

### Review Form 3

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_128993
Title of the Manuscript:	Enhancement of the Small-Signal Stability of Nigerian 330 kV Transmission Network using Static Synchronous Compensator
Type of the Article	Original Research Article

#### **General guidelines for the Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript provides significant insights into the enhancement of small-signal stability in a critical power grid (Nigerian 330 kV Transmission Network). Its importance lies in offering a novel approach using STATCOM to stabilize weak and unstable networks. The research findings have practical implications for grid operators in regions with similar challenges, promoting system reliability and preventing large-scale blackouts. It also contributes to the growing body of knowledge on FACTS controllers and their applications.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title is relevant and accurately reflects the manuscript's core focus. However, a more concise title could be: <b>"Improving Small-Signal Stability of Nigeria's 330 kV Grid with STATCOM Integration."</b>	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract is clear and well-structured. However, including numerical values for eigenvalue improvements (e.g., from positive to negative) and emphasizing the implications of these results for grid reliability would enhance its impact.	
Is the manuscript scientifically, correct? Please write here.	The manuscript employs robust methodologies such as Newton-Raphson and eigenvalue analysis, validated by prior literature. The simulation results align with theoretical expectations, demonstrating scientific accuracy. However, additional clarification on the tuning of STATCOM parameters would strengthen the analysis.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are relevant and sufficiently recent, with most cited works published within the last decade. Including references to recent advancements in STATCOM implementation in developing countries could add context.	
Is the language/English quality of the article suitable for scholarly communications?	The manuscript's language is suitable for scholarly communication. Minor grammatical corrections and restructuring of sentences for better clarity are recommended.	
<b>Optional/General</b> comments	<p><b>Consider including a brief discussion on the scalability of the STATCOM solution for larger grids.</b></p> <p><b>Highlight the cost implications of implementing STATCOM in the Nigerian context.</b></p>	

#### PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

#### Reviewer Details:

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