



Assessment of the acceptance of energy systems transformations



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Abstract

The transformation of existing energy systems into sustainable energy systems with low carbon emissions is an important challenge facing climate change. However, in modern democratic societies, transformation strategies, even if they are technically and economically feasible, may become politically unfeasible, if they are not accepted by the public. Therefore, the reliable assessment of public acceptance is essential for the successful management of transforming an energy system. The aim of the paper is to explain and illustrate how a tool called technology monitoring is used in order to assess the acceptance of Germany's energy system transformation. Firstly, the research questions examined by technology monitoring will be described as well as the tool's elements and methods. Subsequently, by using the examples of CO₂ capture and storage (CCS) and the extraction of shale gas it will be illustrated how technology monitoring can be used for the assessment of public acceptance. This will include a comparison of the public acceptance of CCS and shale gas extraction in Germany along the indicators self-reported awareness, factual knowledge, risk perceptions, benefit perceptions and general attitudes by applying descriptive statistical analyses. Furthermore, the determinants of attitudes towards CO₂ pipelines, CO₂ onshore storage, CO₂ offshore storage and the extraction of shale gas will be identified by applying regression analyses. Against this background the contributions of technology monitoring for the assessment of the acceptance of energy systems transformation in general as well as possible contributions to energy scenarios in particular will be discussed.

References

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