



# Emission Control Regulations

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MEP releases new emission standards for  
battery industry,  
continuing the crack down on lead battery  
manufacturing which could spur  
USD 260m in investments

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The Ministry of Environmental Protection (MEP) released on 27 December a set of standards called the Emission Standard of Pollutants for Battery Industry, which aim to curb severe heavy metal pollution caused by battery production. The guideline is the country's most recent efforts to regulate battery industry's pollution, especially for lead-acid battery, which were the cause of several of blood lead poisoning since 2008. The MEP projects that the regulations could drive USD 260m (CNY 1.6bn) in investments to the environmental protection industry, which could present opportunities for companies specializing in emissions monitoring and reduction systems, and wastewater treatment technologies.

The latest standards are an updated version of two standards that were released in 1996, Integrated Emission Standard of Air Pollutants and the Integrated Wastewater Discharge Standard. However, these guidelines were not directed specifically at the battery production industry. The MEP will begin enforcing the December 2013 rules starting 1 March 2014 for new enterprises. Existing companies, which may need time and money to upgrade older systems, will have until 1 January 2016 before they will be required to follow the new standards. Getting existing companies to comply with new regulations has been an issue in China in the past. In June 2013, the MEP granted a 6-10 month extension to dyeing and printing companies to comply with wastewater standards that they were not able to meet in time, as reported by this news service. One major issue was that most firms did

not know what types of solutions were needed in order to meet the guidelines imposed on them.

## **Strict rules**

The regulation sets lower limits for lead, mercury, cadmium, nickel, zinc, manganese, and silver emissions, and requires companies to target different pollutants in accordance to their battery products. It adds special emission limits around environmental sensitive areas with weak pollution endurance and small environmental capacity. For example, the total lead and mercury emissions are one-fifth lower than the already stricter limits for new enterprises.

Another new requirement is that battery manufacturer should not only monitor emissions from its facility, but also monitor surrounding residential areas, schools, hospitals, and other environmentally sensitive areas. The stringent limits intended to force companies to upgrade equipment and technologies. Battery manufacturers can change product structure by developing lead carbon batteries to lower heavy metal consumption, or deploy container formation and automatic assembly to lower emission volume. Manufacturers could also need equipment for waste water treatment and recycling, multilevel air emission processing, and environmental monitoring.

After implementation, the standard would reduce annual emissions for 700,000 tonnes of waste water, 448 tonnes of COD, 3.74 tonnes of lead and 0.04 tonnes of cadmium in water, as well as 15 tonnes of lead in air, with additional annual operational costs of USD 33m (CNY 200m), according to MEP. MEP said the new standard, which is equivalent to the average level of developed countries, serves as a basic guideline. Local governments can set tighter limits for pollutants mentioned in the standard, and set new limits for pollutants not included.

## **Regulating lead-acid battery industry**

The production and recycling of lead-acid batteries causes heavy pollution. The plate coating and cleaning processes produce heavy metal polluted wastewater, among other pollutants. The plate grid casting and alloy preparing can emit hazardous fumes and dust. Regenerated lead production, a downstream industry of lead-acid battery manufacturing, also produces huge amounts of hazardous waste. The poor control of these pollutants were targeted as the cause of thousands of blood lead poisoning cases that were found in Shaanxi, Henan and Zhejiang provinces. Many of the cases were of children. As a result, the MEP has carried out a slew of regulations to tackle the issue.

In May 2011, the MEP released an announcement to strengthen lead-acid battery and regenerated lead industry pollution prevention and control. It required new enterprises to specify sources of lead pollutants. It also established an accountability system, stating that illegal enterprises would be prosecuted for criminal liability for any public contamination. By the end of 2011, 80% of more than one thousand lead-acid battery companies were forced to close or suspend activities for renovations. In Zhejiang province, only 23 out of 273 companies maintained normal production activities. However, lead-acid battery industry still operated in low efficiency, utilizing only 60% of the production resources. Thus, in May 2012, the MEP together with the Ministry of Industry and

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Information Technology (MIIT) released the Lead-acid Battery Industry Access Conditions, which aimed to consolidate the industry and eliminate outdated production capacity. Starting 1 July 2012, the production capacity for new project and existing project would be required to exceed 500 mVAh and 200 mVAh, respectively, in an attempt to remove smaller players from the field. Unqualified enterprises should exit the market by 2013 year end, according to the plan.

To reinforce the message, MEP, MIIT, Ministry of Commerce, National Development and Reform Commission, and Ministry of Finance jointly released regulations to stipulate upgrade of the industry in March 2013. The regulation required all companies to pass certain environmental inspections by 2015 or be shut down. By that time, lead-acid battery manufacturers are required to satisfy both the industry access conditions and environmental inspections in order to remain in the market. To date, MEP and MIIT has announced 24 enterprises that have passed the environmental inspections. The inspection was initiated in March 2012, and 118 enterprises have submitted applications on a voluntary basis.

Common violations for companies failed the inspection include weak cadmium emissions control, insufficient emergency plan, and lack of online lead wastewater monitoring systems, MEP said.

### **China's battery industry**

China is the world's largest producer and exporter for batteries. China also exports 60% of its zinc manganese batteries, 65% of its secondary batteries, and 90% its of solar cells. In 2012, China produced 17 GVAh of lead-acid batteries, which accounted for more than a quarter of the world's total output, according to MIIT. However, merely 30% of the 2.6m tonnes of waste lead-acid batteries are recycled each year. A complete national recycle network is in need for the country to effectively curb environmental problems caused by illegal treatment, Xinhua News reported.