

REVIEWER'S REPORT

Manuscript No.: IJAR-59427

Title: Sustainable and Resilient Data Center Design for Saudi Arabia's Emerging Digital Economy under Vision 2030.

Recommendation:

Accept as it is
 Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

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

Reviewer Id: JPR-386

Reviewer's Comment for Publication.

The manuscript addresses a significant and timely topic concerning sustainable and resilient data center design in Saudi Arabia under Vision 2030. The study presents a structured integrative review of 30 peer-reviewed studies published between 2020 and 2025. Its main strength is the integrated consideration of energy efficiency, water consumption, cooling technologies, renewable energy, storage, digital controls, and operational resilience. The proposed climate-responsive framework is relevant to Saudi Arabia's hot-arid environment and appropriately emphasizes the trade-offs between energy efficiency, water conservation, carbon reduction, and service continuity.

However, some minor revisions are recommended. The authors should provide a clearer explanation of the literature selection and screening process, including the number of records initially identified and excluded, where available. Figures 1 and 2 should be included clearly and legibly, with appropriate references in the text. Tables 1 and 2 should be improved in formatting and consistency to enhance readability. The discussion would also benefit from a clearer distinction between conclusions directly supported by the reviewed studies and proposed design recommendations for Saudi data centers. Finally, the references and in-text citations should be checked for accuracy, consistency, and DOI validity.

Overall, the manuscript offers a useful and practically relevant framework for sustainable data center development in Saudi Arabia. It is suitable for publication after minor revision.