This section contains certain information and statistics relating to the industry in which we operate that are derived from a report we commissioned from Asia Battery Association, an independent third party. Unless otherwise referred to, the information contained herein is extracted from the Asia Battery Association's report (the "Asia Battery Report"). The Asia Battery Report reflects estimates of market conditions based on samples, and is prepared primarily as a marketing research tool. We believe that the sources of the information contained herein are appropriate sources for such information and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. While we have exercised reasonable care in compiling and reproducing such information, it has not been independently verified by us, or any of our affiliates or advisers, nor by the Underwriters or any of their affiliates or advisers or any party involved in the Global Offering. The information may not be consistent with information available from other sources within or outside the PRC. We, our affiliates or advisers, the Underwriters or their affiliates or advisers, or any party involved in the Global Offering make no representation as to the accuracy, completeness or fairness of such information from Asia Battery Report and other sources and, accordingly, you should not unduly rely on such information.

## THE GLOBAL LEAD-ACID BATTERY INDUSTRY

Based on their use, batteries are generally classified into two categories: (i) primary batteries, also known as non-rechargeable batteries, which are designed to be used once and discarded when they are exhausted; and (ii) secondary batteries, also known as rechargeable batteries, which are designed to be recharged and used multiple times. Primary batteries typically include alkaline-manganese batteries, carbon-zinc batteries, silver oxide batteries, and primary lithium batteries. Secondary batteries typically include lead-acid batteries, rechargeable lithium batteries, nickel-cadmium batteries, and nickel-metal hydride batteries.

Lead-acid batteries have undergone many progressive changes in technology and applications since their invention. Lead-acid batteries are now the most commonly used rechargeable batteries in the world, due to their cost efficiency, high battery capacity, product reliability and safety, and wide applications. They accounted for more than 70.0% of the global industrial rechargeable battery market in terms of sales revenue in 2009. Lead-acid batteries are also highly recyclable, with over 95.0% of all battery lead being recycled and reused in the production of new lead-acid batteries.

By application, lead-acid batteries can be generally classified into three main categories:

- Reserve power batteries, also known as stationary or standby batteries, are used to provide backup power for continuous power supply in case of primary power source failure or outage and to store electricity generated by an attached source. Reserve power batteries are primarily used in telecommunications systems, UPS, electric utilities systems, and other consumer and industrial applications, as well as in power storage systems for the recently fast-growing renewable energy industry;
- Motive power batteries, also known as traction batteries, mainly provide power for motion and are used in vehicles such as trucks, forklifts, mini vans, tourist coaches, and golf carts, as well as electric and hybrid automobiles, electric bicycles and motorcycles; and
- SLI batteries, also known as starting batteries, are used for the starting, lighting and ignition of vehicles such as cars, motorcycles, tractors and boats or other internal combustion engines.

By technology, lead-acid batteries can be generally classified into two main categories:

- Flooded or vented batteries, which require periodic watering and maintenance; and
- VRLA batteries, which are maintenance free. VRLA batteries can be further categorized into:
  - AGM VRLA batteries, which are the most common VRLA batteries. TPPL VRLA batteries and spiral pure lead batteries, which have higher energy density, are two advanced product types in this category;
  - Gel VRLA batteries, which have longer life and higher tolerance for extreme environmental conditions. Tubular gel VRLA battery is an advanced product type in this category.

The global lead-acid battery market has grown from 345.7 million KVAh in 2005 to 372.9 million KVAh in 2009. Driven by the rapid growth in Asia, especially in China, the global lead-acid battery market is expected to reach 413.7 million KVAh in 2012. The chart below sets forth the global market size in terms of KVAh for lead-acid batteries for the periods indicated.



Source: Asia Battery Association

Over the past decade, the global lead-acid battery industry has experienced significant consolidation and currently the main international players are EnerSys, Exide Technologies, Johnson Controls, Inc., and GS Yuasa Corporation ("GS Yuasa").

#### THE LEAD-ACID BATTERY INDUSTRY IN CHINA

China is the largest lead-acid battery producing country in the world, accounting for 41.9% of total global production in 2009. China's total production in 2009 was 156.1 million KVAh, of which 142.3 million KVAh (91.2%) was consumed domestically and 13.8 million KVAh (8.8%) was exported abroad.

#### **Domestic Market Overview**

China's domestic lead-acid battery market has grown from 54.0 million KVAh in 2005 to 142.3 million KVAh in 2009, representing a CAGR of 27.4%, and is expected to reach 235.1 million KVAh in 2012, representing a CAGR of 18.2% between 2009 and 2012. The key driving factors include the fast growth of China's economy, the rapid expansion of China's telecommunications, electric utility, railway, and technology industries, the increased demand for automobiles, motorcycles, and bicycles, the high growth of electric and hybrid vehicles, as well as the fast emergence of the renewable energy industry. The chart below sets forth China's domestic demand in terms of KVAh for lead-acid batteries for the periods indicated.



Source: Asia Battery Association

In terms of 2009 sales volume, reserve power batteries, SLI batteries, and motive power batteries accounted for 28.4%, 34.9% and 36.7%, respectively, of China's demand for lead-acid batteries.



Source: Asia Battery Association

### The Reserve Power Lead-Acid Battery Market

Market demand for reserve power batteries in China grew at a CAGR of 31.3% from 13.6 million KVAh in 2005 to 40.4 million KVAh in 2009, primarily driven by the rapid development of telecommunications facilities, upgrading of electrical grids, computer usage penetration and railway construction. In 2009, 39.8% of the reserve power lead-acid batteries in China are used in telecommunications systems, 33.4% in UPS, 12.2% in electric utilities, 9.3% in railways, and 5.3% in other uses. It is estimated that China's reserve power battery market will grow at a CAGR of approximately 17.5% from 2009 to 2012, with the market size reaching 65.5 million KVAh by 2012. The chart below sets forth China's market demand in terms of KVAh for reserve power batteries for the periods indicated.



Source: Asia Battery Association

The key growth drivers for China's reserve power batteries market include:

- *Telecommunications.* China is one of the fastest growing telecommunications markets in the world. In addition, the Chinese telecommunications industry has begun its conversion to 3G in recent years. The total Chinese investment in 3G in 2009 was approximately RMB150.0 billion, and is expected to total approximately RMB400.0 billion from 2010 to 2012.
- UPS. UPS provide emergency power when the primary input power source fails. UPS are widely used on high-precision instruments, medical equipment, security monitoring, network systems, and automated production lines, and are used in industries such as finance, healthcare, utility, government, technology and transportation.
- *Electric utilities.* The electric utility industry is a key industry in China, and it is in a new phase of increased structural adjustment with accelerated upgrading and construction of urban power grids.
- *Railways.* Railway construction is a key focus area of China's infrastructure and even more so under the current economic stimulus plan. In accordance with China's Mid-to-long-term Railways Network Plans, China's national rail network will increase to 120,000 km by 2020. Lead-acid batteries are used mainly in railway signal systems and train illumination systems.
- *Renewable energy.* With the global attention on green energy, lead-acid battery manufacturers have a new market opportunity to meet the demand in renewable energy, such as in wind and solar power. Energy storage batteries are one of the key equipment items of wind and solar power energy storage systems. From 2005 to 2009, China's installed wind power capacity has increased at a CAGR of over 100.0% and installed solar power capacity has increased at a CAGR over 40.0%.

## The SLI Lead-Acid Battery Market

Market demand for SLI batteries in China grew at a CAGR of 18.9% from 24.9 million KVAh in 2005 to 49.7 million KVAh in 2009, primarily driven by the rapid development of the automobile and motorcycle industries. In 2009, over 80.0% of SLI lead-acid batteries are used in automobiles and approximately 15.0% are used in motorcycles. It is estimated that China's SLI battery market will keep growing at a CAGR of 17.8% from 2009 to 2012, with the market size reaching 81.3 million KVAh by 2012. The chart below sets forth China's market demand in terms of KVAh for SLI batteries for the periods indicated.



Source: Asia Battery Association

The key growth drivers for China's SLI batteries market include:

- *Automobiles.* In the past ten years, China's automobile industry saw rapid development and rising penetration rate of automobiles. China is currently the largest producer of automobiles and is the largest automobile market in the world, according to China Association of Automobile Manufacturers. The rapid growth of China's automobile market provides a huge market and strong growth potential for automotive SLI lead-acid batteries.
- *Motorcycles.* China is also the world's largest motorcycle producer and market, according to China Association of Automobile Manufacturers.

### The Motive Power Lead-Acid Battery Market

Market demand for motive power batteries in China grew at a CAGR of 35.2% from 15.6 million KVAh in 2005 to 52.2 million KVAh in 2009, primarily driven by the rapid development of light electric vehicles such as electric bicycles and motorcycles. In 2009, over 90% of the motive power lead-acid batteries in China were used in light electric vehicles. Further, the Chinese government's support of the development of electric and hybrid vehicles is also expected to foster more demand for motive power batteries. It is estimated that China's motive power battery market will keep growing at a CAGR of 19.2% from 2009 to 2012, with the market size reaching 88.3 million KVAh by 2012. The chart below sets forth China's market demand in terms of KVAh for motive power batteries for the periods indicated.



Source: Asia Battery Association

The key growth drivers for China's motive power batteries market include:

- *Light electric vehicles.* Sales of light electric vehicles including electric bicycles, electric motorcycles, electric scooters, electric wheelchairs and others are growing significantly. Among the light electric vehicles, electric bicycles in China have been the key market and sales of electric bicycles have increased rapidly in the past few years.
- *Electric and hybrid automobiles.* In recent years, the Chinese government has incorporated the development of renewable energy vehicles into national planning. Government authorities have also classified development of electric vehicles and related motive power batteries as key industries. In 2009, the PRC State Council announced the "Auto Industry Restructuring and Revitalization Plan", and stated the government's plan to promote the application of electric vehicles in the public transportation sector. Electric vehicles and motive power lead-acid batteries required to power them are expected to become a significant growth opportunity and establish significant market scale.

### **Export Market Overview**

Chinese lead-acid battery manufacturers have achieved significant improvements in technology and product quality. Due in part to its lower production cost advantage, China is now the largest production base and exporter of lead-acid batteries in the world. It recorded total export output of 13.8 million KVAh in 2009 and such output is expected to grow at a CAGR of 7.8% to 17.3 million KVAh in 2012. The Chinese lead-acid battery export market has the following key features:

- Batteries exported are primarily reserve power batteries in terms of application, and VRLA batteries in terms of technology;
- In terms of exporting regions, VRLA batteries are mainly exported to Asia Pacific (42.2%) including batteries shipped to Hong Kong for re-export (19.7%), the Americas (28.4%) and Europe (24.3%) based on the number of units exported in 2009; and
- Exporters mainly sell battery products through OEMs and distributors.

The chart below sets forth the export output in terms of KVAh of Chinese lead-acid batteries for the periods indicated.



Source: Asia Battery Association

### Major Players in China Lead-Acid Battery Industry

The battery industry in China is highly fragmented and includes a large number of small and mid-sized manufacturers. Reserve power batteries accounted for 28.4% of China's domestic lead-acid batteries market in terms of sales volumes in 2009. With respect to reserve power lead-acid batteries, Leoch International Technology Limited was the third largest manufacturer with a 3.7% market share based on sales revenue in 2009. The first and second largest reserve power lead-acid battery manufacturers had 6.2% and 5.3% of the market share based on sales revenue in 2009. Leoch International Technology Limited is the largest exporter among the lead-acid batteries manufacturers in China, with a 5.8% market share based on export revenue in 2009, followed by the second and third largest exporters of lead-acid batteries having market shares of 5.7% and 4.8%, respectively.

#### **RAW MATERIALS FOR LEAD-ACID BATTERIES**

For lead-acid batteries, lead is the most significant raw material in term of cost composition. The price of lead has experienced significant fluctuations during the Track Record Period. According to the Shanghai Metals Market, a non-ferrous metal market information service provider in China, lead price increased to over RMB25,000 per ton in October 2007 driven by global demand and liquidity in the financial markets. Lead price decreased to below RMB10,000 per ton in December 2008 due to the global financial crisis that led most raw materials prices to decrease. Since 2009, the lead price has been gradually increasing as a result of the global economy recovery. The chart below sets forth movements in the price of lead since January 2007.

#### Lead Price



Source: Shanghai Metals Market

## SOURCE OF INFORMATION

## Asia Battery Report

We commissioned Asia Battery Association, an independent third party, to prepare the Asia Battery Report for use in whole or in part in this prospectus. Information extracted from the Asia Battery Report is contained in sections such as "Summary", "Industry Overview" and "Business" of this prospectus. We paid Asia Battery Association a total of EUR10,000.0 in fees for the preparation and update of the Asia Battery Report.

Asia Battery Association, founded in 2002 and headquartered in Beijing, is an industry association and consultant organization for the battery industry with intelligence on technology, products and market trends. It offers various services such as industry research, market strategies, and corporate training. Asia Battery Association prepared the Asia Battery Report based on its in-house database, independent third-party reports and publicly available data from reputable industry organizations. Where necessary, Asia Battery Association visits companies operating in the industry to gather and synthesize information about market prices and other relevant information. The information contained in the Asia Battery Report has been obtained from sources which Asia Battery Association believes to be reliable; however, there can be no assurance as to the accuracy or completeness of the information presented.

When preparing and updating the Asia Battery Report, Asia Battery Association adopted a six-step methodology illustrated below to enhance the credibility and accuracy of the forecasts:

- *Market research.* Market specialists at Asia Battery Association collected related information and data from various sources, which provided an overview of the current market landscape and trends and also formed the basis for the forecast.
- *Market data analysis.* Measurements collected from the market research process were analyzed under their timeframes to provide additional insights on their historical and future impact on market size and market development.
- *Identifying drivers and factors.* The specialists then identified the factors that drove and will drive market growth as well as those that restrained and will restrain growth of the market.
- *Integration of opinions.* The specialists further discussed with and interviewed a variety of industry experts and consultants, as well as industry participants and customers. These experts' opinions were then integrated with the existing data to provide a refined basis for the forecast data.
- *Forecast.* The specialists utilized the data and information obtained through the steps above to calculate and estimate the probable development of the market, including market size projections.
- *Quality control.* Before finalizing the report, the specialists verified the data and forecast by cross-checking against other available data or information and comparing with comparable statistics.

Forecasts and assumptions included in the Asia Battery Report are inherently uncertain because of events or combinations of events that cannot reasonably be foreseen, including, without limitation, the actions of government, individuals, third parties and competitors. Specific factors that could cause actual results to differ materially include, among others, lead prices, risks inherent in the battery manufacturing industry, financing risks, labor risks, uncertainty of renewals of customer contracts, equipment and supply risks, regulatory risks and environmental concerns.