

Review of: "Low-Carbon Hydrogen Economy Perspective and Net Zero-Energy Transition through Proton Exchange Membrane Electrolysis Cells (PEMECs), Anion Exchange Membranes (AEMs) and Wind for Green Hydrogen Generation"

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Potential competing interests: No potential competing interests to declare.

The manuscript titled "Low-Carbon Hydrogen Economy Perspective and Net Zero-Energy Transition through Proton Exchange Membrane Electrolysis Cells (PEMECs), Anion Exchange Membranes (AEMs), and Wind for Green Hydrogen Generation" has been well written regarding the production of a Low-Carbon Hydrogen Economy.

The following points may be considered for further improvement of the manuscript:

1. In the abstract, please check the wordings "nonplatinum," "nonnafion," etc.
2. In the abstract and the rest of the manuscript, full forms for PEMEC, NEF, CCS, IRENA, etc., should be provided.
3. In the abstract, avoid repetition of AEM full forms.
4. Check for subscripts in figures and text.
5. In the manuscript, the years may be uniformly used to represent various data.
6. Sentences like "When burned with oxygen, hydrogen has a high energy density and emits no carbon dioxide, kg-1, with a 142 MJ energy density" may be refined.
7. The manuscript may be proofread by a native English reader to avoid discrepancies in the sentences.
8. As stated in the sentence "The demand for hydrogen has been steadily increasing since the 1970s to 2024," the statistics for the year 2024 may be provided as stated.
9. Uniformity in citations, viz., "C. Park et al., 2022" or "Park et al., 2022,"
10. In Figure 2, the years on the x-axis may be separated.
11. In a few places in the manuscript, the text is overlapping. Kindly check.
12. In the overall manuscript, uniformity with regard to "hydrogen or H₂" may be provided.
13. As stated in the manuscript, Figure 3 may be refined with regard to the different types of generated hydrogen energy, as stated in section 1.2.
14. A little description about the label may be provided for Figure 9.

