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Attributing responsibility for energy justice: A case study of the Hinkley Point Nuclear Complex☆

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ABSTRACT

Since 2006, as part of the transition to low-carbon technologies, UK energy policy has moved towards incentivising new nuclear power production. As a result, the UK has developed a (now delayed) strategy to deliver around 16 GW of new nuclear power by 2030. This policy context provides an opportunity to reflect not only on the material infrastructure needed to meet transition targets, but also on who is responsible for the energy justice implications of these decisions. Using data collected from 26 semi-structured interviews with NGO and policy representatives, this paper presents a case study of energy justice concerns surrounding the Hinkley Point Nuclear Complex in Somerset, focusing particularly on the highly controversial Hinkley Point C developments. The results emphasise the importance of considering not only instances of energy justice or injustice, but of attributing responsibility for them, a concept that has been largely overlooked in the energy justice literature. NGOs, government and business allocate responsibility differently in nuclear energy decision-making. We find that perceptions of responsibility are highly dependent upon the level of transparency in decision-making. This article is part of a Virtual Special Issue entitled 'Exploring the Energy Justice Nexus'.

1. Introduction

Since 2006, United Kingdom (UK) energy policy has moved towards incentivising new nuclear power production, proposing the first new reactor since the construction of Sizewell B in 1986. This policy reversion is partly a response for a shift towards low-carbon technologies (Florini and Sovacool, 2009; DECC, 2011a, 2011b; Watson and Scott, 2009), and partly a response to a projected energy gap caused by existing facilities coming to the end of their operational lifespans. Planned decommissioning means that by 2020 the UK's total nuclear capacity will have reduced by around three quarters (BERR, 2008; Bickerstaff et al., 2008). Even with lifetime extensions on some existing facilities, new energy production infrastructure will be required. As a result, the UK has developed a (now delayed) strategy to deliver around 16 GW of new nuclear by 2030, with proposed facilities at Hinkley Point, Bradwell, Sizewell, Wylfa, Oldbury and Moorside (BIS, 2013). The Moorside facility is in difficulty as Toshiba's nuclear unit Westinghouse files for bankruptcy; Hitachi at Wylfa have expressed serious concerns about the financing of their new reactor and as is outlined below, Hinkley Point is heavily delayed and over cost. Nonetheless, the UK's change in attitude to nuclear power provides an opportunity to reflect not only on what material infrastructure is needed to fulfil policy goals, but also on who is responsible for the energy justice implications that these decisions carry.

In a definition provided by Jenkins et al. (2016a), the energy justice concept exists to evaluate (a) where injustices emerge, (b) which affected sections of society are ignored, and (c) which processes exist for their remediation in order to reveal and reduce such injustices. The emphasis to date has been on identifying who is ignored and, as a consequence, on identifying strategies for remediation (McCauley et al., 2016). The literature on energy justice has focused on the fuel poor (Middlemiss and Gillard, 2015; Chard and Walker, 2016; Hiteva, 2013; Sovacool, 2015; Teller-Elsberg et al., 2016; Walker and Day, 2012), on disabled or unwell members of society (Snell et al., 2015; Liddell et al., 2016), on poor and ethnic communities who historically shouldered the burden of toxic waste dumps (Williams, 1999; Davis, 2009; Reames, 2016) and on anti-wind campaigners (Jenkins et al., 2016a), amongst others. This paper investigates the question of "justice by whom?", using a case study approach to identify who in the case of UK nuclear energy developments is perceived to be responsible for tackling energy justice concerns.

The paper begins with an introduction to the energy justice concept

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and tenets, and an exploration of the questions "justice for whom" and "justice by whom", articulating a conceptual call to expand the energy justice literature to consider notions of responsibility. The next section provides the research design, explaining why we focus on Hinkley Point as our case study, and the data collection and analysis methods used. The paper then presents and discusses the results, reflecting on the implications of dispersed and centralised models of responsibility which emerge from the research interviews. We make the case for increased transparency in nuclear energy decision-making in order to allow more sophisticated understandings of responsibility to emerge. The final section on policy implications calls for a more systematic inclusion of responsibility into ethics and justice explorations in relation to energy decision-making more broadly, and reflects on the need to learn from lessons from the Hinkley case.

2. Energy justice and responsibility

According to McCauleyet al. (2013: 1) energy justice seeks "to provide all individuals, across all areas, with safe, affordable and sustainable energy". It is concerned with principles of equity and fairness in energy-related decision-making and infrastructural development, and is guided by a normative aim to reduce injustice. McCauley et al., (2013, 2016) and Jenkins et al. (2016a) use three core tenets to operationalise this aim: distributional justice, procedural justice and justice as recognition. In their work, distributional justice refers to the unequal distribution of environmental benefits and ills and their associated responsibilities; procedural justice highlights the importance of procedure in influencing whether outcomes for stakeholders are equitable or inequitable; and justice as recognition encapsulates the aspiration for individuals to be fairly represented, to be free from physical threats, and to be offered complete and equal political rights. Other frameworks, such as the work of Heffron *et al.* (2016) and Sovacool et al. (2016), include cosmopolitanism as an additional tenet. Table 1 provides a summary of the implications of the tenet approach when examined across the evaluative and normative contributions.

This paper seeks to add to this literature by focusing on the notion of responsibility. We position this within the context of the justice as recognition tenet. For some authors, the focus is almost exclusively on matters of distribution (Vincent, 1998; Dobson, 1998), whereas for others justice as recognition is acknowledged, but only as a tacitly included element in the ideal definition of distribution and/or participation (Schlosberg, 2004); Fraser (1999: 98) highlights that some perceive it to be a "false consciousness", and a hindrance to the pursuit of social justice. However, following both Fraser, (1999, 2001, 2009, 2014) and Young (2011), and in keeping with McCauley et al. (2013), this paper affirms justice as recognition as the third tenet and argues that it provides a key role in identifying not only who is affected by energy justice, but also who is *responsible* for that justice.

The energy justice literature has not fully explored who is responsible for energy justice and/or its remediation. This is an aspect of justice that is prominent in environmental and climate justice debates (see Bulkeley et al., 2013, 2014; Barrett, 2013, 2014), and was thrust to prominence by the works of Iris Young, (2004, 2006, 2008, 2010, 2011). In the environmental justice literature responsibility is acknowledged as a key principle, particularly in relation to future generations (Reese and Jacob, 2015; Syme et al., 2014; and Grineski et al., 2012). In this context, both Reese and Jacob (2015) and Syme et al. (2014) note that justice appraisals represent a moral basis of behaviour for environmental protection. The same is true of the climate justice movement, where "common but differentiated responsibilities" underpin international negotiations (Shaw, 2016: 512; UNFCCC, 1992) and represent a key theme in the literature. In both cases, recognising the needs or existence of particular groups is entangled with a need to identify who is responsible for enacting just actions towards them. This paper expands this exploration into the energy justice literature and argues for a focus not only on questions of "justice for whom?", as is typically the case, but also on "justice *by* whom?".

Sovacoolet al. (2016: 1) offer one approach to responsibility within energy justice literature when they state that "an important dimension to justice goes beyond concepts and analysis to decisions and thus decision-making, including policy-makers and regulators ordinary students, jurists, homeowners, businesspersons, investors, and consumers". Heffron and McCauley (2017) refer to this approach as placing responsibility as a key applied principle for enacting energy justice. This approach highlights that we *all* bear the burden of creating energy justice, even when we make the most mundane energy choices such as turning on a light switch. This also builds upon Young (2011) who points to the dispersion of responsibility throughout society compared with previously individualised incarnations which focused only on the family unit. However, these statements do not engage with the power differentials in each group, their awareness of the challenges, or their range of capabilities.

We argue that if the purposes of energy justice are to serve as an analytical tool and move beyond academic discourse, as has been suggested by Heffron et al. (2015), Sovacool and Dworkin (2015), Sovacool et al. (2014) and Jenkins (2016); Jenkins et al. (2016b,c) then in the context of this discussion it must sufficiently "politicise" its focus to avoid naivety in expecting responsibility where it is not in practice assumed. Indeed, we recognise in line with Young (2011) that if structural injustices are to be tackled, models of responsibility must transition from an individualised family-based focus to collective cosmopolitan incarnations where individuals recognise their connections beyond their immediate family setting. Thus, this research focuses on understanding when groups are perceived to be responsible for and are capable of directly tackling energy injustices. We present below the interpretations of NGOs, companies, and government towards responsibility. Before analysing the results, we outline our methodological approach. We note here that there is insufficient space to cover the background of nuclear policy or ethical issues of nuclear in general. Although we concentrate on the Hinkley Point complex, we use this only as an initial exploratory case study and as a lens to explore this issue.

Table 1
The evaluative and normative contributions of energy justice (reproduced from Jenkins et al. 2016a).

Tenets	Evaluative	Normative
Distributional	Where are the injustices?	How should we solve them?
Recognition	Who is ignored?	How should we recognise?
Procedural	Is there fair process?	Which new processes?
Cosmopolitan	Is everyone afforded equal moral rights?	How do we engage in global decision-making?

3. Research design

This section outlines the key components of the research design. We provide, firstly, some key background information on the case study, Hinkley Point, in order to give context to our findings; Hinkley Point was the case study where the issue of responsibility arose the most in our interview data. The mechanism for research data collection and analysis is then detailed before covering the results in the next section.

3.1. Case selection: the Hinkley Point Nuclear Complex

The Hinkley Point Complex in the West Somerset District of the County of Somerset, South West England, comprises two reactor facilities: Hinkley Point A, which is undergoing decommissioning, and the currently operational Hinkley Point B. Both sites are adjacent