EGUsphere, community comment CC1
https://doi.org/10.5194/egusphere-2022-5-CC1, 2022
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Comment on egusphere-2022-5

Richard Rosen

Community comment on "The effect of anthropogenic heat emissions on global warming" by Dimitre Karamanev, EGUsphere, https://doi.org/10.5194/egusphere-2022-5-CC1, 2022

The science underlying this article is all wrong. You cannot determine the increase in temperature of the air due to the heat released by burning fossil fuels using concepts such as the heat capacity of the air as is done on line 259. First of all, the heat released by burning fossil fuels over 100 years will disipate fairly quickly out into space during each year in the form of long-wave radiation, which the author acknowledges. Then why does he add up all the energy released over 100 years and calculate temperature changes as if the energy was all released at once (or in a short period of time). Secondly, over a long period of time the energy escapes via complex radiative transfers between the different kinds of molecules comprising the atmosphere and the surface of the earth, including CO2, and the concept of the heat capacity of the air is only appropriate for very short term effects, before the heat can escape to space. In fact, if CO2 were not increasing in the atmosphere due to the combustion of fossil fuels, and if only heat were released due to their combustion, there would probably be no yearly average incremental heating of the air at all, since the incremental heat would be radiated out into space very quickly, on a daily basis. It is the incremental amount of CO2 released into the atmosphere each year that fundamentally changes the radiation balance for a very long time, as long as the CO2 remains in the atmosphere. Thus, it is the CO2 which "traps" more and more radiation on a daily basis (especially at night) that causes the long term trend towards the higher average global temperature that we clearly see.

This article has no scientific basis and must be rejected.