

Title of the proposed paper

Values in the Smart Grid: the co-evolving political economy of smart distribution.

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Text abstract (max. 300 words)

The objective of this paper is to describe business models and institutional arrangements more suited to delivering 'smart grid' infrastructure in the UK. Investing in 'smart grid' infrastructure is accepted as a key enabler to the transition to low carbon energy systems. A body of literature has emerged that characterises the costs and benefits of individual 'smart' investments (De Castro and Dutra, 2013; Faruqi et al, 2010). The political economy of the UK electricity system, however, has co-evolved in such a way to characterise a mismatch between where these benefits accrue and where the costs are incurred, leading to a problem of value capture and redeployment. Further, some benefits of smart grid deployment are less easy to price directly and can be classified as a public good, such as energy security and decarbonisation (De Castro and Dutra, 2013; Krause 2012). Recent work has begun to analyse the systemic nature of energy system transitions (Foxon, 2011; Verbong and Geels, 2010) and is offering useful insights into the nature of value capture and structural incentives that may be altered to achieve incentives more clearly aligned with decarbonisation, energy efficiency and smart grid deployment (Hannon et al, 2013; Giordano and Fulli, 2010) This paper builds on this work by drawing on a semi-structured interviews and focus groups undertaken with smart grid stakeholders in Northern England, to characterise the co-evolution of value capture and structural incentives in the UK's electricity distribution system. The paper argues the socio technical transitions necessary to promote the delivery of smart infrastructures need to pay more attention to the geographic governance of generation, supply and demand; that relevant business models need to be extended to incorporate social and environmental values as well as economic values; and that recent calls for an expanded role of municipal actors is justified.