HUANENG POWER INTERNATIONAL INC
Form 20-F
April 17, 2013

HUANENG POWER INTERNATIONAL, INC.

Annual Report On Form 20-F
2012

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

R 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 form _____ 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)

Mr. Du Daming
HUANENG BUILDING,
6 FUXINGMENNEI STREET, XICHENG DISTRICT, BEIJING, PEOPLE'S REPUBLIC OF CHINA
Tel: +86 (10) 6322 6999 Fax: +86 (10)6322 6888
(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

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)

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

NONE

(Title of Class)

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.

Yes £ No R

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 R 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
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
£	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 R

(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 £

* 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.

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.

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)
Income Statement Data					
IFRS					
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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	As of December 31,				
RMB in thousands	2008 (RMB)	2009 (RMB)	2010 (RMB)	2011 (RMB)	2012 (RMB)
Balance Sheet Data					
IFRS					
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
Total assets	165,917,758	197,887,179	227,938,213	257,415,874	259,100,372
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)
Total liabilities	(123,357,805)	(147,239,059)	(165,512,741)	(197,858,121)	(193,140,030)
Total equity	42,559,953	50,648,120	62,425,472	59,557,753	65,960,342

	Year Ended December 31,				
RMB in thousands except per share data	2008 (RMB)	2009 (RMB)	2010 (RMB)	2011 (RMB)	2012 (RMB)
Cash Flow Data					
IFRS					
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)
Other Financial Data					
IFRS					
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.

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 termal 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 adversly 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 substainable 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 fluided 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 evolvement 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 cirular 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						

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	401.22	412.24	413.22			
Phase I				426.56	455.89	460.30
Phase II				440.86	455.68	467.30

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

Notes:

(1) Includes value-added tax.

(2) The tarriff 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 threholds 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 Captial 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				

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				

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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

		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
		Unite 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

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
Liaoning Province						
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
Hebei Province						
Shang'an	96.66	95.86	99.94	66.13	66.05	68.54
Gansu Province						
Pingliang	97.39	92.52	92.36	44.66	56.33	42.38
Beijing Municipality						
Beijing	93.32	95.27	93.01	63.55	66.02	62.46
Tianjin Municipality						
Yangliuqing	91.6	91.13	90.61	61.25	66.17	62.70
Shanxi Province						
Yushe	92.37	95.24	92.92	69.76	59.65	64.61
Zuoquan	--	--	92.88	--	--	56.16
Shandong Province						
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

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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 approximately66.5% 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 obtained32.1% 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 obtained11.5% 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 coalfired 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 Sepetember 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 weighcted 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 squre 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 companys 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 issurance, 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:

	Before January 1, 2012			After January 1, 2012		
Category of property, plant and equipment	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		
	2012 RMB'000	2011 RMB'000	Increased/ (Decreased) %
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 RMB'000	2011 RMB'000	2012 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	%)

Jiuquan Wind Power	0.756	N/A	N/A	
Beijing Municpality				
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				
Jinggangshan	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.

	Average tariff rate (VAT inclusive) (RMB/MWh)			
Power Plant	2012	2011	Change	
Liaoning Province				
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	
Inner Mongolia Autonomous Region				
Huade Wind Power	520.00	528.45	(1.60	%)
Hebei Province				
Shang'an	434.63	408.20	6.47	%
Kangbao Wind Power	536.72	N/A	N/A	
Gansu Province				
Pingliang	336.12	306.36	9.71	%
Jiuquan Wind Power	520.60	N/A	N/A	
Beijing Municipality				
Beijing Co-generation	494.00	481.35	2.63	%
Tianjin Municipality				
Yangliuqing Co-generation	438.03	414.23	5.75	%
Shanxi Province				
Yushe	396.56	362.65	9.35	%
Zuoquan	383.25	N/A	N/A	
Shandong Province				
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	%
Henan Province				
Qinbei	441.43	412.75	6.95	%
Jiangsu Province				
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	%

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 deprecation 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 RMB'000	2010 RMB'000	Increased/ (Decreased) %
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 Municpality				

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.

	Average tariff rate (VAT inclusive) (RMB/MWh)			
Power Plant	2011	2010	Change	
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				

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 billio, 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 prifit 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 RMB36.086billion, 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 RMB'000	2011 RMB'000	2010 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 RMB'000	2011 RMB'000	2010 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 RMB'000	2011 RMB'000	2010 RMB'000

Effect of exchange rate	151,027	(227,627)	49,946
NNet 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 shortterm 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 Offce(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		