

Thank you for the opportunity to review this manuscript. After reading the paper carefully, I found the topic timely and relevant, particularly in the context of cleaner closed-loop supply chains for the power battery industry. The proposed Nash bi-level optimization framework is well motivated, and the integration of strategic competition with operational decision-making represents a meaningful contribution. The manuscript is generally well organized, and the computational experiments, including exact validation, algorithm comparison, model comparison, and sensitivity analysis, provide convincing support for the proposed framework.

Overall, I believe the manuscript is suitable for publication after minor revision. I only have a few comments that may further strengthen the paper.

The literature review is comprehensive and the research gap is generally well established. However, I suggest the authors summarize the novelty more explicitly at the end of Section 2. Currently, the contributions are distributed across several paragraphs, making it slightly difficult for readers to distinguish the methodological novelty from the application novelty.

The proposed Nash bi-level framework is compared with Stackelberg and centralized models. It would be helpful if the authors briefly discussed under what practical circumstances the Stackelberg structure might still be preferable. Such discussion would help readers better understand the applicability and limitations of the proposed Nash framework.

The computational experiments are comprehensive. However, since the benchmark instances are adapted from public data, I recommend adding a brief discussion regarding how representative these instances are of real industrial power battery supply chains and whether additional industrial validation would be beneficial in future work.

The managerial implications could be strengthened slightly. Beyond showing that the Nash bi-level model achieves a better balance between system performance and competitive stability, the manuscript would benefit from a short discussion on how battery manufacturers or policymakers could utilize these findings in practical decision-making.

The manuscript is generally well written. Nevertheless, a careful English proofreading is recommended to further improve readability and eliminate several minor grammatical inconsistencies.

Overall, this is a well-structured study with solid mathematical modeling and comprehensive computational validation. After addressing the minor comments above, I believe the manuscript will be suitable for publication in Logistics.