

Review of: "Chronological simulation and Quantitative Evaluation of System Reliability in a Complex Restructured Power System"

Elmer Rolando Llanos Villarreal¹

1 Universidade Federal Rural do Semi-Árido - UFERSA

Potential competing interests: No potential competing interests to declare.

proposed method focuses on optimizing the placement of DG and FACTS devices, focusing on their classifications and locations. This optimization process used Genetic Algorithms, presenting a coding structure designed to facilitate mutations at precise locations. The algorithm operates best within a one-dimensional array structure. The present study explores the impact of different Flexible Alternating Current Transmission System (FACTS) devices on the IEEERTS system and calculates the corresponding Expected Unsupplied Energy (EENS). Notably, the minimum EENS was achieved by incorporating a Unified Power Flow Controller (UPFC) with fine-tuned control settings. These findings clarify the optimal placement of FACTS devices and their influence on the IEEERTS system. The assessment results present significant potential for advancing the use of FACTS devices in renewable energy resources. They provide a valuable foundation for researchers seeking to identify suitable devices and determine their ideal installation locations. The article is well written and well formulated with new contributions. Therefore, the article is accepted for publication.

Qeios ID: IREMRN · https://doi.org/10.32388/IREMRN