

Secondary use of Electric Vehicle Batteries and Potential Impacts on Business Models

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Abstrak

The universal market adoption of electric vehicles (EVs) is still impeded by the high cost of batteries. Repurposing EV batteries in secondary applications could recoup a portion of that initial cost and reduce upfront EV costs. Further, when integrated in energy storage systems for renewables, second-life batteries could clean the electricity mix for EV charging and alleviate environmental concerns over battery disposal. This paper presents business models of different EV stakeholders that facilitate battery reuse. Based on interviews with various stakeholders, as well as industry reports and academic literature, we analyze the deciding factors for battery “post-vehicle” applications and their potential impacts on EV business models. The findings emphasize the importance of battery ownership, inter-industry partnerships, and policy support. In this early stage, government support constitutes the most important trigger for battery reuse. The results also suggest the potential of battery reuse as a catalyst for EV business model reconfiguration.