

## Review of: "Longevity of Electric Vehicle Operations"

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Potential competing interests: No potential competing interests to declare.

Upon reviewing the article "Longevity of Electric Vehicle Operations," I appreciate the authors' significant efforts in this research. However, I've identified several areas throughout the manuscript, that need to be improved for further clarity, depth, and impact. Consequently, I ask the authors to address the following comments provided for further refinement of the manuscript.

- 1. The abstract mentions various dimensions of EV longevity but lacks specificity regarding the novel contributions or insights that this article brings to the field. Without this, it's challenging to determine the article's uniqueness.
- 2. The introduction falls short in its attempt to engage the reader and set a clear context for the article. It needs a more compelling and concise statement of the research problem.
- 3. The introduction briefly touches on policy support, which is quite vague. Provide specific examples and statistics.
- 4. Talking much about the historical overview of battery technology (section 2) sounds like thesis content., Instead, why don't the authors consider talking much about "What specific advancements have emerged in the last few years, and how do they impact EV longevity?"
- 5. A critical brief note on battery technology challenges is needed, including the limitations of current solutions and the potential risks associated with emerging technologies.
- 6. Section 3 discusses the scalability challenges of fast-charging networks and the potential impact on grid infrastructure.

  Are there any concerns about overloading local grids during peak charging times?
- 7. Policy challenges and unintended consequences shall be further critically analyzed. Provide specific details about the impact of different policy measures on EV adoption. Provide a few concrete examples and quantitative data on this effectiveness.
- 8. Section 5 emphasizes the environmental benefits of EVs but does not adequately address their environmental tradeoffs.
- 9. Section 6 was provided with the notion of challenges, but no such content demonstrates obstacles that could hinder the transition to sustainable transportation with EVs. Are there structural or societal barriers that need to be addressed? Discuss.
- 10. Strengthen the conclusion by considering the following: Provide your own solutions on addressing limitations and areas for future research more rigorously. Answer if there are unresolved questions requiring further investigation in EV longevity.

