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Fostering active network management through SMEs practices

Managing the electricity network through 'smart grid' systems is seen as a key strategy to address challenges of energy security, low carbon transitions and the replacement of aging infrastructure networks in the UK. As SMEs have a significant role in responding to and shaping patterns of energy consumption, a better understanding of how their activities interrelate with changes in the electricity networks and systems is critical for active network management. One of the key challenges to the transformation of electricity systems is to make sense of the complexity that stems from the range and variety of commercial activities; the various 'needs' and motivations; social and organisational practices amongst SMEs; and their interaction with the material infrastructures. As part of an industry-regulator funded project in the north of England we engage with SMEs to consider how businesses are 'fitting' smart grid interventions into everyday operational activities. Based on analysis of empirical findings from interviews and 'energy tours' with 50 SMEs, and drawing on evidence of their lighting, space heating and cooling, refrigeration, IT and standby practices, this paper presents a social practice oriented theoretical perspective, which offers explanatory potential, and provides a framework for bringing together the technical and social aspects of energy use, and also a means to explore opportunities for reconfiguring existing practices to foster active network management.

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