

Dr.techn. Prasetyono Hari Mukti

Editors-in-Chief of the JAREE (Journal on Advanced Research in Electrical Engineering)

Dear Dr.techn. Prasetyono Hari Mukti

I am honoured to submit an original research article entitled “Prosumer-Based Optimization of Educational Building Grid Connected with Plug-in Electric Vehicle Integration using Modified Firefly Algorithm” for consideration in the JAREE (Journal on Advanced Research in Electrical Engineering). This manuscript has not been both published and submitted simultaneously for publication elsewhere. In this work, the optimization method of educational buildings when implementing a prosumer scheme and integrating Plug-in Electric Vehicles (PEV) to meet building electricity demand has been presented. Optimizations perform through two case studies, namely the application of a prosumer scheme with independent photovoltaic generators with and without PEV integration. The optimization process uses the Modified Firefly Algorithm. The contribution of this study is highlighted as follows:

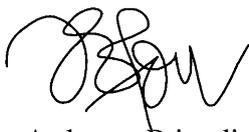
1. Modeling the prosumer scheme in the educational building with land area limitation for photovoltaic installation, parking area capacity, and time of PEV existence.
2. Modeling of load profile obtained from sampling and modelled according to the academic calendar and the national calendar.
3. Calculate optimal size and profit of the educational building if it has a photovoltaic and charging station by implementing a prosumer scheme.

The results found that the two case studies, by applying the prosumer scheme to the educational building, the proposed scheme can produce LCOE, which is cheaper than just buying electricity from the grid. The optimization result shows that photovoltaic installation and charging stations in the educational building can be beneficial when implementing a prosumer scheme. Thus, we believe that the global relevance of our study and the high significance of this paper to both researchers and practitioners make this article an excellent fit for JAREE. We would greatly appreciate your consideration of this paper for publication.

We look forward to hearing favorable news from you.

Thanks for your consideration of this manuscript.

Sincerely,



Ardyono Priyadi

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