongxiang Combined Cycle Cogeneration Co., Ltd. was newly established in 2012.

\*\*\*\* Mine Construction Company was newly established in 2012 by Diandong Energy.

## Note:

(i) Pursuant to an agreement entered into between the Company and another shareholder, the Company is entrusted to vote the 25% voting rights held by the other shareholder as long as the Company remains as the largest shareholder of Beijing Cogeneration. Thus the Company has majority voting rights required by the article of association to control the operation and financial policies of Beijing Cogeneration. Accordingly, the Company has control over Beijing Cogeneration.

(ii) According to its article of association, the other shareholder who holds the remaining equity interests of Shidongkou Power Company entrusts the Company to exercise all its voting rights in relation to the operation and financial policies of Shidongkou Power Company. Accordingly, the Company has control over Shidongkou

Power Company.

- (iii) Pursuant to the shareholders' agreement, the other shareholder who holds the remaining shares of Yingkou Port entrusts the Company to exercise all its voting rights at shareholders' meetings in relation to the operation and financial policies. Accordingly, the Company has control over Yingkou Port.

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## Available-for-sale financial assets

	2012	2011
Beginning of the year	2,301,167	2,223,814
Investment in Shanxi Xishan Jinxing Energy Co., Ltd. (“Jinxing Energy”)	120,300	49,000
Investment in Taiyuan Coal Trading Center	-	40,000
Investment in Ganlong Double-track Railway Co., Ltd.	500,000	300,000
Fair value change gain/(loss)	131,355	(311,647 )
End of the year	3,052,822	2,301,167

Available-for-sale financial assets as at December 31 include the following:

	2012	2011
<b>Listed securities</b>		
257.56 million shares (representing 1.56% shareholding) of Yangtze Power	1,769,435	1,638,080
<b>Unlisted securities</b>		
10% of Jinxing Energy	431,274	310,974
9.09% of Ganlong Double-track Railway Co., Ltd.	800,000	300,000
Others	52,113	52,113
	1,283,387	663,087
<b>Total</b>	<b>3,052,822</b>	<b>2,301,167</b>

There were no impairment provisions on available-for-sale financial assets in 2012, 2011 and 2010.

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## Land use rights

Details of land use rights are as follows:

	2012	2011
Leases of between 10 to 50 years	4,250,317	4,293,876
Leases of over 50 years	46,866	47,698
<b>Total</b>	<b>4,297,183</b>	<b>4,341,574</b>

All the lands located in the PRC and Singapore are leased from respective governments according to corresponding regulations applied across the countries. The Company and its subsidiaries will renew the leases according to the operation requirements of the Company and its subsidiaries and the related regulations of respective countries.

As at 31 December 2012, no land use right was secured to any bank loan (2011: nil).



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## Power generation licence

The movements in the carrying amount of power generation licence during the years are as follows:

	2012	2011
Beginning of the year	3,904,056	4,105,518
Movement:		
Opening net book value	3,904,056	4,105,518
Currency translation differences	180,450	(201,462 )
Closing net book value	4,084,506	3,904,056
End of the year	4,084,506	3,904,056

The Company and its subsidiaries acquired the power generation licence in connection with the acquisition of Tuas Power. The power generation licence was initially recognized at fair value at the acquisition date. Tuas Power operates power plants in Singapore pursuant to the licence granted by the Energy Market Authority for a period of 30 years from 2003 until 2032. The licence was extended to 2044 during 2011 with minimal costs and is subject to further renewal. The Company and its subsidiaries expect that the applicable rules and regulations surrounding the renewal can be complied with based on the current market framework. The Company and its subsidiaries assessed the useful life of the power generation licence at 31 December 2012 as indefinite and therefore the license is not amortized.

## Impairment test of power generation licence

Power generation licence belongs to and has been assigned to Tuas Power, a CGU. The recoverable amount of the CGU is determined based on value-in-use calculation. Management prepared the impairment model based on budget approved by the Board and various factors, such as inflation, power demand and other factors as well as the terminal value.

## Key assumptions used for value-in-use calculation:

Management has assessed that, amongst all assumptions used in the value-in-use calculations, the most sensitive key assumption is the discount rate which was arrived at based on weighted average cost of capital. The discount rate applied in determining the recoverable amounts of the CGU was 6.72% (2011: 7.42%). An absolute change in the discount rate of 0.5% (2011: 0.5%) would result in approximately RMB1,767 million (2011: RMB1,689 million) change in the recoverable amount of the CGU.

Other key assumptions include projection of its business performance based on estimation of future electricity tariffs, volume of electricity sold, fuel prices and other operating expenses, which are largely with reference to advices from the financial advisor engaged and an external study conducted by industry specialist to project the market demand and supply situation, as well as forward trend of electricity prices. On average, the growth and inflation rates of 6% and 2.1% (2011: 3.8% and 2.1%) were used in consideration of future expansion plans and new development projects as part of the long-term strategy.

Based on the assessments, no impairment was provided for the power generation licence.

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## Derivative financial instruments

Details of derivative financial instruments are as follows:

	As of December 31,	
	2012	2011
<b>Derivative financial assets</b>		
Hedging instruments for cash flow hedge (fuel swap contracts)	66,599	98,976
Hedging instruments for cash flow hedge (exchange forward contracts)	1,106	64,642
Financial instruments at fair value through profit or loss (fuel swap contracts)	1,286	226
<b>Total</b>	<b>68,991</b>	<b>163,844</b>
<b>Less: non-current portion</b>		
Hedging instruments for cash flow hedge (fuel swap contracts)	13,532	3,756
Hedging instruments for cash flow hedge (exchange forward contracts)	191	12,633
<b>Total non-current portion</b>	<b>13,723</b>	<b>16,389</b>
<b>Current portion</b>	<b>55,268</b>	<b>147,455</b>
<b>Derivative financial liabilities</b>		
Hedging instruments for cash flow hedge (fuel swap contracts)	47,033	35,118
Hedging instruments for cash flow hedge (exchange forward contracts)	56,576	10,800
Hedging instruments for cash flow hedge (interest rate swap contract)	820,823	567,687
Financial instruments at fair value through profit or loss (fuel swap contracts)	1,214	142
<b>Total</b>	<b>925,646</b>	<b>613,747</b>
<b>Less: non-current portion</b>		
Hedging instruments for cash flow hedge (fuel swap contracts)	6,979	10,055
Hedging instruments for cash flow hedge (exchange forward contracts)	9,203	456
Hedging instruments for cash flow hedge		

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(interest rate swap contract)	820,823	567,687
Total non-current portion	837,005	578,198
Current portion	88,641	35,549

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## Derivative financial instruments (continued)

For the years ended 31 December 2012, 2011 and 2010, no material ineffective portion was recognized in the profit or loss arising from cash flow hedges.

The Company uses an interest rate swap contract to hedge its interest rate risk against one of its variable rate loans. The notional principal amount of the outstanding interest rate swap contract at 31 December 2012 was US\$336 million (RMB equivalents of RMB2,111.93 million) (2011: US\$368 million (RMB equivalents of RMB2,318.73 million)). Through this arrangement, the Company pays an annual fixed interest of 4.40% while the original annual floating interest expense (6-month LIBOR+1%) attached in the loan is offset by the receivable leg of the interest rate swap. Such a swap is settled on a quarterly basis from September 2009 to September 2019. TPG uses exchange forward contracts to hedge its foreign exchange risk arising from highly probable forecast purchase transactions. It also uses fuel oil swap contracts to hedge its fuel price risk arising from highly probable forecast purchases of fuel purchases.

TPG also uses various interest rate swap contracts to hedge floating semi-annual interest payments on borrowings with maturity dates up to 2020. The notional principal amount of these outstanding interest rate swap contracts at 31 December 2012 was S\$1,564 million (RMB equivalents of RMB7,965.30 million) (2011:S\$1,564 million (RMB equivalents of RMB7,613.76 million)). Through these arrangements, TPG swaps original floating interest (6-month SOR) to annual fixed interest determined by individual swap contracts. Such swap contracts are settled semi-annually from September 2011 to March 2020. As at 31 December 2012, these interest rate swap contracts are carried on the balance sheet as financial liability of RMB610.69 million (2011: financial liability of RMB365.36 million).

The analysis of contractual cash inflows/(outflows) of major derivative financial instruments are as follows:

	Cash flows				
	Carrying amounts	Contractual cash flows	Within 1 year	Between 1 and 5 years	After 5 years
As at 31 December 2012					
Derivative financial assets					
Fuel derivatives used for hedging (net settlement)	66,599	66,599	53,067	13,532	-
Forward exchange contracts used for hedging					
- inflows		157,613	103,183	54,430	-
- outflows		(156,386 )	(102,220 )	(54,166 )	-
	1,106	1,227	963	264	-
Fuel derivatives that do not qualify as hedges					
(net settlement)	1,286	1,286	1,286	-	-
Derivative financial liabilities					
Fuel derivatives used for hedging (net settlement)	47,033	(47,033 )	(40,053 )	(6,980 )	-

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Forward exchange contracts used for hedging					
- inflows	3,867,604	3,452,919	414,685	-	
- outflows	(3,922,039)	(3,498,963)	(423,076)	-	
	56,576	(54,435 )	(46,044 )	(8,391 )	-
Net-settled interest rate swaps used for hedging					
- net cash inflows/(outflows)	820,823	(1,054,458)	(209,866 )	(666,008)	(178,584)
Fuel derivatives that do not qualify as hedges (net settlement)					
	1,214	(1,214 )	(1,214 )	-	-

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## Derivative financial instruments (continued)

	Carrying amounts	Contractual cash flows	Cash flows		
			Within 1 year	Between 1 and 5 years	After 5 years
As at 31 December 2011					
Derivative financial assets					
Fuel derivatives used for hedging (net settlement)	98,976	98,976	95,220	3,756	-
Forward exchange contracts used for hedging					
- inflows		2,993,086	2,589,057	404,029	-
- outflows		(2,926,888)	(2,537,998)	(388,890)	-
	64,642	66,198	51,059	15,139	-
Fuel derivatives that do not qualify as hedges (net settlement)	226	226	226	-	-
Derivative financial liabilities					
Fuel derivatives used for hedging (net settlement)	35,118	(35,118 )	(25,063 )	(10,055 )	-
Forward exchange contracts used for hedging					
- inflows		1,503,309	1,457,508	45,801	-
- outflows		(1,513,664)	(1,467,733)	(45,931 )	-
	10,800	(10,355 )	(10,225 )	(130 )	-
Net-settled interest rate swaps used for hedging					
- net cash inflows/(outflows)	567,687	(591,912 )	(216,818 )	(444,208)	69,114
Fuel derivatives that do not qualify as hedges (net settlement)	142	(142 )	(142 )	-	-

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## Goodwill

The movements in the carrying amount of goodwill during the years are as follows:

As at 31 December 2010	
Cost	12,776,404
Accumulated impairment loss	(135,500 )
Net book value	12,640,904



Movement in 2011:	
Opening net book value	12,640,904
Acquisitions (Note 39)	2,134,275
Disposal	(34,331 )
Impairment charge	(291,734 )
Currency translation differences	(558,935 )
Closing net book value	13,890,179
As at 31 December 2011	
Cost	14,317,413
Accumulated impairment loss	(427,234 )
Net book value	13,890,179

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## Goodwill (continued)

Movement in 2012:	
Opening net book value	13,890,179
Impairment charge	(107,735 )
Currency translation differences	500,639
Adjustment on 2011 acquisitions*	134,460
Closing net book value	14,417,543
As at 31 December 2012	
Cost	14,952,512
Accumulated impairment loss	(534,969 )
Net book value	14,417,543

\* Adjustment on 2011 acquisitions represents the adjustment on purchase price allocation in connection with the acquisition of Diandong Yuwang and Diandong Energy.

## Impairment tests for goodwill

Goodwill is allocated to the CGUs of the Company and its subsidiaries.

The carrying amounts of major goodwill allocated to individual CGUs are as follows:

	2012	2011
PRC Power segment:		
Yueyang Power Company	100,907	100,907
Pingliang Power Company	-	107,735
Beijing Cogeneration	95,088	95,088
Yangliuqing Cogeneration	151,459	151,459
Diandong Energy	1,307,558	1,197,574
Diandong Yuwang	438,883	414,407
Singapore segment:		
Tuas Power	11,420,177	10,919,538
All other segments:		
Qingdao Port	107,002	107,002
Luoyuanwan Harbour	309,270	309,270

The recoverable amount of a CGU is determined based on value-in-use calculations. For domestic CGUs, these calculations use cash flow projections based on management's financial budgets covering periods of no more than five years. The Company expects cash flows beyond such periods will be similar to that of the respective final forecast years on existing production capacity. In connection to the goodwill attached to Tuas Power, management has based their assessment of recoverable amount on value-in-use calculations. Management prepared the impairment model

based on budget approved by the Board and various factors, such as inflation, power demand and other factors as well as the terminal value. On average, the growth and inflation rates of 6.0% and 2.1%, were used in consideration of future expansion plans and new development projects as part of the long-term strategy.

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Discount rates used for value-in-use calculations:

Yueyang Power Company	8.14	%
Pingliang Power Company	8.14	%
Beijing Cogeneration	8.14	%
Yangliuqing Cogeneration	8.14	%
Diandong Energy	8.14	%
Diandong Yuwang	8.14	%
Tuas Power	6.72	%
Qingdao Port	8.84	%
Luoyuanwan Harbor	8.84	%

Key assumptions used for value-in-use calculations:

Key assumptions applied in the impairment tests include the expected tariff rates, demands of electricity in specific regions where these power plants are located, fuel cost and the expected throughput and price of the related port. Management determined these key assumptions based on past performance and its expectations on market development. The discount rates used reflect specific risks relating to individual CGUs. Management believes that any reasonably possible change in any of these key assumptions on which recoverable amounts of individual CGUs are based may cause carrying amounts of individual CGUs to exceed their recoverable amounts. Please refer to Notes 4 and 12 for details of respective sensitivity analysis on domestic and oversea CGU impairment testing.

In 2012, no goodwill was impaired except for the goodwill arising from acquisition of Pingliang Power Company. The factors leading to the goodwill impairment were the continuous deterioration in utilization and the competition from non-coal fired power generation plants. As a result, management expects ongoing loss of Pingliang Power Company will be incurred in the future. A full impairment loss of the CGU's goodwill was provided based on the result of impairment assessment.

In 2011, based on the assessments, except for the goodwill arising from acquisition of Zhanhua Cogeneration, no goodwill was impaired.

In 2010, based on the assessments, except for the goodwill arising from acquisition of Yushe Power Company, no goodwill was impaired.

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## Other non-current assets

Details of other non-current assets are as follows:

	As of December 31,	
	2012	2011
Intangible assets*	415,524	376,859
Deferred employee housing subsidies	6,728	8,975
Prepayments for switchhouse and metering station	13,760	14,408
Prepaid connection fees	115,284	135,101
Prepaid territorial waters use right**	814,813	828,918
Finance lease receivables	589,136	619,528
VAT recoverable	540,505	250,041
Others	587,144	306,274
Total	3,082,894	2,540,104

\* The intangible assets consist of software, patented technologies and land use rights granted by government. In 2012, there is no impairment provided on patented technology (2011: RMB15.66 million).

\*\* The prepaid territorial waters use right mainly consists of territorial waters use right of Luoyuanwan Pier, Luoyuanwan Harbour and Ludao Pier. The prepaid territorial waters use right are amortized over the contractual period of 50 years.

As at 31 December 2012, territorial waters use right with net book value amounting to RMB84.40 million (2011: RMB86.37 million) was secured to a bank as collateral against a long-term loan of RMB97 million (2011: RMB78 million) (Note 22).

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## Inventories

Inventories comprised:

	As of December 31,	
	2012	2011
Fuel (coal and oil) for power generation	5,648,973	6,312,592
Material and supplies	1,555,763	1,392,753
	7,204,736	7,705,345
Less: provision for inventory obsolescence	(182,352 )	(179,724 )
	7,022,384	7,525,621



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## Inventories (continued)

Movements of provision for inventory obsolescence during the years are analyzed as follows:

	2012	2011
Beginning of the year	(179,724 )	(191,352 )
Provision	(14,612 )	(1 )
Reversal	2,457	3,354
Write-offs	14,625	2,408
Currency translation differences	(5,098 )	5,867
End of the year	(182,352 )	(179,724 )

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## Other receivables and assets

Other receivables and assets comprised the following:

	As of December 31,	
	2012	2011
Prepayments for inventories	780,042	901,560
Prepayments for pre-construction cost	415,621	243,853
Prepaid income tax	14,850	101,959
Others	127,705	106,536
Total prepayments	1,338,218	1,353,908
Staff advances	14,153	17,877
Dividends receivable	50,000	120,118
Financial lease receivables	13,746	22,061
Fuel receivables	211,987	208,051
Interest receivables	65	17
Others	448,755	891,432
Subtotal other receivables	738,706	1,259,556
Less: provision for doubtful accounts	(28,641 )	(26,505 )
Total other receivables, net	710,065	1,233,051
VAT recoverable	942,112	2,013,291
Gross total	3,019,036	4,626,755
Net total	2,990,395	4,600,250

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## Other receivables and assets (continued)

Please refer to Note 34 for details of other receivables and assets due from the related parties.

The gross amounts of other receivables of the Company and its subsidiaries are denominated in the following currencies:

	2012	2011
RMB	667,151	1,161,340
S\$ (RMB equivalent)	68,956	59,966
US\$ (RMB equivalent)	2,599	38,250
<b>Total</b>	<b>738,706</b>	<b>1,259,556</b>

Other receivables and assets do not contain significant impaired assets. Movements of provision for doubtful accounts during the years are analyzed as follows:

	2012	2011
Beginning of the year	(26,505 )	(42,045 )
Acquisitions	-	(1,355 )
Provision	(2,774 )	-
Reversal	638	16,895
<b>End of the year</b>	<b>(28,641 )</b>	<b>(26,505 )</b>

As at 31 December 2012, there was no indication of impairment relating to other receivables which were not past due and no provision was made (2011: nil). Other receivables of RMB105 million (2011: RMB91 million) were past due but not impaired. These amounts mainly represent funds deposited in a government agency and are fully recoverable. The ageing analysis of these other receivables was as follows:

	As of December 31,	
	2012	2011
Within 1 year	13,381	-
Between 1 to 2 years	21,026	7,434
Between 2 to 3 years	202	10,374
Over 3 years	70,483	72,703
	<b>105,092</b>	<b>90,511</b>

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## Other receivables and assets (continued)

As at 31 December 2012, other receivables of RMB34 million which were past due (2011: RMB33 million) were impaired and a provision of RMB29 million (2011: RMB20 million) has been provided against the receivables. The individually impaired receivables have been long outstanding without any repayment agreements in place or possibility of renegotiation. It was assessed that a substantial portion of the receivables is not expected to be recovered. The ageing of these other receivables was as follows:

	As of December 31,	
	2012	2011
Within 1 year	807	-
Between 1 to 2 years	94	-
Between 2 to 3 years	233	-
Over 3 years	32,501	32,591
	33,635	32,591

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## Accounts receivable

Accounts receivable comprised the following:

	As of December 31,	
	2012	2011
Accounts receivable	14,953,794	14,838,513
Notes receivable	357,589	563,363
	15,311,383	15,401,876
Less: provision for doubtful accounts	(11,419 )	(24,033 )
	15,299,964	15,377,843

The gross amounts of account receivables of the Company and its subsidiaries are denominated in the following currencies:

	As of December 31,	
	2012	2011
RMB	14,111,899	13,885,301
S\$ (RMB equivalent)	1,188,323	1,493,043
US\$ (RMB equivalent)	11,161	23,532
Total	15,311,383	15,401,876

The Company and its subsidiaries usually grant about one month's credit period to local power grid customers from the end of the month in which the sales are made, except for SinoSing Power which provides credit period that ranged from 5 to 60 days from the dates of billings. Certain accounts receivables of Singapore subsidiaries are backed by

bankers' guarantees and/or deposit from customers. It is not practicable to determine the fair value of the collaterals that correspond to these accounts receivables.

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## Accounts receivable (continued)

As at 31 December 2012, accounts receivable of the Company and its subsidiaries of approximately RMB6,319 million (2011: RMB2,771 million) was secured to a bank as collateral against short-term loans of RMB6,250 million (2011: RMB2,490 million) (Note 28).

As at 31 December 2012, notes receivable of the Company and its subsidiaries of approximately RMB3 million (2011: RMB15 million) was secured to a bank as collateral against notes payable of RMB2 million (2011: RMB11 million) (Note 25).

Movements of provision for doubtful accounts during the years are analyzed as follows:

	2012	2011
Beginning of the year	(24,033 )	(25,008 )
Acquisition	-	(3,237 )
Provision	(62 )	(79 )
Reversal	12,508	2,931
Write-off	28	393
Currency translation differences	140	967
End of the year	(11,419 )	(24,033 )

Ageing analysis of accounts receivable was as follows:

	As of December 31,	
	2012	2011
Within 1 year	15,236,883	15,335,719
Between 1 to 2 years	49,693	40,158
Between 2 to 3 years	12,951	219
Over 3 years	11,856	25,780
	15,311,383	15,401,876

As at 31 December 2012, the maturity period of the notes receivable ranged from 1 to 6 months (2011: from 1 to 6 months).

As at 31 December 2012, there was no indication of impairment relating to accounts receivable which were not past due and no provision was made. As at 31 December 2012, there is no past due but not impaired accounts receivable (2011: RMB14 million).

As at 31 December 2012, accounts receivable of RMB11 million (2011: RMB24 million) were impaired. The amount of the provision was RMB11 million as at 31 December 2012 (2011: RMB24 million). The ageing of these accounts receivable was as follows:

	As of December 31,	
	2012	2011

Less than 1 year	27	31
Between 1 to 2 years	-	170
Between 2 to 3 years	7	50
Over 3 years	11,385	23,782
	11,419	24,033

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	Share capital			
	2012		2011	
	Number of Shares	Share capital RMB '000	Number of Shares	Share capital RMB '000
As at 1 January and 31 December				
A shares	10,500,000,000	10,500,000	10,500,000,000	10,500,000
Overseas listed foreign shares	3,555,383,440	3,555,383	3,555,383,440	3,555,383
<b>Total</b>	<b>14,055,383,440</b>	<b>14,055,383</b>	<b>14,055,383,440</b>	<b>14,055,383</b>

All shares issued by the Company were fully paid. The holders of domestic shares and overseas listed foreign shares, with minor exceptions, are entitled to the same economic and voting rights. Of the issued A shares 500,000,000 shares (2011: 7,298,283,321 shares) are still within the lock-up period.

## 20 Surplus reserves

According to the Company Law of the PRC, the Company's articles of association and board resolutions, the Company appropriates 10% of each year's net profit under PRC GAAP to the statutory surplus reserve. The Company has the option to cease provision for such reserve when it reaches 50% of the registered share capital. Upon the approval from relevant authorities, this reserve can be used to make up any losses incurred or to increase share capital. Except for offsetting against losses, this reserve cannot fall below 25% of the share capital after being used to increase share capital.

As the statutory surplus reserve has exceeded 50% of the registered share capital, there is no appropriation of statutory surplus reserve in 2012 (2011: RMB127 million).

According to the Company's articles of association and board resolutions on 20 March 2012, the Company intends to appropriate 10% of net profit for the year ended 31 December 2011 attributable the Company's shareholders under PRC GAAP to the statutory surplus reserve, amounting to RMB127 million, of which RMB72 million is subject to the approval of the shareholders at the annual general meeting. Therefore, only RMB55 million of the aforementioned appropriation of statutory surplus reserve is recorded for the year ended 31 December 2011.

On 12 June 2012, upon the approval from the annual general meeting of the shareholders, the Company appropriated RMB72 million to the statutory surplus reserve. Such appropriation was recorded in the consolidated financial statements for the year ended 31 December 2012.

Appropriation of discretionary surplus reserve is proposed by the Board of Directors, and approved by the general meeting of shareholders. This reserve can be used to make up any losses incurred in prior years or to increase the share capital after obtaining relevant approvals. For the years ended 31 December 2011 and 2012, no provision was made to the discretionary surplus reserve.

According to the articles of association, distributable profit of the Company is derived based on the lower of amounts determined in accordance with (a) PRC GAAP and (b) IFRS. The amount of distributable profit resulting from the current year operation for the year ended 31 December 2012 was approximately RMB5.51 billion (2011: RMB1.13

billion). The cumulative balance of distributable profit as at 31 December 2012 was approximately RMB17.306 billion (2011: RMB12.372 billion).

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## Dividends

On 19 March 2013, the Board of Directors proposed a cash dividend of RMB0.21 per share, totaling approximately RMB2,952 million. This proposal is subject to the approval of the shareholders at the annual general meeting. These financial statements do not reflect this dividends payable, which will be accounted for in shareholders' equity as an appropriation of retained earnings for the year ending 31 December 2013.

On 12 June 2012, upon the approval from the annual general meeting of the shareholders, the Company declared 2011 final dividend of RMB0.05 (2010 final: RMB0.20) per ordinary share, which totaled approximately RMB703 million (2010 final: RMB2,807 million).

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## Long-term loans

Long-term loans comprised the following:

	As of December 31,	
	2012	2011
Loans from Huaneng Group (a)	800,000	800,000
Bank loans (b)	80,386,702	86,952,527
Other loans (c)	434,825	6,232,615
	81,621,527	93,985,142
Less: Current portion of long-term loans	(9,056,703 )	(14,140,270)
Total	72,564,824	79,844,872

## (a) Loans from Huaneng Group

Details of loans from Huaneng Group of the Company and its subsidiaries are as follows:

	As at 31 December 2012				
	Original currency '000	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Loans from Huaneng Group					
Unsecured					
RMB					
- Fixed rate	800,000	800,000	800,000		-4.05%-4.60%
	As at 31 December 2011				
	Original currency	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate



'000

Loans from Huaneng Group				
Unsecured				
RMB				
- Fixed rate	800,000	800,000	-	800,000 4.05%-4.60%

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## Long-term loans (continued)

## (b) Bank loans

Details of bank loans of the Company and its subsidiaries are as follows:

	As at 31 December 2012				
	Original currency '000	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
<b>Bank loans</b>					
<b>Secured</b>					
<b>US\$</b>					
- Variable rate	2,462	15,478	-	15,478	2.74 %
<b>RMB</b>					
- Fixed rate	12,603,780	12,603,780	(1,057,020)	11,546,760	5.90%-6.55 %
<b>Unsecured</b>					
<b>RMB</b>					
- Fixed rate	47,892,706	47,892,706	(6,266,734)	41,625,972	4.51%-7.05 %
<b>US\$</b>					
- Fixed rate	13,026	81,875	(32,558 )	49,317	6.36 %
- Variable rate	677,738	4,259,924	(436,008 )	3,823,916	0.54%-1.79 %
<b>S\$</b>					
- Variable rate	2,924,883	14,896,139	(386,668 )	14,509,471	2.15 %
<b>€</b>					
- Fixed rate	76,560	636,800	(77,715 )	559,085	2.00%-2.15 %
<b>Total</b>		<b>80,386,702</b>	<b>(8,256,703)</b>	<b>72,129,999</b>	

	As at 31 December 2011				
	Original currency '000	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
<b>Bank loans</b>					
<b>Secured</b>					
<b>US\$</b>					
- Variable rate	746	4,700	-	4,700	2.74 %
<b>RMB</b>					
- Fixed rate	13,603,650	13,603,650	(826,000 )	12,777,650	5.35%-8.65 %
<b>Unsecured</b>					
<b>RMB</b>					
- Fixed rate	53,130,490	53,130,490	(6,918,810)	46,211,680	3.51%-7.40 %
<b>US\$</b>					
- Fixed rate	36,176	227,941	(145,865 )	82,076	5.95%-6.60 %

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- Variable rate	741,893	4,674,593	(437,077 )	4,237,516	0.51%-1.79%
S\$					
- Variable rate	3,001,286	14,609,962	(369,585 )	14,240,377	1.94%-2.15%
€					
- Fixed rate	85,904	701,191	(76,267 )	624,924	2.00%-2.15%
Total		86,952,527	(8,773,604)	78,178,923	

As at 31 December 2012, a long-term loan of RMB97 million is secured by territorial waters use right with net book value amounting to RMB84.40 million (2011: a long-term loan of RMB78 million is secured by territorial waters use right with net book value amounting to RMB86.37 million ) (Note 15).

As at 31 December 2012, a long-term loan of RMB149 million is secured by certain property, plant and equipment (2011: RMB169 million) (Note 7).

As at 31 December 2012, long-term loans of RMB12,358 million are secured by future electricity revenue (2011:RMB13,094 million).

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## Long-term loans (continued)

## (b) Bank loans (continued)

As at 31 December 2011, long-term loans of a subsidiary of the Company of RMB234.65 million are secured by property, plant and equipment with net book value amounting to RMB332.43 million (Note 7) and future electricity revenue of the subsidiary of the Company. These loans are also guaranteed by former shareholders of the subsidiary of the Company. These loans were repaid in 2012.

As at 31 December 2011, a long-term loan of a subsidiary of the Company of RMB27.50 million is secured by listed shares held by a former shareholder of the subsidiary of the Company. This loan was repaid in September 2012.

As at 31 December 2012, a long-term loan of a subsidiary of the Company of RMB15.48 million is secured by all assets of the subsidiary (2011: RMB4.70 million).

## (c) Other loans

Details of other loans of the Company and its subsidiaries are as follows:

	Original currency '000	As at 31 December 2012			Annual interest rate
		RMB equivalent	Less: Current portion	Non-current portion	
Other loans					
Unsecured					
RMB					
- Fixed rate	417,000	417,000	-	417,000	5.54%-5.84%
S\$					
- Variable rate	3,500	17,825	-	17,825	4.25 %
Total		434,825	-	434,825	
As at 31 December 2011					
	Original currency '000	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Other loans					
Secured					
RMB					
- Fixed rate	800,000	800,000	(266,666 )	533,334	6.65 %
Unsecured					
RMB					
- Fixed rate	5,400,000	5,400,000	(5,100,000)	300,000	4.20%-6.65 %
S\$					
- Variable rate	6,700	32,615	-	32,615	4.25 %

Total	6,232,615	(5,366,666)	865,949
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As at 31 December 2012, the balance of other long-term loans drawn from Huaneng Finance amounted to approximately RMB417 million (2011: RMB100 million) with annual interest rate of 5.54%-5.84% (2011: 4.86%-6.10%).

As at 31 December 2011, one of the long-term loans of RMB800 million is secured by right of income derived from four power generation units of the Company. This loan was repaid in July 2012.

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## Long-term loans (continued)

(c) Other loans (continued)

The maturity of long-term loans is as follows:

	Loans from Huaneng Group		Bank loans		Other loans	
	As at 31 December		As at 31 December		As at 31 December	
	2012	2011	2012	2011	2012	2011
1 year or less	800,000	-	8,256,703	8,773,604	-	5,366,666
More than 1 year but not more than 2 years	-	800,000	13,918,824	9,334,161	-	566,667
More than 2 years but no more than 3 years	-	-	7,496,615	15,290,895	417,000	266,667
More than 3 years but no more than 4 years	-	-	5,052,298	4,388,884	-	-
More than 4 years but not more than 5 years	-	-	7,166,031	5,452,849	-	-
More than 5 years	-	-	38,496,231	43,712,134	17,825	32,615
	800,000	800,000	80,386,702	86,952,527	434,825	6,232,615
Less: amount due within 1 year included under current liabilities	(800,000)	-	(8,256,703)	(8,773,604)	-	(5,366,666)
Total	-	800,000	72,129,999	78,178,923	434,825	865,949

The analysis of the above is as follows:

	As of December 31,	
	2012	2011
Loans from Huaneng Group		
- Wholly repayable within five years	800,000	800,000

## Bank loans

- Wholly repayable within five years	20,775,428	27,610,488
- Not wholly repayable within five years	59,611,274	59,342,039
	80,386,702	86,952,527

## Other loans

- Wholly repayable within five years	417,000	6,200,000
- Not wholly repayable within five years	17,825	32,615
Total	434,825	6,232,615

The interest payment schedule of long-term loans in the future years are summarized as follows:

	As of December 31,	
	2012	2011
1 year or less	3,954,794	4,538,592
More than 1 year but not more than 2 years	3,588,277	3,902,337
More than 2 years but not more than 5 years	7,190,622	7,849,009
More than 5 years	7,597,486	9,147,103
Total	22,331,179	25,437,041

## Long-term bonds

The Company issued bonds with maturity of 5 years, 7 years and 10 years in December 2007 with face values of RMB1 billion, RMB1.7 billion and RMB3.3 billion bearing annual interest rates of 5.67%, 5.75% and 5.90%, respectively. The total actual proceeds received by the Company were approximately RMB5.885 billion. These bonds are denominated in RMB and issued at par. Interest is payable annually while principal will be paid when the bonds fall due. The annual effective interest rates of those bonds are 6.13%, 6.10% and 6.17%, respectively. Interest paid per annum during the tenure of the bonds are RMB57 million, RMB98 million and RMB195 million, respectively. As at 31 December 2012, the bond with original maturity of 5 years had matured and the Company repaid the principal of RMB1 billion. As at 31 December 2012, interest payable for these bonds amounted to approximately RMB5.61 million (2011: RMB6.79 million).

The Company also issued bonds with maturity of 10 years in May 2008 with face value of RMB4 billion bearing annual interest rate of 5.20%. The actual proceeds received by the Company were approximately RMB3.933 billion. These bonds are denominated in RMB and issued at par. Interest is payable annually while principal will be paid when the bonds fall due. The annual effective interest rate of bond is 5.42%. Interest paid per annum during the tenure of the bonds is RMB208 million. As at 31 December 2012, interest payable for these bonds above amounted to approximately RMB135.06 million (2011: RMB134.19 million).

Please refer to Note 34(c) for details of long-term bonds of the Company guaranteed by HIPDC and government-related banks.

The Company issued medium-term notes with maturity of 5 years in May 2009 with face value of RMB4 billion bearing annual interest rate of 3.72%. The actual proceeds received by the Company were approximately RMB3.940 billion. These notes are denominated in RMB and issued at par. Interest is payable annually while principal will be paid when the notes fall due. The annual effective interest rate of these notes is 4.06%. Interest paid per annum during the tenure of the notes is RMB149 million. As at 31 December 2012, interest payable for these notes above amounted to approximately RMB94.17 million (2011: RMB94.17 million).

The Company issued non-public debt financing instrument with maturity of 5 years in November 2011 with face value of RMB5 billion bearing an annual interest rate of 5.74%. The actual proceeds received by the Company were approximately RMB4.985 billion. These bonds are denominated in RMB and issued at par. Interest is payable annually while principal will be paid when the bonds fall due. The annual effective interest rate of bond is 6.04%. Interest paid per annum during the tenure of the bonds is RMB302 million. As at 31 December 2012, interest payable for these bonds above amounted to approximately RMB45.61 million (2011: RMB42.34 million).

The Company issued non-public debt financing instrument with maturity of 3 years in January 2012 with face value of RMB5 billion bearing an annual interest rate of 5.24%. The actual proceeds received by the Company were approximately RMB4.985 billion. These bonds are denominated in RMB and issued at par. Interest is payable annually while principal will be paid when the bonds fall due. The annual effective interest rate of bond is 5.54%. Interest paid per annum during the tenure of the bonds is RMB277 million. As at 31 December 2012, interest payable for these bonds above amounted to approximately RMB259.14 million.



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## Other non-current liabilities

	As of December 31,	
	2012	2011
Environmental subsidies (a)	673,686	691,253
Security deposits	129,928	111,117
Finance lease payables	95,886	-
Government grants and others	347,964	186,987
<b>Total</b>	<b>1,247,464</b>	<b>989,357</b>

(a) Such grants represented primarily subsidies for the construction of desulphurization equipment and other environmental protection projects.

In 2012, the government grants and environmental subsidies which were credited to the statement of comprehensive income amounted to RMB101.89 million (2011: RMB81.91 million).

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## Accounts payable and other liabilities

Accounts payable and other liabilities comprised:

	As of December 31,	
	2012	2011
Accounts and notes payable	7,354,260	9,122,537
Amounts received in advance	990,355	950,321
Payables to contractors for construction	7,692,036	10,669,533
Other payables to contractors	832,889	1,615,101
Consideration payables for acquisitions	11,136	155,903
Accrued interests	897,839	687,427
Accrued pollutants discharge fees	87,071	94,705
Accrued water-resources fees	17,299	18,950
Accrued service fee of intermediaries	33,992	49,014
Capacity quota payables	39,935	361,440
Security deposits	94,611	72,020
Provisions (a)	157,263	-
Others	1,784,215	1,971,048
<b>Total</b>	<b>19,992,901</b>	<b>25,767,999</b>

Please refer to Note 34 for details of accounts payable and other liabilities due to the related parties.

As at 31 December 2012, notes payable of RMB2 million (2011: RMB11 million) were secured by notes receivable of the Company and its subsidiaries with net book value amounting to RMB3 million (2011: RMB15 million) (Note 18).

(a) In 2012, a provision of RMB157 million was made, due to a legal claim by a vendor of the Company's subsidiary. The outcome of this legal claim is not expected to give rise to any significant loss beyond the amount provided as at 31 December 2012.

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## Accounts payable and other liabilities (continued)

The carrying amounts of financial liabilities included in accounts payable and other liabilities of the Company and its subsidiaries are denominated in the following currencies:

	As of December 31,	
	2012	2011
RMB	17,113,815	22,716,685
S\$ (RMB equivalent)	1,086,111	886,056
US\$ (RMB equivalent)	744,619	1,137,516
JPY (RMB equivalent)	58,001	77,412
EUR (RMB equivalent)	-	9
<b>Total</b>	<b>19,002,546</b>	<b>24,817,678</b>

The ageing analysis of accounts and notes payable was as follows:

	As of December 31,	
	2012	2011
<b>Accounts and notes payable</b>		
Within 1 year	7,287,106	9,018,743
Between 1 to 2 years	51,847	83,275
Over 2 years	15,307	20,519
<b>Total</b>	<b>7,354,260</b>	<b>9,122,537</b>

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## Taxes payable

	As of December 31,	
	2012	2011
VAT payable	337,649	304,600
Income tax payable	788,623	503,252
Others	149,158	210,689
<b>Total</b>	<b>1,275,430</b>	<b>1,018,541</b>

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## Short-term bonds

The Company issued unsecured short-term bonds with face values of RMB5 billion, RMB5 billion and RMB5 billion bearing annual interest rates of 4.41%, 4.42% and 4.58% in April 2012, November 2012 and December 2012, respectively. Such bonds are denominated in RMB, issued at face value and mature in 365 days from the issuance dates. The annual effective interest rates of these bonds are 4.83%, 4.84% and 5.00%, respectively. As at 31 December 2012, interest payables for these bonds above amounted to approximately RMB155.86 million, RMB33.30 million and RMB13.80 million, respectively.

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## Short-term bonds (continued)

The Company issued unsecured super short-term debentures with face values of RMB5 billion, RMB5 billion, RMB5 billion and RMB5 billion bearing annual interest rates of 3.35%, 3.32%, 3.70% and 3.99% in June 2012, July 2012, August 2012 and September 2012, respectively. Such bonds are denominated in RMB, issued at face value and mature in 270 days from the issuance dates. The annual effective interest rates of these bonds are 3.76%, 3.73%, 4.11% and 4.40%, respectively. As at 31 December 2012, interest payables for these bonds above amounted to approximately RMB95.91 million, RMB79.13 million, RMB75.26 million and RMB63.75 million, respectively.

The Company issued unsecured short-term bonds with face values of RMB5 billion and RMB5 billion bearing annual interest rates of 3.95% and 6.04% in January 2011 and September 2011, respectively. Such bonds are denominated in RMB, issued at face value and mature in 365 days and 366 days from the issuance dates, respectively. The annual effective interest rates of these bonds are 4.37% and 6.47%, respectively. These short-term bonds were fully repaid in January 2012 and September 2012, respectively.

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## Short-term loans

Short-term loans are as follows:

	As at 31 December 2012			As at 31 December 2011		
	Original currency '000	RMB equivalent	Annual interest rate	Original currency '000	RMB equivalent	Annual interest rate
<b>Secured</b>						
<b>RMB</b>						
- Fixed rate	6,520,000	6,520,000	5.04%-5.40%	2,490,401	2,490,401	4.13%-7.13%
- F i x e d rate-discounted notes receivable	21,250	21,250	6.08%-6.30%	59,757	59,757	4.32%-8.52%
		6,541,250			2,550,158	
<b>Unsecured</b>						
<b>RMB</b>						
- Fixed rate	20,900,826	20,900,826	5.04%-6.56%	41,429,042	41,429,042	4.00%-7.22%
<b>Total</b>		27,442,076			43,979,200	

As at 31 December 2012, short-term loans of RMB6,250 million (2011: RMB2,490 million) were secured by accounts receivable of the Company and its subsidiaries with net book value amounting to RMB6,319 million (2011: RMB2,771 million).

As at 31 December 2012, short-term loans of a subsidiary of the Company of RMB270 million are secured by future electricity revenue of the subsidiary of the Company (2011: nil).

As at 31 December 2012, short-term loans of RMB21.25 million (2011: RMB59.76 million) represented the notes receivable that were discounted with recourse. As these notes receivable have not yet matured, the proceeds received were recorded as short-term loans.

As at 31 December 2012, short-term loans from Huaneng Finance amounted to RMB1,315 million (2011: RMB1,465 million). For the year ended 31 December 2012, the annual interest rates for these loans ranged from 5.40% to 6.00% (2011: 4.78% to 6.56%).

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## Short-term loans (continued)

As at 31 December 2011, short-term loans from Xi'an Thermal Power Research Institute Co., Ltd. ("Xi'an Thermal") amounted to RMB70 million with an annual interest of 6.89%. These loans were repaid in 2012.

As at 31 December 2012, a short-term loan from China Huaneng Group Clean Energy Technology Research Institute Co., Ltd. ("Huaneng Clean Energy") amounted to RMB120 million (2011: RMB100 million). For the 12 months ended 31 December 2012, the annual interest rate for this loan is 5.40% (2011: 6.56%).

As at 31 December 2011, short-term loans from Huaneng Guicheng Trust Co., Ltd. ("Huaneng Guicheng Trust") amounted to RMB4,500 million. For the year ended 31 December 2011, the annual interest rates for these loans ranged from 4.56% to 7.22%. These loans were repaid in 2012.

As at 31 December 2012, a short-term loan from Huaneng Shandong Power Limited Company ("Shandong Power Limited") amounted to RMB50 million with annual interest rate of 6.00% (2011: nil).

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## Deferred income tax assets and liabilities

Periods which deferred income tax assets and liabilities are expected to recover and realize are as follows:

	As of December 31,	
	2012	2011
<b>Deferred income tax assets:</b>		
- Deferred income tax assets to be recovered after more than 12 months	1,084,890	899,439
- Deferred income tax assets to be recovered within 12 months	222,012	309,893
	1,306,902	1,209,332
<b>Deferred income tax liabilities:</b>		
- Deferred income tax liabilities to be settled after more than 12 months	(2,719,101)	(2,563,755)
- Deferred income tax liabilities to be settled within 12 months	(67,143 )	(112,333 )
	(2,786,244)	(2,676,088)
	(1,479,342)	(1,466,756)

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## Deferred income tax assets and liabilities (continued)

The offset amounts of deferred income tax assets and liabilities are as follows:

	As of December 31,	
	2012	2011
Deferred income tax assets	532,387	526,399
Deferred income tax liabilities	(2,011,729)	(1,993,155)
	(1,479,342)	(1,466,756)

The gross movement on the deferred income tax accounts is as follows:

	2012	2011
Beginning of the year	(1,466,756)	(1,293,912)
Acquisitions	-	(379,084)
Adjustment on 2011 acquisitions (Note 14)	(134,460)	-
Credited/(charged) to profit or loss (Note 31)	148,668	(39,469)
Credited/(charged) to other comprehensive income/(loss)	34,556	173,343
Currency translation differences	(61,350)	69,197
Disposal of a subsidiary	-	3,169
End of the year	(1,479,342)	(1,466,756)

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## Deferred income tax assets and liabilities (continued)

The movements in deferred income tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdictions, are as follows:

## Deferred income tax assets:

	Hedging reserve	Amortization of land use rights	Provision for impairment loss	Depreciation	Accrued expenses	VAT refunds on purchases of domestically manufactured equipment	Unused tax losses	Others	Total
As at 1 January 2011	20,540	15,798	210,994	74,506	158,590	352,475	167,304	202,290	1,202,497
Acquisitions	-	-	538	68,453	-	-	9,525	1,787	80,303
(Charged)/credited to profit or loss	(229 )	(351 )	10,427	14,076	(110,648)	(21,550 )	(37,043 )	106	(145,212 )
Credited to other comprehensive income	74,859	-	-	-	-	-	-	-	74,859
Currency translation differences	(2,512 )	-	(3 )	(145 )	-	-	-	(455 )	(3,115 )
As at 31 December 2011	92,658	15,447	221,956	156,890	47,942	330,925	139,786	203,728	1,209,332
(Charged)/credited to profit or loss	(4 )	(368 )	(34,344 )	(21,309 )	(1,894 )	(24,056 )	(6,796 )	115,811	27,040
Credited to other comprehensive income	67,395	-	-	-	-	-	-	-	67,395
Currency translation differences	2,405	-	15	125	-	-	-	590	3,135
As at 31 December 2012	162,454	15,079	187,627	135,706	46,048	306,869	132,990	320,129	1,306,902

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## Deferred income tax assets and liabilities (continued)

## Deferred income tax liabilities:

	Hedging reserve	Amortization Fair value gains	of land use rights Depreciation	Power generation licence	Mining rights	Territorial waters use right	Others	Total
As at 1 January 2011	(20,575)	(259,543)	(429,326)	(1,057,195)	(693,694)	-	(36,076 )	(2,496,409)
Acquisitions	-	-	(39,102 )	(171,880 )	-	(162,400)	(86,005)	(459,387 )
Credited/(charged) to profit or loss	-	-	27,511	124,668	-	-	519	(46,955 )
Credited to other comprehensive income	20,575	77,909	-	-	-	-	-	98,484
Currency translation differences	-	-	3,067	35,207	34,038	-	-	72,312
Disposal of a subsidiary	-	-	2,619	550	-	-	-	3,169
As at 31 December 2011	-	(181,634)	(435,231)	(1,068,650)	(659,656)	(162,400)	(85,486)	(83,031 )
Adjustment on 2011 acquisitions	-	-	(8,303 )	(17,890 )	-	(108,267)	-	(134,460 )
(Charged)/credited to profit or loss	-	-	22,582	120,146	-	-	519	(21,619 )
Charged to other comprehensive income	-	(32,839 )	-	-	-	-	-	(32,839 )
Currency translation differences	-	-	(2,747 )	(31,220 )	(30,518 )	-	-	(64,485 )
As at 31 December 2012	-	(214,473)	(423,699)	(997,614 )	(690,174)	(270,667)	(84,967)	(104,650)

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## Deferred income tax assets and liabilities (continued)

As at 31 December 2012 and 2011, taxable temporary differences relating to interest in equity method investees amounted to RMB2.03 billion and RMB1.96 billion respectively. No deferred tax liabilities were recognized as at 31 December 2012 and 2011 as dividends from these investees to the Company is exempted from the PRC income tax and the Company has no plan to dispose any of these investees in the foreseeable future.

In accordance with the accounting policy set out in Note 2(s), the Company and its subsidiaries did not recognize deferred income tax assets in respect of accumulated tax losses that can be carried forward against future taxable income. The expiry dates of such tax losses for which no deferred income tax assets were recognized are summarized as follows:

Year of expiry	As of December 31,	
	2012	2011
2012	-	2,432
2013	837,456	1,185,791
2014	581,380	581,380
2015	938,601	938,601
2016	1,703,980	1,578,516
2017	1,934,582	-
	5,995,999	4,286,720

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## Additional financial information on balance sheets

As at 31 December 2012, the net current liabilities of the Company and its subsidiaries amounted to approximately RMB57,508 million (2011: RMB60,180 million) and total assets less current liabilities were approximately RMB165,506 million (2011: RMB160,818 million).

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## Income tax expense

	For the year ended 31 December		
	2012	2011	2010
Current income tax expense	2,659,038	829,458	1,060,362
Deferred income tax	(148,668 )	39,469	(217,687 )
	2,510,370	868,927	842,675

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## Income tax expense (continued)

The reconciliation of the effective income tax rate from the notional income tax rate is as follows:

	For the year ended 31 December					
	2012		2011		2010	
Notional tax on profit before income tax expense, calculated at the applicable income tax rates in the countries concerned	24.28	%	18.43	%	22.05	%
Tax credit relating to domestically manufactured equipment*	-		-		(5.07)	%
Effect of tax losses not recognized	3.28	%	22.67	%	4.55	%
Effect of the tax rate differential on deferred income tax balance	-		0.41	%	(0.73)	%
Effect of non-taxable income	(1.95)	%	(9.78)	%	(4.01)	%
Effect of non-deductible expenses	2.67	%	10.70	%	3.51	%
Others	-		(0.05)	%	(0.06)	%
Effective tax rate	28.28	%	42.38	%	20.24	%

\*This represented tax credit granted to certain power plants on their purchases of certain domestically manufactured equipment upon the approvals of respective tax bureaus.

Effective from 1 January 2008, under the Corporate Income Tax Law of PRC which was passed by the National People's Congress on 16 March 2007, the PRC's statutory income tax rate is 25%. The Company and its PRC branches and subsidiaries are subject to income tax at 25%, except for certain PRC branches and subsidiaries that are taxed at preferential tax rates ranging from 0% to 15%.

Pursuant to Guo Shui Han [2009] No. 33, starting from 1 January 2008, the Company and its PRC branches calculate and pay income tax on a consolidated basis according to relevant tax laws and regulations. The original regulation specifying locations for power plants and branches of the Company to make enterprise income tax payments was abolished. The income tax of subsidiaries remains to be calculated individually based on their individual operating results.

The income tax rate applicable to Singapore subsidiaries is 17% (2011: 17%).

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## Earnings per share

The basic earnings per share is calculated by dividing the consolidated net profit attributable to the equity holders of the Company by the weighted average number of the Company's outstanding ordinary shares during the year:

	2012	2011	2010
Consolidated net profit attributable to equity holders of the Company	5,512,454	1,180,512	3,347,985
Weighted average number of the Company's outstanding ordinary shares	14,055,383	14,055,383	12,107,438
Basic and diluted earnings per share (RMB)	0.39	0.08	0.28

There was no dilutive effect on earnings per share since the Company had no dilutive potential ordinary shares for the years ended 31 December 2012, 2011 and 2010.

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## Notes to consolidated statement of cash flows

Bank balances and cash comprised the following:

	As at 31 December		
	2012	2011	2010
Restricted cash	119,110	117,233	121,471
Cash and cash equivalents	10,505,387	8,552,782	9,426,437
Total	10,624,497	8,670,015	9,547,908

The bank balances and cash of the Company and its subsidiaries are denominated in the following currencies:

	As at 31 December		
	2012	2011	2010
RMB	7,935,202	5,040,151	4,432,568
S\$ (RMB equivalent)	2,142,873	2,935,792	1,887,958
US\$ (RMB equivalent)	545,514	693,823	1,208,447
JPY (RMB equivalent)	404	248	6,557
HK\$ (RMB equivalent)	504	1	2,012,378
Total	10,624,497	8,670,015	9,547,908

There is no material non-cash investing and financing transaction for the year ended 31 December 2012 and 2011. For the year ended 31 December 2010, the material non-cash transaction included the transfer property, plants and equipment under a finance lease arrangement.

Undrawn borrowing facilities

As at December 2012, the Company and its subsidiaries had undrawn borrowing facilities amounting to approximately RMB89.81 billion (2011:RMB90.96 billion). Management drawdowns the available facilities in accordance with the level of working capital and/or planned capital expenditures of the Company and its subsidiaries.

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## Related party balances and transactions

The related parties of the Company and its subsidiaries that had transactions with the Company and its subsidiaries are as follows:

Names of related parties	Nature of relationship
Huaneng Group	Ultimate parent company
HIPDC	Parent company
Huaneng Property Co., Ltd.	A Subsidiary of Huaneng Group
Xi'an Thermal and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Energy & Communications Holdings Co., Ltd. and its subsidiaries ("HEC and its subsidiaries")	Subsidiaries of Huaneng Group
Shandong Power Limited and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Renewables Corporation Limited ("Huaneng Renewables")	A subsidiary of Huaneng Group
Huaneng Guicheng Trust	A subsidiary of Huaneng Group
Huaneng Hulunbeier Energy Development Company Ltd. ("Hulunbeier Energy")	A subsidiary of Huaneng Group
Huaneng Suzhou Thermoelectric Power Company Ltd.	A subsidiary of Huaneng Group
Alltrust Insurance Company of China Limited	A subsidiary of Huaneng Group
Huaneng Tibet Power Generation Co., Ltd.	A subsidiary

Huaneng Wuhan Power Co., Ltd.	of Huaneng Group A subsidiary of Huaneng Group
North United Power Coal Transportation and Marketing Co., Ltd. (“North United Power”)	A subsidiary of Huaneng Group
Huaneng Group Technology Innovation Center	A subsidiary of Huaneng Group
Huaneng Chaohu Power Generation Co., Ltd.	A subsidiary of HIPDC
Gansu Huating Coal and Power Co., Ltd. (“Huating Coal and Power”)	A subsidiary of Huaneng Group
Huaneng Shanxi Qinling Power Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Clean Energy	A subsidiary of Huaneng Group
Huaneng Jilin Power Generation Co., Ltd. (“Huaneng Jilin Company”)	A subsidiary of Huaneng Group
China Huaneng Group Hongkong Company Limited	A subsidiary of Huaneng Group
Huaneng Anyuan Power Generation Co., Ltd.	A subsidiary of HIPDC
Huaneng Xinjiang Energy Development Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Henan Zhongyuan Gas Power Generation Co., Ltd.	A subsidiary of Huaneng Group
Zhejiang Southeast Electric Power Co., Ltd.	A subsidiary of Huaneng



Qinhuangdao Ruigang Coal Logistics Co., Ltd. (“Ruigang Coal”)	Group A subsidiary of Huaneng Group
China Huaneng Group Fuel Co., Ltd. (“Fuel Company”)	A subsidiary of Huaneng Group
Huaneng Ruijin Power Generation Co., Ltd.	A subsidiary of HIPDC
Rizhao Power Company	An associate of the Company and also a subsidiary of Huaneng Group
Huaneng Finance	An associate of the Company and also a subsidiary of Huaneng Group
Jinling CCGT	An associate of the Company
Coal Gasification Co.	An associate of the Company and also a subsidiary of Huaneng Group

## Related party balances and transactions (continued)

Names of related parties	Nature of relationship
Huaneng Sichuan Hydropower Co., Ltd.	An associate of the Company and also a subsidiary of Huaneng Group
Lime Company	An associate of a subsidiary and also a subsidiary of Huaneng Group
Shanghai Time Shipping	A jointly controlled entity of the Company
Jiangsu Nantong Power Generation Co., Ltd.	A jointly controlled entity of the Company
Subsidiaries of Jiangsu Province Guoxin Asset Management Group Limited Company (“Jiangsu Guoxin”)*	A minority shareholder of the Company’s subsidiaries
Government-related enterprises**	Related parties of the Company

\*The director of the Company, Mr. Xu Zujian also serves as the Vice President of Jiangsu Guoxin. Meanwhile, Jiangsu Guoxin holds 30%, 26.36%, 30% and 21% equity interest of Huaneng Nantong Power Generation Limited Liability Company, Huaneng Huaiyin II Power Limited Company, Huaneng Nanjing Jinling Power Co., Ltd. and Jinling CCGT, respectively.

\*\*Huaneng Group is a state-owned enterprise. In accordance with the revised IAS 24, ‘Related Party Disclosures’, government-related enterprises, other than entities under Huaneng Group, which the PRC government has control, joint control or significant influence over are also considered as related parties of the Company and its subsidiaries (“other government enterprises”).

The majority of the business activities of the Company and its subsidiaries are conducted with other government-related enterprises. For the purpose of the related party balances and transactions disclosure, the Company and its subsidiaries have established procedures to determine, to the extent possible, the identification of the ownership structure of its customers and suppliers as to whether they are government-related enterprises. However, many government-related enterprises have a multi-layered corporate structure and the ownership structures change over time as a result of transfers and privatization programs. Nevertheless, management believes that all material related party balances and transactions have been adequately disclosed.

In addition to the related party information shown elsewhere in these financial statements, the following is a summary of significant related party transactions entered into in the ordinary course of business between the Company and its subsidiaries and their related parties during the year and significant balances arising from related party transactions as at year end.

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## Related party balances and transactions (continued)

## (a) Related party balances

## (i) Cash deposits in a related party

	As of December 31,	
	2012	2011
Deposits in Huaneng Finance		
- Savings deposit	3,662,365	2,272,799

For the year ended 31 December 2012, the annual interest rates for these savings deposits placed with Huaneng Finance ranged from 0.35% to 1.49% (2011: from 0.36% to 1.49%).

(ii) As described in Note 22 and 28, certain loans of the Company and its subsidiaries were borrowed from Huaneng Group, Huaneng Finance, Xi'an Thermal, Huaneng Clean Energy and Huaneng Guicheng Trust.

(iii) All balances with Huaneng Group, HIPDC, subsidiaries, associates, jointly controlled entities and other related parties are unsecured, non-interest bearing and receivable/repayable within one year. As at and for the years ended 31 December 2012 and 2011, no provision is made on receivable balances from these parties

Other receivables and assets comprised the following balances due from related parties:

	As of December 31,	
	2012	2011
Accounts receivable from other related parties	44,998	-
Prepayments to associates	152,891	321,678
Prepayments to a joint controlled entity	50,000	-
Prepayments to other related parties	9,759	3,266
Other receivables from subsidiaries	-	-
Other receivables from other related parties	205,269	143,402
Other receivables from Huaneng Group	38	37
<b>Total</b>	<b>462,955</b>	<b>468,383</b>

(iv) Accounts payable and other liabilities comprised the following balances due to related parties:

	As of December 31,	
	2012	2011
Due to Huaneng Group	10,685	1,445
Due to HIPDC	28,052	27,425
Due to subsidiaries	-	-
Due to associates	13,414	43,271
Due to a joint controlled entity	272,684	209,983

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Due to other related parties	827,157	658,477
Total	1,151,992	940,601

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## Related party balances and transactions (continued)

## (a) Related party balances (continued)

(v) As at 31 December 2012, included in long-term loans (including current portion) and short-term loans are loans payable to other government-related enterprises amounting to RMB106 billion (2011: RMB129 billion).

The balances with government-related enterprises also included substantially all the accounts receivable of domestic power plants from government-related power grid companies, most of the bank deposits which are placed in government-related financial institutions as well as accounts payables and other payables arising from the purchases of coal and property, plant and equipment construction and related labor employed with other government-related enterprises. Except for bank deposits, these balances are unsecured, non-interest bearing and the majority of receivable/repayable is within one year.

## (b) Related party transactions

	For the year ended 31 December		
	2012	2011	2010
<b>Huaneng Group</b>			
Interest expense on long-term loans	(23,955 )	(36,220 )	(34,674 )
Acquisition of 30% equity interest in Hainan Nuclear Power	-	-	(174,000 )
Training fees	(22 )	(37 )	-
<b>HIPDC</b>			
Service fees expenses on transmission and transformer facilities	(140,771 )	(140,771 )	(140,771 )
Rental charge on land use rights of Huaneng Nanjing Power Plant	(1,657 )	(1,334 )	(1,334 )
Rental charge on office building	-	(450 )	(9,267 )
<b>Huaneng Finance</b>			
Drawdown of short-term loans	3,555,000	4,115,000	605,000
Drawdown of long-term loans	417,000	-	-
Interest expense on short-term loans	(174,930 )	(51,668 )	(17,714 )
Interest expense on long-term loans	(12,338 )	(11,235 )	(11,355 )
<b>Huaneng New Energy</b>			
Interest expense on long-term loans	-	-	(3,922 )
Agency fee on CDM projects	(1,200 )	(200 )	(700 )
<b>HEC and its subsidiaries</b>			
Purchase of coal and service fee occurred for transportation	(611,474 )	(404,257 )	(1,995,787)
Purchase of equipment	(82,685 )	(204,207 )	(596,234 )
Purchase of materials	(3,994 )	-	-
Acquisition of 50% equity interest in Shanghai Time Shipping	-	-	(1,058,000)

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## Related party balances and transactions (continued)

## (b) Related party transactions (continued)

	For the year ended 31 December		
	2012	2011	2010
<b>Lime Company</b>			
Purchase of lime	(116,741 )	(112,157 )	(104,636 )
<b>Xi'an Thermal and its subsidiaries</b>			
Technical services and industry-specific technological project contracting services obtained	(166,520 )	(156,997 )	(207,779 )
Purchase of equipment	(170,741 )	(47,499 )	(101,483 )
Drawdown of short-term loans	100,000	70,000	-
Interest expense on short-term loans	(4,347 )	(2,197 )	-
<b>Hulunbeier Energy</b>			
Purchase of coal	(970,328 )	(676,184 )	(839,462 )
<b>Rizhao Power Company</b>			
Purchase of coal	(1,795,217)	(2,119,430)	(2,079,342)
Sales of electricity	2,372	2,743	-
Purchase of materials	(47,235 )	(44,084 )	(49,513 )
Purchase of electricity	(6,160 )	(4,822 )	(4,443 )
Sales of coal	202,819	524,979	119,757
Rental charge on lease of certain property, plant and equipment	(16,228 )	(13,337 )	-
Purchase of power generation quota	(30,396 )	-	-
<b>Huaneng Hainan Power Co.,Ltd.</b>			
Sales of coal	-	-	71,526
<b>Huaneng Suzhou Thermoelectric Power Company Ltd.</b>			
Sales of coal	31,682	70,338	90,593
<b>Huaneng Wuhan Power Co., Ltd.</b>			
Sales of coal	88,694	144,844	34,049
<b>Huaneng Ruijin Power Generation Co., Ltd.</b>			
Sales of coal	206,731	238,297	681,372
<b>Huaneng Property Co., Ltd.</b>			
Rental charge on office building	(95,595 )	(96,485 )	(65,295 )
<b>Hebei Huaneng Industrial Development Limited Liability Company</b>			

Purchase of coal	-	-	(8,185 )
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## Related party balances and transactions (continued)

## (b) Related party transactions (continued)

	For the year ended 31 December		
	2012	2011	2010
<b>North United Power</b>			
Purchase of coal	(100,364 )	(196,430 )	(21,755 )
<b>Inner Mongolia Power Fuel Co., Ltd.</b>			
Purchase of coal	-	-	(68,666 )
<b>Huating Coal and Power</b>			
Purchase of coal	(1,658,401)	(2,364,518)	(1,463,619)
<b>Huaneng Heilongjiang Power Generation Co., Ltd.</b>			
Service fee relating to the purchase of equipment	-	-	(520 )
<b>Huaneng Guicheng Trust</b>			
Drawdown of short-term loans	-	4,500,000	3,180,000
Interest expense on short-term loans	(157,610 )	(246,747 )	(55,150 )
<b>Huaneng Jinan Huangtai Power Generation Co., Ltd.</b>			
Purchase of power generation quota	-	-	(7,685 )
<b>Alltrust Insurance Company of China Limited</b>			
Premiums for property insurance	(148,525 )	(158,937 )	(138,208 )
<b>Huaneng Tibet Power Generation Co., Ltd.</b>			
Labor service	-	190	877
Purchase of vehicles	-	-	(2,118 )
<b>Huaneng Group Technology Innovation Center</b>			
Technical services and industry-specific technological project contracting services obtained	(21,480 )	(27,750 )	(47,210 )
<b>Shanghai Time Shipping</b>			
Purchase of coal	(717,159 )	(93,290 )	-
Service fee paid for transportation	(715,460 )	(1,618,548)	-
Purchase of assets	(88,889 )	-	-
<b>Huaneng Chaohu Power Generation Co., Ltd.</b>			
Sales of coal	-	24,675	-

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## Related party balances and transactions (continued)

## (b) Related party transactions (continued)

For the year ended 31 December  
2012                      2011                      2010

<b>Fuel Company</b>			
Purchase of coal	(658,317 )	(497,806 )	-
Sales of coal	27,593	-	-
Service fee	8,971	-	-
<b>Huaneng Shanxi Qinling Power Co., Ltd.</b>			
Purchase of capacity quota	-	(244,000 )	-
<b>Huaneng Clean Energy</b>			
Drawdown of short-term loans	120,000	100,000	-
Interest expense on short-term loans	(5,784 )	(1,257 )	-
Service fee	(540 )	-	-
<b>Huaneng Jilin Company</b>			
Transfer of 100% equity interest in Huaneng Jilin Biological Power Generation Limited company	-	106,303	-
<b>Jinling CCGT</b>			
Lending of short-term loans	-	(100,000 )	-
Interest income on short-term loans	2,849	-	-
Entrusted management fee	38,810	-	-
<b>Coal Gasification Co.</b>			
Advance from Coal Gasification Co.	-	1,310	-
<b>Huaneng Henan Zhongyuan Gas Power Generation Co., Ltd.</b>			
Purchase of power generation quota	(49,500 )	-	-
<b>Huaneng Xinjiang Energy Development Co., Ltd.</b>			
Sales of assets	8,900	-	-
<b>Zhejiang Southeast Electric Power Co., Ltd.</b>			
Purchase of power generation quota	(37,744 )	-	-
<b>Huaneng Anyuan Power Generation Co., Ltd.</b>			
Training Fee	(319 )	-	-
Provision of entrusted power generation	235,195	-	-



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## Related party balances and transactions (continued)

## (b) Related party transactions (continued)

	For the year ended 31 December		
	2012	2011	2010
<b>Shandong Power Limited and its subsidiaries</b>			
Purchase of power generation quota	(138,484 )	-	-
Purchase of materials	(159 )	-	-
Purchase of coal	(957,275 )	-	-
Drawdown of short-term loans	50,000	-	-
Interest expense on short-term loans	(867 )	-	-
Sales of coal	-	29,892	-
Sales of fuel	-	127	-
Advance from Dongying New Energy	-	2,942	-
<b>Jiangsu Nantong Power Generation Co., Ltd.</b>			
Transfer of assets (Note 7)	1,034,777	-	-
<b>Ruigang Coal</b>			
Rental Revenue	4,539	-	-
<b>Subsidiaries of Jiangsu Guoxin</b>			
Provision of entrusted power generation	163,512	-	-

For the years ended 31 December 2012, 2011 and 2010, the Company provided management service to certain power plants owned by Huaneng Group and HIPDC. The Company did not receive any management fee. At the same time, Shandong Power Limited provided management services to certain branches and subsidiaries of the Company which are located in Shandong Province. The Company did not pay any management fee for such arrangements.

## Transactions with government-related enterprises

For the years ended 31 December 2012, 2011 and 2010, the Company and its domestic power subsidiaries sold substantially all their products to local government-related power grid companies. Please refer to Note 5 for details of sales information to major power grid companies. The Company and its domestic subsidiaries maintained most of its bank deposits in government-related financial institutions while lenders of most of the Company and its subsidiaries' loans are also government-related financial institutions.

For the years ended 31 December 2012, 2011 and 2010, other collectively-significant transactions with government-related enterprises also included a large portion of fuel purchases, property, plant and equipment construction and related labor employed.

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## Related party balances and transactions (continued)

(c)	Guarantees	As of December 31,	
		2012	2011

(i) Long-term loans guaranteed by			
- Huaneng Group	532,508	631,733	
- HIPDC	2,000,000	2,113,228	
(ii) Long-term bonds guaranteed by			
- HIPDC	4,000,000	4,000,000	
- Government-related banks	5,000,000	6,000,000	

(d)	Pre-tax benefits and social insurance of key management personnel			
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	For the year ended 31 December		
	2012	2011	2010
Salaries	7,572	7,272	7,579
Pension	1,043	1,033	1,039
Total	8,615	8,305	8,618

(e)	Related party commitments		
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Related party commitments which were contracted but not recognized in balance sheet as at balance sheet dates are as follows:

(i)	Capital commitments		
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	As of December 31,	
	2012	2011
Xi'an Thermal and its subsidiaries	213,444	91,906
HEC and its subsidiaries	14,679	159,168
	228,123	251,074

(ii)	Fuel purchase and transportation commitments		
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	As of December 31,	
	2012	2011
Shanghai Time Shipping Fuel Company	181,544	15,040
HEC and its subsidiaries	24,986	5,777
	113,463	50,519

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Huating Coal and Power	409,680	618,572
North United Power	11,276	5,959
Hulunbeier Energy	4,849	1,545,872
Shandong Power Limited and its subsidiaries	62,310	-
	808,108	2,241,739

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34	Related party balances and transactions (continued)		
	(e)	Related party commitments (continued)	
	(iii)	Operating lease commitments	
		As of December 31,	
		2012	2011
HIPDC		59,647	49,365
Huaneng Property Co., Ltd.		125,439	61,251
		185,086	110,616

35 Labor cost

Other than the salaries and staff welfare, the labor cost of the Company and its subsidiaries mainly comprises the following:

All PRC employees of the Company and its subsidiaries are entitled to a monthly pension upon their retirements. The PRC government is responsible for the pension liability to these employees on retirement. The Company and its subsidiaries are required to make contributions to the publicly administered retirement plan for their PRC employees at a specified rate, currently set at 14% to 22% (2011 and 2010: 14% to 22% and 14% to 22%) of the basic salary of the PRC employees. The retirement plan contributions paid by the Company and its subsidiaries for the year ended 31 December 2012 were approximately RMB487 million (2011 and 2010: RMB466 million and RMB394 million), including approximately RMB474 million (2011 and 2010: RMB448 million and RMB382 million) charged to profit or loss.

In addition, the Company and its subsidiaries have also implemented a supplementary defined contribution retirement scheme for PRC employees. Under this scheme, the employees are required to make a specified contribution based on the number of years of service with the Company and its subsidiaries, and the Company and its subsidiaries are required to make a contribution equal to two to four times the employees' contributions. The employees will receive the total contributions upon their retirement. For the year ended 31 December 2012, the contributions to supplementary defined contribution retirement scheme paid by the Company and its subsidiaries amounted to approximately RMB138 million (2011 and 2010: RMB135 million and RMB114 million), including approximately RMB134 million (2011 and 2010: RMB130 million and RMB110 million) charged to profit or loss.

SinoSing Power and its subsidiaries in Singapore appropriate a specified rate, currently set at 6.5% to 16% (2011 and 2010: 5% to 16% and 5% to 15%) of the basic salary to central provident funds in accordance with the local government regulations. The contributions paid by SinoSing Power and its subsidiaries for the year ended 31 December 2012 were approximately RMB17.10 million (2011 and 2010: RMB18.91 million and RMB11.98 million), all of which were charged to profit or loss.

The Company and its subsidiaries have no further obligation for post-retirement benefits beyond the annual contributions made above.





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## Labor cost (continued)

In addition, the Company and its subsidiaries also make contributions of housing funds and social insurance to the social security institutions at specified rates of the basic salary and no more than the upper limit. The housing funds and social insurance contributions paid by the Company and its subsidiaries were charged to the costs or expenses, the amounts of which for the year ended 31 December 2012 were approximately RMB377 million (2011 and 2010: RMB332 million and RMB276 million) and RMB397 million (2011 and 2010: RMB355 million and RMB301 million), respectively.

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## Directors', supervisors' and senior management's emoluments

## (a) Pre-tax benefits and social insurance of directors and supervisors

The remuneration of every director and supervisor of the Company for the year ended 31 December 2012 is set out below:

Name of director	Fees	Basic salaries	Performance salaries	Pension	Total
Mr. Cao Peixi	-	-	-	-	-
Mr. Huang Long	-	-	-	-	-
Mr. Li Shiqi	-	-	-	-	-
Mr. Huang Jian	-	-	-	-	-
Mr. Liu Guoyue	-	347	485	108	940
Mr. Fan Xiaxia	-	347	485	108	940
Mr. Shan Qunying	48	-	-	-	48
Mr. Guo Hongbo 1	48	-	-	-	48
Mr. Xu Zujian	48	-	-	-	48
Mr. Xie Rongxing 2	24	-	-	-	24
Ms. Huang Mingyuan 2	24	-	-	-	24
Mr. Liu Shuyuan 1	-	-	-	-	-
Mr. Shao Shiwei	74	-	-	-	74
Mr. Wu Liansheng	74	-	-	-	74
Mr. Li Zhensheng	74	-	-	-	74
Mr. Qi Yudong	74	-	-	-	74
Mr. Zhang Shouwen	74	-	-	-	74
Sub-total	562	694	970	216	2,442
Name of supervisor					
Mr. Guo Junming	-	-	-	-	-
Mr. Hao Tingwei	48	-	-	-	48
Ms. Zhang Mengjiao	-	-	-	-	-
Mr. Gu Jianguo	48	-	-	-	48
Mr. Wang Zhaobin	-	250	376	89	715
Ms. Zhang Ling	-	113	447	88	648

Sub-total	96	363	823	177	1,459
Total	658	1,057	1,793	393	3,901

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36 Directors', supervisors' and senior management's emoluments (continued)

(a) Pre-tax benefits and social insurance of directors and supervisors (continued)

The remuneration of every director and supervisor of the Company for the year ended 31 December 2011 is set out below:

Name of director	Fees	Basic salaries	Performance salaries	Pension	Total
Mr. Cao Peixi	-	-	-	-	-
Mr. Huang Long	-	-	-	-	-
Mr. Wu Dawei	-	-	-	-	-
Mr. Li Shiqi	-	-	-	-	-
Mr. Huang Jian	-	-	-	-	-
Mr. Liu Guoyue	-	331	463	101	895
Mr. Fan Xiaxia	-	331	463	101	895
Mr. Shan Qunying	48	-	-	-	48
Mr. Xu Zujian	48	-	-	-	48
Ms. Huang Mingyuan	48	-	-	-	48
Mr. Liu Shuyuan	48	-	-	-	48
Mr. Liu Jipeng	40	-	-	-	40
Mr. Yu Ning	40	-	-	-	40
Mr. Shao Shiwei	74	-	-	-	74
Mr. Zheng Jianchao	40	-	-	-	40
Mr. Wu Liansheng	74	-	-	-	74
Mr. Li Zhensheng	40	-	-	-	40
Mr. Qi Yudong	40	-	-	-	40
Mr. Zhang Shouwen	40	-	-	-	40
Sub-total	580	662	926	202	2,370
Name of supervisor					
Mr. Guo Junming	-	-	-	-	-
Mr. Hao Tingwei	24	-	-	-	24
Ms. Zhang Mengjiao	-	-	-	-	-
Ms. Yu Ying	24	-	-	-	24
Ms. Wu Lihua	-	-	-	-	-
Mr. Gu Jianguo	48	-	-	-	48
Mr. Wang Zhaobin	-	109	330	84	523
Ms. Zhang Ling	-	45	136	35	216
Mr. Dai Xinmin	-	54	166	58	278
Sub-total	96	208	632	177	1,113
Total	676	870	1,558	379	3,483

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36 Directors', supervisors' and senior management's emoluments (continued)

(a) Pre-tax benefits and social insurance of directors and supervisors (continued)

The remuneration of every director and supervisor of the Company for the year ended 31 December 2010 is set out below:

Name of director	Fees	Basic salaries	Performance salaries	Pension	Total
Mr. Cao Peixi	-	-	-	-	-
Mr. Huang Long	-	-	-	-	-
Mr. Wu Dawei	-	-	-	-	-
Mr. Huang Jian	-	-	-	-	-
Mr. Liu Guoyue	-	284	512	99	895
Mr. Fan Xiaxia	-	284	512	99	895
Mr. Shan Qunying	48	-	-	-	48
Mr. Xu Zujian	48	-	-	-	48
Ms. Huang Mingyuan	48	-	-	-	48
Mr. Liu Shuyuan	48	-	-	-	48
Mr. Liu Jipeng	74	-	-	-	74
Mr. Yu Ning	74	-	-	-	74
Mr. Shao Shiwei	74	-	-	-	74
Mr. Zheng Jianchao	74	-	-	-	74
Mr. Wu Liansheng	74	-	-	-	74
Sub-total	562	568	1,024	198	2,352
Name of supervisor					
Mr. Guo Junming	-	-	-	-	-
Ms. Yu Ying	48	-	-	-	48
Ms. Wu Lihua	-	-	-	-	-
Mr. Gu Jianguo	48	-	-	-	48
Mr. Wang Zhaobin	-	126	393	80	599
Mr. Dai Xinmin	-	124	393	80	597
Sub-total	96	250	786	160	1,292
Total	658	818	1,810	358	3,644

1 On 21 February 2012, Mr. Guo Hongbo was appointed as director of the Company on resignation of Mr. Liu Shuyuan.

2 On 12 June 2012, Mr. Xie Rongxing was appointed as director of the Company on resignation of Ms. Huang Mingyuan.

During the year, no option was granted to the directors or the supervisors (2011 and 2010: nil).

During the year, no emolument was paid to the directors or the supervisors (including the five highest paid employees) as an inducement to join or upon joining the Company or as compensation for loss of office (2011 and 2010: nil).

No director or supervisor had waived or agreed to waive any emoluments during the years 2012, 2011 and 2010.

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## 36 Directors', supervisors' and senior management's emoluments (continued)

## (b) Five highest paid individuals

The five individuals whose emoluments were the highest in the Company and its subsidiaries for the year include two (2011 and 2010: two and two) directors whose emoluments are reflected in the analysis presented above. The emoluments payable to the remaining three (2011 and 2010: three and three) individuals during the year (fell within the range of nil to RMB1 million) are as follows:

	For the year ended 31 December		
	2012	2011	2010
Basic salaries	888	844	880
Performance salaries	1,236	1,181	1,089
Pension	298	279	267
	2,422	2,304	2,236

## 37 Commitments

## (a) Capital and operational commitments

(i) Commitments mainly relate to the construction of new power projects, certain ancillary facilities and renovation projects for existing power plants and the purchases of coal. Details of such commitments are as follows:

	As of December 31,	
	2012	2011
Contracted but not provided for		
– purchase of inventories	6,284,455	16,105,660
– construction	10,463,817	18,355,294
Sub-total	16,748,272	34,460,954
Authorized but not contracted for		
– construction	1,062,672	196,394
Total	17,810,944	34,657,348



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## Commitments (continued)

## (a) Capital and operational commitments (continued)

(ii) The Company and its subsidiaries have entered into various long-term fuel supply agreements with various suppliers in securing fuel supply for various periods up to 2028. All the agreements require minimum volume purchases and subject to certain termination provisions. Related purchase commitments are as follows:

	Periods	The Company and its subsidiaries			
		2012	2011	2012	2011
		Purchase quantities	Estimated unit costs (RMB)	Purchase quantities	Estimated unit costs (RMB)
A government-related enterprise	2012 – 2023	486.9 million m3/year	1.63/m3	486.9 million m3/year	1.63/m3
Other suppliers	2012 – 2013	175.1 BBtu/day	100,000/BBtu	175.1 BBtu/day	100,000/BBtu
	2014	90.0 BBtu/day	100,000/BBtu*	90.0 BBtu/day	100,000/BBtu*
	2015 – 2023	72.4 BBtu/day	*	72.4 BBtu/day	*
	2024 – 2028	49.9 BBtu/day	*	49.9 BBtu/day	*

BBtu: Billion British Thermal Unit

\* As the Company and its subsidiaries are not required to commit purchases of one of the contracts until 2014, no unit cost information available for daily purchase quantities of 72.4 BBtu and 72.4 BBtu and 49.9 BBtu during respective period categories of 2014, 2015 – 2023 and 2024 - 2028.

For the year ended 31 December 2012, annual purchases from the government-related enterprise and other suppliers above amounted to RMB1,158 million (2011: RMB1,150million and 2010: RMB738 million) and RMB7,975 million (2011: RMB7,600 million and 2010: RMB5,692 million), respectively.

## (b) Operating lease commitments

The Company has various operating lease arrangements for land and buildings. Some of the leases contain renewal options and most of the leases contain escalation clauses. Lease terms do not contain restrictions on the Company's activities concerning dividends, additional debts or further leasing.

Total future minimum lease payments under non-cancelable operating leases are as follows:

	As of December 31,	
	2012	2011
Land and buildings		

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- not later than 1 year	127,219	72,874
- later than 1 year and not later than 2 years	59,172	32,099
- later than 2 year and not later than 5 years	81,822	78,555
- later than 5 years	1,180,415	1,091,400
	1,448,628	1,274,928

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## Commitments (continued)

## (b) Operating lease commitments (continued)

In addition, in accordance with a 30-year operating lease agreement signed by Huaneng Dezhou Power Plant (“Dezhou Power Plant”) and Shandong Land Bureau for the land occupied by Dezhou Power Plant Phases I and II in June 1994, annual rental amounted to approximately RMB30 million effective from June 1994 and is subject to revision at the end of the fifth year from the contract date. Thereafter, the annual rental is subject to revision once every three years. The increment for each rental revision is restricted to no more than 30% of the previous annual rental amount. For the years ended 31 December 2012, 2011 and 2010, the annual rentals were approximately RMB34 million, respectively.

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## Financial guarantees

	As of December 31,	
	2012	2011
Granted to jointly controlled entities	5,566	-

Based on historical experience, no claims have been made against the Company since the dates of granting the financial guarantees described above.

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## Material business combinations

## 2012 Business Combinations

There was no material business combination in 2012.

## 2011 Business Combinations

In January 2011, the Company acquired 100% equity interest of Diandong Energy, 100% equity interest of Diandong Yuwang, 58.30% equity interest of Luoyuanwan Pier, 60.25% equity interest of Luoyuanwan Harbour and 73.46% equity interest of Ludao Pier from Shandong Power, and 39.75% equity interest of Luoyuanwan Harbour from Shandong Luneng Development Group Company Limited (“Luneng Development”). Both Shandong Power and Luneng Development are government-related enterprises.

The aggregate cash considerations of the above acquisitions amounted to RMB7,465.13 million.

In addition, the Company also acquired the remaining 26.54% equity interest of Ludao Pier from the non-controlling shareholders at a consideration of RMB65 million in January 2011.

The acquisition reflects the Company’s implementation of its development strategy which focuses on both green-field development and acquisition. Upon completion of the acquisitions above, the Company also further strengthened its coastal port operations and expanded the geographical coverage to Yunnan Province.

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## Material business combinations (continued)

## 2011 Business Combinations (continued)

Fair value of total consideration transferred is as follows:

Purchase consideration:

– Cash consideration 7,530,127

Acquisition-related costs of RMB5.71 million have been charged to the profit or loss for the year ended 31 December 2010.

In December 2011, the Company acquired 100% equity interest of Enshi Hydropower from Beijing Ance Hengxing Investment Limited Company, Zhuhai Jingyang Investment Limited Company, Wu Songling and Fang Xiaogui.

Fair value of total consideration transferred is as follows:

Purchase consideration:

– Cash consideration 227,000

Acquisition-related cost of RMB0.32 million has been charged to the profit or loss for the year ended 31 December 2011.

Upon completion of the acquisition, the Company further expanded the geographical coverage of hydropower to Hubei Province.

The fair values of assets and liabilities arising from the acquisitions of Diandong Yuwang, Diandong Energy, Luoyuanwan Pier, Luoyuanwan Harbour, Ludao Pier and Enshi Hydropower and proportionate share of acquiree's net assets attributable to non-controlling interests on respective acquisition dates are as follows:

	Diandong Yuwang	Diandong Energy	Luoyuanwan Pier	Luoyuanwan Harbour	Ludao Pier	Enshi Hydropower	Total
Cash and cash equivalents	69,313	186,480	1,724	38,021	880	52,113	348,531
Property, plant and equipment	5,523,233	10,649,705	193,513	1,462,089	161,932	332,433	18,322,905
Land use rights	-	246,333	54,341	68,007	28,501	-	397,182
Mining rights*	278,318	1,644,337	-	-	-	-	1,922,655
Other non-current assets	312	141	332	690,081	12,007	-	702,873
Inventories	168,729	401,523	321	10,570	78	-	581,221
Receivables and other assets	329,426	587,284	35,639	137,402	54,595	14,608	1,158,954
Payables and other liabilities	(604,743 )	(1,020,057 )	(18,397 )	(815,517 )	(7,095 )	(42,763 )	(2,508,572 )

Salary and welfare payables	(2,761 )	(5,516 )	(24 )	(547 )	(738 )	-	(9,586 )
Borrowings	(4,546,000)	(9,225,000 )	(100,798 )	(713,721 )	(2,200 )	(262,150 )	(14,849,869 )
Deferred income tax liabilities	(29,571 )	(260,728 )	(12,961 )	(61,175 )	(12,655 )	(1,994 )	(379,084 )
<b>T o t a l identifiable net assets</b>	<b>1,186,256</b>	<b>3,204,502</b>	<b>153,690</b>	<b>815,210</b>	<b>235,305</b>	<b>92,247</b>	<b>5,687,210</b>
Non-controlling interests	-	-	(64,089 )	-	-	-	(64,089 )
Goodwill	414,407	1,197,574	28,693	309,270	49,309	134,753	2,134,006
Consideration	1,600,663	4,402,076	118,294	1,124,480	284,614	227,000	7,757,127

\*The mining rights are related to coal mining operations of Diandong Yuwang and Diandong Energy. As the coal mines are still under construction, no amortization was provided for the years ended 31 December 2012, 2011 and 2010.

## 2011 Business Combinations (continued)

Goodwill arising from the acquisitions is attributable to the economies of scale and significant synergies expected to arise after the acquisitions of the Company on the equity interests in the subsidiaries stated above. None of the goodwill recognised is expected to be deductible for income tax purposes.

The fair value of receivables and other assets includes accounts receivables and other receivables of RMB669 million and RMB459 million, respectively. The gross contractual amounts of accounts receivables and other receivables are RMB672 million and RMB461 million, respectively. Management estimated accounts receivables of RMB669 million and other receivables of RMB459 million to be collectible.

The revenue included in the consolidated statement of comprehensive income since acquisition dates contributed by acquisitions above was RMB5,006.86 million. These acquisitions above also contributed a net loss of RMB681.75 million over the same periods.

Had the acquisitions above been consolidated from 1 January 2011, the consolidated statement of comprehensive income would show unaudited revenue of RMB133,432.97 million and unaudited net profit of RMB1,177.85 million.

## 2010 Business Combinations

In December 2010, the Company acquired 100% equity interest of Zhanhua Cogeneration, 100% equity interest of Jilin Biological Power, 100% equity interest of Qingdao Port and 53% equity interest of Hualu Sea Transportation from Shandong Power, a government-related enterprise, at a consideration of RMB 1,159.874 million.

The acquisition reflects the Company's implementation of its development strategy which focuses on both green-field development and acquisition. Upon completion of the acquisition, the operation scale and geographical coverage of the Company were expanded, and the acquisition achieved the combined synergy effect from the facilities of power and harbour.

Fair value of total consideration transferred is as follows:

## Purchase consideration:

– Cash Paid	1,159,874
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Acquisition-related costs of RMB 0.89 million have been charged to the profit or loss for the year ended December 31, 2010.

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## Material business combinations (continued)

## 2010 Business Combinations (continued)

The fair values of assets and liabilities arising from the acquisitions of Zhanhua Cogeneration, Hualu Sea Transportation, Qingdao Port and Jilin Biological Power and proportionate share of acquiree's net assets by non-controlling interests on respective acquisition dates are as follows:

	Zhanhua Cogeneration	Hualu Sea Transportation	Qingdao Port	Jilin Biological Power	Total
Cash and cash equivalents	8,439	25,778	31,754	24,553	90,524
Property, plant and equipment	1,152,894	283,322	584,021	293,287	2,313,524
Land use rights	203,249	3,735	35,455	31,152	273,591
Other non-current assets	-	-	214	136	350
Inventories	28,110	3,969	-	7	32,086
Receivables	97,085	8,846	3,526	5,705	115,162
Payables	(354,737 )	(66,596 )	(179,132 )	(46,115 )	(646,580 )
Salary and welfare payables	(2,022 )	(4,242 )	(556 )	(1 )	(6,821 )
Borrowing	(950,000 )	(20,000 )	(110,000 )	(200,000 )	(1,280,000 )
Deferred income tax liabilities	(66,624 )	(6,542 )	(16,320 )	(3,169 )	(92,655 )
<b>Total identifiable net assets</b>	<b>116,394</b>	<b>228,270</b>	<b>348,962</b>	<b>105,555</b>	<b>799,181</b>
Non-controlling interests	-	(107,287 )	-	-	(107,287 )
Goodwill (Note 14)	291,734	34,913	107,002	34,331	467,980
<b>Consideration</b>	<b>408,128</b>	<b>155,896</b>	<b>455,964</b>	<b>139,886</b>	<b>1,159,874</b>

Goodwill arising from the acquisitions is attributable to the economies of scale and significant synergies expected to arise after the acquisitions of the Company on the equity interests in the subsidiaries stated above. None of the goodwill recognised is expected to be deductible for income tax purposes.

The fair value of receivables amounting to RMB 115 million includes accounts receivables and other receivables which equal to their respective gross contractual amounts.

The revenue included in the consolidated statement of comprehensive income since acquisition dates contributed by above acquisitions was RMB 77.92 million. The acquisitions above also contributed a net loss of RMB 18.45 million over the same periods.

Should the acquisitions above had occurred on January 1, 2010, the consolidated statement of comprehensive income would show unaudited revenue of RMB 105,009.91 million and unaudited profit of RMB 3,219.29 million.

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## Subsequent event

(a)



On 11 January 2013, the Company entered into the Equity Transfer Agreement with Huaneng Group, pursuant to which the Company agreed to acquire a 50% interest in Fuel Company, a wholly owned subsidiary of Huaneng Group, from Huaneng Group for a consideration of approximately RMB108.32 million. On the same day, the Company entered into the Capital Injection Agreement with Huaneng Group and Fuel Company, pursuant to which the Company and Huaneng Group agreed to make a capital injection of RMB1.4 billion respectively into Fuel Company after the completion of the Acquisition.

The closing date is the day on which the Company is registered at the competent administration for Industry and Commerce as the holder of 50% interest in Fuel Company. The Company shall pay to Huaneng Group the consideration in cash by one-off payment within 15 working days from the closing date. The business registration has not been completed as at the approval date of the financial report.

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Subsequent event (continued)

(b) On 5 February 2013, the Company issued unsecured public bond amounting to RMB1.5 billion bearing annual interest rate of 3.85%. The bond is denominated in RMB and issued at face value with maturity period of 3 years. The listing of the RMB bonds on Hong Kong Stock Exchange became effective on 6 February 2013.

On 27 February 2013, the Company issued the first tranche of the super short-term debentures amounting to RMB5 billion bearing annual interest rate of 3.80%. The bond is denominated in RMB and issued at face value with maturity period of 270 days.

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Signature

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Huaneng Power International, Inc.

By:	/s/Du Daming
Name:	Du Daming
Title:	Vice President and Secretary to the Board

Date: April 17, 2013