Review of: "Design of an intelligent controller for improving the solar system efficiency"

Carlo Makdisie[1]

1 Tishreen University

Potential competing interests: No potential competing interests to declare.

After reviewing the sent manuscript which is titled 'Design of an intelligent controller for improving the solar system efficiency"

There are some points, comments and inquires as following:

Abstract: The simulation model, employed for this research work, is implemented using Matlab/Simulink. a detailed comparison between the classic Perturb and Observe **P&O** algorithm and another intelligent based on the fuzzy algorithm is conducted to assess MPPT accuracy.

Introduction:

- The choice between these control strategies depends on factors such as**;** system complexity, cost considerations, and the specific requirements of the photovoltaic application.
- This is particularly important given the dynamic nature of environmental conditions, such as changes in solar irradiance and temperature, which can significantly affect the output of PV systems.

Dirty is considered one of the important factors that affect in decreasing the efficiency of the solar panel.**Has it taken into consideration in your study?**

- **Fuzzy logic controllers use linguistic variables to represent imprecise information and make decisions based on a set of rules. In the context of MPPT, fuzzy logic can provide a more adaptive and robust control strategy, particularly in dynamic and uncertain environments (What do you mean?).**

Simulation of PV System and Results

- The basic layout of the photovoltaic system proposed includes a PV panel,

a boost converter (Chopper- DC Regulator),MPPT controllers and a storage device (Fig. 1).

- **It is better to illustrate the implemented circuit, then move on to the simulation circuit (fig 1)**
- **Re-drawing table 1 & Fig5, fig6 (To Import figures from MATLAB environment)**
- **The researcher did not explain the resulting numerical value in efficiency improvement, nor did he explain the difference in cost. As well as he did not conduct a technical-economic comparison.**

Final decision: **The manuscript can be accepted after responding comments and inquires**