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# Wind power, landscape and strategic, spatial planning—The construction of 'acceptable locations' in Wales

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ABSTRACT

A number of analysts have argued that decisions about renewable energy technologies and targets need to be reconciled with the social and environmental contexts in which those technologies are adopted. However, an unresolved issue is how the contextually-embedded qualities of landscape might be represented at the national level, alongside other energy policy considerations like resource availability, economic efficiency and technical feasibility. To explore the dilemmas of this enterprise, this work examines the efforts of the Welsh Assembly Government to develop a spatial planning framework for wind energy. The work examines how particular landscapes became identified as 'acceptable locations' for wind farms, and the consequences. Four sets of findings are discussed: the selectivity with which landscape qualities enter strategic planning rationalities, favouring qualities that are formally demarcated and measurable 'at a distance'; the tendency of the identified strategic search areas for wind to reinforce the degraded status of afforested upland areas; the extent to which the planning framework has rendered certain environmental qualities malleable; and the way that drawing boundaries around acceptable locations for large-scale wind energy development may restrict the scope for future reflexivity in energy policy.



## Introduction

In a thought-provoking article, Shove (1998) takes issue with the 'web of taken for granted beliefs' (p. 1107) about the role of research in energy policy and its relationship to practice. She summarises the conventional view in which policy processes are driven by analyses of the 'technical potential' of a given technology, based on resource availability, or the potential for saving costs, energy or carbon, which then inform 'the setting and realisation of energy . . . targets' (p. 1106). For Shove, a key problem with this conventional view is the split between the technical and the social. While technically-derived policy goals are seen as unproblematic, rational and immutable, the 'surrounding social and political context is rendered irrational, soft and open to manipulation in order to achieve particular policy outcomes' (Bulkeley et al., 2005, p. 14). Altogether, there is a failure 'to appreciate . . . the social contexts of ... action' and 'the socially situated character of technical knowledge' (Shove, 1998, p. 1108). A further problem with this conventional view is that it privileges technical researchers, in defining the technical fixes for future energy development, leaving social scientists with the 'secondary tasks of removing blockages' (p. 1108) to achieving them.

Shove was writing about energy conservation, but her critique is pertinent to the way in which policy for renewable energy has been constructed in the UK, especially for wind energy. For almost two decades, industry, government and environmental groups have routinely prefaced the case for expanding wind power with assertions that the UK has the best wind energy resources in Europe. Arguments proceed from statements about the technical capacity and economic viability of wind energy to the identification of policy targets. For all that policy discourse acknowledges the importance of reconciling renewable energy with other environmental values like landscape and ecology, a central feature of policy approaches has been the positioning of the various environmental and social effects bound up with the wind energy as downstream, exogenous factors, relegated to 'local', siting issues (Owens, 2004). As a corollary, if wind farm development attracts resistance, and targets prove difficult to achieve, then protagonists bemoan the planning system and call for the barriers to new renewable energy capacity to be overcome (see, for example, Beddoe and Chamberlain, 2003; Department of Trade and Industry, 2003, 2007).

The logic of Shove's argument is that society needs more reflexive deliberation between the technical potential of different renewable energy technologies and the contextual conditions in which they might be deployed. Indeed, such arguments have wider relevance to debates about environmental policy integration, especially for renewable energy where coordinating policies for energy

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and land-based resources is critical (Nilsson and Eckerberg, 2007). However, this argument leads to rather under-examined questions about how the spatially and socially differentiated contexts of energy development come to be represented in strategic policy debates. While there is a voluminous research on planning and wind energy (see articles in Land Use Policy 12(1)), much of which identifies a need for strategic spatial planning to steer development to more acceptable sites (Pasqualetti et al., 2002), few analysts have considered how the qualities of landscapes might 'jump scale' (Cox, 1998) to gain some presence alongside energy technology choices. Thus the aim of this work is to understand how the varied environmental qualities of territory come to be represented in the instruments of strategic planning; what kind of 'acceptable locations' are thereby constructed (after Cowell and Owens, 1998), and what might the implications be for reflexivity between places, landscapes and energy policy?

I tackle these questions by drawing upon recent research into spatial planning for renewable energy in the UK, which has seen growing government and business frustration at the failure to meet targets, and various efforts to resolve what are seen as 'delays' caused by land use planning (Cowell, 2007). The particular focus of this work is Wales where, in 2005, local planning processes for onshore wind farm applications were overlain with a cross-national, strategic framework – Technical Advice Note (TAN) 8: Renewable Energy (WAG, 2005) – which identified seven 'strategic search areas' for large scale on-shore wind energy development. While previously statutory conservation bodies have proffered their own indicative spatial zonings for wind energy (Scottish Natural Heritage, 2002), and a few local planning authorities have experimented with 'preferred areas' (Hull, 1995; ETSU, 1996), this was the UK's first national-level, fully government-endorsed attempt at strategic spatial planning for renewable energy. After setting out the theoretical, methodological and historical context for the work, I analyse the process of producing the new spatial planning guidance, before considering its implications.

## Theoretical context and methodology

Analysts of state practice have long recognised the partial vision of central planning activities (Scott, 1998). This is very evident in the energy sector, in which policy has been driven by aspatial discourses of market regulation or state-sponsored expansion – based on economic analysis, demand projections or, increasingly, the need to meet greenhouse gas reduction targets – insulated from the environmental conditions in which electricity networks develop (Cowell, 2004; Walker et al., 2007).

To understand this neglect and its consequences, analysts now recognise the importance of looking at governance *practice*s and techniques in the exercise of power, and this is the theoretical orientation adopted here As Murdoch (2000) suggested, using a Foucauldian perspective, the promulgation of rationalities and techniques is a prominent means by which states seek to govern across space and time. Such techniques 'extract characteristics from complex situations, 'combine' them, 'shuffle' them, and 'aggregate' them in new representations of the socio-spatial world, and allow government to 'act at a distance' on the basis of these representations' (p. 513). This applies to the statistics of, say, energy demand projections but also to spatial mapping techniques which, by rendering heterogeneous landscapes into apparently measurable qualities, capable of being delineated on maps, make them available to new, precise forms of governmental power (Demeritt, 2001; see also Jensen and Richardson, 2007). One example is 'sieve mapping' which, through the aggregation of spatial data, seeks out areas free of land-use constraints (Labussiere, 2007) to steer the location of development. Such techniques are often dependent on new graphic visualization techniques, which enable command over collections of otherwise disparate information, but also enable them to be combined into some commensurable, mappable denominator (Demeritt, 2001).

Importantly, in liberal democracies at least, the power of these exercises cannot readily be understood as the foisting of partial, state-sponsored representations of landscape onto yielding territory. As Shove (1998, p. 1108) suggests, practitioners 'do not have contextually disembodied technologies transferred upon them. Instead they acquire and develop knowledges which mesh with and which emerge out of locally, culturally and temporally specific working environments'. Thus, to function effectively, 'compromises encoded within the technologies of planning frequently require a balancing of . . . abstraction and local context' (Murdoch, 2000, p. 505); a balance in which knowledge must transcend immediate local contexts but must also, to some extent, resonate with 'local place identifications' (Devine-Wright, 2005). Thus, achieving reflexivity between energy policy goals and contextual conditions raises exacting questions about how landscape characteristics become pulled into the state's strategic planning processes, what is omitted, and the consequences of the compromises that are struck.

These are critical questions for wind power, where social controversy has been dominated by visual impacts and landscape considerations (Warren et al., 2005; Wolsink, 2007). In the UK as elsewhere (Pasqualetti, 2000; Pasqualetti et al., 2002), a powerful social dynamic is the desire to protect valued landscapes and, especially, to secure symbolically 'wild', pastoral, 'rural' landscapes from the 'invasion' of 'urban' development. This dynamic has been fostered by the institutional arrangements and social expectations of the British planning system, which have geared it towards protecting 'the countryside' from 'the city' (Lowe and Murdoch, 2003). Yet the expansion of renewable energy threatens to transgress these categories, and challenges the institutionalised presumptions of land use planning - at least insofar as the technologies deployed, like wind turbines, demand new, highly visible facilities in the countryside (Hull, 1995). Consequently, for all the abstract purity of debates about the 'technical potential' for wind, what is at stake is not simply the social acceptability of a pre-given technology but also judgements about the acceptability of wind generation technologies *in particular places*. Conflicts over whether turbines are essentially 'industrial', 'urban' facilities, and therefore 'out of place' in the countryside (Cresswell, 1996; Woods, 2003) have thus been played out across the British planning system; resolving them raises questions about the role of planning in mobilising the regulatory power of landscape (Mitchell, 2000).

This work draws upon qualitative, multi-site research which has been tracking the production and implementation of strategic, spatial planning guidance for renewable energy in Wales. The research draws upon documentary analysis (of the planning guidance itself, written responses to it, and documents pertaining to individual wind energy decisions) and semi-structured interviews with key players in the Welsh Assembly Government (WAG), industry, local planning authorities and community groups during 2007 and 2008. The analysis is presented in two parts. The first focuses on how the strategic planning framework for wind energy was produced, and how landscapes came to be represented within it. The second part analyses the consequences. It considers how far strategic planning tools have reinforced or renegotiated distinctions between the 'urban' and the 'rural'. It then looks at how certain environmental qualities become absolute constraints to onshore wind power while others are rendered malleable. Finally, the analysis considers how far the use of spatial planning fosters or frames future energy policy reflexivity.