

PLOS

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Submission Cover Letter



Dear Prof. Khosla, Prof. Anadon, Prof. Jaramillo, Prof. Jaramillo, dear Editors

We are pleased to submit our manuscript entitled "Own trade-off and synergy beliefs, not others' beliefs, drive public acceptance of energy technologies" for consideration in Environmental Research Letters.

Our paper examines how first-order beliefs (people's own perceptions of trade-offs and synergies) and second-order beliefs (expectations about what others value) shape public acceptance of energy technologies, including Alpine photovoltaics (PV), wind, sustained nuclear, and new nuclear energy. Using a population-representative survey experiment in Switzerland ($N = 1,899$), we combine analysis of the drivers of first- and second-order beliefs with a belief-updating experiment to test whether providing accurate information about societal preferences shifts perceptions and acceptance.

We show that entrenched first-order beliefs dominate acceptance – this contrasts with prior research highlighting the importance of what others believe for people's own preferences. Our experimental evidence shows that when respondents with biased expectations were presented with information about societal preferences, they rarely revised their own evaluations or acceptance of energy technologies. This may be due to the high polarization around the energy technologies that we analyzed.

Perceptions of synergies matter more than trade-offs for renewables. Respondents generally see biodiversity and landscape protection as synergistic with emission reductions, and these perceptions strongly predict acceptance of Alpine PV and wind projects. By contrast, nuclear energy acceptance is lower and less sensitive to these perceptions.

These results have broader implications for energy policy and social acceptance. They suggest that political debates may overemphasize trade-offs to advance specific agendas, but in contexts with high public awareness, preferences remain relatively stable despite misperceptions about societal views. Interventions aiming to shift acceptance may thus need to go beyond arguments about others' acceptance, leveraging participatory processes, procedural fairness, and benefit-sharing mechanisms to address locally entrenched concerns.

We believe this manuscript will be of interest to the readership of ERL, given its relevance to energy transitions, public perceptions of renewable and nuclear energy, and the interaction of social beliefs with policy support.

Thank you for considering our submission. Sincerely,

A handwritten signature in black ink, appearing to read "S. Montfort".

Dr. Simon Montfort on behalf of Dr. Jonas Schmid, Jair Campfens, Prof. Isabelle Stadelmann-Steffen, Prof. Claudia R. Binder

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Article specs

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