

This article presents an algorithm to aid in the design of a fully developed regional EV charging hub ecosystem for a target future year or EV population.

The topic presented in this work is really interesting. Simulation experiments were conducted to explore the performance of the EV charging system. The presented method accounts for highway infrastructure, electrical system constraints, daily traffic flow volumes. If more specific data are available, it can be simply extended to include seasonal traffic patterns, regionally heterogeneity in population growth, EV adoption, and driving patterns. Importantly however, in the absence of detailed traffic studies, reasonable approximations can be used. This is a good work, and it can be published in this journal. However, some comments should be considered to improve the quality of this paper:

1. I suggest adding the list of abbreviations and nomenclatures, since the manuscript includes many of them.
2. How can the authors consider other types of long-term batteries?
3. Please summarize the contributions of the manuscript at the end of the introduction section. Some of the stated points are not contributions but just a summary of the work done.
4. Please extend your introduction to address the applications/benefits of the proposed method, e.g. in or applications and reliability perspectives with E-road and battery applications in <https://www.mdpi.com/1996-1073/15/5/1925> it is the latest battery-EV article in MDPI. I would like the authors when referring to charging refer also to the Electrified road system infrastructure. The literature review should include a synthetic presentation of research results from the latest published works on this topic (or their chronological presentation) and a detailed assessment of the current state of knowledge on the development of the subject and its disadvantages - it should also include references to European and world studies of the latest, adapting them to the basic purpose of work.
6. In section 3, the authors present the mathematical model implemented. However, some of the terms in the equations are not presented, equations are not numbered, and there is no nomenclature section. Additionally, equations not sometimes are referenced during the text.
7. The authors can refer to the lack of attention regarding the "seasonal conditions" effect on battery and charging systems operation.
8. Discussions: The discussion of the results is merely descriptive and the obtained evidence is flimsy due to the fact the outcomes are not supported by an adequate discussion in light of scientific literature. Authors should discuss the results and how they can be interpreted in perspective of previous studies and their implications should be discussed in the broadest context possible.
9. Use such a system and make a re-edition: eg. The scientific aim of the work is The subject of the research was to obtain This study extends the existing research in
10. Briefly, this article brings a new look to the existing literature in the following areas: (I) (11), (11) technology) and (IV)
11. The article is organized as follows. Chapter 2 Chapter 3 a detailed description of the research approach. Chapter 4 describes the results of experimental research along with their interpretation. Chapter 5 presents the final conclusions of the research, indicating their limitations, practical application and future directions of research in this field. Adapt this layout to the content of the article.
12. I suggest to put references for figures if the figures are not produced by authors.
13. Further discussion about the implication for people living in rural areas has to be provided at least in the conclusion section. What are the major disadvantages of this system?

I hope these comments might help in improving the paper and encourage the authors to move forward.