

Review of: "Assessing Reliability and Economic Viability of Different EV Charging Station Configurations"

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Potential competing interests: No potential competing interests to declare.

Article review

Assessing Reliability and Economic Viability of Different EV Charging Station Configurations

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The article is relevant in the context of the transition to alternative energy, in terms of creating, for example, photovoltaic charging stations, the operation of which requires improvement of both energy production and consumption. In these conditions, the coordination of energy production and consumption, for example, in Smart Grid technologies, based on predicting changes in technological parameters, acquires particular importance.

Developed, for example, an integrated Smart Grid system for matching the production and consumption of electric power based on a prediction of changes in the battery capacity for a photovoltaic charging station <https://doi.org/10.15587/1729-4061.2021.235120>. Advanced decisions on the change in power transmission capacity to the network have made it possible to regulate voltage in the distribution system by maintaining the power factor of the photoelectric charging station. Advanced decision-making has made it possible to raise the power factor of the photoelectric charging station up to 40 % due to matching the electric power production and consumption. Maintenance of the operation of the photoelectric charging station using the developed Smart Grid technology has enabled prevention of peak loading of the power system due to a 20 % reduction of power consumption from the network.

The article must be valuable to the reader. Scientific work must have a clearly formulated goal, which is set by the author and conveyed to readers. To achieve this goal, the author sets tasks that he needs to complete in order to achieve the goal. It is these tasks that should be presented in the conclusions as already solved.

Notes on the work

The comments presented require mandatory correction to improve the publication

1. The reference to literary source [1], which has a similar title to the presented article, is questionable. It needs to be more fully analyzed in terms of the approach presented in the source for solving the problems proposed in the article.

2. The abstract does not contain specific data on the results obtained in reducing the failure rate and maintenance costs of charging stations by increasing the reliability of port locations and increasing voltage stability. It is necessary to submit an abstract that should reflect the results of work with specific data.
3. It is necessary to clearly and concisely formulate the purpose of the work.
4. It is necessary to set tasks to achieve the purpose of the study.
5. It is necessary to present mathematical and logical modeling of the developed method.
6. It is necessary to provide specific examples of the use of the proposed method with the presentation of graphical and tabular information.
7. It is necessary to answer the question of how the developed algorithm for increasing the reliability and economic feasibility of the proposed configuration of charging stations is consistent with the reliability of the network.
8. Conclusions must reflect specific data obtained from the study.