ISSN: 2320-5407

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

Manuscript No.: IJAR- 55497

Title: Performance Evaluation of the Souapiti Hydroelectric Power Plant (April–June 2025) in the Republic of Guinea

Recommendation:
Accept

Rating	Excel.	Good	Fair	Poor
Originality	Yes			
Techn. Quality		Yes		
Clarity		Yes		
Significance		Yes		

Reviewer Name: Dr. Ashish Yadav

Detailed Reviewer's Report

Reviewer's Comment for Publication.

Acceptance Comment are mentioned below suitable for the paper titled "Performance Evaluation of the Souapiti Hydroelectric Power Plant (April–June 2025) in the Republic of Guinea"

Reviewer Comments: Accept

Reviewer Comments –

1. Introduction

The introduction clearly establishes the relevance of evaluating the operational performance of the Souapiti Hydroelectric Power Plant within the Republic of Guinea, particularly over a defined period aligned with hydrological variability. The study is well justified in terms of strategic importance, as hydroelectric production is directly influenced by environmental conditions and contractual obligations under the Power Purchase Agreement (PPA). The motivation is strong, and the problem context is clearly articulated, making the research both timely and meaningful for stakeholders in energy policy, power system management, and hydropower optimization. Overall, the introduction is coherent and provides a solid rationale for the study.

2. Literature Review

The literature grounding demonstrates an awareness of prior work relating to hydropower performance modelling, reservoir management, and the influence of hydrological variability on plant output. The reference to PPA-based performance evaluation also reflects a contemporary and applied research orientation. However, while the citations appear varied and relevant, the literature framework would benefit from a clearer synthesis of key findings and positioning of the present work within existing research trends. Even so, the background context appears sufficiently robust to support the study's objectives and methodological direction.

ISSN: 2320-5407
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

3. Solution Approach

The study adopts a structured modelling-based analytical approach using operational data such as inflow, turbine discharge, reservoir levels, effective head, and power generation performance indicators. This framework is appropriate for quantifying monthly variations and benchmarking against contractual forecasts. The use of multi-parameter monitoring demonstrates methodological rigor and practical alignment with power sector evaluation standards. Although additional clarity on statistical or computational tools would further support reproducibility, the approach as presented is systematic and well designed for performance analysis in hydropower operations.

4. Results and Discussion

The results are clearly articulated and insightful, highlighting how hydrological conditions and reservoir management practices directly influence monthly production outcomes. The study successfully explains variations in power output across April–June 2025, noting the interaction between inflows, reservoir levels, and effective head. The interpretation is logical and demonstrates strong analytical depth, particularly in linking operational decisions to system performance and resource sustainability. The emphasis on optimization levers and medium-term management strategies enhances the practical relevance of the findings and supports industry decision-making.

5. Conclusion

The conclusion convincingly reinforces the importance of continuous performance monitoring, hydrological forecasting, and adaptive reservoir management in ensuring sustained hydropower efficiency. The study offers meaningful insights for improving operational planning under climate and inflow variability, aligning technical performance with contractual and strategic objectives. While future work could expand toward predictive modelling or scenario simulation, the current study already represents a valuable contribution to hydropower performance assessment. Overall, the work is well-structured, relevant, and suitable for acceptance, offering both academic and practical value.