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 paper proposes a mathematical reliability assessment and reliability improvement through DGs and FACTS resources, for deregulated power systems. Some comments are below:

- The state-of-the-art needs an updating. For instance, on page 3, works are revised [12]-[15], but [12] and [14] are from 2014 and 1998, respectively. Moreover, the contribution of the present work in relation to previous works are not clarified in the manuscript.

- On page 3, does the sentence "To identify the optimal position or setting for the installation of different types of FACTS devices, a dual search method is employed, ensuring their effective deployment within the power system" refer to [15] or to the present work? Again, the contribution of the present work is not clarified in the proposal.

- In the results, Figure 4, the paper seems to only make a analysis from simulations in different conditions, but seems not to provide an approach for enhancement of reliability and economic operation, as claimed in the beginning of the manuscript.

- Why a non-chronological reliability assessment would not be sufficient for a proper analysis in the present context? It must be highlighted that a non-chronological technique is less complex and time-requiring that a chronological approach.

 - ISO is defined twice on page 2.