Trust in SolStore technologies

Louisa Estadieu[1,3], Julius Fenn[1,2], Michael Gorki[1,2] , Andrea Kiesel[1,2]

[1] Cluster of Excellence *liv*MatS, University of Freiburg, [2] Institute of Psychology, University of Freiburg, [3] Faculty of Philosophy, University of Freiburg

Concept(s) of trust

Trust according to Mayer et al. (1995)

- "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party".

Trust in emerging technologies

- 3 dimensions of trust: **(1)** trust in the information received about the emerging technology, **(2)** trust in the institutions or people developing the emerging technology, = **(3)** trust and/or reliance in/on the emerging technology

Factors influencing trust in renewable technologies

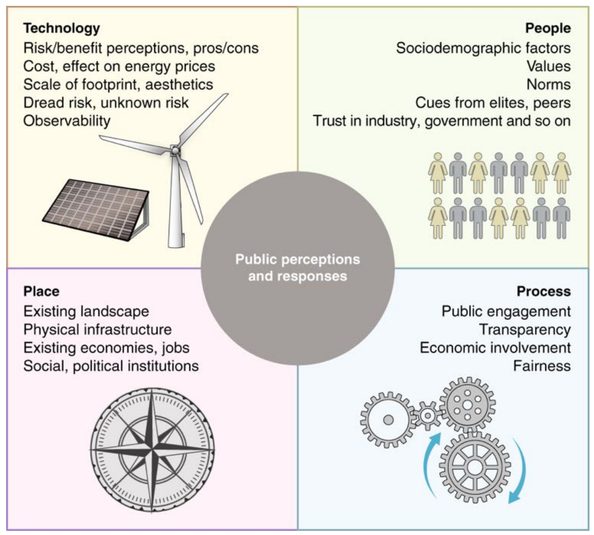


Fig. 1: Factors influencing trust according to Boudet (2019)

Measuring trust in renewable technologies

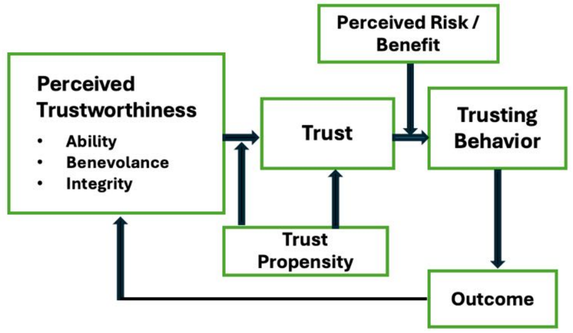


Fig. 2: Trust model adapted from Mayer et al. (1995) & Schlicker et al. (2024)

Measuring trust in SolStore technologies

Fig. 3: Cognitive-Affective Map

Research Questions

- What are the key determinants that influence public trust in SolStore technologies, including perceived risks and benefits, sociodemographic variables, and levels of trust in scientific and industrial?
- How do different stakeholder perceptions (e.g., local communities, scientists, and industry experts) vary regarding the trustworthiness and acceptance of SolStore technologies?
- Which communication strategies can enhance public trust and acceptance of SolStore technologies?

Study Design:

1. CAM-Study: Based on scenario texts, we will ask participants to draw Cognitive-Affective Maps (CAMs) to identify key factors influencing the trustworthiness of SolStore technologies. Additionaly, participants will complete Likert scale questions on trust in renewable technologies.
2. Surveying Experts: We will gather insights from *liv*MatS members and industry professionals on how to design and frame renewable technologies, such as SolStore technologies, to enhance their trustworthiness.

Download the poster

References

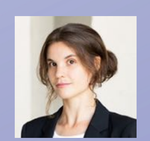
Boudet, H. (2019). Public perceptions of and responses to new energy technologies. Nature Energy. Doi: 10.1038/s41560-019-0399-x

Mayer, et al. (1995). An integrative model of organizational trust. Acad. Manage. Rev. Doi: 10.2307/258792

Schlicker, N. et al. (2023). A Micro and Macro Perspective on Trustworthiness: Theoretical Underpinnings of the Trustworthiness Assessment Model (TrAM). PsyArXiv. Doi: 10.31234/osf.io/qhwvx

Acknowledgements

*liv*Mats is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy – EXC-2193/1 – 390951807 and the grant 2277, Research Training Group "Statistical Modeling in Psychology" (SMiP)



Contact

Louisa Estadieu, Dr.

E-Mail: louisa.estadieu@livmats.uni-freiburg.de

Phone: +49 761 203 95141

Center for Renewable Energy
Albert-Ludwigs-Universität Freiburg

Gefördert durch DFG Deutsche Forschungsgemeinschaft

FIT

Centre for Renewable Energy
Albert-Ludwigs-Universität Freiburg

universität freiburg