Review of: "Grid-secluded Induction Generator with ANN and Interval Type-2 Fuzzy based Controller for Wind Power Generation with Smart Load Control"

Elhadj Bounadja[1]

1 Université de Chlef

Potential competing interests: No potential competing interests to declare.

The main objective of this under reviewing paper is to propose a novel power generation scheme utilizing an induction generator, specifically designed for standalone operation. This scheme incorporates an innovative power point tracking capability, ensuring optimal power generation. To achieve this, a controller based on an artificial neural network (ANN) and an interval Type-2 Fuzzy inference system is employed for maximum power point tracking (MPPT). Additionally, a smart load controller is introduced, which utilizes ANN to identify and isolate loads exhibiting early signs of faults. Through simulation and experimentation, the proposed method is thoroughly evaluated to demonstrate its effectiveness. The paper is clear, concise, well written and well organized. The scientific quality and the contribution strength to the field represented in this paper are acceptable. However, there are some comments in order to improve the quality of manuscript. Therefore, it is recommended to be accepted for publication after considering following comments:

1. The state of art is insufficient and lacks previous research criticisms in order to show what is new in this research, so we recommended to adding some recent reference in the introduction for comparison ,
2. There are so many variables mentioned in the paper and some are not well defined, for example the variables of the equivalent circuit of Fig. 2. A list of all variables with their associated definitions at the beginning of the article will certainly be useful to readers.
3. How can readers be convinced that the results are correct as it seems that it has not been performed by a standard software package for the whole system (WT+IG+Converters+Load)?
4. The system parameters presented in the manuscript need indicate their related reference.
5. The proposed MPPT scheme based on ANN and interval type-2 fuzzy logic should be synthesized in details and add in the manuscript.
6. The conclusion section of the paper, besides qualitative description, also requires quantitative comparisons.