

8 November 2024

Dear Editors:

My co-authors and I are pleased to resubmit revised versions of a pair of original research articles to *The Energy Journal*.

TITLES

- Energy, expenditure, and consumption aspects of rebound, Part I: Foundations of a rigorous analytical framework (23-007)
- Energy, expenditure, and consumption aspects of rebound, Part II: Applications of the framework (23-008)

AUTHORS

Matthew Kuperus Heun^{a,b,c,*}, Gregor Semieniuk^d, Paul E. Brockway^b

^a Engineering Department, Calvin University, 3201 Burton St. SE, Grand Rapids, MI, USA, 49546

^b Sustainability Research Institute, School of Earth and Environment, University of Leeds, Leeds LS2 9JT, United Kingdom

^c School for Public Leadership, Faculty of Economic and Management Science, Stellenbosch University, Private Bag X1, Matieland, 7602, Stellenbosch, South Africa

^d Political Economy Research Institute & Department of Economics, University of Massachusetts at Amherst, 412 North Pleasant St., Amherst, MA, 01002, USA

* Main author for correspondence: mkh2@calvin.edu; Tel.: +1 (616) 526-6663

SHORT HISTORY OF THIS SUBMISSION

- In March 2022, Prof. Yatchew suggested that we “...submit [our long paper] to the *EJ* in its current form. Once it has undergone an initial review, we can make a determination how best to proceed.” We submitted in late March 2022.
- In June 2022, our manuscript was rejected, as expected, primarily due to manuscript length.
- Following reviewer guidance, we re-submitted the manuscript as two papers (Parts I and II) in January 2023.
- Referee reports for both papers (Parts I and II) were received in March 2024.
- In response to referee reports, revised versions of both papers (Parts I and II) were submitted in July 2024.
- A second set of referee reports for both papers (Parts I and II) were received on 10 September 2024.

- In response to the second set of referee reports, we made revisions and are resubmitting both papers under this cover letter.

RESPONSE TO REFEREE REPORTS

We are grateful for the second set of referee reports on both papers, as they have significantly improved the papers in ways large and small. We addressed all referee comments, as detailed in the attached document. Major improvements to the papers include:

- Restating the budget constraint in Part I.
- Clarifying that we define emplacement effects without behavioural changes.
- Changing nomenclature to use subscript “g” instead of “o” for other goods and services throughout both papers.
- Clarifying that the framework applies to a single-device energy efficiency upgrade in both Part I and Part II.
- Moving detailed description of rebound planes closer to the first example in Part II.
- No longer repeating values in results tables in Part II. Blanks indicate unchanging values.
- Clarifying our results for the lamp example via a sensitivity study in a new section 4.4.
- Clarifying our description of the macro multiplier (k).

In addition, many smaller improvements have been made throughout both papers, as can be seen in the track-changes versions.

Again, we are very grateful for the review comments, and we trust that our extensive revisions satisfactorily address the issues raised by the referee. We look forward to seeing these papers in *The Energy Journal* soon.

Yours sincerely,



Matthew Kuperus Heun (for co-authors Gregor Semieniuk and Paul Brockway)