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# World Batteries

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Industry Study with Forecasts for **2014 & 2019**

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*China will remain the world's largest national battery market, based on the country's position as a global leader in portable electronics production. India will see the strongest sales growth.*

## Global demand to climb 4.8% yearly through 2014

Global primary and secondary battery demand is forecast to climb 4.8 percent per year to \$109 billion in 2014. China will remain the world's largest national battery market by far, as the country's position as a global leader in portable electronics production supports an \$11.5 billion increase in battery demand from 2009 to 2014. India will register the strongest sales growth of any national market, supported by healthy increases in manufacturing activity, personal consumption expenditures and motor vehicles in use. Gains will also be strong in a number of smaller countries with developing economies. Battery demand in the developed areas of the US, Japan and Western Europe is projected to increase at below global average rates through 2014, yet still support a \$4.7 billion overall increase in battery sales.

## Non-lead-acid secondary batteries to grow fastest

Non-lead-acid secondary battery demand increases will outpace sales of primary and lead-acid secondary batteries through 2014. The market for lithium ion and lithium polymer batteries and, to a lesser extent, nickel-metal hydride batteries will be spurred by the immense popularity of portable electronic devices such as cell phones, digital audio players, gaming systems and laptops. The rapid growth in hybrid vehicle production will also boost demand for these batteries. Manufacturers of

## World Battery Demand, 2009 (\$86.2 billion)



Asia/Pacific  
51%

North America  
19%

Western Europe  
17%

Other Regions  
13%

secondary lead-acid batteries will benefit from a global recovery in motor vehicle production and continued growth in the number of vehicles in use. Primary battery demand will be bolstered by increased use of electrical and electronic products traditionally powered by these batteries and the ongoing conversion from basic, lower-cost zinc-carbon and zinc-chloride dry cells to more advanced, higher-priced alkaline and lithium types.

## Industrial applications to post strongest advances

Demand for batteries used in industrial and other applications will post the strongest advances through 2014, supported by ongoing growth in gross

fixed investment, accelerating gains in global manufacturing output, economic recovery in developed regions and ongoing industrialization efforts in developing economies. Consumer battery sales increases are forecast to be in line with the battery market overall through 2014, supported by rising personal income levels in developing areas and a growing reliance in many parts of the world on portable electronic devices. Automotive battery demand is expected to climb less rapidly, held back by the relative maturity of this market in most developed nations and expected declines in lead and lead-acid battery prices. Still, the development of hybrid and electric vehicles will provide growth opportunities in this market.

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## Sample Text, Table & Chart

### ASIA/PACIFIC

#### China: Secondary Battery Outlook & Suppliers

Market for rechargeable batteries in China is expected to increase in 2014, outpacing regional and world growth (due to rapid growth registered during the 2000s and up by sharp price increases). Growth of motor vehicles and electric bicycles, production of -- and increased use of cell phones, laptops and mp3 players at both the OEM and maintenance/repairs (MRO) level. In addition, growing motor vehicle and production will generate significant battery demand, although gains will not be as strong as those registered during the 2000 period. As a result of these factors, advances will be broad based of the major secondary battery chemistries seeing solid gains. Even faster growth will be intense price competition in many segments and raw material pricing declines, which will serve to offset battery price increases. Furthermore, improvements in secondary battery designs which lengthen the life of these products will necessarily limit replacement demand, although such improvements also tend to support initial purchases of secondary batteries.

Leading Chinese producers of secondary batteries include Baoding Jin Fengfan Storage Battery, BYD, China BAK Battery, Huanyu Power Source and SCUD Fujian Electronic. A number of foreign producers are also important suppliers to the Chinese secondary battery market such as GP Batteries, GS Yuasa, Johnson Controls and Panasonic. These firms maintain manufacturing operations in China both to serve the domestic market and to use as a base for low cost production for international markets. A number of other firms also follow this strategy, including C&D Technologies, Coslight Technology International, Eveready, Hi-Watt Battery, Hitachi (via Wuxi Hitachi Maxell), NEC (via TOKIN), Saft, Samsung SDI, Simplo Technology and Sony.

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**SAMPLE  
TEXT**

TABLE VI-5

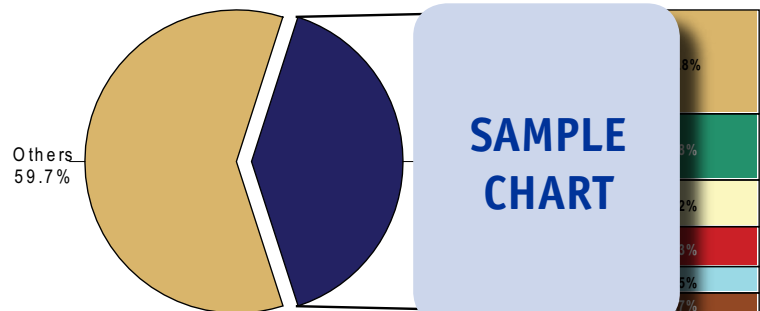
### CHINA: PRIMARY BATTERY DEMAND (million dollars)

Item	1999	2004	2009	2014	2019
Population (million persons)	1.2	1.4	1.5	1.6	1.7
Gross Fixed Investment (bil 2008\$)	1.5	2.5	4.5	6.5	8.5
\$ consumer batteries/capita	4	4	4	4	4
\$ industrial & other batteries/000\$ G	8	8	8	8	8
Primary Battery Demand	0	0	0	0	0
By Market:					
Consumer	0	0	0	0	0
Industrial & Other	0	0	0	0	0
By Type:					
Alkaline	0	0	0	0	0
Zinc-Carbon/Zinc-Chloride	5	5	5	5	5
Lithium	0	0	0	0	0
Other	5	5	5	5	5
% primary	4	4	4	4	4
China Battery Demand	2	2	2	2	2

**SAMPLE  
TABLE**

CHART VIII-3

### WORLD LEAD-ACID BATTERY MARKET SHARE BY COMPANY (\$29.8 billion, 2009)



**SAMPLE  
CHART**

## Sample Profile, Table & Forecast

### COMPANY PROFILES

#### Eveready Industries India Limited

Jeevan Deep Building  
 1 Middleton Street  
 Kolkata, India  
 91-33-22  
 http://ww

Sales: \$  
 Geograp  
 side Indi  
 Employ

Key Products: zinc-carbon, alkaline, nickel-metal hydride, nickel-cadmium and lithium ion batteries

Eveready Industries India is a manufacturer of batteries, flashlights, lighting, mosquito repellents and packet tea. The Company is owned by Williamson Magor Group (India).

The Company is involved in the world battery industry mainly through the production and sale of zinc-carbon, alkaline, nickel-metal hydride (Ni-MH) and nickel-cadmium (Ni-Cad) batteries. In July 2009, Eveready expanded its presence in the world battery industry through the acquisition of 80-percent interest in Uniross SA (France), a manufacturer and marketer of rechargeable batteries and related products. The remaining 20-percent share in Uniross is held by CG Holding (France), which owned 65-percent of Uniross prior to July 2009. This purchase of Uniross is Eveready's first overseas acquisition. Primary Products & Operations -- Eveready's zinc-carbon, alkaline, Ni-MH and Ni-Cad batteries are sold primarily in India under the EVEREADY umbrella brand name. EVEREADY heavy-duty zinc-carbon batteries

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**SAMPLE  
PROFILE**

TABLE VI-4

CHINA: BATTERY SUPPLY & DEMAND  
 (million dollars)

Item	1999	2004	2009	2014	2019
Gross Domestic Product (bil 2008\$)	32	42	57	70	87
\$ GDP/capita	2,700	3,500	4,700	5,800	7,300
Population (million persons)	1,212	1,321	1,412	1,496	1,574
\$ batteries/000\$ GDP	0.00077	0.00087	0.00107	0.00130	0.00162
\$ batteries/capita	2.1	2.8	3.7	4.5	5.7
Battery Demand					
Primary	2,000	2,500	3,200	3,900	4,800
Secondary	1,000	1,200	1,500	1,800	2,200
net exports					
primary	1,000	1,200	1,500	1,800	2,200
secondary	1,000	1,200	1,500	1,800	2,200
Battery Shipments					
Primary	2,000	2,500	3,200	3,900	4,800
Secondary	1,000	1,200	1,500	1,800	2,200

**SAMPLE  
TABLE**

"Primary battery demand in China is expected to increase 7.9 percent per annum to \$4.6 billion in 2014, outpacing secondary battery sales and representing one of the strongest markets for primary batteries in the world. Product demand will be fueled by healthy growth in per capita GDP and personal consumption expenditures through 2014, as well as by ..."

--Section VI, pg. 230





**OTHER STUDIES**

**World Turbines**

Global demand for turbines is projected to increase 6.1% annually through 2014. Growth will be driven by the wind turbine segment, but the large turbine engine sector will also post strong gains. The Asia/Pacific region will be among the fastest growing markets and expand its share of demand. This study analyzes the \$98.7 billion world turbine industry with forecasts for 2014 and 2019 by product, application, world region and for 22 countries. It also evaluates company market share and profiles industry competitors.

#2689 ..... November 2010 ..... \$5900

**Batteries in China**

Demand for batteries in China will grow 8.5% yearly through 2013. Growth will be driven by increasing output of battery-powered products and an ongoing shift toward value-added batteries for export. Secondary batteries will grow nearly twice as fast as primary batteries, driven by transportation markets. This study analyzes the 188 billion yuan battery industry in China, with forecasts for 2013 and 2018 by technology, product and market. It also evaluates company market share and profiles industry participants.

#2630 ..... May 2010 ..... \$5200

**Solar Energy Products in China**

Solar energy product demand in China will grow 16.6% annually through 2013. Solar thermal collectors will remain the dominant type while photovoltaic modules grow the fastest from a small base. Central-East China will continue as the largest regional market. This study analyzes the 23.4 billion yuan solar energy product industry in China, with forecasts for 2013 and 2018 by type and region. It also evaluates company market share and profiles industry participants.

#2613 ..... April 2010 ..... \$5300

**Battery & Fuel Cell Materials**

US demand for materials used in batteries and fuel cells will decline 2.5% annually through 2013, largely due to a moderation in raw material prices. In volume terms, however, materials demand will rebound due to an improvement in US battery production. Performance additives and catalysts will see the fastest gains by function. This study analyzes the \$4.9 billion US battery and fuel cell material industry, with forecasts for 2013 and 2018 by type, function and application. It also evaluates market share and profiles industry players.

#2574 ..... November 2009 ..... \$4700

**World Fuel Cells**

Global commercial fuel cell demand will triple through 2013 in dollar terms. Portable fuel cell systems will remain the dominant application by unit, while electric power generation will continue as the top use in value terms. PEM chemistry fuel cells will strengthen their dominant position over the next decade. This study analyzes the \$570 million world fuel cell industry, with forecasts for 2013 and 2018 by product, chemistry, application, world region and for 15 national markets. It also details market share and profiles major players.

#2502 ..... May 2009 ..... \$5800

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