Review of: "Longevity of Electric Vehicle Operations"

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The global shift towards sustainable transport solutions has led to the rapid growth of electric vehicles (EVs) as a viable alternative to traditional internal combustion engine vehicles. However, there are now concerns about ensuring the longevity of electric cars. The paper aims to thoroughly explore the multifaceted aspects of EV longevity: technological progress, infrastructure development, political support, and consumer behavior. Advances in battery technology have the greatest impact on the lifespan of electric vehicles. The article delves into battery chemistry, energy density, and thermal management systems that collectively affect the battery, vehicle life, and overall vehicle longevity. In addition, insights into battery recycling and reuse programs are discussed as essential strategies to mitigate environmental impacts and increase the sustainability of EV operations.

By examining factors such as battery technology, charging infrastructure, policy support, consumer behavior and maintenance practices in detail, it becomes clear that ensuring an extended and efficient EV service life is critical to creating a cleaner and greener future. Advances in battery technology play a key role in determining the durability and performance of electric vehicles. As research continues to improve battery chemistry, energy density, and thermal management, allowing batteries to last longer and provide greater reliability. To alleviate the situation, it is necessary to create a reliable charging infrastructure that reduces anxiety, supports long journeys and promotes the widespread use of electric cars. Governments, private actors and their collaboration play a critical role in developing an accessible and efficient charging network that provides the ability to charge at various speeds and meet the needs of electric vehicle users. Consumer behavior and problem perception are vital components in sustaining EV operation. Ultimately, the pursuit of longevity in operating electric vehicles is integral to a cleaner, more efficient and greener transportation landscape. By encouraging a collaborative approach between stakeholders, investing in research, infrastructure and education, and aligning policies with sustainability goals, societies can pave the way for a future in which electric vehicles not only transform mobility, but also contribute significantly to a greener and more sustainable world

The article is intended to convince scientists and the public that the use and long-term operation of electric cars can be sustainable and to which aspects it is necessary to pay attention. This is a good introductory article that introduces the state of EVs in the world and what should be done next, but it is not characterized by scientific or practical innovation, because the problems are only named, not solved.