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The ‘Social Gap’ in Wind Farm Siting Decisions: Explanations and Policy Responses

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ABSTRACT If approximately 80% of the public in the UK support wind energy, why is only a quarter of contracted wind power capacity actually commissioned? One common answer is that this is an example of the ‘not in my backyard’ (Nimby) syndrome: yes, wind power is a good idea as long as it is not in my backyard. However, the Nimby claim that there is an attitude–behaviour gap has been rightly criticised. This article distinguishes between two kinds of gap that might be confused, namely the ‘social gap’ – between the high public support for wind energy expressed in opinion surveys and the low success rate achieved in planning applications for wind power developments – and the ‘individual gap’, which exists when an individual person has a positive attitude to wind power in general but actively opposes a particular wind power development. Three different explanations of the social gap are distinguished, only one of which depends upon the individual gap. In the second section of the article the relevance of our three explanations for policy is considered. It is argued that the different explanations suggest different policy responses and that the success of efforts to increase wind energy capacity may depend on developing a better understanding of the relative significance of the three explanations.

If approximately 80% of the public in the UK support wind energy, why is only a quarter of contracted wind power capacity actually commissioned (Toke, 2002)? One common answer is that this is an example of the ‘not in my backyard’ (Nimby) syndrome: yes, wind power is a good idea as long as it is not in my backyard. On this account, there is a gap between an attitude motivated by concern for the ‘common good’ and behaviour motivated by ‘self-interest’. As a result of this gap, people who favour wind power in general oppose particular developments proposed for their area. However, the Nimby concept has rightly been criticised on the grounds that it fails to reflect the complexity of human motives and their interaction with social and political institutions. In this article, we consider the role of politics and policy in

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generating – and potentially bridging – the gap between public support for wind energy and successfully building wind energy capacity.

The article is divided into two main sections. The first section introduces a distinction between two kinds of gap that might be confused, namely the 'social gap' and the 'individual gap'. We distinguish three different explanations of the social gap and argue that only one of these involves or depends upon the individual gap. The second section considers the relevance of our three explanations for policy and, in particular, the different kinds of policy response that might be appropriate depending upon which explanation(s) of the social gap is (are) correct. Our aim is not to provide a guide to achieving successful wind farm applications but rather to consider the relationship between explanations of the social gap and policy proposals. Our analysis draws on work carried out as part of a wider project aimed at understanding public responses to renewable energy.¹

Theoretical Framework: Two Gaps and Three Explanations

We begin by distinguishing two gaps, which we will call a social gap and an individual gap. The social gap is the gap between the *high* public support for wind energy expressed in opinion surveys and the *low* success rate achieved in planning applications for wind power developments. The individual gap is the gap that exists when an individual person has a *positive attitude* to wind power in general but *actively opposes* a particular wind power development. Our primary interest is in the social gap – as we know it exists and that it needs to be bridged if the potential contribution of wind power to government energy targets is to be realised. Our interest in the individual gap is derivative – if the individual gap causes the social gap, we need to understand its nature and how it might be bridged.

We distinguish three possible explanations of the social gap. One makes no reference to the individual gap. One suggests that the individual gap is more apparent than real. Only one explanation depends upon the existence of an individual gap. Our aim is not to claim that any single explanation is more plausible than the others; we simply want to present the three explanations and suggest that there may be some merit in each of them. Indeed, we would expect that a plausible explanation of the social gap would make use of all three explanations – detailed empirical studies would be needed to identify their respective contributions to the generation of the social gap.

The 'Democratic Deficit' Explanation

The first explanation regards the social gap as the product of a 'democratic deficit'. The claim is that while opinion polls show that a majority of people are in favour of wind power, particular wind power development decisions are controlled by the minority who oppose wind power. The outcome of the permitting process does not reflect the will of the majority (Toke, 2002). The

'democratic deficit' explanation does not depend on any individual 'suffering' from an individual gap. The key question for the 'democratic deficit' explanation is why opponents of wind power are able to dominate the permitting process.

Wolsink (2000, p.58) suggests that 'people generally do not come forward with positive responses to planners' agendas'. In part, this may be a product of the design of the planning process whereby initial decisions are made by developers, announced to the public and then defended against public criticism. The role of the public in this 'decide-announce-defend' model of decision making is to provide criticism rather than support (Wolsink, 1996, 2000). As Kahn (2000, p.26) puts it, 'siting reviews are open forums where criticism is not only accommodated, it is solicited'. Toke (2002, pp.88-9) suggests that higher levels of active opposition might also be explained by Olson's rational choice theory of collective action:

we could argue that local opponents of a given wind power scheme could count as a 'privileged group' ... in terms of the local planning system. This is because the potential gain for each opponent of a wind power scheme (perceived protection of local landscape) could outweigh the costs of writing to object to that scheme and of organising others to do the same ... The majority may want wind power because of its ... collective benefits ... [but] the effect of having a local windfarm will not have a significant impact on delivering the collective benefits. Thus, the ... benefits that would flow from arguing strenuously for the proposal are small ... there is a great temptation for people to act as 'free riders' ... making little effort to support what they ... perceive to be clean energy sources.

The point is that opponents might reasonably believe that actively opposing a development would make a significant enough contribution to their goal of protecting the local landscape to outweigh the costs of participation. The goal of supporters is a global goal to which any single development could make only a tiny contribution so that even if supporters were to believe that they could influence the process it would not matter enough to justify the cost of participation.

Toke (2002, p.90) offers some evidence from a study of a consultation about the Carno wind farm in central Wales to support the idea that levels of support and opposition expressed in the planning process do not accurately reflect public opinion:

There were 47 objectors (who were mainly concerned with the visual impact) and 40 supporters in a consultation conducted in 1994. However, a random survey of local residents only a few miles away conducted by University of Wales researchers a few months after the Carno planning consultation reported that supporters of an existing local windfarm outnumbered objectors by 74 per cent to 23 per cent.

Toke's (2002) example is suggestive but it is important to bear in mind two points: the Carno application was actually granted planning permission; and there is considerable evidence to suggest that local opposition to wind farms decreases significantly after they are installed.² Therefore, Toke's (2002) 'public opinion' figures might actually give a misleading impression of actual public opinion in the area closest to the Carno development at the time that it was proposed. Moreover, the Carno case suggests that higher levels of active opposition than support may not result in the failure of the application. Active opposition certainly does not guarantee the failure of a proposed development. There are a number of instances of strong and organised opposition groups working to prevent a development in their area, but failing to do so: the development at Cefn Croes in mid-Wales is one such example. The potential of opponents to block wind power developments is likely to be greater if they fit a particular educational and socio-economic profile that enables them to operate more effectively in the political arena. However, the ability of small, active opposition groups to dominate the planning process and successfully oppose a development is likely to be context-dependent. The structure of the planning system may encourage 'oppositional' participation but planning policy and government support for wind energy may make successful opposition increasingly difficult (Toke, 2005).

The 'Qualified Support' Explanation

The second explanation of the social gap is that the failure of particular wind developments reflects a general principle of qualified support for wind energy (Walker, 1995; Sparkes & Kidner, 1996). Most of the people who support wind energy do not support it without qualification. They believe that wind energy is a good idea but they also believe that there are general limits and controls that should be placed on its development (Wolsink, 2000). Typically, these might include qualifications regarding the impact of developments on landscape, the environment, animals (e.g. birds, fish) and humans (Rand & Clarke, 1990; Pasqualetti, 2001). If there are many people who adopt a qualified general principle of support for wind energy, they may be responsible (or partly responsible) for the social gap. Many public opinion surveys merely ask if people support wind energy in general. They do not give respondents the opportunity to enter qualifications.³ People who are qualified supporters of wind energy may appear to be making an exception to their general principle in a particular case that has a direct effect on them when in fact they are following their general principle (of qualified support) in that particular case.

We can see this kind of general principle of qualified support most clearly (and without too many doubts about its sincerity) in the official position of organisations such as the Campaign to Protect Rural England (CPRE) (2003, p.3):

While CPRE welcomes in principle the expansion of a broad range of renewable technologies, it is vital that the countryside, its beauty and tranquillity are not damaged in the process.

CPRE is in favour of renewables, including wind energy, but its support is not unqualified. The impact of any particular development on the countryside must be considered before CPRE would support it. Individuals may also adopt a general principle of qualified support (Wolsink, 1996; Pasqualetti, 2001). For example, Wolsink (2000, p.61) reports the findings of a survey of members of an environmental group in the Netherlands which showed that 'they simply assess the acceptability of wind turbines in terms of visual intrusion and the consequences for the chosen location'. In other words, they are prepared to support any wind development that meets certain criteria but will oppose developments that do not meet those criteria. Of course, they may not find it easy to provide a definitive list of the criteria that they consider to be important. Typically, judgements about the acceptability of particular developments will be just that – a matter of judgement.

It might be objected that while people offer landscape or environmental reasons to justify their opposition to particular developments, their real concern is much more personal. In other words, they adopt a general principle of supporting wind energy but make an exception whenever a development gets too close to home and then 'dress it up' as a principled landscape or environmental objection (Bosley & Bosley, 1988; Gipe, 1995). As Arthur O'Donnell has put it:

Many observers have reached the conclusion that while NIMBY opponents of a particular project may mouth environmental arguments, they do not truly accept broader environmental ethics (O'Donnell, quoted in Kahn (2000, p.27)).

It is hard to differentiate between people motivated by self-interest who want to 'free-ride' on others having wind farms in their 'backyards' and those who genuinely hold a general principle of qualified support (Elliott, 1994; Kahn, 2000). The arguments that are offered in public debate are rarely cast in terms of self-interest. In general, a self-interest argument is unlikely to win a public debate (Rose & Suffling, 2001). There may be good grounds for thinking that self-interested reasons for opposing a development will be 'hidden' behind principled arguments but we should not automatically assume that opponents of local developments do not genuinely hold a general principle of qualified support for wind energy. If we want to determine whether or not people are qualified supporters, we will (at least) need to look beyond their public arguments to the reasons they offer in private for opposing a development.

The 'Self Interest' Explanation

The third explanation of the social gap is that people support wind energy in general but actively oppose any developments in their own area for self-interested reasons. As Wolsink (2000, p.51) notes, 'The conventional view ... is that people are in favour of wind power, but are opposed to wind turbines in their own area'. The Nimby explanation is both very popular and very widely criticised (Wolsink, 2000; Haggett, 2003). For our purposes, the important point is that the Nimby concept properly understood offers a very specific account of the social gap as the product of a particular kind of collective action problem (Wolsink, 2000). In a multi-person prisoner's dilemma it is collectively rational for the public good (wind energy) to be produced but it is individually rational for each individual to 'free-ride' on the contributions of others (not have a wind farm in their area). The individual's contribution to the public good (a few megawatts of wind energy from the local wind farm) is negligible, while the cost of making that contribution may be considerable (e.g. lower utility resulting from their favourite walk being 'spoiled'). Every individual makes the same individual calculation and chooses to 'free-ride' (not have a wind farm in their area). Therefore, the public good is not provided (wind energy developments fail).

The Nimby explanation of the social gap is the only explanation that depends upon an individual gap between attitudes to wind power in general (unqualified positive) and attitudes to a particular development (negative). Nimby is intended to explain local opposition to wind energy developments (so it clearly does not explain the opposition of an organisation such as CPRE). On the Nimby account, the individual gap is the gap between collective rationality (or concern for the public good) which people will express in opinion surveys when it costs them nothing and individual rationality (or self-interest) which will motivate their behaviour. Significant numbers of people 'suffering' from an individual gap cause the social gap – when it comes to the development of a wind farm in their area they make an exception to their general principle of support for wind energy and count on being able to 'free-ride' on others' contributions. The prevalence of the Nimby syndrome is a matter of some dispute (Wolsink, 1994; Krohn & Damborg, 1999). More generally, the appropriateness of the multi-person prisoner's dilemma as a model of environmental behaviour and attitudes has been subject to significant criticism based on empirical studies that claim people do not fit the rational choice model of (narrowly) self-interested actors (Mansbridge, 1990; Hunter & Leyden, 1995). To determine its relevance in the context of wind energy, we would need further studies to test Wolsink's (2000, p.55) empirically grounded claim that 'The [Nimby] syndrome really exists, but ... we must conclude that its significance remains very limited'.

Policy Responses to the Social Gap

So far, we have identified three possible explanations of the social gap. We would suggest that all three may play some role in the generation of the social gap but further empirical research would be required to make a sound judgement about their relative importance. However, we would not want to suggest that empirical research could easily ‘disentangle’ or ‘measure’ the relative significance of these putative explanations. Indeed, our own experience (and, in particular, our involvement in a preliminary multi-disciplinary discussion of methods for examining the social gap) suggests to us that a very demanding research programme would be required (Haggett, 2004). It is beyond our ambition here to try to set out such a research programme. Instead, we consider the significance of these three very different explanations for policy. We suggest that it should be a matter of considerable interest to policy makers how much each of these explanations contributes to the generation of the social gap because the appropriate policy responses may be very different in each case. We will consider each explanation in turn.

The Significance for Policy of a Democratic Deficit

The first explanation claims that the social gap is caused by a democratic deficit – a majority support wind energy developments but a minority stop them. There are some interesting philosophical issues about the proper size of the demos for wind energy decisions. Should it be restricted to those living closest to a proposed development, to a village, to a local authority, to the nation or should it include everyone affected by the continued use of fossil fuels to generate energy? However, this is not the place to discuss these issues. Instead, we will simply assume that whatever boundaries it may be appropriate to set to the democratic community, we find that a majority is in favour of a particular development but the minority has sufficient power to prevent that development. How should policy makers respond to this situation?

The obvious solution is to change the decision-making process. The most straightforward way of doing that might be to require a direct public vote on wind farm developments. However, the problem of specifying the relevant constituency will arise again. Moreover, it is not clear that a direct public vote would solve the problem. It is true that voting is likely to be less demanding than writing a letter to your local authority, so wind energy supporters might be more likely to become active participants in the decision-making process. It is also likely that a voting procedure would not solicit opposition in the same way as the ‘decide–announce–defend’ model inherent in the current planning process. However, it is not clear that voting would actually overcome the problem of apathy or inactivity among supporters. The low levels of participation in local (and national) elections do not suggest that people are keen to take the trouble to vote at all – and it is difficult to see why a referendum on a wind farm would be significantly different. Indeed, when a

'referendum' was held in one case in the UK the result showed local support for the wind farm but with only a moderate turnout (Energy Technology Support Unit, 2001). Of course, it is also difficult to see how a general policy of direct public votes on wind farms could be squared with the continuation of the existing planning process for other developments.

We might also be concerned that a public vote would politicise a particular development (or even wind energy in general) so that the process becomes subject to intense rivalries rooted in existing political divisions (Kahn, 2000). Moreover, politicisation might encourage more extreme press coverage designed to sway public opinion or (at least) mobilise minority opposition. This may be a particular concern given the evidence that already suggests that (local) press coverage tends to be more opposed than public opinion to wind developments (Pasqualetti, 2001). Politicisation might also encourage people to oppose developments to show solidarity with their community against the 'outsiders' (i.e. the developers).⁴ It may even encourage what Kahn (2000, p.27) calls 'opportunists' who 'intervene in a facility siting case not to defeat or mitigate a project, but to extract a benefit from having opposed it'. The 'opportunist' enters the fray for what they might be able to get out of it. Their motivation is self-interest and their attitude to wind energy in general is irrelevant. The opportunist might be looking for 'compensation' or some kind of monetary benefit from the development project (e.g. employment).

An alternative to a public vote that tries to overcome the democratic deficit by giving power to the people might be a top-down decision based on an independent opinion survey of a representative sample of the demos. In some respects, this may be a better reflection of people's attitudes than a public vote. However, it is an expensive and an undemocratic option. A public opinion survey may overcome one democratic deficit that allows minority opposition to block developments, only to create another by explicitly excluding anyone not included in the sample survey from the decision-making process. A 'middle way' would retain the planning process as it is but support independent public surveys which could be used by planning authorities to inform and justify their decisions. In this way, survey support for a development might help to offset the bias toward opposition that is built into the existing planning system.

One final option is to change the underlying character of the planning process from confrontation to collaboration (Healey, 1996, 1997). A collaborative approach is grounded in the claim that 'deliberative' rather than 'technical' rationality should be the basis for environmental decision making (Owens *et al.*, 2004). Collaborative planning shifts the emphasis from competitive interest bargaining to consensus building; it recognises and includes all stakeholders; and seeks to identify diverse interests and the mechanisms of power that may work to subordinate some of them. The aim is public participation rather than public consultation; it does not aim to 'educate', but to create opportunities for discussion. A collaborative process might overcome the democratic deficit by encouraging (some of) the 'silent majority' to participate in decision making. If the siting process involves the

local community from the very beginning – even before a specific site is chosen – there may be more incentive for local people to participate. Of course, it has been widely argued that a collaborative process is likely to lead to more acceptable outcomes – as differences and disagreements are negotiated and overcome – but it would also be interesting to know how the character of the decision-making process affects who participates in the first place. Would our speculation that collaborative processes are more likely than standard ‘decide–announce–defend’ procedures to draw supporters into the siting process be supported by empirical evidence? And, of course, the key question is: which kinds of collaborative and participatory processes and techniques would provide the kind of institutional framework that draws in a group of participants who accurately reflect the initial balance of public opinion?

In sum, if the problem is a democratic deficit, the solution must be to find a way of increasing the power of the majority over the decision. We have suggested that it might be done directly through giving people a vote, indirectly through opinion surveys that are taken into account by decision makers or by restructuring the decision-making process to encourage the ‘silent majority’ to find their voice. In each case, the aim must be to find a way of increasing public participation in the siting process so that a small vocal minority no longer dominates it.

The Significance for Policy of Qualified Support

The second explanation of the social gap is that the failure of particular wind developments reflects a general principle of qualified support for wind energy. There are two basic kinds of response to this ‘problem’. First, we might try to change people’s minds so that their support becomes unqualified or, at least, the qualifications on their support are reduced or modified. Second, we might change key features of (particular) wind energy developments so that they meet the criteria for support. The choice of strategy for policy makers (and advocates of wind energy) will depend upon how we view the qualifications that lead people to oppose particular developments. If we consider that their objections are misguided and should not be accommodated, assuming we do not wish to exclude them completely, our strategy must be to change their minds. If we consider that their objections should be accommodated, our strategy should be to change the developments.

Some protagonists have argued that lack of knowledge is a major factor in opposition to wind farms (Ottinger & Williams, 2002). For example, Elliott (1994, p.354) quotes Mike Harper, (then) director of the British Wind Energy Association: ‘the controversy to date has largely revolved around misconceptions and misinformation distributed by groups aiming to stifle wind energy development completely’. Elliott (1994, p.354) disagrees with Harper’s diagnosis of the problem – ‘the opposition cannot be written off as simply being mistaken’ – but does not deny the possible importance of either disinformation or lack of information. It is important to distinguish two kinds

of 'knowledge' that the public might be lacking. First, they might be lacking understanding or appreciation of the importance of wind energy and its potential contribution to an enlightened energy policy. This seems to be the kind of 'knowledge' that the House of Commons Select Committee on Environmental Audit (2002, p.2) thinks the public needs: 'Government needs to launch a sustained and hard hitting campaign to raise the level of public awareness and understanding of these issues'. This kind of 'knowledge' might bridge the social gap by persuading the public that the concerns that they have about wind energy developments – e.g. landscape concerns – are less important than increasing the supply of wind energy. However, an education programme built on exhorting people who are already qualified supporters of wind energy to 'recognise' that wind energy is more important than they currently believe may not be successful (Wright, 1993). Indeed, there is considerable evidence to suggest that this general approach to promoting environmental concern is psychologically naïve (Kolmuss & Agyeman, 2002).

The second kind of knowledge that the public might be lacking concerns their objections to particular wind energy developments. For example, if people believe that a particular proposal will have a significant effect on local avian mortality or that a particular offshore wind farm will be a hazard to ships, it may be important to provide information from sources that they can trust which might allay their fears. In this context, the response is to take seriously the objection and to address it through research and education. The aim of this kind of education is not to change people's values – e.g. to persuade them that they should be more concerned about increasing wind energy capacity than about a 'few dead birds' – but rather to provide them with information that they can evaluate and take into account in their assessment of the proposed development. This kind of 'education' or 'information provision' should surely be an important part of the wind energy development process but it is important to understand its limitations. In particular, we must be aware of three issues.

First, information must be accessible and comprehensible. It must be presented in a way that the public can understand and it must be easy for them to obtain it. The provision of documentation, such as research reports or environmental impact assessments, is unlikely to meet the information needs of the public. Instead, wind energy developers and policy makers need to look carefully at their communication policies. In particular, they should draw on the growing literature on (and experience with) public participation techniques and environmental communication (Pleasant *et al.*, 2002). However, they will also need new research that considers the merits of alternative communication strategies in the particular context of wind energy.

Second, information will always be 'negotiated' by the public (Bush *et al.*, 2001). Any information provided by developers or 'independent' experts will be evaluated and understood in the context of each individual's existing 'web of beliefs' (Quine & Ullian, 1970). Each individual's 'web of beliefs' will be different (although there may be significant similarities in relatively homogeneous communities) depending upon their education and experience.

However, ‘lived experience’, ‘common sense’, ‘local knowledge’ and tacit or ‘practical knowledge’ will all play an important role (alongside ‘technical knowledge’) in how people respond to information provided by proponents of wind energy developments.⁵ If the perspectives of the particular communities are not understood by policy makers and developers, their ‘information provision’ will be a waste of time (and may even alienate communities). Therefore, direct engagement with communities to encourage them to come forward with their concerns and understandings of the issues would seem to be an essential part of a successful development process.

Third, information will always be ‘suspect’ in a climate of mistrust. It is widely recognised that the public do not trust politicians, developers or even experts (Healey, 1996; Breukers & Wolsink, 2003). Therefore, building trust among all of the parties involved in a wind energy siting process seems essential if we want people to take seriously the information that is provided to them (Healey, 1996). In sum, an ‘education’ or ‘information provision’ strategy designed to show qualified supporters of wind energy that their concerns are – in a particular case – unfounded can only succeed if it is grounded in an existing relationship of trust built through a participatory process. If policy makers want to pursue this kind of strategy they need to know more about how trust is built through participatory processes.

More knowledge is only one kind of ‘solution’ to the problems posed by qualified support for wind energy. The other alternative is to change ‘the world’ rather than changing people’s minds. More specifically, policy makers and wind energy developers could respond by accommodating people’s concerns. Pasqualetti (2001, pp.697–8) has argued that wind energy developers have pursued this path since the early days of wind energy:

Only 20 years into the modern development of wind power, many of the sources of worry and disapproval have already been addressed successfully. Within that short period, the challenges of turbine size, color, finish, spacing, noise, efficiency, reliability, safety, and decommissioning all have been remedied or conceptually solved by developers, equipment manufacturers, and regulatory authorities.

Nonetheless, Pasqualetti (2001) also recognises that important concerns remain, especially about the impact of wind farms on the landscape (see also Wolsink, 2000). In other words, it is the specific choice of location for wind farms and their cumulative effect on particular landscapes that concern qualified supporters of wind energy (Wolsink, 2000). Unlike the mainly technical issues that Pasqualetti (2001) claims have been addressed, there is no ‘technical fix’ for the problem of landscape impact. Instead, the only way of accommodating people’s landscape concerns is to site wind farms in places that people find more acceptable.

The increasing interest in offshore wind development is an example of this strategy. As former Energy Minister, Brian Wilson, has said, ‘There is ample

evidence that the biggest new contributor to our renewables target is going to be offshore wind' (quoted in McCarthy, 2003, p.7). The interest in offshore wind is clearly motivated by the 'simpler . . . local "sociology" of offshore wind power cases' and the relative lack of interest of 'Countryside protection organization[s]' (Marsh & Toke, 2003, p.4; see also CPRE, 2003). However, the siting of offshore wind farms still needs careful consideration to accommodate fishing, shipping, Ministry of Defence, radar, environmental and seascape concerns (Henderson, 2002). Similarly, the siting of onshore wind farms may need to be more carefully planned than at present if landscape concerns are to be accommodated. There are, at least, three different policy 'levels' at which this problem might be tackled.

First, it might be left – as it often is at present – to developers to work with local communities and other interested parties to find a site that is acceptable. An intelligent developer may recognise that there are good reasons for involving interested parties in the siting process from the beginning to ensure that stakeholders 'own' the decision that is made and are less likely to oppose it later. Halliday (1993) describes this as a move from a 'decide–announce–defend' approach to one of 'consult–consider–modify–proceed'. Policy makers and developers need to consider more carefully how developers can successfully engage with local communities.

Second, national policy makers might set clear planning guidelines that prohibit or limit development in areas that meet certain requirements. For example, this is the current situation with Areas of Outstanding National Beauty. It makes sense to have national policies that provide clear planning guidance to try to ensure consistency of decision making.⁶ However, it is also important – if we want to avoid local opposition to developments – to allow enough local flexibility so that communities do not feel that inappropriate national rules are being imposed on them. In other words, national planning policies must be designed to allow for the particularities of place.

The third policy 'level' that might affect siting choices is energy policy. A number of commentators have argued that UK energy policy has encouraged large-scale wind developments in high-wind areas (often sensitive landscapes) (Hedger, 1995; CPRE, 2003). In particular, the structure of the energy market and the way that renewable energy has been introduced into the energy market (including subsidies, competitive pricing and the National Fossil Fuels Obligation) have been highlighted as factors that have driven development in particular directions.⁷ If policy makers want to take seriously the possibility of changing 'the world' to accommodate the concerns of qualified supporters of wind energy, it may not be enough for them to look to particular developers or to the planning system. They may also need to look much more broadly at energy policy and the energy system.

To summarise: insofar as the social gap is the product of qualified support for wind energy, policy makers must decide whether they need to improve people's access to better information and understanding or modify developments in response to people's concerns. We have argued that the only credible

form of information provision is grounded in trust that is built through two-way communication embedded in an inclusive participatory process. To achieve this trust policy makers need to devote more attention to building the institutional capacity and personal skills to design and manage this kind of participatory process. The alternative to information provision may be no less demanding. At the first 'level' of site negotiation a participatory process that begins before potential developers make any siting decisions is essential. At the second 'level', national guidelines must provide a framework for consistent yet place-sensitive local decision making. At the third 'level', it may only be through a radical revision of energy policy that the incentive structures for developers are changed so that less sensitive sites become more attractive.

The Significance for Policy of Self-interest

The third explanation of the social gap is that people support wind energy in general but actively oppose any developments in their own area for self-interested reasons. There are three important ways of responding to Nimbyism. The classic response to collective action problems of this type is to propose an authoritarian solution. A good example of this kind of response is the so-called 'Nimby Bill' in the Netherlands:

[The Nimby Bill] gives the national and provincial government the authority to impose concrete land uses to be taken up by the municipality in its zoning scheme. The instrument was intended to force decisions on locations for waste facilities and manure processing installations, or other unpopular facilities, like asylum seekers' centres, or wind farms. (Breukers & Wolsink, 2003, p.9)

However, Breukers and Wolsink (2003, p.9) note that 'A first and only attempt to ever apply the Nimby instrument failed [in 2000]'. Authoritarian 'solutions' may be more likely to promote opposition than overcome it. Attempting to exclude people from the decision-making process is likely to alienate them and increase levels of opposition (Elliott, 1994; Krohn & Damborg, 1999). Opponents will find new ways of making their voices heard if they are excluded from direct involvement in siting decisions. So exclusion may make Nimbys fight harder while qualified supporters are alienated.

The second response is to appeal to people's 'better nature' or to try to promote a more effective sense of 'environmental citizenship' (Dobson, 2003). In our opinion, the promotion of environmental citizenship is an essential part of a successful environmental policy but it is far from clear how environmental citizenship can be promoted effectively. In the context of wind energy developments, it is difficult to see how Nimbys are likely to be converted by any kind of targeted education programme. The promotion of environmental citizenship seems much more likely to be dependent upon cultural changes that will occur only over long periods of time and through the development of the

right kinds of 'green' social, cultural and (ultimately) physical infrastructure (Horton, 2005).

The third response to Nimbyism takes most seriously the Nimby's motives. If Nimbys are motivated by self-interest, the best response might be to find ways of increasing the personal benefits that they will receive from a wind energy development. Two versions of this approach might be distinguished. The first version offers financial compensation to offset the costs of development to the Nimby (Rand & Clarke, 1990; Bosley & Bosley, 1992). This strategy might provide a way of overcoming Nimby opposition or 'co-opting nascent NIMBY opposition' (Kahn, 2000, p.28). Moreover, even principled opponents of particular wind developments might be 'co-opted' by sufficient financial incentives. Their opposition to a development may not be grounded in self-interest but they might be tempted *not* to oppose the same development if they stand to gain financially from it. Such people are not genuine Nimbys (nor are they 'opportunists' in Kahn's (2000) sense) but (crudely put) their 'principles are for sale at the right price' or (less unkindly) there are limits to the opportunity cost that they can afford (or are willing) to pay to stand by their principles.

However, before policy makers choose to adopt a financial incentive strategy they need to be sure that they are dealing with either Nimbys or people whose 'principles are for sale'. In addition, they need to have good grounds for believing that they can afford to pay the asking price. A compensation strategy may run a particular risk of alienating people if either they are not offered what they consider to be enough or if their principles are not for sale. As Wolsink (1994, p.864) states, 'this strategy of compensation is becoming popular, but it is also very dangerous'. He notes payment can be seen as a bribe, especially when compensation is not proposed at an early stage but offered after a division between developers and opponents emerges. This may be particularly problematic if, as Luloff *et al.* (1998, p.84) note, incentive packages are often targeted to 'economically vulnerable and politically weak communities'. Developers may also be justifiably worried that a compensation strategy might encourage 'opportunism' (Kahn, 2000, p.27).⁸

The second 'personal benefits' approach allows the Nimby to buy shares in a community- (or privately) owned wind energy development project so that they have a financial stake in its success. Community-owned wind farms are widely advocated because of the success of the Danish model (Toke & Elliott, 2000; Toke, 2002; CPRE, 2003). However, it may be important to distinguish the economic from the social and political effects of community ownership. The benefits of community ownership may have as much to do with local involvement in the development process as they do with the potential profits of ownership. For example, reduced opposition to community wind farms might be due more to local control over the siting process – including local accommodation to the concerns of qualified supporters of wind energy and the personal concerns of Nimbys – than to the financial incentives offered by share ownership. If it is control rather than money that reduces opposition to

community wind farms, private developers should not expect to overcome local opposition by selling (or giving) shares in wind farms to local people but they might reduce opposition by involving local people in the planning, development and management of wind farms.

In sum, we have suggested that Nimbyism may pose a severe challenge to policy makers. Financial inducements (compensation or profits) may be an appropriate way of dealing with Nimbyism but they must be managed carefully. Moreover, they may also help to 'silence' principled opponents of wind energy. However, we have suggested that policy makers need to know whether a financial incentive strategy is the most effective in wind energy cases. Are most opponents Nimbys? Can qualified supporters of wind energy be 'bought' at an 'affordable price'? Is it money that matters to opponents of wind energy or is it control over the character of developments? Policy makers must find answers to these questions before they can develop effective policy responses.

Conclusion

In this article, we have attempted to develop a theoretical framework in which we can think about the 'social gap' in wind farm siting decisions and how policy makers should respond to it. Our aim has not been to provide a definitive diagnosis of the social gap or to prescribe particular policy responses. Instead, we have identified three plausible explanations of the social gap and emphasised the importance of empirical research to examine the relative contribution of those explanations to the social gap. In addition, we have identified a range of possible policy responses to each explanation. We have argued that some policy responses may be ineffective, impractical or illegitimate. The effectiveness of other policy responses is likely to depend (among other things) on the relative importance of the alternative explanations of the social gap. If the UK government wants to increase capacity rapidly it needs to develop a better understanding of the social gap so that it can respond appropriately to the real causes of failure to commission wind farms. Further empirical research that systematically examines the significance of the alternative explanations canvassed in this article would seem to us to be a good starting point.

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Notes

- 1 'Tilting at windmills? The attitude-behaviour gap in renewable energy conflicts' was funded by the Economic and Social Research Council as part of the Environment and Human Behaviour New Opportunities Programme.
- 2 On the result of the Carno application see Toke (2002). On the positive effects of familiarity see Krohn and Damborg (1999) and Pasqualetti (2001).
- 3 It is likely that qualifications will only be 'discovered' or (at least) developed in any detail through acquaintance with particular developments when people really begin to think about their views on wind energy and its impact on the landscape or the environment (Wolsink, 2000).
- 4 The importance of local perceptions of the developers (and their motives) is emphasised by a number of commentators. See, for example, Krohn and Damborg (1999) and Pasqualetti (2001). However, the relevance of community solidarity – and its effects on attitudes – does not seem to have been discussed.
- 5 On local knowledge see, for example, Irwin (1995). Developers who ignore local knowledge are likely to alienate communities (Breukers & Wolsink, 2003). On the distinction between 'technical knowledge' and 'practical knowledge' see Oakeshott (1991). The importance of lived experience seems clear in the increased support for wind farms after they have been built (Pasqualetti, 2001).
- 6 How far this is currently (or has been) the case in the UK is a matter of dispute. The updated Planning Policy Statement 22 on renewable energy published in November 2003 may be seen as an attempt to set clearer guidelines, as it states that the wider economic and environmental benefits of renewable energy developments, whatever their scale, must be taken into account.
- 7 On subsidies as a cause of rapid commercialisation see Elliott (1994). On the impact of competitive pricing see Toke and Elliott (2000) and Toke (2002). On the National Fossil Fuels Obligation (NFFO) see Hedger (1995) and Toke (2002).
- 8 An example from the UK offshore wind industry is the sudden emergence of large numbers of fishers who claim to be affected by wind energy developments (personal conversation between one of the authors and a fishermen's representative, 2003).

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