

Press release

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Quotas for electro-mobility and rules on battery recycling: is China a step ahead of the EU?

The Chinese government recently issued new rules on the disposal of electric vehicle batteries. Among other things, they require manufacturers to ensure that transparent information is available about batteries' charging capacity and component substances. Spent batteries must now be sent for safe recycling. This puts China well ahead of the European Union in regulating the raw materials used in the electro-mobility sector. On behalf of the European Commission, the Oeko-Institut is currently reviewing the EU's existing Batteries Directive, which dates back to 2006 and now needs to be updated in response to the dynamic developments in e-mobility.

Agenda for Europe – the Oeko-Institut's demands

The Oeko-Institut is urging the European Union to adopt firm commitments on the sustainable development of e-mobility and the associated battery technology. This must include ambitious goals for the collection, reuse and recycling of used traction batteries and specific targets for the recovery of key strategic raw materials such as lithium, cobalt and nickel. The Oeko-Institut described the background and impacts in a recent study on a sustainable resource supply for electro-mobility, commissioned by Agora Verkehrswende.

"Last year, China issued quotas for the electric vehicle market share from 2019 and is now following up with rules on battery reuse and recycling," says Dr Matthias Buchert, Head of the Oeko-Institut's Resources & Transport Division, summing up the situation. "The EU must be careful not to fall behind. It needs to set its own ambitious standards for the management of these valuable resources – and must do so as a matter of urgency."

Minimising risks, covering costs – more regulations needed

The Oeko-Institut sees a continued and urgent need for regulations on the reuse of retired e-vehicle batteries, for example as stationary batteries to store solar-generated electricity. For their safe and efficient conversion, exacting and standardised testing and work processes are required in order to avoid potential hazards such as fire risks, accidental release of hazardous substances or fatal electric shocks, all of which can occur if conversion is performed incorrectly.

But that's not all. "The legislator must regulate cost factors all along the recycling chain," Dr Buchert emphasises. "Our research shows that we should not expect the revenue from the recovery of secondary raw materials to cover the costs of collection, safe transport and recycling."

Background: electro-mobility and battery recycling in China

According to China's National Resources Recycling Association, there will be five million fully-electric and plug-in hybrid vehicles on China's roads by 2020. In 2017 alone, a total of 777,000 electric cars were sold in the Chinese market,

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up 53 per cent on the previous year. Against this background, the China Automotive Technology and Research Center (CATARC) estimates that China will see 120,000 to 200,000 tonnes of batteries disposed of between 2018 and 2020; by 2025, the figure could be as high as 350,000 tonnes.

More information

[“Strategies for a sustainable resource supply for electro-mobility: synthesis paper on resource requirements for batteries and fuel cells”, produced by the Oeko-Institut for Agora Verkehrswende](#)

[FAQ: Faktencheck – Elektromobilität \(FAQs: E-mobility Factsheet published by the Oeko-Institut – in German only\)](#)

[Article on the Chinese battery rules from Chinadaily.com \(in English\)](#)

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About the Oeko-Institut

The Oeko-Institut is a leading independent European research and consultancy institute working for a sustainable future. Founded in 1977, the institute develops principles and strategies for ways in which the vision of sustainable development can be realised globally, nationally and locally. It has offices in three cities in Germany: Freiburg, Darmstadt and Berlin.

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