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Dear Reviewers, dear Associate Editors,

Please find attached our manuscript *“Green hydrogen from hydropower: A non-cooperative open-source modeling approach assessing the profitability gap and future business cases”*, which we would like to submit for publication in your journal *International Journal of Hydrogen Energy*.

The core objective of this research paper is to investigate a possible future business case for green hydrogen production from hydropower. In particular, the main research question is to find the trade-offs for a run-of-river hydropower plant owner between the currently prevailing business model of wholesale electricity trading and, alternatively, production of green hydrogen. The results indicate that the current market environment and price setup do not allow for profitable green hydrogen production as yet. However, an increasing CO₂ price as the key determining parameter leads to improved competitiveness and expected profitability of the business case studied in this work.

We believe that with this work we can contribute for your journal's agenda, as our focus lies on hydropower-based green hydrogen production, future business cases, strategic-based open-source modeling, and optimal renewable energy resource allocation.

The manuscript is original; no part of this work has been published before nor is it under consideration for publication in another journal. An earlier version has been submitted to *Applied Energy* and rejected; a fundamentally revised and extended version is now submitted here. The authors declare that there are no conflicts of interest regarding the publication of this paper. The paper has been professionally proofread.

The corresponding author is Sebastian Zwickl-Bernhard. The contact details can be found above.

I am looking forward to your reply and thank you in advance for your consideration.

Yours sincerely,



Sebastian Zwickl-Bernhard