

# **Trends in Battery Recycling Legislation**

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#### Multiple Drivers Support Sustainable Reuse or Recycling



> In order to make informed decisions, a full view of regulatory, environmental and technical aspects is required

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## Battery Recycling Promotes a Circular Economy with Multiple Benefits Throughout the Production Process





> Net benefit should be measured with respect to the energetic requirement of the selected process(es)

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## New Regulation Seeks to Apply Recycling Legislation More Precisely to Batteries





> A tailored approach to product planning across the entire Life Cycle will be necessary to maximize value

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## The New Circular Economy is Already Shaping Up, Existing Players are Highly Active in Recycling (Excerpt)





> An accurate assessment of the competitive landscape will be essential when determining next steps

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More Stringent and Precise Regulation has Far-Reaching Implications on the Entire Value Chain



#### **Technical Challenges**

- Positive energy balance from recycling / re-using the battery
- Recouping valuable/specific elements from "black mass" with minimal destruction
- Optimizing durability and recyclability properties
- Cost-Optimal Approach

#### Social / Environmental Challenges

- Net benefits over entire life cycle (LCA)
- Positive environment footprint of recycling method
- Requirements and the role of second life applications
- Reducing dependence on raw materials

fka's E2P approach helps to evaluate technology options already in the concept phase
This enables comprehensive technology strategies to keep pace with the new circular economy and the changing supplier landscape

Ecological E2P Economical

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