



EGUsphere, community comment CC1
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Comment on egusphere-2022-471

Richard Rosen

Community comment on "The IPCC Sixth Assessment Report WGIII climate assessment of mitigation pathways: from emissions to global temperatures" by Jarmo S. Kikstra et al., EGU sphere, <https://doi.org/10.5194/egusphere-2022-471-CC1>, 2022

My main reaction is that the article is far too long and detailed given that the issue of how to translate emissions scenarios into temperature changes is not primarily a problem that has been attributed to simplified models like MAGICC. The main uncertainties in going from emissions to temperatures derive from the levels of uncertainty from the full-blown climate models themselves the results of which are used to create models like MAGICC. Unfortunately, in the IPCC reports and similar reports on emissions scenarios, the underlying physical uncertainties in translating from emissions to temperature changes are discussed little if at all.

The fact that these reports include hundreds of emissions scenarios makes it difficult in practice to then include the uncertainties for each scenario itself. In my opinion, the IPCC reports should focus on just a few key emissions scenarios, and thereby making it possible to show how the uncertainties in calculating temperature scenarios based on those relatively few emissions scenarios makes hitting temperature goals or targets by a date certain almost impossible to assure. In addition, of course, there are many other kinds of uncertainty buried in other variables in the integrated assessment models. Thus, I think this much too lengthy a paper is not necessary and appropriate to publish if the goal is to educate policy makers about the range of uncertainty in temperature scenarios. It is huge, but most of the sources of uncertainty are not discussed here.