

Geosci. Model Dev. Discuss., editor comment EC1
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Topical Editor comment on gmd-2021-85

Daniel Huppmann (Editor)

Editor comment on "REMIND2.1: transformation and innovation dynamics of the energy-economic system within climate and sustainability limits" by Lavinia Baumstark et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-85-EC1>, 2021

Dear authors,

In addition to the comments by the reviewers and the executive editor, please also take into account the following considerations when preparing the submission of responses and an updated version of the manuscript:

- There are references to the code in the style "number plus module name" throughout the manuscript. It is not clear what the logic of the numbering is, so I'd suggest to provide an explanation and/or an overview figure or table with all (or at least the most relevant and referenced) modules.
- In the section on steady-stage and equilibrium, you should introduce the general-equilibrium concept early on (not in the last paragraph). Also, this section should cross-reference the "perfect-foresight" assumption of REMIND.
- Table 2 does not have a very complicated structure and could be replaced by a sentence or a list.
- The "additional tax of 50% of the current carbon price" on net-negative CO₂ emissions (page 29, line 777f) seems to be a very arbitrary modelling choice. Please provide a rationale for this value.
- The term "internally consistent" may be more intuitive than "self-consistent".
- The phrase "investments turn out regrettable" (p13, line 337) and "capital is enlarged" (page 18, line 465) should be revised.
- The sentence "the marginal of the (variable of) taxed activities is impacted by the tax [..]" (page 19, line 499) is not clear.
- The phrase "these assets are then stranded" (page 23, line 573) should be revised.
- Subsection header 3.4 should be renamed, as this section also includes non-GHG emissions.
- "roughly a doubling" (page 33, line 850) should be revised.

- Section 5 is quite short and the section title "Discussion" is therefore not adequate.
- The programming language(s) should be clearly stated in the section "Code and data availability".
- Please use the year of the latest update of the model description when citing the IAMC wiki (currently, it does not have a year in the reference)