

Abstract for the session – Towards Low-Carbon Energy Systems - 12th IAS-STS Annual Conference

Title: Community-based renewable energy – exploring resource potential and community attitudes with residents in Cumbria, UK.

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Abstract: The concept of community-based renewable energy has received increasing attention due to the role it might play in helping the transition to a low carbon society. The rationale for this is that localised developments can increase consumer interaction with the energy system, which raises energy awareness and helps to alter consumer energy behaviour, in addition to reducing reliance on fossil fuels. However, for such behavioural changes to take place it is believed that local residents must be willing to be involved or have some ownership over the development, which can also have a positive impact on local acceptance to proposed developments. Here we present an interdisciplinary approach that uses both quantitative and qualitative methods to identify communities that have the resource potential for a portfolio of renewable technologies and explore community-level interest in involvement, ownership structures and technologies. The approach then combines both the quantitative assessment of the renewable resource with the qualitative data on residents' views of localised renewable energy through a series of community-level scenarios in order to assess whether the community is able to achieve a given target of local energy generation. The approach has been demonstrated for three rural communities in Cumbria, UK.