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 article tackles an important topic, proposing a method for producing green hydrogen by combining PEMECs, AEMs, and wind energy. However, to strengthen the paper's persuasiveness, the authors need to provide more experimental data to support their theoretical and economic analyses and to discuss the feasibility of technology implementation in more depth. Moreover, a comparison with existing hydrogen production technologies to highlight the innovative aspects and potential benefits of the proposed method is recommended.

Recommendations:

1. Provide detailed experimental design and operational parameters for the generation of green hydrogen through the combination of PEMECs and AEMs with wind energy.
2. Include experimental data to validate the performance and advantages of the I2 MEA component.
3. Offer a more comprehensive discussion, including an assessment of environmental and economic impacts and a comparative analysis with other existing technologies.
4. Strengthen the introduction with more background information on the limitations of existing technologies and the potential benefits of the proposed method.
5. Incorporate a thorough analysis of potential environmental risks, energy consumption, and economic viability of hydrogen production in the discussion.

For non-specialist readers, add an appendix or footnotes with definitions of terms and technical background information to enhance the article's readability and comprehensibility.