

## ***ABSTRACT***

*The innovation of electric vehicle technology can provide solutions for environmentally friendly and energy-efficient transportation. However, there is a problem, which is that batteries have a limited lifespan. Therefore, the researchers developed a Multi-Level Perspective (MLP) model for electric vehicles. This model allows researchers to analyze the interactions between various levels, namely the socio-technical landscape at the macro level, the socio-technical regime at the meso level, and specific innovations at the micro level, which will be used to analyze sustainability transitions. In addition, a battery life cycle model for electric vehicles was created to plan for a circular economy in electric vehicles. In the battery life cycle, batteries that have reached the end of their lifespan must undergo processes of reuse, remanufacturing, and recycling before they can be properly disposed of. With the creation of a supply chain model implementing a circular economy, it is hoped that it can help achieve more renewable energy usage, reduce the accumulation of waste from electric vehicle batteries, and maximize the value of recycled materials while ensuring optimal performance in the supply chain. This research is expected to serve as a reference for future planning regarding battery waste management.*

***Keywords—Circular Economy, Electric Vehicle, Multi-Level Perspective (MLP)***