Review of: "Mathematical Assessment of the Reliability in a Complex Deregulated Power System"

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Potential competing interests: No potential competing interests to declare.

The authors furnished information regarding the installation of multiple FACTS devices in the system's weakest areas, which facilitated the computation of EENS (Equivalent Energy Not Supplied). This, in turn, was coupled with the assessment of related reliability indices such as system frequency and system duration. This approach not only elevates system reliability but also promotes the cost-effective operation of both transmission and distribution networks. The simulation results strongly support the alignment of power system reliability goals in deregulated power systems with the required standards, thereby advocating for the restructuring of power networks.

The reliability assessments, driven by the optimal placement of Distributed Generators (DGs) and Flexible AC Transmission Systems (FACTS) devices, reveal significant enhancements in system reliability, highlighting the pivotal role of these technologies in bolstering overall power system dependability.

However, it is essential for the authors to provide a justification for the utilization of multiple FACTS devices to secure the test system. Additionally, the authors should conduct a comparative analysis with a benchmark system to demonstrate the improvements achieved.