

***Interactive comment on* “Can Limits to Growth in the Renewable Energy Sector be Inferred by Curve Fitting to Historical Data?” by Kristoffer Rypdal**

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I received the following comment from Jan Petter Hansen (of Hansen et al. 2013) and post it on his behalf.

Axel Kleidon, Editor

Comment by J. P. Hansen and D. L. Aksnes to the discussion of the manuscript, “Can Limits to Growth in the Renewable Energy Sector be Inferred by Curve Fitting to Historical Data”, by K. Rypdal

In the paper [1] the authors conclude that the combined wind and solar installed global power capacity show early sign of a logistic development. This was based on an observed decrease (fig 3, inset in [1]) in annual growth rates for the period 1997-2015.

In contrast to the claim in [2], adding data for wind and solar installed capacity from 2016 only strengthen this observation. A decreasing growth rate is a prerequisite for a logistic development.

According to the author [2], such results should not be published because of potential misuse by "those with strongly biased views against the future of renewables". We disagree! As stated in the final sentence of [1] we consider that "the present data are an early warning of a growing gap between expressed ambitions and an actual growth." However, when it comes to predicting future trajectories we fully agree with the author of [2] that there are huge uncertainties and that only future data will provide the answer.

References

[1] Hansen, J. P., Narbel, P. A, and Aksnes, D. L.: Limits to growth in the renewable energy sector. *Renewable and Sustainable Energy Reviews*, 70,759-774, <http://dx.doi.org/10.1016/j.rser.2016.11.257>, 2017.

[2] Rypdal, K.: Can Limits to Growth in the Renewable Energy Sector be Inferred by Curve Fitting to Historical Data?, *Earth Syst. Dynam. Discuss.*, <https://doi.org/10.5194/esd-2017-93>, in review, 2017.

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Discussion paper

