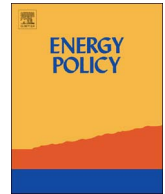




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# Harnessing social innovation for energy justice: A business model perspective<sup>☆</sup>

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## ABSTRACT

This paper uses a business model framework to discuss how principles of energy justice - in particular, equitable distribution of costs and benefits, affordability, due process and greater participation in decision-making - can be embedded in business model innovations for energy, through social innovation. The paper discusses four cases at different scales (local, subnational, regional and global) to highlight opportunities for introducing principles of energy justice into the core of business models of companies. By doing so, the paper offers a critical perspective on the potential of business model innovation to be guided through a more broadly defined understanding of value enhanced by concepts of energy justice. The discussion of the four case studies—the Carbon Cooperative, Robin Hood Energy, RenEsco, and the Yansa Community Interest Company—highlights the importance of creating supportive wider environments for social and business model innovations, such as the development of skills, knowledge and social capital, through interventions coming from multiple levels and focused on different aspects of energy generation, supply and use (i.e. finance and technical implementation). Going against the grain of current policy, the study implies a shift away from upscaling innovations by taking them to the national scale, and towards creating supportive conditions for more local deals in different geographic locations.

## 1. Introduction

During the 1850s in the United States, when the debate over whether Christianity justified slavery reached its peak, then Illinois Congressperson (and later President) Abraham Lincoln was reputed to place a silver dollar on top of the Bible and to say during debates that “no [person] can see the word of justice when it’s covered by a silver dollar.” His point was that as long as people have a vast economic stake in existing infrastructure, no matter how immoral it may be, they will tend to support it. But does such a remark hold true today? Is business incompatible with social justice?

To be sure, the generation and supply of energy has become veiled in complexity, technocratic language and piecemeal economic regulation (Kuzemko, 2016), while energy usage is often concealed by concerns of household privacy and business competitiveness (McKenna et al., 2012), leading to poor recognition justice for consumers and citizens. At the same time there is a growing number of social innovation initiatives (like UK’s Transition Towns Movement, the International Network Of Sustainable Energy (INFORSE) and community energy projects (Seyfang and Haxeltine, 2012) built around

creating new linkages and bringing together diverse and new actors, and with them a range of environmental, social and ethical values (Avlino et al., 2015; Pisano et al., 2015; Seyfang et al., 2013).

Energy services are also experiencing a period of increased interest in their business model innovation by regulators and government (see Ofgem (2015), Cabinet Office (2016)), and municipal and local organizations and enterprises (such as Bristol Energy; Bristol Energy Cooperative; Robin Hood Energy in Nottingham) with social values (such as justice, cohesion and community development) becoming part of the business model of energy generation, supply and use (Hall and Roelich, 2016; Roelich and Bale, 2014); as well as values such as environmental protection, moving from the periphery to the core of energy business models (for examples on low carbon infrastructure see Foxon et al. (2015), Hiteva et al. (2017)). This indicates an opportunity for business model innovation inclusive of principles of energy justice. The paper also aims to show how a “new story” (Magretta, 2002) about energy just business models can be developed, a theme that has so far remained peripheral in the energy justice literature summarized by Sovacool and Dworkin (2014, 2015).

To facilitate this fusing of the justice and business literatures, the

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paper identifies a number of areas where energy justice can inspire innovation practices of value creation and capture, and vice versa, areas where harnessing the power of private actors can catalyze improvements in justice. In exploring opportunities to bring together business model innovation and energy justice thinking, this paper builds on two extensions: one extending the concept of energy justice to cover the whole system of the energy supply; and the other expanding the range of values in a business model that are considered valuable to create, capture and monetize, directly or indirectly. The former extension is referred to as a whole system approach to energy justice advocated by Jenkins et al. (2014) and has the ability to engage with all components of the energy supply chain, from start to sink. It opens up all components of the energy supply chain as potential areas for business model innovation and spaces for recognition justice through innovative practices and interventions. Of relevance here is also McCauley et al.'s (2013: 2) interpretation of energy justice as aiming “to provide all individuals, across all areas, with safe, affordable and sustainable energy” as it implies certain normativity with regards to the environmental impact of the energy system, and not just any energy, at any cost to humans and the environment. Foxon et al. (2015) found that the extension of the range of values considered in business models can be traced to social drivers (such as need to regenerate housing stock and mitigating fuel poverty) and environmental drivers (mainly reducing carbon emissions). These drivers are interconnected and potentially complementary, and can open up new revenue streams and value capture opportunities to new actors and society (these are discussed in more details in Sections 2 and 3).

Our motivation behind the paper is a recognition that one of the biggest challenges facing the energy justice agenda is translating the normative concept to an 'operational' one that can be understood and implemented in policy and business. This paper presents an exploration of how it might be possible to do so, therefore pushing the agenda forward in a business context. Taking a social innovation approach, it uses case studies from four different scales to illustrate how energy justice might be integrated into business models. In essence, it begins to translate academic theory into practical action. Whilst the success of such an approach may, of course, be limited in businesses where energy justice is not the bottom line, we offer the paper as an important first step towards this goal.

More specifically, this paper uses a business model framework to discuss how principles of energy justice, in particular, equitable distribution of costs and benefits, affordability, due process and greater participation for users in decision-making can be embedded in the business model innovations for energy, through social innovation. By doing so, the paper contributes to the discussion of how to bridge the gap between business values and activities, and social values like energy justice. Although business model innovations in the context of sustainability have been discussed (see Foxon et al. (2015), Roelich and Bale (2014)) and the role of bottom-up (grassroots) social innovations in sustainability and energy transitions have also been studied (Seyfang et al., 2013; Hargreaves et al., 2013), so far there has been no discussion linking concrete aspects of energy justice with empirical examples of mechanisms for creating, capturing and monetizing value from energy services. The novelty of this approach is in proposing a practical way of bringing together the business model innovation literature with literature on energy justice that speaks to policy and business. By doing so, the paper highlights the role of social innovation (the innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organizations whose primary purposes are social, as defined by Mulgan et al. (2007)) in helping to translate or bridge between the two.

By bringing together these concepts, the paper also contributes to an important and growing discussion on the social direction of business model innovation, and the means for delivering sustainable infrastructure (Corfee-Morlot et al., 2016). The delivery of sustainable infra-

structure requires additional steps through all (upstream and downstream) phases of project development, which include greater willingness and ability to reconceptualize to ensure that environmental, social and governance considerations are taken into account. Thus, sustainable infrastructure creates opportunities for promoting procedural justice (by broadening participation in infrastructure governance with the inclusion of residents; non-governmental organizations and other civil society actors), through representational and participatory processes over time and space (Shi et al., 2016). This implies a stronger focus on social and environmental justice, on a par with concerns with effectiveness, cost, productivity and competitiveness. Sustainable infrastructure seems to offer a timely opportunity of expanding social and environmental values, and bring a focus on justice in infrastructure, by adopting a system-like approach (including upstream and downstream activities), which resonates with the whole system approach to energy justice. However, these expansions over time and space can provide more opportunities for justice-driven interventions, as well as increase the number and severity of conflicts between alternative values and traditional business model rationales such as competitiveness and the need to be profitable. This potential for exacerbating tensions between the two rationales necessitates a closer interrogation of the mechanisms through which principles of energy justice can be embedded in business models for infrastructure, in the context of concrete empirical case studies. This paper attempts just that.

The paper is structured as follows. The energy justice and business model frameworks are described before tensions and complexities of considering the two frameworks together are detailed. These dynamics are illustrated by four case studies: The Carbon Cooperative, Robin Hood Energy, RenEsco, and the Yansa Community Interest Company. The paper lastly considers the policy implications and relevance of bringing energy justice, social innovation and business models together in the four case studies.

## 2. Research methods

Our core method is a qualitative, comparative, case study approach drawn from a synthesis of peer-reviewed literature as well as current reports and documents related to our four business models explained below. These cases have been selected, based on the authors' knowledge, on dimensions such as their budget (i.e., they all have funding in the order of multiple millions of dollars), operational status (i.e., they all operate currently), scope (they all focus on aspects related to the provision of energy services or supply) and legal character (they all operate as distinct, legally recognized entities). The resulting sample of cases was expected to share enough background conditions to be considered a homogenous population, while still exhibiting considerable variation in governance characteristics. Put another way, they were meant to be illustrative rather than representative cases. Our research method corresponds to what has been called interpretive (Lijphart, 1971: 691) or disciplined-configurative (Eckstein, 1975: 99–104) case studies.

The paper proceeds to discuss four case studies of energy services businesses—entities with either a corporate or company charter—at different scales and locations, extending from the insightful discussion of scale offered by Cash and Moser (2000). For the purposes of this paper, scale is a heuristic used to describe specific geographically bounded level at which particular phenomenon is recognizable (ibid. p. 110). A “local” scale energy business is illustrated by the case of the Carbon Co-op in Manchester, UK. The case of Robin Hood Energy in Nottingham, UK illustrates a growing type of “subnational” scale initiatives involving participation of local municipalities. The case of Dutch private ESCO and social entrepreneur company operating in the Eastern European housing market illustrates innovative business model initiatives at the regional scale between “national” and “global”. And the case of NGO Yansa illustrates such arrangements at the “global” scale. The four cases emphasize different opportunities for

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