

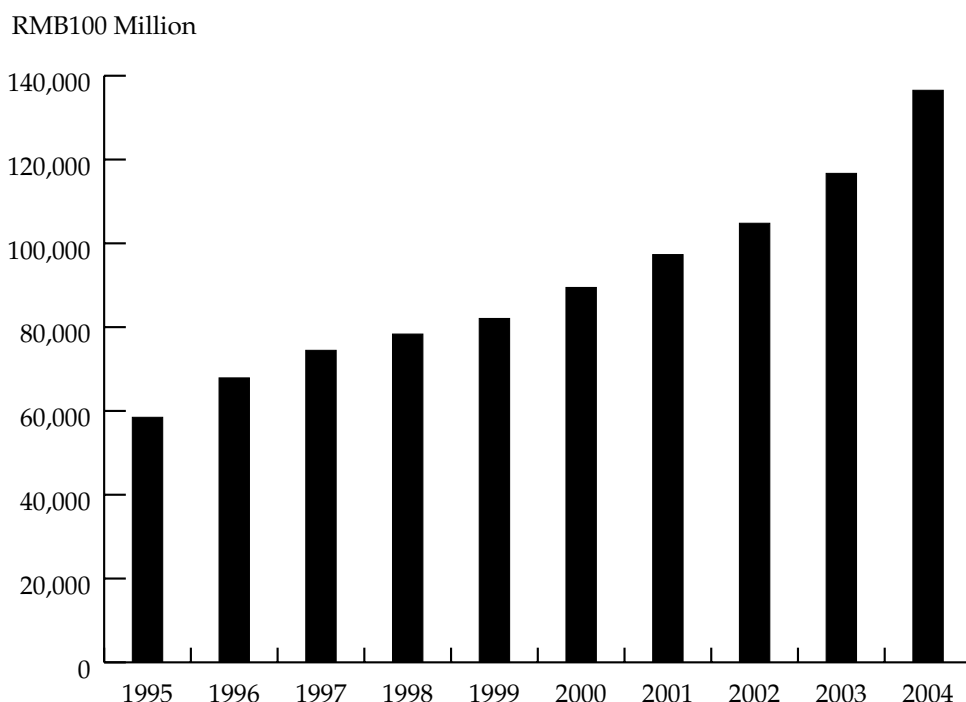
INDUSTRY OVERVIEW

The information in this section and elsewhere in this prospectus relating to the industry background, unless otherwise indicated, has been derived in part from various government official publications. This information has not been independently verified by us, the Directors, the Joint Sponsors, the Lead Manager, the Underwriters or any of their respective affiliates or advisers. However, the Joint Sponsors and the Directors have taken reasonable care in the compilation and reproduction of this information. Such information may not be consistent with other information compiled within or outside the PRC and accordingly should not be relied on.

ELECTRICITY INDUSTRY IN THE PRC

Economic growth is one of the main driving forces of electricity consumption growth. The PRC economy has experienced strong growth over the past decade. The GDP grew at a CAGR of 8.9% between 1995 and 2004. The chart below illustrates the GDP growth from 1995 to 2004 in the PRC.

GDP



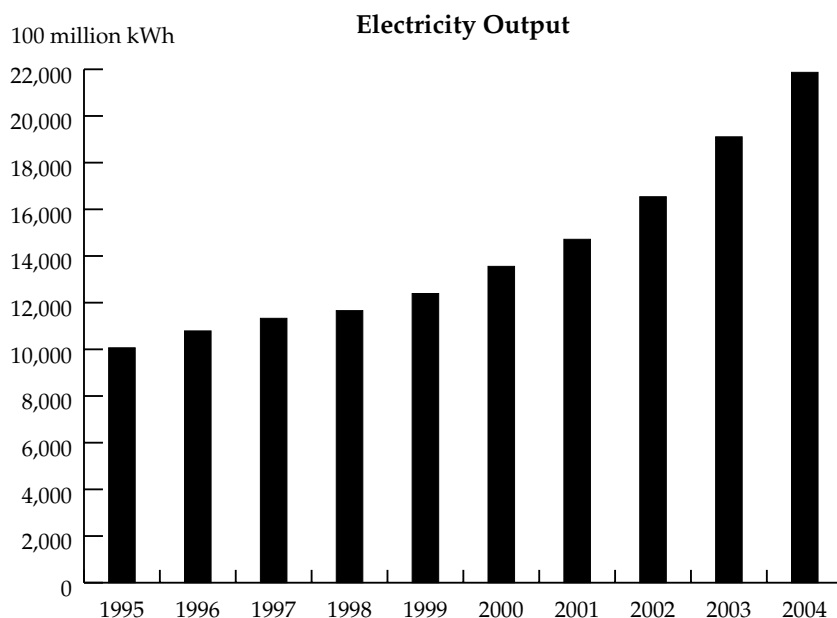
Source: *China Statistical Yearbook 2004 and Statistical Communiqué of the PRC on the 2004 National Economic and Social Development published by the National Bureau of Statistics of China*^{Note}

Under the Tenth Five-Year Plan, GDP is expected to grow at 7% per annum over the period from 2001 to 2005. According to the preliminary statistics published by the National Bureau of Statistics of China for the year of 2004, GDP increased by 9.5% compared to that in 2003.

Note: *The National Bureau of Statistics of China is an official agency directly under the State Council of the PRC. It is responsible for the statistics and economic accounting in the PRC and works in accordance with the PRC Statistics Law and other relevant stipulations of the State Council.*

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With the fast growing economy, the demand for electricity has been increasing. The chart below shows the electricity output in the PRC between 1995 and 2004.



Source: *China Statistical Yearbook 2004 and Statistical Communiqué of the PRC on the 2004 National Economic and Social Development published by the National Bureau of Statistics of China*

As shown in the above chart, the momentum of growth of electricity generation was strong. The PRC's electricity generation grew at a CAGR of 5.4% between 1995 and 2004. From the preliminary statistics published by the National Bureau of Statistics of China in February 2005, the electricity output in the PRC in 2004 increased by 14.5% compared to that in 2003. In spite of the strong growth of electricity generation, 24 provinces, municipalities and autonomous regions in the PRC suffered power shortage in 2004 according to the statistics of China Electricity Council^{Note 1}. China Electricity Council has predicted that the PRC will continue to encounter electricity shortage in 2005, estimated to be at a maximum of 23 GW.

According to a study entitled "Electricity demand in the PRC: Investment requirement and environmental impact" by Asian Development Bank^{Note 2} in March 2003, the PRC's electricity demand growth rates were projected to be about 6.7% between 2002 and 2005, 5% between 2006 and 2010, and 5.8% between 2002 and 2010. To meet the forecasted demand, the total installed capacity is estimated to be increased by 187 GW to 503 GW between 2002 and 2010 and the investment costs are estimated to be US\$193 billion in

Notes:

1. *China Electricity Council is a consolidated organisation of all the PRC power enterprises and institutions. It provides various forms of service to the power enterprises and assisted the then Ministry of Energy and Ministry of Electric Power in power industry management.*
2. *Asian Development Bank is a multilateral development finance institution established in 1966. Its economics and research department frequently publishes financial analyses on different aspects relating to the economic development of the countries in the Asia-Pacific region.*

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2002 prices. The actual total installed capacity in the PRC was increased to 385 GW by the end of 2003. Furthermore, the total installed capacity is expected to reach 950 GW by 2020.

Another factor for the growth in the electricity industry is the development of electricity generation and network. The substantial growth in electricity demand has spurred the investment in power-generating plants and power transmission and distribution equipment. According to the preliminary statistics released by the National Bureau of Statistics of China in February 2005, production of power-generating equipment in terms of kilowatts increased by approximately 92.9% in 2004 compared to that in 2003.

CIRCUIT BREAKER INDUSTRY IN THE PRC

Circuit breaker

Circuit breaker is one of the key components of switchgear and is an essential electrical device in protecting electrical equipment against damage caused by short circuit. Switchgears are used primarily in power plants, substations of electricity transmission and distribution networks, substations of electricity supply for industrial and commercial facilities and residential complexes.

According to various types of insulating and arc-quenching media, circuit breakers are classified as VCB, oil circuit breaker and SF₆ circuit breaker.

Oil circuit breakers, in which oil was used as the insulating and arc-quenching medium, were used to be the major type of circuit breakers in the last century. The 12kV oil circuit breakers have been progressively replaced by VCBs. This is due to the fact that oil circuit breakers require regular maintenance as the oil quality deteriorates over time which causes them to malfunction. The major disadvantage of an oil circuit breaker is that dielectric failure may result from excessive localised moisture or excessive amount of conductive particles in oil, which is resulted from arcing during circuit breaker closing and opening operations. Moreover, thermal runaway causes by-product polymeric films to form on conductors and carbonisation. This increases the surface resistance of the contacts and results in overheating to the point of failure.

SF₆ circuit breakers use sulphur hexafluoride in gaseous form as the insulating and arc quenching medium. This type of circuit breakers can be regarded as substitutes for VCBs. However, SF₆ emissions can be resulted from properly functioning equipment and leakages from old or deteriorated gaskets and seals. As gas leakage in the circuit breakers can lead to the inability to extinct arc of fault current, they require continuous monitoring of gas density. Due to the aforementioned possible defects, SF₆ circuit breakers are now rarely used in the 12kV distribution network in the PRC.

VCBs excel oil and gas circuit breakers in a number of ways, such as higher reliability, explosion-safety, flame-safety, lower maintenance cost, and more environmental-friendly.

Due to the comparative advantages of VCBs over oil and gas circuit breakers, VCBs dominate the 12kV circuit breakers industry in the PRC. They accounted for approximately 92.3% and 95.8% of the 12kV circuit breakers produced in the PRC in terms of production volume in 2002 and 2003 respectively. 12kV is one of the standard voltage specifications adopted in the PRC for power distribution equipment.

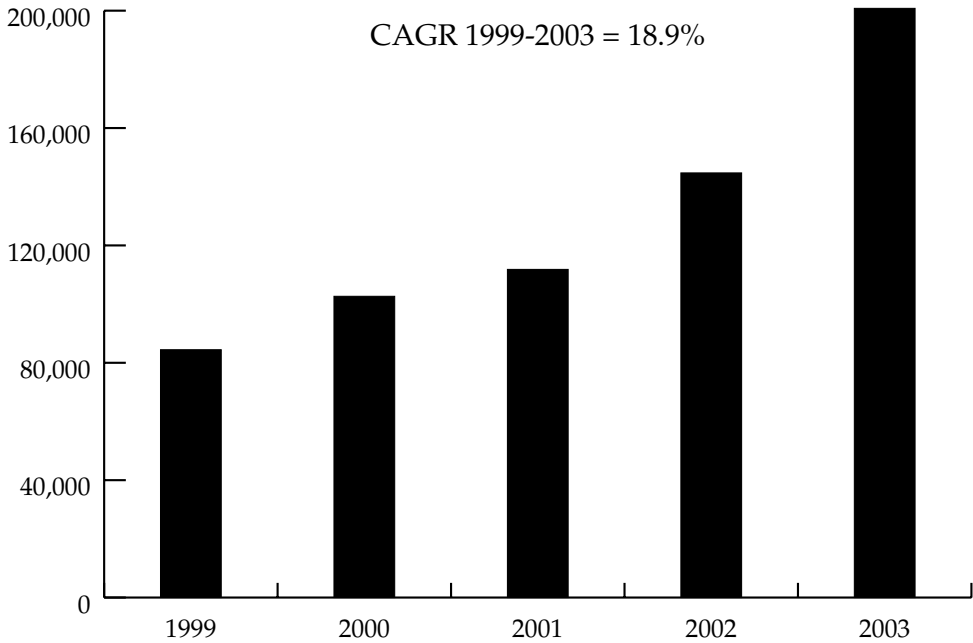
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12kV VCB industry in the PRC

Between 1999 and 2003, the production volume of 12kV VCBs in the PRC grew at a CAGR of 18.9%. Such strong growth was generally attributed to the strong underlying electricity generation growth in the PRC, which grew at a CAGR of 19.8% over the same period. The following chart sets out the production volume of 12kV VCBs in the PRC from 1999 to 2003.

12kV VCB Production Volume in the PRC

Number of units



Source: 高壓開關行業年鑒 (High Voltage Switchgear Industry Yearbook) issued between 2000 and 2004

The statistics from 高壓開關行業年鑒 (High Voltage Switchgear Industry Yearbook)^{Note} issued between 2000 and 2004 indicated that our production volume of 12kV VCBs accounted for approximately 2.1%, 3.8%, 6.1%, 6.1% and 6.3% of the total production volume of 12kV VCBs in the PRC in 1999, 2000, 2001, 2002 and 2003 respectively.

Note: The yearbook was edited and published by 中國電器工業協會高壓開關分會 (High Voltage Switchgear Sub-association of China Electrical Equipment Industry Association). This sub-association has more than 740 members, all of which are engaged in manufacture of high voltage switchgear and/or its components. The statistics and publications made by this sub-association represented the majority of the industry players. The association was formed under the permission of Ministry of Civil Affairs and the former Ministry of Machinery Industry of the PRC. Currently, it is under the administration of 國家經濟貿易委員會 (National Economic and Trade Committee).

According to the PRC industry standard, a high voltage circuit breaker refers to an electrical device which is used in the making and breaking of an electrical conductive circuit at rated voltage of 1kV or above. A low voltage switchgear refers to that with rated voltage of less than 1kV in the case of alternating current.

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It is estimated that currently more than 100 manufacturers are engaged in the production of the 12kV VCBs. The industry players in the PRC can in general be classified into three types of manufacturers:

1. overseas manufacturers which consist of well-known international manufacturers, of which VCBs are manufactured and imported from overseas;
2. sino-foreign joint ventures or licensed manufacturers of international companies which produce VCBs under international brand names with high degree of localisation in the production process. With their established brand names, the products are generally regarded as high-quality products, and thus enjoy a certain extent of price premium; and
3. domestic manufacturers which have the largest market share (about 70%-80%) and vary to a large extent in terms of production scale and technological competence, product design and quality, price and market share.

The first two sectors are dominated by a small number of players, whereas the third sector consists of a large number of small scale manufacturers with relatively low efficiency and often produce VCBs with outdated technology. There are only a small number of large scale and highly efficient manufacturers which produce VCBs with more advanced technology. According to 高壓開關行業年鑒 2004 (High Voltage Switchgear Industry Yearbook 2004), there were only three manufacturers (including Changzhou Senyuan) which produced more than 10,000 units of VCBs and on the other hand, 85 manufacturers produced less than 1,000 units of VCBs in 2003.

The statistics from 高壓開關行業年鑒 2004 (High Voltage Switchgear Industry Yearbook 2004) indicated that the production volume of the ten largest manufacturers accounted for approximately 40.1% of the 12kV VCBs produced in the PRC in 2003. The 12kV VCB market is dominated by these highly efficient manufacturers because firstly, their production technology has become more mature over the years and is of higher production standard and secondly, imported VCBs are comparatively more expensive and the prices of which are often two to three times higher than those produced locally.

According to 高壓開關行業年鑒 2004 (High Voltage Switchgear Industry Yearbook 2004), 廈門ABB開關有限公司(ABB Xiamen Switchgear Co., Ltd.), 華儀電器有限公司(Huayi Electrical Apparatus Group Co., Ltd.) and Changzhou Senyuan ranked first, second and third in terms of production volume of 12kV VCBs in the PRC in 2003 respectively. Their production volumes were approximately 7.9%, 6.6% and 6.3% of the total production volume of 12kV VCBs in the PRC in 2003 respectively. To the best of the Directors' knowledge and belief, 廈門ABB開關有限公司(ABB Xiamen Switchgear Co., Ltd.) is a sino-foreign joint venture manufacturer whilst 華儀電器有限公司(Huayi Electrical Apparatus Group Co., Ltd.) is a domestic enterprise. 華儀電器有限公司(Huayi Electrical Apparatus Group Co., Ltd.) is principally engaged in the manufacture and sale of pole-mounted outdoor circuit breakers, and hence it is not regarded as a direct competitor of our Group.

We expect that the demand for VCBs in the PRC will continue to grow along with the growth of electricity demand. We also expect that the urbanisation in regions which enjoy fast economic growth and the emergence of metropolises will result in less space for building power substations of electricity distribution. This in turn will stimulate the demand for more compact circuit breakers with higher level of safety and reliability for retrofit and new construction projects.