

Wind Energ. Sci. Discuss., referee comment RC5
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Comment on wes-2021-118

Anonymous Referee #3

Referee comment on "Public acceptance of wind energy – concepts, empirical drivers and some open questions" by Michael Ruddat, Wind Energ. Sci. Discuss.,
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The paper starts with (see the abstract: "Problems are (...) and local protests") and endorses throughout an outdated – by scientific research standards – perspective to individuals' and communities' responses, specifically opposition, to wind farms as a/the problem. This is already and in itself clearly a significant limitation of this paper given that it aims to be an updated review of the literature in the area of the social acceptance of wind energy. In fact, the author not even refers to, let alone uses, some of the frameworks or approaches that have been more recently used in this area of research, such as those of energy and socio-environmental justice (e.g., Levenda et al., 2021, ERSS).

In a related way, it is difficult to understand exactly why is this review innovative or even needed, especially given that recently there have been both thorough and insightful reviews of this field, starting with Wüstenhagen et al, 2007, and going through Petrova, 2013, Ellis & Ferraro, 2016, Wolsink, 2018, Levenda et al, 2021,...

To this regard, the author says by the end of the abstract that "Although there has been already a lot of valuable scientific work done, there are still some open questions left", but these open questions should be the key focus of the abstract and of the rest of the paper, given that the review of relevant factors has been presented and discussed many times before (and again, here, the review of these factors and frameworks is not even conducted in an updated way).

Additionally, there are also some conceptual incorrections in relation to the use of key concepts in this literature. For instance in the abstract, the author refers to perceived distributional fairness and to risk/benefits perceptions – but how are these different? The same applies to procedural fairness vs. participation – how are these different?

The paper starts with a highly normative statement - The further development of wind energy is of major importance for the success of the energy system transformation in Germany and elsewhere - but without any data or arguments for backing it up. This should be addressed.

Section 2 starts with: The iridescent concept of (risk) acceptance – for sure it is not the concept of risk acceptance that has been the focus of the extensive research on social acceptance that the author refers to. What follows is also then incorrect because what the author is referring to is to risk perception and not to the (social) acceptance of renewable energy infrastructures as a concept. Risk perception might affect acceptance but they are different concepts.

At a certain point the author says “under certain circumstances (e. g. cultural or institutional context) that can have consequences for individual behavior” – circumstances are not only cultural or institutional, but also or even mainly local and contextual, meaning that the way in which renewable energy infrastructures affect particular places, livelihoods, ecosystems... are contextual and to be understood at the community/place level, and not at the individual level only or even mostly. In fact, social acceptance is a very complex, multidimensional and dynamic phenomenon which is something that really is not integrated and accounted for in this review – this review presents acceptance in a simplistic and individualistic way (even if still in an unclear way regarding what could explain acceptance).

Methodologically, the type of review conducted and the results taken from it is also highly problematic. The author concludes that:

In general, socio-political acceptance of wind energy is clearly positive in many countries of the European Union. This positive evaluation is even more apparent in comparison with conventional energy sources like coal, gas or nuclear power. Problems arise when looking at local acceptance of wind turbines or wind farms, respectively. The protest potential with respect to wind projects is clearly higher than the one for solar projects.

But a systematic and comprehensive review was not conducted nor statistics and results analyzed in a systematic way to arrive to such conclusions. Additionally, research highlighting the problems and limitations of much of the research on the social acceptance of renewable energy infrastructures is not here properly acknowledged and taken into account (e.g., Ellis et al., 2007; Walker, 2009; Aitken, 2010; Fast, 2013; Gaede & Rowlands, 2018; Wolsink, 2018, 2019,...) , thus delivering an extremely partial and incomplete – sometimes even incorrect – review of the literature in this area.

The fact that Wind Energy Science is an open access journal that has the potential to be read and to influence diverse actors in the wind and associated industries, makes it even more relevant, in my opinion, that any review of the research in this area is completely accurate and up to date in terms of the concepts it uses, the findings it summarises and the assumptions it follows.