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## Social enterprise as a potential niche innovation breakout for low carbon transition



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#### ABSTRACT

While there is growing consensus that human behaviours need to change to a more sustainable paradigm, community driven approaches, such as social enterprise, have yet to be explored as serious instruments of sustainability transition. Social enterprises sit within the third sector of the economy, typically where market or governmental failures exist in the provision of social welfare, and have increasingly become a key driver of social progress. The autonomous nature of the social-economic model applied by such organisations can represent a viable means to reduce state social welfare dependence, and is a proven model for social change. The capability of social enterprises to create both social and economic value is considered a 'win-win'. Yet there are clear potentials for social enterprise models to be more extensively applied to address contemporary ecological challenges of neo-liberal market economies, moving towards 'win-win' outcomes across social, economic and ecological domains. This paper investigates the value of social enterprises as drivers of low-carbon transition at the community level, with an emphasis on the energy sector. Evidence from seven organisations in the UK is presented and a socio-technical transitions conceptual framework is applied to analyse these social enterprise operations as a form of social innovation.

#### 1. Introduction

#### 1.1. Social sustainability

"It is easy enough to see that we do want sustainability in some form or other, but the question is: in which form? What rival conceptions to sustainable development may be worth considering?" (Sen, 2013, p9).

As described by Sen (2013), a fuller concept of sustainability has to aim at sustaining human freedoms, rather than only at our ability to fulfil felt needs. Sen (2013) redefines the Brundtland Report's definition of sustainable development as development that prompts the capabilities of present people without compromising capabilities of future generations. Sustainability transitions are not only processes of sociotechnical change therefore, but also present opportunity for socio-political change towards more sustainable societies (Ahlborg, 2017; Avelino and Wittmayer, 2016). German and Schoneveld (2012) highlight societal impact and community involvement as key elements of social sustainability, for instance. Social sustainability is critically important from an energy perspective, specifically in terms of energy justice (Hiteva and Sovacool, 2017).

At present, global energy systems are undergoing radical change, from centralised fossil fuel based models to decentralised (European Commission, 2011) and decarbonised (Allen et al., 2015) systems. Decentralised Energy Systems (DES) are emerging comprised of large scale renewable energy technology (Adil and Ko, 2016). At the same time, inequality of access to safe and affordable energy is rising, as is energy poverty, even in affluent nations (Healy and Barry, 2017). In the context of such systemic change in local energy infrastructure, a comprehensive assessment of the sociotechnical co-evolution of energy systems - how technologies and social responses evolve together and how their co-evolution affects urban planning and energy policies, is required (Adil and Ko, 2016). Healy and Barry (2017) stress the need to consider whether, where and how policies aimed at decarbonizing the economy can address the range of injustices and impacts of such a socio-energy transition, for instance. Hiteva and Sovacool (2017) argue that social sustainability in energy terms should incorporate equitable distribution of costs and benefits, affordability, due process and greater participation in decision-making. These constitute key elements of an energy justice perspective. Sovacool et al., (2017 p677) define "energy justice" as a global energy system that fairly distributes both the benefits and

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burdens of energy services, and one that contributes to more representative and inclusive energy decision-making.

Healy and Barry (2017) advocate for a "just transition" highlighting, amongst other aspects, the need for supports for communities that have been marginalized or negatively impacted by low carbon energy transition processes. It would therefore seem that energy transition processes (including decentralisation) will involve potential for conflict of interest but may also present opportunities where the productive and creative abilities of communities can be enhanced (Ahlborg, 2017). However, one of the biggest challenges facing the just energy transitions agenda is translating the normative concept to an operational one that can be understood and implemented in policy and business (Hiteva and Sovacool, 2017). Hiteva and Sovacool (2017) argue that social innovation is a key means of embedding energy justice concepts in business models for energy provision. This paper investigates this idea, with a focus on social enterprises as a vehicle for low carbon transition in community energy provision.

#### 1.2. Aims and objectives

This paper investigates the value of social enterprises as a driver of sustainability at the community level, with an emphasis on application in the energy sector. Evidence from seven social enterprise focused stakeholders in the UK is presented and a socio-technical transitions conceptual framework is applied to analyse these social enterprise operations as a form of social innovation. The paper critically evaluates the characteristics of social enterprises which suggest potential for wider socio-technical systemic transformation and appraises the potential for such organisational models to act as 'engines of socio-technical transformation'. Firstly, the academic literature regarding niche innovations, sustainability transitions and social enterprises is reviewed. Secondly, results from seven semi-structured interviews with social enterprises from the Liverpool City Region in the UK are applied to explore their role in the context of an emerging low-carbon energy system. A socio-technical transitions conceptual framework is applied here to analyse how social enterprise operations constitute a niche innovation. The potential for wider socio-technical systemic transformation together with the potential for such organisational models to act as 'engines of socio-technical transformation' is appraised. Barriers to the widespread diffusion of social enterprise models are identified, as well as operational and strategic challenges in actively delivering on the 'win-win' potential of these organisations for sustainability. The following three exploratory research questions are addressed:

- 1. What do 'social enterprises' do and how are they structured?
- 2. Can social enterprises survive without policy supports such as feedin tariffs?
- 3. What does social sustainability mean in an energy business environment, and can social enterprises deliver this?

Thus the paper applies an exploratory and inductive model of research using social science methods to investigate social-enterprise organisations. Such an approach is being increasingly called for in the literature, for example by authors such as Devine-Wright et al. (2017) and the paper aligns with studies published by Ruggiero et al. (2018) and Becker et al. (2017). In adopting a social science approach, the authors are mindful of the argument of Sovacool et al., (2015, p95) that "realizing a future energy system that is low-carbon, safe, and reliable will require fuller and more meaningful collaboration between the physical and social sciences."

#### 1.3. Niche innovation and sustainability transitions

The concept of 'transition' has become increasingly central to futures-oriented thinking (Feola and Nunes, 2014). Deeply embedded socio-ecological problems urgently require novel approaches with a

long-term orientation. The transitions literature has stimulated debate to increasingly recognise this and the multi-dimensional shifts required for delivery of sustainable modes of production and consumption. For an overview of socio-technical transitions focused research, Lachman (2013) reviews the growing body of literature, providing criticism as well as detailing strengths and contributions from the various transitions related research approaches. In the Multi-Level Perspective (MLP) nested hierarchy, the theoretical framework applied by Geels and others, the niche level affords space for experimentation and new ideas to emerge (Geels and Schot, 2007). The MLP posits that transitions come about through interactions between processes at three levels: (a) niche-innovations afford space for new ideas to be tested and developed<sup>1</sup>: (b) changes at the landscape level create pressure on the regime: and (c) destabilisation of the regime creates windows of opportunity for niche innovations to emerge. The alignment of these processes enables the breakthrough of novelties in mainstream markets where they compete with the existing regime (Geels and Schot, 2007). Niches act as 'incubation rooms' or 'protected spaces' protecting novelties against pressures of the mainstream, including forces of market selection for instance (Schot, 1998; Kemp et al., 1998). Radical innovations break out of the niche-level when ongoing processes at the levels of regime and landscape create a 'window of opportunity', which allow these niche innovations to go on to become integral to regimes (Geels and Schot, 2007).

There are significant challenges related to the diffusion of niche innovations, particularly related to the scale of niche innovations within a wider regime, making scale-up challenging and presenting difficulties with replication of conditions for success across wider regime environments (Charnock, 2007; Seyfang and Smith, 2007; Seyfang, 2010). Niche innovations are carried and developed by small networks of dedicated actors, often outsiders or fringe actors (Geels and Schot, 2007). While this assures that sustainable alternatives are considered and acted upon, gathering wider support can be challenging within the context of a regime change. Tensions and contradictions may occur with incumbent regimes as opening niche opportunities emerge and niches start to drive regime transformations (Geels and Schot, 2007; Seyfang and Smith, 2007).

The transitions literature has to date tended to emphasise the technological aspects of sociotechnical transitions, at the expense of social innovation, movements, and actors (Seyfang and Haxeltine, 2012). In discussing regimes, Smith et al. (2010) describe that a sociological sensibility extends the idea of the regime to embrace institutions (such as regulations and markets), heterogeneous networks (including devices and people), user relations, and social expectations including values and norms. It therefore follows that the social domain constitutes as important a dimension of the socio-technical regime, as the technical. The transition from one regime to another involves a fundamental reordering and realignment of both the social and technical components of systems (Bolton and Hannon, 2016). According to the Strategic Niche Management (SNM) literature, niche innovations have a high failure rate when they emerge (van Eijck and Romijn, 2008). Structural change at the regime level can come from the incubation of ideas and experiences at the niche level (Berry et al., 2013). Successful niches are 'incubation rooms' within which innovating firms are supported both by private resources and public funding. New technologies are protected against harsh selection competition and are provided with space to grow and mature through gradual experimentation and learning processes (Lopolito et al., 2011). Avelino et al. (2017) propose a coevolutionary understanding for social innovation, a framing consistent with an MLP understanding of transformative change. Such social

<sup>&</sup>lt;sup>1</sup> Niches of innovation offer opportunities to experiment with new practices, technologies and organisational models, with subsequent potential for wider social transformation, should these niche innovations be suitable for wider uptake and diffusion (Geels, 2002; Geels and Schot, 2007; Seyfang and Smith, 2007; Seyfang, 2010).

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