

## **"You can't believe a word they say": the presence, problems and risks of employing deficit models of understanding in geoscience and energy policy.**

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This paper explores public understanding of geoscience and geoscientists with respect to energy issues in the UK. It highlights how across a range of renewable energies and new geologic related energy developments such as carbon capture and storage, radioactive waste disposal and unconventional hydrocarbon extraction, there has emerged widespread resistances that could be characterised as a shift from NIMBYism to NIAMYism (Not-in-my-back-yard to Not-in-anyone's-back-yard) or a failure to generate a social licence to operate. Such resistances are often characterised by geoscientists through some variant of a deficit model of public understanding; the assumption being that concern and disengagement reflects lack of knowledge or understanding and hence can be addressed by the provision of more or more appropriately packaged scientifically based information. Williams et al. (2015) have argued that this model has become an important ingredient in the UK Government's strategies concerning unconventional gas and oil development, highlighting the emphasis it places on the provision of information to the public. In the paper we outline some of the criticisms levelled at this conceptualisation of public understanding, drawing on research conducted in rural communities in the UK, as well as highlighting how it places major, but highly problematic, demands on geoscientists and geoscientific institutions. It is argued that deficit models not only deliver poor understandings of people's concerns over specific forms of energy developments but also pay insufficient attention to how these connect into a range of other discursive formations, including those related to social and environmental governance, capitalistic self-interest, trust and neo-liberal subjectivities. A key issue highlighted is how geoscience and geoscientific institutions are themselves positioned within these interpretations, it being clear that the provision of information relating to these developments and associated environmental conditions is frequently interpreted as a far from disinterested, apolitical activity. The paper ends by exploring the potential of a Living Lab approach to address some of the problems associated with deficit focused interpretations of public understanding.