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 present review article, entitled “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,” is very well presented and satisfies the current demand. It has good content and figures to represent the focus on hydrogen energy. It is recommended for publication with consideration of minor corrections as follows:

1. The title is too lengthy and can be presented more precisely.
2. The provided sections seem to be short and can be elaborated to meet the suitability for readers.
3. Provide a citation for Figure 3, if any.
4. In Section 2, share a discussion on the hydrogen economy. Add more content about its current standing and future aspects.
5. Provide a suitable citation for the sentence “Proton exchange membrane fuel cells (PEMFCs) have many advantages over other types of fuel cells, including low operating temperatures, sustained performance at high energy density, compactness, cost potential, low mass, long battery life, quick startup, and suitability for intermittent operation.”
6. Authors should provide a comparative illustration for the discussed methods for hydrogen and power generation that would be easy for readers to understand.
7. Section 5.1 has a discussion on the storage of hydrogen; what about its transportation? It should be accountable for the overall cost of the process to claim it as a good process.
8. Rather than Mg-Al double-layered hydroxide, what others are being used for a similar purpose? Some are here, https://pubs.rsc.org/en/content/articlelanding/2020/na/d0na00727g, https://doi.org/10.1080/02603594.2021.2013827
9. Can authors add more about carbon-based hydrogen storage materials in the context of a low-carbon hydrogen economy?