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**COMMUNITY BENEFITS FROM WIND
POWER**

A study of UK practice &
comparison with leading European
Countries - Report to the
Renewables Advisory Board & the
DTI

URN NUMBER: 05/1322

dti

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COMMUNITY BENEFITS FROM WIND POWER
A study of UK practice & comparison with leading European countries

Report to the Renewables Advisory Board & the DTI

URN NUMBER 05/1322

Contractor

Centre for Sustainable Energy
With
Garrad Hassan

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Contents

POLICY MAKER'S SUMMARY	3
EXECUTIVE SUMMARY	6
1 Introduction	17
2 Study Objectives.....	19
3 Defining community and benefit.....	19
4 Study Methodology.....	21
4.1 UK case studies.....	22
4.2 UK questionnaire survey	24
4.3 Case studies in leading European countries	25
4.4 The context for wind power development in each country.....	26
5 The UK experience	28
5.1 The context for wind power development in the UK.....	28
5.1.1 UK Profile.....	28
5.1.2 UK Wind Power Promotion.....	29
5.1.3 UK Planning System and wind power	30
5.1.4 UK Public Attitudes	33
5.1.5 UK Community Involvement	34
5.2 The scale and nature of community benefits on offer from UK wind power projects.....	36
5.2.1 UK Case Studies Analysis of Benefits	37
5.2.2 Questionnaire Survey Analysis of Benefits.....	45
5.2.3 Formalisation of Community Benefits.....	52
5.2.4 Community benefits as material considerations in planning decisions	53
5.3 The role of community benefits in planning and public acceptance	54
5.4 The need for a best practice guide on community benefits and community engagement in the UK.....	58
5.5 Key findings from UK surveys: a summary.....	60
6.1 Germany.....	62
6.1.1 German Profile.....	62
6.1.2 German Wind Power Promotion	63
6.1.3 German Planning System	63
6.1.4 German Public Attitudes	64
6.1.5 German Community Involvement.....	66
6.2 Denmark	68
6.2.1 Denmark Profile	68
6.2.2 Danish Wind Power Promotion	70
6.2.3 Danish Planning System	71
6.2.4 Danish Public Attitudes	72
6.2.5 Danish Community Involvement.....	73
6.3 Spain.....	79
6.3.1 Spanish Profile.....	79
6.3.2 Spanish Wind Power Promotion	79
6.3.3 Spanish Planning System	79
6.3.4 Spanish Public Attitudes	80
6.3.5 Spanish Community Involvement.....	81

6.4	Ireland.....	83
6.4.1	Ireland Profile	83
6.4.2	Irish Wind Power Promotion.....	83
6.4.3	Irish Planning System	84
6.4.4	Irish Public Attitudes	84
6.4.5	Irish Community Involvement	85
7	Comparing the UK and leading EU countries.....	86
7.1	Wind Power Promotion	86
7.2	Planning system.....	87
7.3	Public Attitudes	89
7.4	Community Involvement.....	90
7.5	Lessons for the UK from European comparison	92
8	Analysis and conclusions.....	94
9	Recommendations to the Renewables Advisory Board.....	98
10	References	103

POLICY MAKER'S SUMMARY

The routine provision of meaningful benefits to communities hosting wind power projects is likely to be a significant factor in sustaining public support and delivering significant rates of wind power development.

In direct contrast to the UK where community benefits typically rely on voluntary cash contributions to a community fund from the project developer, the evidence from Spain, Denmark and Germany indicates that significant local benefits are effectively built into the fabric of all wind power projects.

These routine benefits typically take the form of the local tax payments, jobs and economic benefits from regional manufacturing, and, for Denmark and Germany, opportunities for local ownership. In these leading EU countries for wind power development, which have enjoyed far higher rates of wind power development, the concept of a voluntary contribution or a community fund is unfamiliar; benefits are already accruing without the need for developers to volunteer additional payments.

Comparison of 'Typical' Community Benefits from Wind Power in Different Countries

Benefit / Feature	UK	Denmark	Germany	Ireland	Spain
Community fund contribution	Yes	No	No	No	No
Community compensation	No	No	Yes	No	No
Pre-approval contribution	No	No	No	No	Yes
Local taxes	No	Yes	Yes	Yes	Yes
Jobs	No	Yes	Yes	No	Yes
Individual investments	No	Yes	Yes	No	No
Co-operative investments	No	Yes	No	No	No

In addition, in the UK the voluntary provision of a community fund is generally not being treated as a material local benefit of the project in the planning process. In other countries, this is a largely irrelevant consideration for any single project since individual project planning decisions are taken by officials within the context of local or regional planning strategies. It is these strategies which take account of (and encourage) these routine local economic benefits.

This overseas evidence points to a need to make meaningful community benefits more routine and systematic in UK wind power projects if future rates of deployment are to grow. However, much of what is done in these other countries is not directly importable.

The use of permitting systems to support local manufacturing in Spain is not consistent with the UK's strict interpretation of EU procurement rules. The dominance of Danish and German wind power industries was born out of their own historically high development activities. And UK support mechanisms for renewables have created market conditions with relatively high entry costs (and risks) making it harder for local ownership to feature.

In this context, the focus for how local communities engage with, and gain from, wind power developments in the UK have tended to be on:

- the nature and openness of engagement with local communities;
- direct financial contributions – a community fund of some kind – and/or
- opportunities for community ownership or 'dividend'.

Assuming the continuing absence of policies which will ensure other clear community benefits emerge as a matter of course (jobs, local taxes etc), it would be legitimate to focus on perfecting these approaches as ways of capturing for the local community at least some of the benefits of a wind project which in other countries would be accruing as a matter of course.

This analysis leads to 6 recommendations for the Renewables Advisory Board and DTI.

Recommendation 1 – a good practice 'toolkit' on community benefits

- Develop a national good practice 'toolkit' on community benefits for developers, planners and community groups, providing guidance on the nature and scale of benefits available together with a clear justification for their provision.

Recommendation 2 – planning best practice guidelines to legitimise community benefits within planning process

- Draw up planning best practice guidelines, to be subsequently integrated into future planning policy guidance, which treats community benefits explicitly as a legitimate and relevant aspect of a wind power project that shall be considered as material to planning decisions.

Recommendation 3 – guidance on community engagement

- Establish new good practice guidance – or more fruitfully, a protocol agreed between different stakeholders – on how to liaise effectively with local communities during the project development process and, in particular, how to explore and negotiate community benefits with communities and other stakeholders.

Recommendation 4 – a review of the potential for local taxes to accrue locally

- Review the potential for existing local business taxes for wind power projects to benefit the locality more directly and proportionately (thus ensuring some local financial benefit is consistently applied and routine rather than case specific and voluntary)

Recommendation 5 – research into the impact of new planning policy framework

- Investigate how the new planning policy framework coming through from PPS22 and PPS1 in England, NPPG6 in Scotland, and, in due course, a revised TAN 8 in Wales, is influencing what is and what isn't being considered material in planning decisions.

Recommendation 6 – bankable models for community ownership

- Undertake research, in collaboration with the finance sector, to establish reliable and 'bank-approved' models of project commercial and financing structure which enable local community ownership without great complexity.

In combination, these measures would make community benefits a legitimate and potentially routine aspect of wind power development in the UK, raising the prospect of long-term and significant improvements in UK wind power development rates based on sustained public support.

EXECUTIVE SUMMARY

The extent to which communities in the UK benefit from wind power projects in their locality has become a contentious issue.

Questions are being asked about whether communities are getting their 'fair share' of the economic benefits of wind power development and if higher local benefits would secure higher levels of planning success. There are also questions about whether the provision of such benefits should have a more formal influence on planning decisions. Anecdotal evidence from other EU countries with much higher rates of wind power development suggests they are delivering proportionately more local benefits.

Yet to date there has been little systematic documentation of the scale and nature of benefits flowing to communities hosting wind power developments in the UK, or how it compares with other leading European countries. Similarly, there is little analysis of the nature of the relationship (if any) between the benefits offered to communities by wind power projects and the planning decision-making process.

This study was designed to establish a firmer evidence base about the scale and nature of community benefits being offered in the UK, to increase understanding of how the whole process of community engagement plays out in the planning decision-making process, and to enable comparison with common practices in other leading European countries, specifically: Denmark, Germany, Spain and Ireland.

Study Methodology

The study involved:

- examining in detail 10 wind power projects in the UK of at least 10 turbines which have recently successfully completed planning, with interviews with both planning officers and developers where possible;
- undertaking a questionnaire survey of remaining UK wind projects built in the last 5 years (with returns obtained from 33% of project developers or owners);
- analysing the context for the development of wind power in the UK, Spain, Germany, Denmark and Ireland, including support mechanisms, public acceptance, planning systems, community involvement (jobs, local income, ownership), and;

- reviewing individual wind power projects in each of these countries to provide concrete examples of how the national context shapes wind development practice.

In examining community benefits, and to enable international comparisons, the study assessed all opportunities for local communities to benefit from the wind power project – from direct financial contributions into ‘community funds’ and opportunities for local ownership to payment of local taxes and jobs and construction and component manufacturing contracts.

Key findings from UK surveys

- There is not a standard approach to the nature and scale of community benefits or to approaches to community engagement by wind power developers in the UK. While payment into a community fund of some kind is an increasingly ‘standard’ (but not universal) feature, there is no standard level of payment and no standard approach to the management of the funds or the purpose to which they may be put.
- As development activity intensifies under the RO, developers are exploring a number of different approaches to offering enhanced community benefits
- There is no strong evidence from this survey that higher levels of community benefit offered during the planning process necessarily lead to earlier planning success or stronger local public acceptance, though some evidence that a lack of community liaison can increase the likelihood of having to resort to appeal or public enquiry.
- Planning officers and developers generally share a sense that the level of community benefits offered plays little explicit part in the local decision-making process (indeed some felt that they sometimes brought a negative sense that developers were attempting to ‘buy consent’).
- There is however a strong belief that the level of community benefits offered is an influence on the views of individual planning committee members ‘behind the scenes’, even though there is only anecdotal evidence of this.
- Some developers also feel that the level of community benefits on offer does have an influence (though rarely significant) on the nature of local public response to a proposal.

- Concerns about being portrayed as ‘buying consent’ appear to be capping the level of direct financial benefits developers are offering to communities.
- Experience varies as to whether any specific community benefit is treated as a material consideration in the planning decision. General economic benefit to the area has been so treated in at least two case studies (Cefn Croes and Drummuir). Other direct community economic benefits of equivalent value (e.g. cheaper local electricity) may be material in theory but are rather complex in their implementation.
- It is unusual for projects to establish formal agreements relating to the provision of community benefits, with only one in four of the surveyed projects having done so with either the planning authority or the local community.
- Local or regional economic benefits, in the form of significant turbine or component manufacturing jobs, are proving difficult for UK wind projects to achieve.
- The level of benefits realised during a project’s construction and its subsequent operation tend to be greater than those offered during planning. This is particularly the case with: (a) the involvement of local contractors in construction (which is very common in practice but difficult to guarantee prior to tender), and; (b) public and school liaison once operation has begun.
- Developers and planners generally share a belief in the value of developing good practice guidance on community benefits and, more particularly, on community engagement.

Lessons for the UK from European comparison

The concept of community benefits does not appear to be contentious in other countries in the way it is becoming in the UK:

- Benefits accruing to local communities from wind power projects in Spain, Denmark and Germany – where levels of wind power development significantly exceed those in the UK – are generally higher than in the UK.
- Jobs and local taxes appear to be important and significant benefits in each of these countries. Payments to community funds are rare. Local

ownership is a feature of Denmark and Germany, partly as a by-product of a simple and relatively low-risk mechanism for supporting wind power which has created low entry costs and enabled a preponderance of smaller wind farms (cf the UK where the opposite is true)

- There is no strong evidence that these higher benefits are necessarily securing higher levels of public acceptance in general (since these are already high in all countries studied including the UK). However, it is likely that they are important in sustaining acceptance as wind development becomes more intensive, and in limiting local opposition to a specific project.
- There is also no indication that the higher levels of benefits result from deliberate policy to stimulate community benefit in the narrow 'community fund' sense it has tended to be used in the UK. Instead there has been, in Germany and Denmark, deliberate intention to create simple support mechanisms which enable wide participation in development and ownership of wind power projects and, in Spain, deliberate intention to secure significant regional economic benefits.
- There is a perception that national and/or regional economic benefits derived from the wind power industry are strong factors in public acceptance in these countries. Wind power *demonstrably* creates jobs in these countries - potentially creating a virtuous circle that greater development is now stimulating more orders for turbines manufactured 'at home' and supporting existing or new jobs and local economies.
- Planning decisions for individual project proposals tend to be taken by officials within local or regional planning strategies established with political and public input, making decisions about individual projects less contentious and less subject to specific objection (though not necessarily any quicker).

The clear picture to emerge from this study is that in leading EU countries, unlike the UK, community benefits are effectively built into the fabric of wind power development. So much so, that the issue of 'community benefits' is not contentious in the way that it has become in the UK.

Community benefits have become an issue in the UK because:

- (a) Historic levels of development have been too low and too unpredictable to secure the wider available economic benefits of wind power development in terms of manufacturing and servicing

- jobs – so there isn't the 'it's a good thing for Britain / the region' economic argument;
- (b) the UK support mechanisms for renewables have created market conditions with high entry costs, leaving the main development activity to 'outside' commercial interests, particularly 'big' utilities, rather than locally-owned initiatives;
 - (c) key local benefits such as payment of business taxes do not accrue to the locality;
 - (d) both the financing structure of wind projects and the financial regulations governing an offer of investment to members of the public combine to discourage community involvement in ownership as complex and potentially costly to establish, and;
 - (e) the planning system does not address community financial benefits explicitly or transparently, leading to a somewhat shady picture of offers of benefit packages being 'in the background' in what is a politicised planning process focusing on individual project proposals.

This is in direct contrast to Spain, Denmark and Germany where community benefits are more-or-less assured by various combinations of local or regional wind turbine manufacturing and construction jobs (all, but particularly Spain), local taxes (all), and local ownership facilitated by simple support mechanisms (principally Denmark and Germany).

These countries have seen far higher levels and faster rates of wind power development than the UK and it is likely that such routine provision of meaningful community benefits has been a key and uncontentious factor in enabling this success.

The question is whether an effective combination of these conditions for success can be created in the UK.

The answer is that it cannot be created in ways which are directly importable from these other countries. There is, in this context, some truth in the adage 'abroad is foreign'. The UK's policy for wind power development has emerged out of much stronger underlying commitments to achieving policy objectives through the use of market mechanisms, to our strict interpretation of EU procurement rules, to national business taxation frameworks, and to unimpeachable local planning decision-making which focuses political decision-making and public involvement on individual project proposals.

These underlying policy positions make it difficult to create conditions in the UK in which strong and explicit community benefits (local or regional jobs, locally-driven and owned development, and local taxes) are as much part of the fabric of wind power development as they are in the more successful EU countries.

Yet failure to deliver such benefits on a routine basis in the future may undermine public support for (and ultimately the achievement of) otherwise reasonable ambitions for the future growth of UK wind development.

As a result of these obstacles, the focus for how local communities engage with, and gain from, wind power developments in the UK has tended to be on:

- the nature and openness of engagement with local communities during the planning process;
- direct financial contributions – a community fund of some kind; and/or
- opportunities for community ownership or ‘dividend’.

In the absence of policies which will ensure other clear community benefits emerge as a matter of course (jobs, local taxes, etc.); it would be legitimate to focus on perfecting these approaches as ways of capturing some of the benefits of a wind project for the local community which in other countries would be accruing as a matter of course.

However, from this study’s findings, to do so will clearly require some changes to the way in which these issues are dealt with in the planning process. It would also gain from a good practice ‘toolkit’ which creates a clear and transparent framework of benefits which could become routine in future. Effective and ‘finance worthy’ models of community ownership (or related dividend) would also be useful to remove some of the complexities which currently afflict attempts to achieve this end.

This analysis leads to six recommendations which assume that there will not be a wholesale change of UK policy on supporting renewables through market mechanisms and following a strict interpretation of EU procurement rules.

Recommendation 1 – a good practice ‘toolkit’ on community benefits

- Develop a national good practice ‘toolkit’ on community benefits for developers, planners and community groups, providing guidance on the nature and scale of benefits available together with a clear justification

for their provision and detail of those aspects which should be considered routine and those which are project-specific.

These should be drawn up through a process of stakeholder engagement and consultation to ensure widespread 'ownership'.

Recommendation 2 – planning best practice guidelines to legitimise community benefits within planning process

- Draw up planning best practice guidelines, to be subsequently integrated into future planning policy guidance, which treats community benefits explicitly as a legitimate and relevant aspect of a wind power project that shall be considered as material to planning decisions.

Recommendation 3 – guidance on community engagement

- Establish new good practice guidance – or more fruitfully, a protocol agreed between different stakeholders – on how to liaise effectively with local communities during the project development process and, in particular, how to explore and negotiate community benefits with communities and other stakeholders.

The new South West Public Engagement Protocol for Wind Energy (and associated guidance) provides a good example of both an effective process to develop a protocol with widespread 'buy in' and a sound framework within which developers, planning authorities and public interest and community groups may work.

Recommendation 4 – a review of the potential for local taxes to accrue locally

- Review the potential for existing local business taxes for wind power projects to benefit the locality more directly and proportionately (thus ensuring some local financial benefit is consistently applied and routine rather than case specific and voluntary)

Recommendation 5 – research into the impact of new planning policy framework

- Investigate how the new planning policy framework coming through from PPS22 and PPS1 in England, NPPG6 in Scotland, and, in due course, a revised TAN 8 in Wales, is influencing what is and what isn't being considered material in planning decisions.

Recommendation 6 – bankable models for community ownership

- Undertake research, in collaboration with the finance sector, to establish reliable and ‘bank-approved’ models of project commercial and financing structure which enable local community ownership without great complexity – either as a result of direct investment by local individuals or within some form of community fund.

In combination, these measures would remove any sense that the levels of community benefit are dependent on developer largesse or, equally, limited by concerns of being seen to ‘buy consent’. They would make the issue of community benefits a legitimate and potentially routine aspect of wind power development in the UK.

In the absence of other measures to create the conditions of success found in more successful EU countries for wind power development, these measures have the potential to create the basis for long-term and significant improvements in UK wind development rates based on sustained public support.

1 Introduction

Much of the debate over the development of wind power in the UK has centred on the balance between the relatively local impacts of a project and its wider benefits of reducing carbon emissions and improving energy security.

In recent years, questions have been raised about whether communities hosting wind power projects should be gaining some of the economic benefits of the project more directly. Would this, it is asked, help secure higher levels of local public acceptance and greater willingness of local politicians to grant planning consent?

And where some community benefits are offered – as is increasingly typical – questions are asked as to whether UK developers are ‘short-changing’ communities compared with their European counterparts? Questions are also asked about whether community benefits should have any formal influence on planning decisions and whether it is legitimate for local authorities to set out the levels of benefit which they expect to be offered.

Yet to date there has been little systematic documentation of the scale and nature of benefits flowing to communities hosting wind power developments in the UK, or how it compares with other leading European countries.

Similarly, there is little analysis of the nature (if any) of the relationship between the benefits offered to communities by wind power projects and the planning decision-making process.

Moreover, in debate on the issue, the notion of ‘community’ is often vaguely defined and a desire to establish a ‘sense of community ownership’ is frequently recast as a need to create explicit opportunities for members of the community to take some legal ownership of the project. While there are some UK-based models of communities taking some ownership of wind projects (e.g. Baywind Energy Co-operative, Bro-Dyfi Community Renewables Ltd) these are of modest scale and very much the exception rather than the rule.

As a result, discussions on the ‘best’ approach to securing community acceptance and permission for wind power proposals tend to be dominated by:

- largely untested assumptions about the nature of benefits which secure community engagement and acceptance;

- often narrow interpretations of what constitutes 'benefits' and of what might motivate members of the public to accept wind power projects (if they do);
- a tendency to disregard benefits accruing to only a few members of the host community (e.g. the landowner), thereby presenting only part of the 'benefits' picture, and;
- accusations with regard to the low level of benefits available in the UK compared with other European countries where wind power development has been more extensive, without a full understanding of the nature of the benefits in other European countries and their policy, regulatory and cultural context.

This lack of hard evidence and these shifting definitions are unhelpful to:

- a. developers seeking permission for a wind power project;
- b. members of the local community trying to decide how they feel about the balance of benefits and impacts of the proposal;
- c. planning officials and decision-makers attempting to make sense of the arguments for and against the project, and;
- d. the development of a clear position on how local benefits provided by wind power projects should be considered within national, regional and local planning policies and within individual planning decisions.

This study was designed to enlighten discussions on the issue of community benefits and community engagement with wind power projects in the UK. The intention has been to establish a firmer evidence base about the nature of community benefits being offered in the UK, how the whole process of community engagement plays out in the planning decision-making process, and to enable comparison with common practices in other leading European countries, specifically Denmark, Germany, Spain and Ireland.

The DTI on behalf of the Renewables Advisory Board Planning Working Group commissioned a project team from the Centre for Sustainable Energy and Garrad Hassan to undertake this study.

2 Study Objectives

The main objectives of the study were to:

- investigate and document examples of wind farm developments in the UK and elsewhere in Europe in order to establish how the UK compares with other EU countries with respect to community benefits;
- understand the types and level of benefits available to communities from wind power developments in the UK and in Europe and the influence exerted by the different economic, regulatory, planning and cultural conditions under which renewable energy is deployed in each country;
- ascertain the impact of community benefits on the rate of deployment of wind power projects both in the UK and Europe and whether the level or type of benefit make any difference to planning consent and community acceptance;
- establish whether there is a case for benchmark best practice guidance for developers in the UK on community engagement and community benefits to help reach the Government's 2010 renewable electricity target and aspiration for 2020;
- if there is a case for best practice, assess whether, to what extent, and how this could be adopted uniformly in the UK given the economic, regulatory, planning and cultural conditions under which renewable energy is deployed in the UK.

3 Defining community and benefit

The starting point for the study was to establish greater clarity in the definitions of both 'community' and 'benefit'.

On the surface it may appear that, as a widely used phrase, 'community' is easy to define. However, as recognized recently by the Government, this is not the case. In its 2003 publication on Sustainable Communities, the Office of the Deputy Prime Minister stated that "*deeper attempts to define community come to the conclusion that there are many types of community*" and "*whatever it is that makes a group of people into a community is elusive and fluid.*"

Research often distinguishes between **community of locality** (based on a geographical location) and **community of interest** (i.e. with a shared outlook with regard to faith, politics, social interaction, ethnicity or common interests). There can therefore clearly be communities of interest within communities of locality.

For the purposes of this study our focus was communities of locality – with the locality defined in relation to the wind power project and including all people living there. We are therefore talking principally of **local** benefits.

However, the geographical extent of the ‘locality’ in terms of **where benefits accrue** is harder to define. It depends largely on the inhabitants’ collective sense of belonging and shared purpose – and this may change depending on the nature of the benefit in question.

Thus benefits relating to the value of ‘local’ content in manufacturing may actually be defined as ‘local’ on a county or regional basis. Whereas a fund to improve local communal facilities may only be perceived as a benefit in relation to the project if it is restricted to the villages or towns within viewing distance of the project (or even closer).

Similar clarity is needed for the definition of what should be considered a ‘benefit’. The study examined the following aspects of a wind power project when assessing its benefit to the local community:

- Involvement in the development process by local landowners, groups or individuals
- The use of locally manufactured content
- The use of local contractors during construction
- Equity share or other investment opportunity for local communities
- Land rental to a local landowner
- Local business rates and/or taxes
- Local community facility improvements through lump sum or ‘in kind’ contribution
- Revenue or profit share
- Energy related benefits (such as cheaper electricity)
- Employment of local people in O&M provision
- Education visits and school support
- Habitat enhancement
- Visitor centres and tourist facilities
- Community liaison activities (meetings, information provision, talks to groups etc)

Clearly, there is a question over the extent to which members of the local community universally perceive each of these as a benefit (for example, a

local contractor or local landowner may not be perceived as part of 'the community' by other local people).

However, for the purposes of this study, it was deemed important to consider as 'benefits' all aspects where the wind power project has provided something from which local people – individually or collectively – have an opportunity to gain and/or engage more deeply with the project (be that money, facility improvements, employment, education/information or other).

4 Study Methodology

Four different approaches were taken to provide data and information to enable the study objectives to be achieved:

- a. 10 detailed case studies of major wind farms constructed in the UK (minimum 10 turbines), seeking experiences from developers, current site owners and, where possible, planning officers involved in the planning process;
- b. A questionnaire survey circulated to developers of all 43 wind projects built in the UK in the last 5 years (from the most recent, Llangwryfon II, back to the Royal Seaforth Dock project, completed in April 1999), to test broader opinion within the wind power industry;
- c. Case studies of major wind farms (where possible with a minimum 10 turbines) selected from Denmark, Germany, Spain and Ireland;
- d. Analysis of the policy, planning, regulatory and cultural basis for wind power development in each of the countries studied.

The methodology employed for each of these elements has been summarised in this section, with detail of the key objectives.

In designing the study, consideration was given to exploring actual community perceptions of wind farms and their relationship with community benefits through one-to-one interviews. This was rejected because of the difficulty of identifying the relevant individuals to find the 'community' perspective (beyond existing public opinion polls) and, in particular, the potential expense of assessing this meaningfully. Developers and planning officers questioned in the surveys were asked about their perceptions of local public opinion and whether they had any evidence.

Consideration was also given to the possibility of examining the extent of community benefits offered where planning applications had failed. While theoretically this could have helped to improve understanding of how such benefits impact on planning decisions, in practice it proves difficult to secure accurate objective data and telling views on the role of community benefits in failed applications. It is hoped that, because most of the main companies involved in wind power development in the UK were surveyed for the study, perspectives relating to what does or does not make a difference in planning were captured in this study. There may nevertheless be value in monitoring the level of community benefits offered in all planning applications on a more systematic basis in future, so that impacts on planning and changing trends can be assessed regularly.

4.1 UK case studies

10 major UK onshore wind farm projects of at least 10 MW were selected for case studies. The selection was designed to be reasonably representative of the range of locations, owners, developers and consenting experience with wind power in the UK, resulting in 4 from England, 2 from Wales, 3 from Scotland and 1 from Northern Ireland. The 'sample' is more recent than would be truly representative of UK wind development to date, reflecting the intention to review current and recent practice.

The selection includes two projects consented in the last five years under Section 36 of the Electricity Act and three that were refused consent by the local planning authority and approved on appeal and/or following public inquiry.

Table 1: The case studies

Project Name	Total Capacity MW	Number of Turbines	Make	Developer	Region	Appeal	Planning Officer Recommendation/ Planning Committee Decision	Status at time of survey
Altahullion	26	20	Bonus 1300	B9 energy	NI	N	PO+	Operational 2003
Cefn Croes	58.5	39	GE	Renewable Development Co / GE Energy	Wales	s36	PO- / PC'tee+	Operational since 2004
Ffynnon Oer	21	16	Tbc	National Wind Power	Wales			Approved
Burton Wold	20	10	Tbc	Your Energy	England	N	PO+	Approved
Deeping St Nicholas	14	8	V66	Wind Prospect	England	Y	PO+ / PC'tee-	Approved
Out Newton	9	7	Bonus	Wind Prospect/ Powergen Renewables	England	Inquiry	PO+ / PC'tee-	Operational since 2002
Tees Wind North	45	18	Tbc	AMEC Wind	England	N	PO+	Approved
Beinn an Tuirc	30	46	Vestas V47	Scottish Power	Scotland	N	PO+	Operational since 2001
Drummuir	42.0	22	FKI	RES	Scotland	Inquiry	PO-/PC'tee-	Referred to planning inquiry*
Paul's Hill & Cairn Uish	56	28	TBC	Natural Power Company	Scotland	S36	PO+	Approved

* Subsequently approved Feb 2005

The project team collated information on the case studies from the BWEA, published data, and CSE and Garrad Hassan's own records. This enabled the team's engagement with the project developers to focus on the study's objectives rather than routine information regarding development history and size. The team requested additional planning documentation from the project owners to enable analysis of any formal obligations to provide community benefits (as defined by the study). Similarly, documentation of local public opinion was sought where available.

Attempts were made to interview project developers, site operators (where different from the developer) and the planning officers involved for each case study. A total of 18 interviews were completed with 9 developers, 1 site operator and 7 planners. Unfortunately, the team were unable to interview 1 developer who was too busy to take part in the study, and 3 planning officers who were no longer in post.

The survey was designed to produce a comprehensive picture of each project with respect to:

- current practice on providing community benefits and perceptions of community acceptance of the project;

- the history of community benefit discussions during the development process;
- a perspective of how community benefits 'played out' during the planning decision-making process.

The interviews were semi-structured and distinguished, where possible, between community benefits offered during development and those provided during construction and subsequent operation.

In particular they sought information on:

- what community benefits were offered (scale and nature) and at what point in the process
- what community benefits were suggested and/or imposed through planning agreements or otherwise
- what community liaison was undertaken
- the proactive role, if any, of any local people in the development and planning process
- what other issues played an important role in obtaining (or not) planning permission
- the extent to which planning officers feel the community benefits influenced the decision (and how members of the planning committee reacted)
- the use of locally manufactured content and or local contractors in the construction phase
- the scale and nature of benefits provided now (see earlier definition of 'benefit')
- any problems experienced in realisation of benefits
- perceptions of local acceptance of the project
- whether there was any tangible evidence for community acceptance (or rejection) of the project

4.2 UK questionnaire survey

In considering the questionnaire survey of the 43 wind power projects commissioned in the UK since April 1999 (source: BWEA as at May 2004), the project team was mindful of the number of surveys which have been sent to wind developers and owners in the recent past. Therefore the project team worked closely with the planning team at BWEA to establish a clear picture of the information which has not been sought so as to minimise discontent and, it was hoped, maximise response.

The questionnaire aimed to collect similar data and perspectives from site operators and developers to that collected in the case study interviews. In

addition, the questionnaire sought views from developers on whether they felt there were differences in the scale and nature of community benefits offered for those of their projects that had failed to gain planning consent.

With the help of follow-up emails and telephone contact, the survey returned a 33% response rate, providing data on 14 projects from 8 different companies.

This was a disappointingly low response; the majority of contacts that failed to respond indicated that they did not have time to complete the survey, principally because of the high level of development activity currently underway.

Nevertheless, as a result of the case study interviews and the questionnaire survey, the project as a whole has garnered views from 15 companies involved in wind power development and/or ownership in the UK:

AMEC
B9
Ecotricity
EDF Energy
Farm Energy
Mersey Dock & Harbour Company
National Wind Power
Natural Power Company
Powergen Renewables
Renewable Development Company
RES
Scottish & Southern
Scottish Power
Wind Prospect
Your Energy

4.3 Case studies in leading European countries

In order to understand how the UK compares with other EU countries with respect to community benefits from wind power development, four other EU countries were selected for comparison – each for a different reason:

- Germany: for its world-leading status in terms of installed capacity
- Spain: for the recent rates of development (now leading to a large installed capacity) and its success in creating a manufacturing base in a relatively short time period
- Denmark: for its world-leading manufacturing industry

- Ireland: for its similar cultural context to the UK

European data was collected with the help of Garrad Hassan staff in Spain and Germany, and a Garrad Hassan contractor in Denmark (Søren Krohn Consulting).

Projects were selected for detailed study which exemplified approaches to wind project development taken in each country. The information on these was drawn from a combination of existing knowledge and direct contact with project owners or developers.

4.4 The context for wind power development in each country

With input from the same European-based staff resources, the project team examined the policy, planning, public attitude and community involvement aspects of wind power development in each of these countries and the UK. A particular focus of this part of the study was to identify the extent to which the types of benefit listed above (Section 3) were features of wind power projects and, if so, for what reasons. Were they, for example, required by law or demanded by precedence? Or was it that the support mechanisms for renewable energy markets and/or the culture of enterprise (e.g. farm co-operatives) drove particular types of approach?

For each country, the study examined key influences:

- Wind power promotion: Environmentally-motivated market mechanisms are the primary means by which commercial wind power projects are promoted. There have been efforts to harmonise market support throughout the EU, but, to-date, individual countries have implemented their own mechanisms. They differ principally by the level and stability of remuneration, the amount of capacity or energy supported, and the continuity of support. These factors in turn have a bearing on individual project returns, the size and stability of the market, and the types of company which can afford to carry the development cost and risk.
- Planning system: The way in which wind power projects are decided upon – their nature and location; who makes the decisions; and to what extent and when the public have a say. Political and public input into decision-making, and a formal assessment process, are common throughout the countries analysed, but there are significant differences in who makes what decision, how the public are involved (and at what stage), and the criteria against which decisions are made.

- **Public attitudes:** Seeking and/or assessing public opinion is a formal part of the planning process. Public acceptance, and the political mandate this gives, is important for the wider promotion of wind power. Representative public attitudes are normally ascertained through attitude and opinion surveys.
- **Community Involvement:** The degree to which a community is actively invested in a project is often thought to influence its popularity and likelihood of success. Typically this might comprise community ownership of turbines, participating in project development, provision of a community fund or provision of local jobs. Community involvement is encouraged through rules, regulations and financial incentives.

These aspects are reviewed for each country. Details and examples of community benefits, project development and planning experience are also provided from the country case studies and, in the case of the UK, the questionnaire survey.

Information drawn from the case study projects is presented as the evidence base. This was considered preferable to writing up individual case studies in detail since that may over-emphasise case-specific experience at the expense of the general picture this research was designed to draw.

4.5 Presenting the study findings

The results and analysis are presented in the remainder of this report as follows:

- The UK context for wind power development followed by findings from the UK case studies and questionnaire survey (Section 5)
- The context for each of the European countries, together with information gathered from individual case studies (Section 6).
- Comparison between the UK and overseas (Section 7)

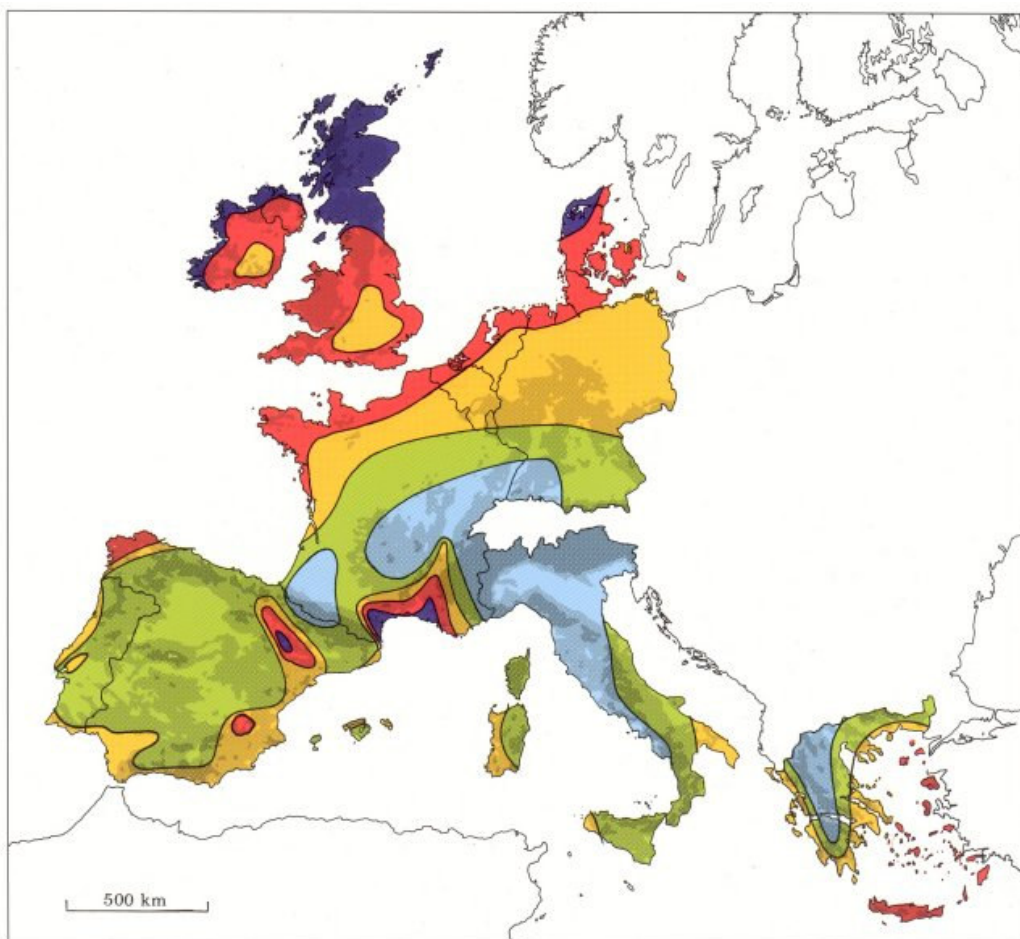
Following analysis of the findings emerging from these sections (Section 8), specific recommendations for action in the UK are outlined in Section 9.

5 The UK experience

5.1 The context for wind power development in the UK

5.1.1 UK Profile

For many years, the UK has been defined first and foremost by its *potential*. Figure 5.1 is the epitome of that potential. Published in 1989, the European Wind Atlas is a graphic demonstration of the fact that the UK's wind resource, and in particular that in Scotland, rivals that of any of its European neighbours.



Wind resources ¹ at 50 metres above ground level for five different topographic conditions										
	Sheltered terrain ²		Open plain ³		At a sea coast ⁴		Open sea ⁵		Hills and ridges ⁶	
	ms ⁻¹	Wm ⁻²	ms ⁻¹	Wm ⁻²	ms ⁻¹	Wm ⁻²	ms ⁻¹	Wm ⁻²	ms ⁻¹	Wm ⁻²
Dark Blue	> 6.0	> 250	> 7.5	> 500	> 8.5	> 700	> 9.0	> 800	> 11.5	> 1800
Red	5.0-6.0	150-250	6.5-7.5	300-500	7.0-8.5	400-700	8.0-9.0	600-800	10.0-11.5	1200-1800
Yellow	4.5-5.0	100-150	5.5-6.5	200-300	6.0-7.0	250-400	7.0-8.0	400-600	8.5-10.0	700-1200
Green	3.5-4.5	50-100	4.5-5.5	100-200	5.0-6.0	150-250	5.5-7.0	200-400	7.0- 8.5	400- 700
Light Blue	< 3.5	< 50	< 4.5	< 100	< 5.0	< 150	< 5.5	< 200	< 7.0	< 400

Figure 5.1 European Wind Atlas

The UK has been slower than some of its less well-endowed European neighbours at exploiting this resource. It ranks sixth (of EU-15) in terms of installed capacity. As a percentage of its potential, the UK languishes behind the European industry leaders Spain, Germany and Denmark, but is also exceeded by Austria, the Netherlands and Portugal.

However, recent UK policy targets are ambitious – 10% of electricity supply from renewables by 2010 and an aspiration of 20% by 2020. Scotland has its own aspirational target of 40% by 2020. Although there are high hopes for offshore wind and other marine renewables, for practical and economic reasons, much of the 2010 target is expected to come from onshore wind. The industry estimates that this would require approximately 4GW of onshore wind by 2010, more than a 4-fold increase on today's capacity and a 2.5 - 20-fold increase on annual installation rates since 1999.

5.1.2 UK Wind Power Promotion

The UK's first market support mechanism for renewables – known as the Non Fossil Fuel Obligation (NFFO) – began in 1990. The basic concept was to oblige electricity suppliers to purchase the output from projects awarded a government-backed, fixed price, fixed term, power purchase contract (or 'power purchase agreement' – PPA). Developers bid against each other for contracts in technology bands on the basis of unit (p/kWh) prices.

A new support mechanism, the Renewables Obligation (RO), was implemented in Britain in 2002. The RO places an obligation on electricity suppliers to source an increasing percentage of their demand from eligible renewables. Suppliers must prove compliance through purchase of tradable green certificates called Renewable Obligation Certificates (ROCs). ROCs can be purchased from a renewable energy generator, or from the Regulator Ofgem at a set buy-out price. Funds accrued through compliance via the latter are apportioned to suppliers complying via the former. This is called the "recycle benefit".

Because developers bid against each other for contracts, the NFFO was successful in reducing prices over successive rounds. It also meant that wind energy developers looked for the highest wind speed sites in order to gain a cost-competitive site. By placing an obligation on supply companies to purchase all output from contracted plant for a fixed duration, the NFFO provided a simple, robust and, above all, bankable market for renewables. It was not however successful in delivering volume, failing to meet its own target for installed capacity, which in itself was modest.

By contrast, the RO creates a market for renewable electricity but has no inherent price or term guarantees for developers. To date, these tend to be

provided by energy supply companies signing PPAs with generators to lock in their supply of ROCs. The size of the obligation and the ROC value have promoted a significant upturn in onshore wind development activity. By removing the price competition between developers inherent in the NFFO, the RO has also enabled developers to consider development on less windy sites.

5.1.3 UK Planning System and wind power

A framework of structure and local development plans produced by Planning Authorities (PAs), guided by national policy guidance and advice, forms the backbone of the UK planning system. Development plans will usually contain specific guidance on wind power, either as a criteria-based policy, or as locational guidance. National guidance seeks to ensure that PA's facilitate national policy on renewable energy, most recently in Planning Policy Statement 22 and its supporting technical guidance.

Depending on their size, onshore wind power projects require development permission from either a PA or the government. The relevant ministers are responsible for authorising power plant over 50MW under a "Section 36" consent process¹. All other power plant fall to be determined by the relevant planning authority, where the final decision for each individual project proposal is taken by a committee of elected councillors.

A project developer is responsible for finding a site, conducting the necessary environmental assessments, disseminating information on the project and submitting a planning application. The public, and various special-interest consultees, have the opportunity to put forward their views to the determining authority, as part of the process. Typically, a developer will hold local public exhibitions on their proposals.

Since the early days of wind power in the UK, planning permission has been cited as a barrier to development. The old NFFO system was widely thought to have aggravated the situation by, through its price competitiveness, pushing developers to high wind speed, and hence typically high visibility sites. Under the new RO, there is a perception that the situation has improved in Scotland, and that this is due in part to revised Scottish planning guidance.

Recent analysis by BWEAⁱ shows that determination times are about 3 times longer than they are meant to be, and that post-consent agreements – principally formalising planning conditions – can add significant further

¹ The relevant planning authority is nonetheless influential under a Section 36 consent, so named after the section of the Electricity Act 1989 which gives the ministers these powers.

delay. Reasons cited for this delay include the sheer volume of applications which are becoming log-jammed in the system.

That said, it is also important to acknowledge that, for many (though not all) planning authorities and unlike many other types of development, an application for a wind power plant is a rare event for which planning officials and councillors will have little direct experience to apply or common practice amongst the planning community to fall back on.

Planning statistics are difficult to obtain and interpret since some projects have not 'proceeded' for non-planning reasons. Certainly planning success rates did drop to under 50% for later NFFO projects, and consenting rates have been latterly higher in Scotland. However Scotland has less wind farms and less people than England. What is irrefutable is that despite a sea change in UK policy and political support for wind power, the planning system still dominates any analysis of why the UK does not have more wind power installed.

5.1.4 The UK planning system and community benefits

Planning law in the UK is a significant factor in the way in which community benefits 'play out' in the planning decision-making process. And it is by no means a clear cut situation.

This is principally because a number of legal 'grey' areas have not really been subjected to legal test on wind power projects, particularly with regard to the extent to which different types of community benefit can be considered as material in the determination of planning applications.

Current planning legislation prevents planning authorities from seeking contributions of local benefits from developers where this is not regarded as 'necessary' (Circular 1/97 Annex B Planning Obligations). Thus an authority cannot oblige a contribution from the developer, unless it can justify it as necessary to mitigate a particular impact of a development. Such impacts (and the mitigating contribution) need to be relevant to planning, directly related to the proposed development and necessary to make the proposal acceptable in land-use planning terms. Examples might be road improvements, or habitat reinstatement. This mitigating contribution does count as a material consideration for the planning committee.

Where benefits are not actively sought by the local planning authority but are instead offered by the developer, they are only meant to be considered material to the planning decision if they are relevant to planning and directly related to the proposed development.

The purpose of this approach is, in its purest form, to try to ensure that unacceptable development is never permitted because of unrelated benefits being offered by the developer.

As the projects studied in this research show, there is much discussion (and disquiet) over the extent to which various community benefits are, or should be, considered relevant to planning and related to the development, and therefore material to the planning decision. This is of central importance, since it is only if the benefits are taken as a material consideration that they have any formal influence on the planning process.

This issue also emerges in terms of formalising the provision of community benefits. Planning obligations ('section 106' in England and Wales, 'section 75' in Scotland) can be used by local planning authorities to secure more formally the community benefits offered by a developer. However, these are generally only considered applicable for benefits which are relevant to planning and related to the scheme.

This may change under the new planning system being brought forward under draft PPS1 (in England and Wales), currently under consultation. This would allow for benefits sought by a planning authority and offered by developers to be taken into account within the determination of the planning application provided they have more than *de minimis* connection with the development.

Some local planning authorities in Scotland have taken a pro-active approach. Both Argyll & Bute and Highlands & Islands Councils have developed and published policies which make explicit their intentions to seek financial contributions to community funds from wind power projects developed in their districts. Argyll and Bute are using the Local Government Act (as opposed to the Local Town and Country Planning Act) as the legal framework for their approach. In both cases the principle remains that contributions are not material to the planning decision, and any representatives electing to be party to community fund negotiations relinquish their right to vote on the planning application.

At the time of interview, one of the case study projects – Drummuir – was due to go to public enquiry. The developers' arguments included a contention that the council, Moray, was wrong to disregard as immaterial certain community benefits, in particular the prospect of UK manufactured content from another local authority area in Scotland, Fife, and England.

The project has since been approved. The reporter's report, now published, includes:

The council's view that "the proposed community fund is considered to be a separate matter between [the developer] and parties involved with creation of the fund. It would not be appropriate for this to be seen as sufficient to outweigh the impact of the development in terms of development plan policies, as this could be seen as buying planning permission"

The council's view that "arguments for the development ...providing contracts for the turbines to Scottish and other UK suppliers are not considered to be a sound basis for departure from the development plan.....the claimed employment benefits would be limited....other claimed benefits, including the footpath network, educational resource, and payments to the local railway, are considered to be limited. Taken together these material considerations are not sufficient to outweigh the development plan."

Referring to a previous enquiry where employment benefits were proposed for the same local authority area in which the wind farm was situated, the reporter at Drummuir concluded that he was "not satisfied that employment benefits in Fife should, on their own, be given great weight" and that the "employment arguments support, albeit with relatively little weight, the proposals."

5.1.5 UK Public Attitudes

A review by the BWEA of 42 opinion polls in the UK between 1991 (when the UK's first wind farm became operational) and 2002, revealed an average of 77% supportive of wind power or a particular project, and 9% against. The review included wind farm open day surveys, opposition group questionnaires and a government-commissioned attitudes surveyⁱ. A survey of electricity bill payers in 2003, found that 74% were in favour of an increase in wind power.

Wind power in the UK remains a relatively novel addition to the landscape, and will usually be worthy of note by passers by. To examine views related to specific wind farms, the Scottish Executive commissioned in 2003 a survey on attitudes amongst those local to operational wind farms. All respondents lived within a zone of 20km from one of the 10 operational, commercial wind farms in Scotland at the time.

The study found that the most actively positive feelings towards wind farms were amongst those in closest proximity, or who frequently pass the wind

farm. Of those living within 5km, 45% thought there had been a positive effect (6% negative), which dropped to 43% (and 6%) for 5-10km and 17% (and 6%) for 10-20km. It also showed that construction of a wind farm often allays fears held in its run-up. For instance, 27% feared there would be a negative impact on landscape, but this dropped to 12% still holding this view post-construction. 82% of respondents were in favour of an expansion of wind energy. 54% would take this further and support a 50% expansion of their local wind farm (9% would oppose).

A DTI-commissioned studyⁱⁱⁱ, also in 2003, and across the UK population, found 86% of the population of the view that onshore wind energy is a very good (49%) or fairly good (36%) idea. When asked of their reaction should an onshore wind farm be proposed in the locality, 66% of the general population would be positively disposed, (strongly approving, 29%, or slightly approving, 37%) while 15% were ambivalent. The same question posed to a group of respondents living close to an existing wind farm returned a 94% approval rate.

Generally then, around three quarters of the population is consistently in favour of wind power. This approval rating does not appear to have dropped over time as more wind farms are developed, and is no less for those living close to a wind farm. Of those who have a day-to-day familiarity with wind farms, the majority feeling is positive or ambivalence. Throughout all of the surveys, an actively negative view is a minority view.

In contrast, of 1190 letters to the UK press over a year (August 2001 to July 2002), 727 or 61% were negative compared to 31% positive. Further analysis showed that "serial" letter writers were more common amongst the negative letter-writers – 54% of all negative letters were from people that had written 2 or more letters, compared to 18% for positive letters^{iv}.

5.1.6 UK Community Involvement

Ownership

Community-inspired and owned wind farms have not been a defining feature of UK wind power. Rather the development model has tended to be dominated by commercial companies taking advantage of government incentives. By placing obligations on utility supply companies, the incentives in turn are arguably biased towards commercial exploitation, especially by the 'obligated' companies themselves. There has also until recently been very little explicit government support for or promotion of community-owned schemes.

While co-operative movements do exist in the UK, they are not a significant part of the economic culture. This means that the infrastructure required to support them – such as provision of shareholder loans – is not readily available, and that the public is simply not accustomed to making personal investments through a co-operative structure.

There are of course exceptions to the norm, the most notable being at Harlock Hill in Cumbria. The Swedish developer offered ownership to the local community through a co-operative investment model used widely in Scandinavia. Two share offers raised nearly £2 million, 50% of which came from people living in Cumbria and North Lancashire. This enabled the co-operative to buy three turbines and in 2001 it took out a bank loan to buy the remaining three. The co-operative has run the Harlock Hill site ever since. It also bought a turbine on the Haverigg II wind cluster from The Wind Fund plc once the project had been constructed.

Local income

As the survey results outlined below reveal, provision of a ‘community fund’ is now the norm in the UK. This is a cash contribution to the community, aligned to the size of the wind farm. There are usually restrictions on the destination of funds.

Wind farms are liable for business rates levied by the local authorities. However, in the UK the revenue accrues to central government (for its local government budgets), not directly to the ‘host’ local authority. Business rates are therefore not considered to be a local benefit.

Landowners (who may or may not be ‘local’) earn rental income from a wind farm.

Jobs

The majority of wind turbines installed to date in the UK have been manufactured abroad. With the introduction of the RO, there have been efforts at government and industry level to secure UK-manufactured content. Vestas now has a factory in Scotland. A long-established Wales-based tower manufacturer continues, after a recent period of difficulty, to supply to the UK market. However, there have been difficulties, with a would-be turbine manufacturer and an established blade manufacturer floundering in the absence of orders.

There is a genuine effort to secure UK-based manufacturing jobs, but there are difficulties for any one manufacturer in securing enough orders at

current rates of development and construction to justify, or maintain, a UK presence.

Recent developments

It is only relatively recently that community representatives have started to play an active part in negotiating enhanced community benefits. This has co-incided with the new RO support mechanism and the rapid rise in wind farm proposals, especially in Scotland. The most publicised demand is for higher community funds. This is because there is a perception that higher potential value of wind power under the RO means that owners can afford higher contributions, and that communities hosting the wind farms should share in this change of fortune. Indeed, the level of community fund offered by developers has increased under the RO.

The Baywind investment model is also being expanded, with share ownership now offered by a number of developers. Other models under discussion, but in early stages of feasibility, include allocating part of a consented wind farm for community-raised financing and ownership, and community land buy-outs of wind farm sites.

5.2 The scale and nature of community benefits on offer from UK wind power projects

The evidence gathered from the 10 large UK wind farms studied in depth with both developers and planning officers is presented below. This is followed by additional information and further views garnered from the questionnaire survey of a further 14 projects. The full range of community benefits described in section 3 was explored. Together these findings give a rounded – if relatively complex – picture of the nature and scale of community benefits being offered and, in the cases of those projects now operational, actually realised.

Of the case studies, only a few could provide information on actual experience. This was variously because projects were not yet operational, because they were only just operational, or because developers were not involved in the operational phase of the project.

In addition, it should be noted that, while information is provided here on both a quantitative and qualitative basis, the quantitative findings should not be treated as 'representative' of all UK practice (i.e. '70% of case studies' should not be translated into '70% of UK wind projects').

5.2.1 UK Case Studies Analysis of Benefits

Community Benefits Offered

Respondents were asked which benefits, from the list in Table 2, were offered by the developer during planning discussions.

Table 2 (below) shows those community benefits offered pre-planning application by the 10 UK projects studied in detail. The majority of developments, e.g. 70% or higher, offered the following benefits: the use of locally manufactured content, the use of local contractors, land rental to a local land owner, a form of community fund, habitat enhancement, and 100% undertook community liaison activities.

Table 2: Community benefits offered by UK case study projects (#10)

Community Benefit	UK Case Studies – Offered pre- application (out of 10 projects)	Developer considers a <i>Standard</i> element of benefits package	Developer considers they have a <i>Distinguishi</i> <i>ng</i> approach
The involvement of local landowners in planning	7	3	1
The use of local contractors during construction	7	5	
The use of locally manufactured content	7	6	1
Equity share or other investment opportunity for local communities	2	2	1
Land rental to a local landowner	8	6	
Local community improvements through lump sum or 'in kind' contribution	1	2	
Habitat enhancement - e.g. reforestation	7	7	
Revenue or profit share (e.g. into Community Fund)	8	2	
Energy-related benefits (e.g. energy savings or energy supply deals)	1		1
Employment of local people	5	3	

in O&M provision			
Education visits and school support	5	4	
Visitor centres and tourist facilities	6	4	
Community liaison activities (meetings, information provision, talks to groups, etc.)	10	4	2

- **Use of local manufactured content and/or local contractors**

The use of locally manufactured content and local contractors was offered at 7 of the projects. However, 6 of these indicated that this could only be offered in principle, subject to EU procurement law which required a fair and competitive tendering system.

The majority of the operational case study sites used local contractors in construction, typically for the provision of aggregate for construction, the use of local cranes and machinery, and the use of local electrical contractors. Developers did not specify the percentage of total contract value this local contracting represented but it would typically be under 20% of the total.

To date, none of the sites have used locally manufactured turbines. The developer at Cefn Croes highlighted the linkage between a local turbine tower manufacturer, Cambrian, and the local economy and estimated that, of the £35 million total project build cost, £11 million would be spent in Wales and £1 million locally (however, the demise of Cambrian led to some problems in the realisation of this benefit) .

Scottish Power (Beinn an Tuirc) anticipated that the towers would be manufactured locally at Macrihanish. Unfortunately the factory wasn't ready in time and the turbines were imported from Italy. The developer however noted that Beinn an Tuirc was the catalyst for establishing the Vestas factory at Macrihanish which has gone on to provide locally manufactured content for several wind farms in the area and across the UK.

At Drummuir, the developer offered a guarantee of 50% UK manufactured content, and the possibility of this rising to 80%. During the time that the project was in public inquiry, the two main prospective suppliers, FKI for the turbines and NOI Scotland for the blades, went into administration, both citing a lack of orders. It remains to be seen whether UK content can be secured for the project.

The total value of work won by local contractors or the proportional value was not specified by developers, but the general work included: provision of aggregate for construction; the use of local cranes and machinery, and; the use of local electrical contractors.

Generally, provision of engineering and construction work to local or regional contractors was seen to be relatively straightforward and typical for a project. While considered desirable, experience is mixed in provision of local manufactured content, with some amount of frustration exhibited by those attempting, within the UK's interpretation of EU procurement rules, to realise this benefit.

- **Habitat enhancement**

The enhancement of local habitat by developers was required at 7 of the sites studied. However, the benefit is site specific and the offer was often dependent on the planning officer identifying the need during site assessment. Nevertheless, in some cases the financial value of such benefits can be significant and are by no means related solely to restoration of habitats affected by the wind farm. For example, Cefn Croes is contributing to a £250,000 land management project designed to restore the site's ecological value lost through commercial forestry and intensive agriculture. The Beinn an Tuirc project has employed a warden to ensure effective habitat management to protect local golden eagles.

- **Community funds, facilities improvement (lump sum or revenue link)**

The provision of local community facility improvements, a community fund or revenue/profit sharing was offered at 90% of those sites surveyed. The value of this fund/contribution varied across the 9 sites, with 5 of the developers unwilling or unable to provide an indication of the total value. However, 4 of those surveyed gave details of specific community fund values which ranged between £700/MW and £1000/MW. In some cases the developer offered an initial lump sum payment followed by smaller annual payments.

There are varying approaches taken both to the management of the fund and to the extent to which limits are imposed on the purpose to which funds may be put (beyond benefiting the local communities). For many of the case studies, these details are still being finalised as the project moves from approval to implementation.

At Beinn an Tuirc, a trust fund has been set up to support projects delivering local environmental improvements and other local good causes. It is administered by a trustee body which meets once a year and consists a

third each of community representatives (drawn from community councils), the local authority and the project owner.

At Altahullion, a fund is distributed to three existing community groups who can then spend the money on, more or less, what they like (although agreements between the developer and the groups ensures that it cannot be spent on antagonistic religious activities or environmentally damaging activity).

At Tees Wind North there has been discussion about providing a lump sum payment to a local college to help its efforts to upgrade its status.

For Deeping St Nicholas, Wind Prospect undertook consultation with local communities in public meeting to examine views of various options ranging from restricting spending to energy saving to allowing local people to decide priorities. The latter approach has been chosen.

Your Energy (Burton Wold) has created a fund designed to reduce energy use in the local community. The idea was born out of the desire of local residents to receive cheap power from nearby developments. However, it was felt that current energy supply regulations rendered this too complex, so Your Energy decided to set up a fund that would install energy efficiency measures in local houses & community scale renewables for schools etc. They are working with the local energy efficiency advice centre, the Energy Saving Trust Innovations programme & the relevant local councils (Kettering DC and Burton Latimore DC) to establish a scheme that will provide grants to householders that are ineligible for other support and ensure that they all reach a target of 250mm of loft insulation.

- **Tourist facilities**

The provision of tourist facilities was offered in 6 of the sites studied. The extent of facilities discussed varied with 3 developers offering signs, display boards and walk ways. B9 Energy (Altahullion) was asked to do tourist work by a community group, which resulted in them setting aside the turbine nearest to road as a tourist turbine. Wind Prospect was asked by the local planning authority to investigate the possibility of installing a viewing platform at Deeping St Nicholas. However, Powergen renewables (Out Newton) took the view that visitor's centres and tourist facilities will start to become redundant as more wind projects are built.

- **Schools visits**

A total of 5 of the 10 UK case studies surveyed stated that they would provide or were considering providing support for schools' education visits. The responses were varied, including: running annual schools visits; creating a walk way with education boards; providing access and information packs to visiting schools; and stating that they had held discussions with local schools and councillors. At Deeping St Nicholas, Wind Prospect donated a £14,000 Marlec wind turbine as prize for a school competition.

- **O&M jobs**

The creation of local jobs in operation and maintenance (O&M) was offered or realised at 50% of the sites surveyed. The majority of responders stated that this benefit would be realised where possible. Some had been more precise; the developer at the Cefn Croes site (Renewable Development Company) stated in their planning submission that they anticipated 6 local jobs in O&M and 60 in construction.

- **Ownership opportunities**

Two projects had offered and/or explored opportunities for local people to take some level of ownership in the project. At Deeping St Nicholas, Wind Prospect are planning to enable local people to purchase 2 of the 8 turbines through a local share ownership scheme.

At Drummur, RES examined options for either community ownership of a turbine or a share in the whole project through the holding of shares in the company. However, they found some concern within the community that opportunities to invest would only be available to those who could afford it and would therefore be divisive. The developer also had concerns that the lack of operational control for a minority shareholder (an inevitable condition of financing) and the typically low initial returns to shareholders (while debt finance is repaid) would potentially undermine the intended sense of ownership. In the end they proposed a community fund instead.

- **Community liaison**

The range of community liaison activities are summarised in Table 3. The case study analysis shows that the majority of developers surveyed have implemented a comprehensive set of liaison activities including exhibitions, producing briefing packs and conducting public meetings.

50 to 60% of sites also had meetings with parish councils, conducted public opinions surveys and distributed newsletters. Other less common activities included taking local residents to other wind farms and talks to local councillors.

Table 3: Community liaison activities by UK case study projects

Project	Planning Officer (PO) +ve or -ve	Appeal	Newsletter	Exhibition	Briefing Pack	Parish Council Meetings	Visit to Wind Farm	Public Meeting	Survey	Other
Altahul lion	PO+			Y	Y				Y	
Cefn Croes	PO- / PC'tee+	s36	Y	Y				Y	Y	
Ffynnon Oer		Y		Y		Y		Y		
Burton Wold	PO+			Y	Y	Y	Y			
Deeping St Nicholas	PO+ / PC'tee-	Y	Y	Y	Y	Y		Y	Y	Early talks with LA
Out Newton	PO+	Inquiry	Y	Y	Y	Y				
Tees Wind North	PO+			Y	Y	Y		Y		
Beinn an Tuirc	PO+		Y	Y	Y			Y	Y	
Drummuir	PO-	Inquiry	Y	Y	Y	Y		Y	Y	Stakeholder Committee
Paul's Hill & Cairn Uish	PO+	S36	Y	Y	Y	Y		Y	Y	
TOTAL			6	10	8	7	1	7	6	1

As Table 3 demonstrates, amongst these case studies there is no apparent relationship between the range of community liaison activities undertaken by developers and initial success at planning committee. [Though in an extensive study of UK wind power planning decisions and developer activity, Toke (2004 in press)^v found that active liaison with the Parish Council was one of the better (if still not particularly good) predictors of eventual planning success].

Standard and Distinguishing Benefits Offered

The table of community benefits offered in the UK case studies also contains details of those benefits that respondees felt were standard or distinguishing. In total 10 (7 developers and 3 planners) of those surveyed felt that there was an element of 'standard' community benefits which were offered with wind developments. 3 respondents felt that there were not any standard elements, with the remainder either unsure, neutral or not responding.

From the 10 respondents that felt there was an element of standard community benefits. 7 (5 developers and 2 planners) felt able to say which benefits were 'standard' and which were a 'distinguishing' feature of a particular developer.

The provision of habitat enhancement (where necessary) was seen as a standard component of the community benefit package by all those responding.

The offer to use locally manufactured content and local contractors was identified as standard benefits by 6 and 5 of the respondents respectively (though the proportion of locally manufactured content was not specified). However, as in the survey of community benefits offered, the majority of those responding indicated that this could only be offered in principle, subject to EU procurement law.

The payment of land rental to a local landowner is acknowledged within the industry as a standard procedure, unless the developer owns the land.

In total 6 of the 7 respondents indicated that the undertaking of community liaison activities was a standard benefit instigated by developers as a matter of course in a site's development. However, 2 of these respondents (Wind Prospect and Natural Power Company) felt that their own organisation's community liaison activities were distinguishing.

Details of 'Distinguishing' approaches to Community Benefits

Three developers assessed their own approaches to community benefits as 'distinguishing' compared with the approach taken by most other developers.

The Natural Power Company had won a Scottish press award for their public consultation based on the local community liaison exercise at Paul's Hill & Cairn Uish. The developers provided community newsletters, leaflets and held exhibitions and meetings with local authority officers and members. They held a series of community consultation exercises and used addresses provided on respondents' questionnaires to keep members of the community updated on the development. Natural Power Company also allocated a member of staff to visit local residents that had queries.

Wind Prospect felt that their community liaison activities (with a Community Liaison Group consisting of 7 people with 6 meetings pre-application and 3 meetings post-application) and early involvement of the local landowner was 'distinguishing', as was their investment scheme for local people to purchase 2 turbines (4MW installed capacity). They also investigated the possibility of supplying green electricity from site to local residents: however, this was found to be too complex within current supply regulations.

In tendering for turbine supply in advance of a planning decision, RES felt that its approach to providing certainty on local manufactured content at Drummuir was novel (albeit if successful others may follow).

Lessons from experience

Interviewees were asked if there were any problems in realising offered benefits, and if there might be any lessons for future practice.

The majority view was that benefits had been implemented as expected, and that new projects built positively upon past experiences.

Two planning officers commented on local manufactured content: one stating that there was some disappointment on the lower than anticipated local gains from the project, and one noting the need for vigilance against consenting substandard projects on the local employment card. Two developers noted difficulties in securing locally manufactured content.

One developer thought that there would be benefit in greater sharing of experiences between communities.

5.2.2 Questionnaire Survey Analysis of Benefits

14 (33%) of the 43 sites surveyed responded, with these sites being responsible for 85.25 MW (22%) of the total installed capacity of 395.25 MW (as at May 2004).

In total 8 separate organisations responded to the wider survey, with Ecotricity (6) and National Wind Power Ltd (2) sending multiple responses. The submission of multiple responses by companies has reduced the number of separate returns for generic questions e.g. views on the development of a best practice guide.

Table 4: Questionnaire survey respondents

Project	Developer(s)	Total Capacity MW	Number of Turbines	Rated Capacity	Region 2
High Hedley Hope	AMEC Wind (Survey respondent EDF Energy – current owner)	2.25	3	0.8	England
Lendrum's Bridge I & II	B9 Energy	13.2	20	0.66	NI
Eco Tech Centre	Ecotricity	1.5	1	1.5	England
Mablethorpe	Ecotricity	1.2	2	0.6	England
Somerton	Ecotricity	1.5	1	1.5	England
Dagenham	Ecotricity	5.4	3	1.8	England
Swaffham II	Ecotricity	1.8	1	1.8	England
Sainsburys, Langlands Park	Ecotricity	0.6	1	0.6	Scotland
Bu Farm	Farm Energy	2.7	3	0.9	Scotland
Royal Seaforth Dock	Mersey Dock & Harbour Co	3.6	6	0.6	England
Lambrigg	National Wind Power Ltd	6.5	5	1.3	England
Tow Law	National Wind Power Ltd	2.25	3	0.8	England
Tangy	Scottish & Southern	12.75	15	0.85	Scotland
Cruach Mhor	ScottishPower	29.75	35	0.85	Scotland

Community Benefits Offered & Realised

Table 5 shows that, for projects responding to the questionnaire survey, the community benefits most frequently offered at the pre-planning application stage were the use of local contractors during construction (79%) and land rental to local landowner (64%).

Table 5: Benefits offered and benefits realised – UK questionnaire survey

	Offered pre-application (out of 14 projects)	Benefit realised (out of 14 projects)
Community Benefit		
The use of local contractors during construction	11 (79%)	12 (86%)
The use of locally manufactured content	4 (29%)	7 (50%)
Equity share or other investment opportunity for local communities	0	0
Land rental to a local landowner	9 (64%)	11 (79%)
Local community facility improvements through lump sum or 'in kind' contribution	3 (21%)	3 (21%)
Habitat enhancement - e.g. reforestation	1 (7%)	2 (14%)
Revenue or profit share (e.g. into Community Fund)	5 (36%)	4 (29%)
Energy-related benefits (e.g. energy savings or energy supply deals)	0	0
Employment of local people in O&M provision	2 (14%)	3 (21%)
Education visits and school support	5 (36%)	7 (50%)
Visitor centres and tourist facilities	3 (21%)	4 (29%)
Community liaison activities (meetings, information provision, talks to groups, etc.)	4 (29%)	8 (57%)
Other	1 (7%)	2 (14%)

In total, 6 (43%) projects offered community improvements and (2)/ or (4) community funds. The benefits ranged from occasional ad hoc contributions to a community to re-roof a local community centre (value c £2,500) and the offer of a local visitor centre, to contributions to community funds of £700 - £1,000 per MW per year.

From the 14 questionnaire surveys returned it is clear that the benefits realised are often greater than those offered pre-planning. For example, 7 of the sites surveyed support education visits from local schools, but only 5 offered this at the pre-planning stage.

Although 11 respondents indicated that they offered 'the use of local contractors during construction' at the pre-application stage, 7 of these

respondents indicated that they stated this would only be done where possible (bearing in mind EU procurement law). In practice, 12 projects managed to realise use of local contractors.

Of the 4 respondents that offered the use of locally manufactured content pre-planning application, only one stated that this would only be done where possible, subject to EU procurement law. In practice 7 projects used locally manufactured content.

The survey asked developers and site owners if they had offered 'energy-related benefits' which was intended to refer to local provision of lower cost electricity supply or energy saving deals. 5 respondents claimed to offer energy related benefits, but all cited the 'achievement of national & local government targets for emissions and electricity generation' rather than anything more directly beneficial to the local community.

Impact on planning decision

Of the 14 sites that responded, 3 went to appeal (2 of which had been recommended by the Planning Officer but turned down by the Committee) and 11 were approved by local PCs.

The summary of benefits offered to both those that went to appeal and those approved in Table 6 shows that none of those sent to appeal offered either community improvements or community funds at either stage. Furthermore, none of those sites that went to appeal conducted significant community liaison activities pre or post planning. However, while this is an interesting finding, it is not a large enough sample to justify drawing general conclusions.

Table 6: Community benefits offered for approved vs. 'appealed' sites

Community Benefit	Sites sent to Appeal (#3)		Sites Approved (#11)	
	Offered pre-application	Benefit realised	Offered pre-application	Benefit realised
The use of local contractors during construction	2 (67%)	2 (67%)	9 (81%)	10 (91%)
The use of locally manufactured content	1 (33%)	2 (67%)	3 (27%)	5 (45%)
Equity share or other investment opportunity for local communities				
Land rental to a local landowner	1 (33%)	2 (67%)	8 (72%)	9 (82%)
Local community facility improvements through lump sum or 'in kind' contribution			3 (27%)	3 (27%)
Habitat enhancement - e.g. reforestation		1 (33%)	1 (9%)	1 (9%)
Revenue or profit share (e.g. going into Community Fund)			5 (45%)	4 (36%)
Energy-related benefits (e.g. energy savings or energy supply deals)	1 (33%)	1 (33%)	4 (36%)	4 (36%)
Employment of local people in O&M provision			2 (18%)	3 (27%)
Education visits and school support		1 (33%)	5 (45%)	6 (55%)
Visitor centres and tourist facilities	1 (33%)	2 (67%)	2 (18%)	2 (18%)
Community liaison activities			4 (36%)	8 (73%)
Other?			1 (9%)	2 (18%)

Differences between the case study and questionnaire surveys

Table 7 below illustrates the benefits offered pre-application for the UK case studies and wider questionnaire survey. This demonstrates that the proportion of community benefits offered is higher for the UK case studies when compared to the wider survey. Indeed this is true for all benefits except the use of local contractors during construction e.g. 70% compared to 79%. However, the analysis of both the wider survey and UK case studies has shown that respondents often indicated that the provision of this benefit was subject to EU procurement law.

Table 7: Comparison between UK case studies and questionnaire survey

	UK Case Studies: Offered pre-application No of projects (of 10) (% of projects)	UK Questionnaire Survey: Offered pre-application No. of projects (of 14) (% of projects) [% of MW]
Community Benefit		
The use of local contractors during construction	7 (70%)	11 (79%) [78%]
The use of locally manufactured content	7 (70%)	4 (29%) [45%]
Equity share or other investment opportunity for local communities	2 (20%)	0
Land rental to a local landowner	8 (80%)	9 (64%) [52%]
Local community facility improvements through lump sum or 'in kind' contribution	1 (10%)	3 (21%) [49%]
Habitat enhancement - e.g. reforestation	7 (70%)	1 (7%) [35%]
Revenue or profit share (e.g. going into Community Fund)	8 (80%)	5 (36%) [63%]
Energy-related benefits (principally relevant to overseas projects)	1 (10%)	5 (36%) [12%]
Employment of local people in O&M provision	5 (50%)	2 (14%) [17%]
Education visits and school support	5 (50%)	5 (36%) [34%]
Visitor centres and tourist facilities	6 (60%)	3 (21%) {10%}
Community liaison activities (meetings, information provision, talks to groups, etc.)	10 (All)	4 (29%) [31%]
Other (in this case, sponsorship of local cycling group)		1 (7%) [15%]

The UK case studies are more recent examples of sites that have been through the planning process. The increased scale of community benefits offered is therefore likely to be related to the emergence of best practice and the higher profile of this issue in the planning process. For example, all the UK case study sites surveyed conducted community liaison activities,

and 80% discussed the provision of revenue or profit share compared to 36% for the wider survey.

5.2.3 Formalisation of Community Benefits

Of the 24 projects surveyed through the questionnaire survey and UK case studies, only 6 (25%) projects had formalised community benefits through a legal agreement or a Section 75 (Scotland) or Section 106 agreement.

From these sites, 3 were from the questionnaire survey and they were all approved by the local planning committee. These sites included Tow Law, Tangy and Cruach Mhor. The developers at Tangy formalised the provision of a community fund through a Section 75, and the developers of Cruach Mhor formalised the details of the habitat enhancement through a Section 75.

The developers at Tow Law did not formalise the provision of a community fund through the planning process, but formed a separate legal agreement with a local community group.

From the UK Case Study survey, Altahullion, Cefn Croes and Beinn an Tuirc formally agreed the provision of a community benefit. B9 Energy (Altahullion) did not use a Section 75 or 106 agreement to formulate the benefits offered, but made a direct agreement with the communities on fund value and restrictions on spending.

The development at Cefn Croes used a Section 106 agreement to cover the land management plan. The development resulted in deforestation, which would then be returned to suitable habitat for black grouse. The developer offered a land management plan for the life of wind farm which extends beyond the boundaries of the wind farm.

Scottish Power used a Section 75 to formalise both the community fund and habitat enhancement for the Beinn an Tuirc development. The developer felt that a separate legal framework unrelated to planning law would have been helpful for the formalisation of the community fund.

Only 2 projects (Beinn an Tuirc and Cruach Mhor) out of these 6 developments used a planning agreement, e.g. Section 75 or 106 to formulate the provision of a community fund. A further 2 developments formed a legal agreement directly with the local community.

5.2.4 Community benefits as material considerations in planning decisions

There is no sign from the case study interviews that community benefits are being routinely considered by planning officers as material considerations. The exception to this is the provision of habitat enhancement or reinstatement (which is usually provided to mitigate the anticipated impacts of the project and is routinely considered material for most types of planning application).

Indeed, one of the main community benefits now offered by developers – an annual payment into a community fund – is generally excluded from consideration in the formal planning decision-making process. As explained in Section 5.1.3 above, this is because, in spite of the genuine local economic benefit it represents, it is usually thought to be too remotely connected with the planning aspects of the project.

Developers are divided on whether community benefits should be considered material. Some feel that, for community funds in particular, immateriality ensures that contributions are clearly not a 'bribe'. Others are of the opinion that contributions offer a genuine local benefit of the project and therefore should be weighed up as a positive local factor in the planning decision. One felt that the elevation of community fund provision to a material consideration would actually help avoid accusations of 'bribery' since it would be more explicitly part of the planning decision.

Indeed, one developer mentioned that the provision of a community fund was now expected by some planning committees (though it was not being treated as a benefit material to planning decision).

In one case, Cefn Croes (a section 36 consent from the DTI), the local planning officer disregarded the provision of a community trust fund but included the proposed local employment, construction contracts and land management plans. That said, he also considered these were outweighed by the impact of the wind farm on the local landscape and recommended refusal, a recommendation which was overturned by the Planning Committee which appears to have given the local economic benefits greater weight. This experience is mirrored by that of Drummair, where the council disregarded the community fund and attached a low weight to economic benefits.

Several developers identified a lack of clarity and consistency in the treatment of community benefits as material considerations. They shared a view that the provision of lower cost electricity supply to local people was generally held by planning officers to be potentially material to the application (while contributions of equal monetary value to a community

fund would not). In addition, the use of local contractors and locally manufactured content – more ‘traditional’ local economic benefits deriving from a project – were also felt to be material, provided they could be legitimately confirmed or guaranteed prior to planning application.

However, these points are rendered somewhat academic by the difficulty of delivering on the benefits as a result of, for cheaper electricity, the complexity of current energy supply regulations and, for local content, EU procurement laws and unpredictable planning outcomes.

These points demonstrate a grey area. Some local economic benefits would ‘count’ as material considerations if they could be delivered. Yet a financial contribution to a community fund of equal value to discounts on electricity bills would not. And nor would the use of local contractors in spite of the fact that precedence and common practice would indicate a high likelihood of success in delivering this economic benefit.

As outlined below, the fact that these benefits are not treated as material consideration does not mean that they are having no influence on the planning decision-making process.

5.3 The role of community benefits in planning and public acceptance

The possible relationship between community benefits offered and recommendations made by planning officers, planning committee decisions, and levels of local public acceptance/support were examined in some detail in the case study interviews.

Influence on planning officers

Neither planning officers nor developers perceived that the levels of community benefit on offer had any impact on the planning officer recommendation to committee. This derives from the view that these benefits should generally not be treated as material considerations.

Influence on planning committees

In general, both planning officers and developers felt that community benefits did have a greater influence on planning committee decisions than on planning officer recommendations. This was explicitly the case in Cefn Croes according to both planning officer and developer.

In other cases, developers confidently assert that their package of benefits was undoubtedly a factor in how individual members of planning committees viewed the proposal.

However, in one case (Burton Wold) the planning officer's view was that the planning committee had deliberately ignored the community benefits (in the form of community funds) as they did not want to be seen as 'bought off'.

The nature, scale and quality of community liaison activities were generally perceived to be the most significant influence on planning committees of any community benefit. This is substantiated by the finding (outlined in 5.1.2) that, of the projects surveyed, there were lower levels of community liaison amongst those projects which had gone to appeal.

What is clear from the survey is that the package of community benefits and the approach taken to community liaison is 'in the background' of planning committee evaluation of wind power development proposals, even if it has little explicitly acknowledged formal influence.

Influence on local acceptance – pre-application

The case study interviews investigated the levels of local acceptance and perceptions of a possible link with community benefits for the 10 UK Case Studies. In a number of cases, local acceptance and support for wind power was already considered generally strong, which meant that developers did not consider that community benefits would have much influence either way on public views.

In total only 2 respondents perceived a strong link between local benefits and local acceptance (developers at Cefn Croes & Beinn an Tuirc). Although, a further 3 noted a 'medium' link (Altahullion, Burton Wold and Ffynnon Oer), with all these sites reporting 'balanced' opinion or 'support' at the *post-planning consent* stage.

The developer for the Altahullion site stated that there was local support prior to the planning application, with a weak link between support and those benefits offered.

The officer and the developer at the Cefn Croes site had different views of the level of local support pre-application; with the developer identifying support and the officer opposition. The developer felt that support was increased by the benefits they offered to the local economy. However, the officer felt that the development had split the community, with more objections to the scheme than those supporting. The officer did not perceive a link between the community benefits offered and local support, but they did state that there were local expectations on jobs.

The planning officer was the only respondent for the Ffynnon Oer site. They felt that public opinion was balanced, and had obtained no feedback with regard to benefits offered and local views.

Both the developer and the planning officer for Burton Wold stated that there were high levels of public support both prior to and following planning consent. Your Energy felt there was a weak link with community benefits, with the planning officer identifying a 'medium' link. The officer felt this link could have been enhanced if the developer had been able to sell shares in the development to the local community, though opinion testing within the community indicated that this would not have been the case.

Both Wind Prospect and the planning officer for Deeping St Nicholas stated that there was opposition to the development prior to planning consent. The planning officer identified a weak link with community benefits and local support, but felt the main focus for this opposition was the visual and noise impact. Wind Prospect felt that local residents have little concept of how benefits will affect them, and therefore tend to focus on the perceivable impact which is principally visual. The developer felt it would not have changed the benefits they wished to offer because of the increased risk of accusations around 'buying consent'.

Wind Prospect and the planning officer both stated that there were high levels of opposition to the Out Newton development. They perceived either 'no link' or a 'very weak link' between community benefits and local acceptance.

The developer and the officer for the Tees Wind North development felt that the link between community benefits and support was 'very weak' or 'weak'. The officer stated that local acceptance was balanced, with the developer indicating that they did not know the level of local acceptance. Both the developer and the planning officer suggested that the link could be enhanced by changing the benefits offered. The developer and planner felt that local distribution of renewable electricity would increase support, with the planner also suggesting the possibility of a community fund.

The planning officer for Beinn an Tuirc did not reflect on the levels of local acceptance. However, the developer felt there was a high level of local acceptance which was strongly linked to the community benefits offered. The developer felt that support could have been increased further if the fund amount were increased, whilst the officer felt that local employment was also a factor in local acceptance.

The Natural Power Company (NPC) was the only respondent for Paul's Hill & Cairn Uish, and they identified 'balanced' public opinion prior to planning consent. They perceived a 'very weak' link between the community benefits offered and local acceptance.

Influence on local acceptance – post-development

The majority of respondents which had commented on local acceptance (7 projects) felt that local opposition had decreased following the award of planning consent and project development.

Indeed, both the developers and officers felt this at the Deeping St Nicholas and Out Newton sites, and the planning officer for Cefn Croes and the developers at Paul's Hill & Cairn Uish also noted this. The Deeping St Nicholas and Out Newton sites claim to have experienced 'opposition' and 'high levels of opposition' prior to planning which fell back to more balanced local opinion once the projects had been given the go ahead.

However, the respondents did not identify community benefits as the catalyst for this reduction. The developers indicated that this was common place for wind developments post planning consent and/or construction. For example, Wind Prospect recently went into a pub where the protestors against Out Newton met and asked the landlord what people thought of the turbines; he said that people didn't take notice of them anymore.

The planning officers at the Beinn an Tuirc and Ffynnon Oer site were the only planning officers to identify a link between community benefits and local support. The officer for Ffynnon Oer was unable to estimate the size of this link, and the officer for Beinn an Tuirc felt the continuing prospect of jobs in the area was important to support levels.

The remaining planning officers and the developers for the Tees Wind North and the Burton Wold site felt that the level of support was unchanged. Indeed, 3 planning officers felt that community benefits could not change levels of support, as most local opposition was focused on visual and noise impacts.

While it is not strictly related to the way in which community benefits play out within the planning system, the project also gathered planning officer and developer perceptions of the role which perceived levels of local acceptance played in the planning process. The analysis shows that, while local acceptance is not a strong influence on planning officers, it is considered to be a factor which is 'as' or 'more' important than other factors for planning committees. This analysis is shown in more detail in Appendix 1.

5.4 The need for a best practice guide on community benefits and community engagement in the UK

Case study interviews and the questionnaire survey asked for views on the value and potential content of a best practice guide on community benefits and community engagement

In total 24 sets of views on these issues were collected: from the 8 organisations responding to the questionnaire survey and from 16 detailed responses in the case study interviews (with 9 from developers and 7 from planning officers).

The value of a best practice guide

When asked if a best practice guide to the provision of community benefits and community engagement would be useful, 17 out of 24 responders indicated that some form of best practice guidance would be useful. Only 1 respondent felt that guidance would not be useful, with 4 of the remaining 5 unsure and 1 gave no opinion.

The one respondent who thought that a best practice guide for community benefits would not be useful felt that it would be more likely to force developers to offer community benefits where none were necessary. Nevertheless, they also felt there would be some benefit in producing guidance on community engagement.

The purpose and content of a best practice guide

The key themes and suggestions for best practice guidance are summarised below.

Key Themes	Dev / SO	Planner	Total
Reduce accusations of developers attempting to buy consent	5	1	6
Create some consistency of community benefits offered	5		5
Provide guidance on approaches to community engagement	3	1	4
Establish consistency of community engagement from all parties	2	1	3
Give space for developer to take their own approach	3		3
Establish national approach to best practice (but reflect variations in status and current acceptance of wind between nations e.g. N Ireland)	2		2
Take account of scale of development	1		1
Set high standards for community engagement (to reflect genuine best practice)	1		1
Use BWEA best practice model	1		1
Develop from best practice found in this study	1		1
Provide guidance on the materiality of community benefits		1	1
Provide myth busting information for the general public	1		1

This analysis reveals two somewhat contradictory themes relating to best practice guidance.

Firstly, the two most commonly mentioned themes relate to establishing best practice guidance on the provision of community benefits, both to set common and consistent standards and to help reduce the risk of developers being accused of attempting to buy consent.

Secondly, there was demand for best practice guidance on community engagement with two respondents identifying the Highland Council guide as a useful reference source. Some respondents felt that a guide for

communities involved in negotiating benefits would be helpful, but that a guide on what benefits should be offered would be unhelpful. Indeed, several developers were concerned that best practice guidance on community benefits would either force developers to offer benefits where 'none were needed', or undermine what some developers feel are 'enhanced' benefits which distinguish them from other developers. This may point more to a desire for guidance on 'good' rather than 'best' practice.

There is therefore clearly a school of thought (albeit a minority of respondents) that would prefer guidance to cover only community engagement (and thereby only the process for discussing the provision of community benefits rather than the nature of those benefits themselves).

The need for consistency in engagement for all stakeholders (developer, planning authority and 'the community') was specifically raised by 3 respondents, with the recently developed Regen South West Wind Protocol being cited as a useful reference source.

A number of respondents identified that guidance would need to consider issues such as location and scale of development. Some concern was raised that guidance should be national rather than regional – to avoid too much regional variation, but that the different nations (England, Wales, Scotland and Northern Ireland) might need specifically tailored guidance to reflect different levels of public acceptance and planning legislation and official planning guidance.

In terms of defining the community benefits to be covered by the guidance, some responders highlighted the current BWEA best practice guide and the extensive list of community benefits used in this study.

5.5 Key findings from UK research

- There is not a standard approach to the nature and scale of community benefits or to approaches to community engagement by wind power developers in the UK. While payment into a community fund of some kind is an increasingly 'standard' (but not universal) feature, there is no standard level of payment and no standard approach to the management of the funds or the purpose to which they may be put.
- As development activity intensifies under the RO, developers are exploring a number of different approaches to offering enhanced community benefits.

- There is no strong evidence from this survey that higher levels of community benefit offered during the planning process necessarily lead to earlier planning success or stronger local public acceptance, though some evidence that a lack of community liaison can increase the likelihood of having to resort to appeal or public enquiry.
- Planning officers and developers generally share a sense that the level of community benefits offered plays little explicit part in the local decision-making process (indeed some felt that they sometimes brought a negative sense that developers were attempting to 'buy consent').
- There is however a strong belief that the level of community benefits offered is an influence on the views of individual planning committee members 'behind the scenes', even though there is only anecdotal evidence of this.
- Some developers also feel that the level of community benefits on offer does have an influence (though rarely significant) on the nature of local public response to a proposal.
- Concerns about being portrayed as 'buying consent' appear to be capping the level of direct financial benefits developers are offering to communities.
- Experience varies as to whether any specific community benefit is treated as a material consideration in the planning decision. General economic benefit to the area has been so treated in at least two case studies (Cefn Croes and Drummuir). Other direct community economic benefits of equivalent value (e.g. cheaper local electricity) maybe material in theory but are rather complex in their implementation.
- It is unusual for projects to establish formal agreements relating to the provision of community benefits, with only 1 in 4 of the surveyed projects having done so with either the planning authority or the local community
- Local or regional economic benefits, in the form of significant turbine or component manufacturing jobs, are proving difficult for UK wind projects to achieve.
- The level of benefits realised during a project's construction and its subsequent operation tend to be greater than those offered during planning. This is particular the case with: (a) the involvement of local contractors in construction (which is very common in practice but difficult

to guarantee prior to tender), and; (b) public and school liaison once operation has begun.

- Developers and planners generally share a belief in the value of developing good practice guidance on community benefits and, more particularly, on community engagement.

6 The experience of community benefits from wind power in other leading EU countries

In order to understand how the UK compares with other EU countries with respect to community benefits and wind power development, four additional EU countries were selected for comparison – each for a different reason:

- Germany: for its world-leading status in terms of installed capacity
- Spain: for the recent rates of development (now leading to a large installed capacity) and its success in creating a manufacturing base in a relatively short time period
- Denmark: for its world-leading manufacturing industry
- Ireland: for its similar cultural context to the UK

The situation in each country is outlined below, bringing together country-wide analysis with specific information arising from case studies in each country where helpful to illustrate particular aspects of the national situation.

6.1 Germany

6.1.1 German Profile

Due to combined promotional measures taken by federal and regional governments, and continuous political support, installed wind power in Germany rose from 0.2 GW in 1992 to over 14 GW in 2003, giving Germany the highest installed wind energy capacity in the world.

In 1998, Germany set national commitments – for share of primary energy consumption, to double the share from the then 2% to 4% by 2010, and then further increases to 25% by 2030 and 50% by 2050; and for share of electricity consumption, to double this from 5 to 10% by 2010. Latterly, Germany is aiming to meet its Renewables Directive target of 12.5% of electricity from renewables by 2010. Wind power is key to meeting these targets.

Germany has also committed to phasing out nuclear power.

6.1.2 German Wind Power Promotion

Market incentives in Germany were in the early years provided through direct subsidies from state governments, federal research programmes, cheap loans and tax breaks. A new legal framework for the growing market was established in 1991, called the Electricity Feed Law. The law had two main components: it required the grid operator to purchase all electricity generated by wind power, and it fixed the price to be paid by the grid operator. The latter, the “feed-in price” was set as a percentage of the average retail price. Costs were borne by the grid operator in whose area the generation was connected, and despite a later cap on the volume of electricity which had to be purchased by each company, it resulted in disproportionate costs for grid operators in high wind areas. As such it became unpopular with these grid operators.

A new Renewable Energy Act (the EEG) was introduced in 2000, and has been subject to subsequent amendments. It retains the principle of a feed-in price, but incorporates some key changes:

- A cut-off reference yield below which projects are ineligible for support, to target support to more productive sites.
- By giving remuneration for a given amount of production as opposed to time, it has a tariff structure which, for projects meeting the reference yield, is designed to even out development over more and less windy areas.
- A long-term price structure (with the price decreasing over time) to encourage investment and technological development.
- Even distribution of costs across grid companies.

Germany is a strong proponent of its feed-in system for renewables in terms of its ability to contribute to volume-based targets. This is despite criticism from, amongst others, the European Commission, who consider it to be costly and somewhat non market-based. These points can be debated. It has however been indisputably successful in delivering installed MW at a world-record pace.

6.1.3 German Planning System

Since reunification in 1990, Germany is made up of 16 regional administrations or Länder (11 prior to 1990).

Onshore wind farms need to seek planning permission which entails securing a building permit and usually a full environmental impact assessment.

The Federal Building Code grants preferential status to wind turbines, under certain conditions. But otherwise, the planning process is largely governed by the Länder. There can be varying requirements of developers depending on the Länder concerned. The process can be lengthy and complicated, and it is difficult for those unfamiliar with the system to navigate it.

The Länder issue guidance on the application of Federal and Länder legislation. Usually there are such planning guidelines in place specifically for wind turbine developments. They cover items including:

- distance limits from roads, electricity lines, motorways etc.
- when an environmental statement is necessary and what its content should be

Regional and local development plans usually provide for wind energy, often in a way which can be prescriptive for individual projects. Approval of these development plans is a political process. Planning decisions on individual projects are taken by local government officials.

6.1.4 German Public Attitudes

Wind energy's success in Germany speaks for itself in terms of public attitudes. Wind energy has been promoted by successive governments with an environmental agenda, voted in by an environmentally conscious public. Because of its high installed capacity, in a relatively densely populated country, Germany has also tested public attitudes more so than any other country in the world.

Public opinion surveys have been carried out by specialist opinion poll companies Emnid, Forsa and Allensbach. Surveys carried out between 1997 and 2004 show a consistent, high level of public support for wind energy, that appears to be unaffected by installed capacity increases over the period.

An Emnid study from 1997^{vi} found that 88% of the German population have a positive attitude towards the use of wind energy. In 2003^{vii}, 77% of the population were in favour of a further expansion of wind energy. And in 2004^{viii}, 85% of Germans were in favour of the current support system for renewable energies; 60%, would even prefer to increase public support.

A Forsa study from 2004^{ix} found 66% of the German population in favour of a further expansion of the use of wind energy in Germany, and 60% welcoming of further development in their neighbourhood. Also in 2004, an Allensbach study^x polled 62% of Germans in favour of an expanded use of renewable energies.

Motivated by a desire to understand the impacts of wind farms on tourism in Schleswig Holstein, a collection of interested parties – including the Schleswig Holstein Tourist Board, the Lübeck Chamber of Commerce, and the regional wind energy and energy foundation – commissioned a study to review data on visitor numbers and public attitudes^{xi}. At the time in which the study was undertaken, Schleswig-Holstein had the second largest number of wind farms in Germany. At the same time, Schleswig-Holstein is one of the most important holiday destinations in Germany, and is known in particular for its expansive sandy beaches.

The study compared overnight stays at tourist resorts with different numbers of nearby wind farms, undertook questionnaires amongst the general German population and visitors to Schleswig Holstein, and conducted some in-depth group discussions.

The review of overnight stays showed no relationship to the number of nearby wind farms. That is, wind farms were having no negative effect on overnight visitor numbers at existing resorts. Taken with the outcome of the questionnaires, and group discussions, the authors found that "*the results of the study conclusively show that the fear that the presence of wind farms would lead to perceivable damage to the tourist industry is not proven*"² and that "*even a further increase in wind power would not be rejected by visitors out-of-hand. The majority of those questioned would in fact welcome it.*"

Interestingly, the results of the group discussions in particular suggested that the attitude of the local population could play an important role. The authors concluded that "*the attitude of the local population plays a role that can not be underestimated. Committed protest against feared problems from wind farms could possibly lead to a self-fulfilling prophecy about the negative impact of wind farms on the attitudes of visitors....An aggressive and positive stance on wind power in holiday resorts, if complemented with tourist marketing of the attraction of a 'wind park' could possibly establish a competitive edge over other holiday resorts.*"

² Quotes are translated from the original German language report

6.1.5 German Community Involvement

Most of the wind development in Germany has taken place in the northern regions of Germany where the wind resource is best. These are traditionally regions with weak industrial infrastructure, low population density and a high percentage of the population living from agriculture. In the coastal zones the traditional fishing industry is being replaced by tourism and the ship-building industry has been steadily declining with consequently high unemployment rates.

Ownership

Most of the early projects in Germany were initiated by individual farmers and owners of small local businesses. In Schleswig-Holstein the owners of 50% of all wind turbines are individuals^{xii}. Small-scale development was economically feasible due to the clear legal and economic framework set by the federal government, and early state government subsidies. Used to Common Agricultural Policy subsidies, and looking for alternative sources of income and future security, farmers were able and motivated to avail themselves of the support framework.

A second class of developers is attracted by tax benefits – companies developing small wind farms financed by groups of private investors, some of whom may live in the locality. The investors' taxable income is reduced by investments in renewable energy projects, and the levels of remuneration attract those with more than just a green conscience. These developers have gradually taken over the lead role from farmers. Especially in the new Eastern states, farmers now rarely initiate or participate in wind farm projects^{xii}. Today, wind farm size and investment volume is increasing, and as a result large institutional investors are becoming more interested in the market.

In Germany there is also ready availability of low cost debt financing from institutional banks. The combination of below-market financing, high returns from attractive feed-in tariffs and favourable tax laws, has tended latterly to favour larger, highly-leveraged projects.

Local income

Local land-owners receive fixed fee rental. The land-ownership structure in the Eastern states is different and this benefit is less likely to go to a local citizen.

A local trade tax "Gewerbesteuer" is levied on all businesses whose headquarters are located in the municipality. In an area that has only a weak

industrial infrastructure, as is typical for areas with wind development, the trade tax income from wind-related developments can multiply the income available to a rural community. While under the 'older' wind development model the trade tax usually accrued locally, now this is less likely because the wind farms are initiated by companies based outside the region.

Other contributions are made on a voluntary basis and tend to be rather ad hoc community-based measures – for example roads maintenance, community facilities and so on.

Compensation

The environmental assessment process, as specified by European law, encompasses compensatory or mitigating measures. Environmental protection law in Germany prescribes a sliding scale of compensatory measures. Priority is given to measures which directly reverse the impact in terms of its nature and geographical location. If this is not possible, alternative measures deemed to be equivalent to the impact are required. These alternative measures can include monetary payments.

The Länder have their own environmental protection laws which can further specify compensation requirements. In all cases, compensation is calculated as a function of the amount of environmental impact. In Hesse for instance, landscape types are defined and given a score per square meter. A development imposing change on the landscape is assessed by comparison of the total score of the influenced area before and after the development, the latter including any physical mitigation measures. Any loss in score between the before and after case is charged by the region at 0.32 € per point difference. Payments go towards an environmental protection fund.

Commissioned by North Rhine-Westphalia, a 1993 guideline describes the landscape impact of tower-like structures, and presents a means of calculating the area which should be compensated. A wind farm design software package offers a module incorporating this calculation. There is however no official requirement to use this method in North Rhine-Westphalia.

A review of wind energy projects in Saxony Anhalt^{xiii} found that one-off compensation payments ranged from 210 to 80000 € per wind turbine. Recurrent annual payments ranged from 360 to 5600 € per turbine. These are considerable sums of money for the municipalities.

Thus while the rationale for compensation is rather well documented, the amounts accruing to local communities are highly variable. One developer

is even currently subject to legal proceedings, accused of paying more than should have been due.

Jobs

Construction and infrastructure works are typically contracted locally, and locally-manufactured turbines selected. The total number of jobs created in wind energy is estimated at 35,000 in 2002^{xiv}, and one estimate published this year put this number at 50,000. While as stated, the focus has shifted away from individual farmers, benefits for the community as a whole remain, albeit the increased size projects means that it is more the region as a whole, and less the local community, benefiting directly.

6.2 Denmark

6.2.1 Denmark Profile

Denmark is often regarded as a model country when considering the development of wind energy. It has been seen as a “pioneer” in developing community-based as well as large scale wind farms. It has two defining features. The first is its enormously successful wind turbine manufacturing industry, which has sold to-date just over 40% of all wind turbines world-wide – a staggering figure for such a small country. The second is shown in Figure 6.1.



Figure 6.1 Installed wind turbines in Denmark (2002)

6.2.2 Danish Wind Power Promotion

The oil crises of the late 70's hit Denmark's economy, which was very reliant on imported oil. As a result, it introduced a range of measures which sought to reduce import dependency, including:

- exploitation of domestic oil and gas reserves
- energy efficiency measures, including promotion of Combined Heat and Power (CHP)
- promotion of indigenous renewables

Into the 80s and early 90s, environmental concerns became increasingly prominent and this strengthened the government's commitment to renewables and energy efficiency. Denmark became the only European country to combine its energy and environment ministries.

While the means of promotion has shifted, there has been long-term commitment to renewables in Denmark, helped by three successive terms of a coalition government led by the social democrats from 1993-2001. In 2001, a new coalition led by the liberals and including the conservatives, has introduced a shift in energy policy emphasis, whose priority is now on achieving cost reductions through market-based measures. The energy and environment ministries have been split, and plans for offshore wind delayed to allow for implementation via the open market.

Since the 1970s, utilities have been obliged to purchase wind-generated electricity at a mandated price. The mechanism employed, that of a guaranteed price for delivered electricity, was a feed-in price. The price decreases over time until at 10 years the output is exposed to the market prices. From 1979 to 1989, an installation subsidy of 30% capital costs was also provided.

Legislation introduced in 1999 envisages a tradable green certificate system, with an obligation on consumers, which is fulfilled by the system operators, to purchase a specified amount of renewable energy. Introduction of this scheme has been protracted, but turbines commissioned in 2003 onwards are exposed to the current market conditions, which are receipt of renewable energy certificates plus the market price for electricity. The green certificate regime is not yet fully functioning, and until such time as it is, the value of a certificate has been fixed.

Since April 2001 the onshore Danish wind turbine market has been driven by the “replacement scheme for wind turbines”. The scheme provides for voluntary replacement of existing wind turbines below 100-150 kW (and soon 450 kW). It allows owners to triple existing capacity and to earn a favourable price for output. The right to a premium price is transferable and since its implementation all onshore turbines in Denmark have been installed under this scheme, i.e. developers of wind turbines or wind farms have bought the necessary rights.

6.2.3 Danish Planning System

Denmark has three levels of government at the national, county (or regional) and municipal level. The planning system has four levels as follows:

1. National plans: establish the framework for regional (county) and municipal planning through national planning initiatives, national planning directives and guidelines.
2. Regional plans: set the framework for municipalities. They are drawn up every four years (coinciding with the election cycle) by ten county councils or bodies, which have equivalent authority, i.e. the Greater Copenhagen Authority and the Bornholm Municipal Council. In the text below all of these entities are referred to as counties.
3. Municipal plans: are drawn up every four years by approximately 260 municipal councils.
4. Local plans: are the basis for issuing building permits in a specific neighbourhood. They are prepared and approved every year by the municipalities as needed. Some 1,200 plans are prepared each year.

The Danish planning system is quite decentralised, and citizens are encouraged to participate in the planning process. Planning proposals from the municipalities have a public hearing period of at least eight weeks. Coastal zones (and retail trade) are subject to special regulations. The general policy is to keep coastal zones as free as possible of development and installations that do not require coastal proximity.

In the case of wind farms, Danish counties have a key responsibility. Municipalities are only allowed to initiate planning for wind turbines in areas which are designated for such use in a regional plan. A detailed national wind survey was carried out to facilitate this process.

Regional plans in turn must adhere to national guidelines. From 1992, national government has required local governments to provide space for wind turbines. Notably in 1994 the Minister of the Environment issued a guideline to realise an indicative national target of 1,500 MW of wind power by 2005. All counties and municipalities submitted plans (some with 0 MW of installed power in larger cities) with space for some 2,500 MW eventually submitted by 1995. As a result, developers have, more or less, been able to use areas that were pre-planned for wind turbine use. "Planning permission" in this case is a building permit.

Projects falling under EIA requirements are subject to a special 10-12 month procedure with a countywide public hearing. The regional planning authority generally prepares the assessment as a supplement to the regional plan. Developers often voluntarily submit draft local plans to the municipality in order to facilitate the spatial planning process. Likewise, developers may submit essential parts of the EIA.

6.2.4 Danish Public Attitudes

Denmark is known as a country with a relatively high public and political consciousness of renewable energy in general, and wind energy in particular. It is also known as perhaps *the* country with the most active involvement of the general public in local implementation of wind energy.

Wind energy in Denmark continues to enjoy wide public support – three consecutive public opinion polls in 1991, 1996 and 2001^{xv} show an unchanged 68% share of the population in favour of increasing the share of wind energy in electricity supply, despite a significant growth in the actual share of wind energy. In the latest 2001 survey, the remaining respondents were split between finding the current level satisfactory (18%), undecided (7%), or finding the current level unsatisfactory (7%).

Sydthy municipality, a small town of 12,000 inhabitants, has one of the highest concentration of wind turbines in the world. A 1997 study (Andersen et al) looked at attitudes in the context of other parameters. It found that, when attitudes towards wind turbines in general were compared with the number of visible turbines from respondents houses, no clear pattern could be detected. People who could see between 20 and 29 turbines tended to be more positive about wind energy than people being able to see only a smaller number of turbines.

Sydthy municipality was quite unique in that 58% of the households had one or more shares in a co-operatively owned wind turbine. People who owned shares were significantly more positive about wind power than

people having no economic interest. Members of wind co-operatives were more willing to accept a neighbour erecting a wind turbine.

6.2.5 Danish Community Involvement

Ownership

Approximately 80% of wind turbines installed onshore in Denmark are owned by individuals (local farmers and, increasingly, city people) or wind co-operatives (a roughly 70/30 split). Until 1999 ownership was restricted to electrical utilities and residents of the municipality in which each turbine is located, plus neighbouring municipalities. The political rationale for this restriction was partly to ensure local support for wind projects, and partly a result of power company lobbying to restrict the proliferation of independent power producers. Because of administrative difficulties, ownership is no longer restricted.

Denmark leads the world in wind co-operatives. The Danish co-operative tradition is particularly developed in rural areas and small towns, and originated in the 19th Century. Co-operatives became the dominating form of organisation for dairies and slaughterhouses, fisheries auctions, gardening auctions, food retailing outside towns, mortgage lending, savings banks, fire insurance, etc. Most of this development occurred after 1857, when all town and guild monopolies were abolished by law. Water and electricity supply in rural and semi-rural areas were largely organised as local co-operatives as well, and the electricity distribution system in Denmark is still dominated by co-operatives.

Modern wind co-operatives started in the late 1970s, frequently organised by anti-nuclear activists, often with roots in rural Denmark and with moderate Liberal Party leanings. Wind co-operatives are usually organised as unlimited partnerships, and each share is fully paid up by each investor, i.e. the co-operative has no debts. With proper insurance of operating risks there is no insolvency risk for the individual investor. There are some examples of co-operatives, which have mortgaged their wind turbine(s), but that tends to be the exception rather than the rule.

Investors usually finance their own shares from their savings or by taking out a bank loan, which is often offered on favourable standard terms by a local bank as part of the introduction package in the prospectus. The bank will take the co-operative shares as collateral for the loan. Local banks often see wind co-operatives as an opportunity to get in contact with new costumers with a view to getting all of their financial business.

Co-operatives are usually quite small, consisting of only a single turbine or (part of) a cluster of wind turbines. In later years most wind turbines in Denmark have been built in clusters of 3-6 turbines. Frequently some of the turbines in a cluster are wholly owned by a single individual, for instance the landowner or outside investors. In these cases the large investors and their turbines are usually not part of the co-operative, because this would entail accountancy and auditing requirements for the partnership *per se*.

Early tax incentives encouraged co-operative ownership of turbines. The current tax structure gives some benefits to co-operative and individual owners, but the vast majority (>90%) of income from wind electricity is subject to tax.

In the Eastern part of Denmark the electrical power companies have entered into agreements with co-operatives and own some of the turbines in order to fulfil the obligations which were previously laid on power companies to invest in wind power. In the Western part the power companies have preferred to build their own wind farms.

Local income

Municipalities and counties levy personal income taxes and property taxes. Half the revenue from corporate taxation accrues to the municipality where the company is registered.

Most wind turbines in Denmark are owned by local residents and the major part of the income tax from the turbine owner accrues to the local municipality. Landowners are also taxed on the basis of the property value, which is reassessed when the property is reclassified as a potential wind turbine site.

Jobs

The wind industry is established in the economic landscape of Denmark. In 2003, 20,000 people were estimated to be employed in the wind turbine industry, 6,219 of which were working in manufacturing factories.

Cheap electricity?

For some reason, an idea has gained currency within UK renewable energy 'circles', that much of the benefit gained by communities in Denmark was in the form of cheaper electricity. It does not appear that this is the case.

There has been no general reduction in the price of electricity supplied to Danish wind turbine owners, regardless of whether they are organised in

wind co-operatives. Turbine owners sell the energy to the grid at prices varying between approximately 0.25 and 0.60 DKK/kWh, and they buy from the grid like all other households at a price around 1.40 to 1.60 DKK/kWh because of high energy taxes.

There is an exception to this general rule, which applies only to small wind turbines installed within the turbine owner's own electrical installation (generally less than 25 kW). These 'household' turbines are metered separately for export and import. Electricity consumed on the premises is not subject to VAT or energy taxes but there is income tax on the value of this electricity. Even with these benefits, and an export tariff of 0.60 DKK/kWh, such turbines are only generally considered financially viable if they are providing more than half of the owner's electricity needs.

Recent developments

A stark demonstration of the differences between the UK and Denmark is the fact that it was difficult to find case studies which met the study guideline of 10 or more turbines. Two case studies are presented here which are atypical compared to the majority of development to-date, but more typical of recent developments, which are in response to re-powering incentives. Both of these projects have introduced the concept of community funds (until now very rare in Denmark) and a more 'mixed' ownership structure.

- **The Fjaltring-Trans Wind Turbine Pool**

Fjaltring-Trans is a small parish in the Western part of Denmark. Previously, it hosted a single wind farm of two 95 kW turbines, owned by a wind turbine co-operative and built in the mid/late 1980s.

As part of the development plan process in Denmark in the 1990s, the municipality allocated and planned a land area for a 5 x 750 kW turbine wind farm, with the condition that the existing two wind turbines be removed, on the grounds of providing for a visually acceptable new wind farm. As a consequence, development of the new wind farm required consent from the existing wind turbine owners. Because of government incentives for re-powering, implemented in 2001, this replacement of the turbines was an attractive option for the existing owners.

Investment for the new wind farm was secured through:

- the existing wind co-operative investing in one of the new wind turbines, having expanded to include nearly all of the 350 households in the local community.

- an outside developer with investors for another three turbines.
- a local farmer investing in one of the turbines located on his land. He also suggested that the community should be compensated for hosting the turbines.

The farmer's idea of offering income for the local community won the support of the wind turbine co-operative. After considering options, the owners agreed to attach an easement to each of the five wind turbine lots, obliging the owners to contribute to an association which became known as The Fjaltring-Trans Wind Turbine Pool.

Contributions are levied as 2% of the pre-tax profits of the co-operatives and 3% of the profits of the remaining turbines owned by individuals. The differentiation largely reflects the differences in tax treatment of the two groups. The contributions are not tax deductible.

The board of the pool has five members consisting of three individual wind turbine owners, a representative elected by the co-operative and the farmer, who has delegated his membership to the locals. The largest project the pool has financed was the planning plus 10% of the construction costs of new hostel in the parish, which has now been built and is in full operation.

The community reaction to the creation of the wind turbine pool was obviously positive, granted that the vast majority of households are members of the co-operative. A few people felt that it was unhealthy to have parish initiatives in the hands of the turbine owners but subsequent reactions have been positive. The wind farm was commissioned in 2002.

- **Rønland Wind Farm**

One of the most successful community wind farm projects in Denmark is Rønland Wind Farm, consisting of 5 x 2 MW turbines, located on a pier immediately North of a chemical biocide factory, on the North Western coast of Denmark. It was on-line at the end of 2002. With a local population of 4,000 people of 18 years and above, more than 1,000 own shares in the wind farm, i.e. more than half the households in the community. Local people, who had first priority in the allotment of shares, own 90% of the wind farm.

Fraught with planning difficulties, the total planning procedure took some seven years. An original proposal fared badly: the chemical factory argued against planning permission on safety grounds, citing risks of possible blade throws from the turbines. Ornithologists and nature conservationists argued against the project since the area borders on a Ramsar Convention

area (a bird sanctuary), and in the end the central government – the Minister of the Environment and Energy – vetoed the project consisting of eight turbines on grounds of environmental protection.

The Danish replacement scheme for wind turbines gave an incentive to restart the co-operative project. The local wind co-operative operated a wind farm of 4 x 90 kW machines built elsewhere in the municipality in 1987, and wanted to replace the old wind farm with turbines in the Rønland area.

The scheme for a new wind farm required extensive data collection with a view to an environmental impact assessment. The wind co-operative managed to collect almost €150,000 for the environmental studies by selling approximately 3,500 options for shares in the future wind farm. One share in a Danish wind farm traditionally entitles the owner to 1,000 kWh of the estimated energy output per year, i.e. a wind farm with an estimated average annual production of 30 million kWh will be split into 30,000 ownership shares in the unlimited partnership. The options cost 25 DKK per share (about £2.50 per share). The option payment would count as an advance down payment on each share. If the project did not materialise, no refund was due.

The municipality strongly supported the community initiative, but meanwhile a private developer wanted to build an additional 7 turbines on an adjoining site next to the chemical plant. The county administration rejected both applications citing concerns for the Ramsar status of the general area.

However the community' group had strong support from the municipal authorities, who wanted to “clean up” the landscape by centralising wind energy production in the windy, highly industrialised area on the coast. Intensive lobbying of central government managed to ensure that both projects became reclassified as offshore projects. This secured three advantages for the developers: (1) The deadline for benefiting from preferential electricity tariffs was extended; (2) the tariff was higher than for onshore projects, and; (3) the planning authority became central government, rather than local government, i.e. the Danish Energy Authority would manage the replies from all interested parties.

Eventually, the Danish Society for Nature Conservation – a powerful lobby group, which historically has had a somewhat ambiguous relationship with wind energy – supported the citizens' project. Likewise the local electricity company was supportive by offering support for civil work related to cabling in the rather difficult terrain.

Planning permission was granted after seven years, to both to the co-operative and to the privately developed project. The two competing projects, rejected by the county administration, had by then evolved into somewhat different projects in slightly different locations, though within the same general perimeter.

Interestingly, the original project from the citizens' group envisaged the creation of a community foundation after the model of Fjaltring-Trans project. However, in the end this proposal was rejected by the general assembly of the wind co-operative.

The project as a whole has been rated as a highly successful community project, in the sense that the very strong component of local ownership has ensured a high degree of public acceptance for wind energy in the area. Asked about the importance of local ownership for the final planning permission, one of the founders of the co-operative stressed that the municipality had been very supportive of the project throughout the process, regardless of the existence or non-existence of community benefit schemes, in addition to local ownership itself.

The wind co-operative contracted civil works to local contractors, but this did not play a role in the public planning process as such. Thus, as with the Fjaltring-Trans project, the community fund idea did not play a significant role in the planning process. It is evident, however, that public mobilisation to secure favourable treatment at national level played a very important role in the final approval of the project by central government authorities.

Arguments advanced by the co-operative in its prospectus material for the wind farm are typical in Denmark of broadly accepted reasons why a municipality will approve a wind project. The prospectus reads:

"Why should we have wind turbines in the municipality?"

The following speaks for itself:

- *Pollution-free electricity production*
- *Good economics for both the local population and the municipality (taxes)*
- *The municipality must fulfil the requirement of minimum 10 MW, which is why we recommend local wind turbines for the local population. (Its should be noted that the municipal council has unanimously decided to support our proposal)"*

6.3 Spain

6.3.1 Spanish Profile

Spain is second in Europe and third in the world in terms of installed capacity. It has experienced substantial growth rates, with installation of over a GW a year in the last 3 years. A combination of this high volume market, and a planning system which heavily favours local manufacture has been very effective in creating a domestic manufacturing industry.

6.3.2 Spanish Wind Power Promotion

A key reason for Spain's rapid growth in wind power is the so-called "Special Regime". Introduced in 1994, it provides premium prices for renewable energy.

A series of three Royal Decrees have provided updated guidelines for Special Regime generation. All three Royal Decrees have provided a fixed tariff option for sale of energy from wind farms, but other options have also been provided. The second Royal Decree (effective for all new projects from 1st January 1999 to 31st March 2004) also gave an option to take the hourly market price calculated for Special Regime producers and published at the end of each month, plus a premium, plus a bonus (or levy) for reactive power.

The latest Royal Decree, from March 2004, introduced the option of selling electricity on the market (pool) through a market agent, as well as a fixed tariff option. Until the 2004 Decree, the fixed tariff was set annually by government, within certain defined parameters. The current fixed tariff option is set as a percentage of a reference tariff, and is updated each year based on several costs of the Spanish electrical system.

6.3.3 Spanish Planning System

The planning system in Spain is largely the remit of regional governments, who are responsible for awarding the "Administrative Authorisation" (planning permission) (AA) and approving the EIA. Municipalities issue Building Licences, but this is normally a formality³ once the AA and the EIA have been granted. However, they can strongly influence the Public Opinion Process for the AA and the EIA.

Wind farm development can take from 18 months upwards to construction. The exact procedure depends on the region (Comunidad Autónoma)

³ If the local urbanisation plans for the future are not affected by the proposed location of the wind farm

concerned. 10 regions of a total of 17 have established special legislation for the development of wind farms, usually known as a “Strategic Wind Plan” (SWP): Aragón, Asturias, Castilla- La Mancha, Galicia, Castilla y León, Valencia, Catalunya, Navarra, the Basque Country and the Canary Islands. For wind farms in regions where the regional authority has not developed a specific plan, national legislation applies.

The SWP defines the approval process for wind farms in a region. A developer can apply for one or more projects at the same time under an SWP, where environmental work has been undertaken as part of the process of developing the SWP. Once adopted, an SWP therefore tends to produce simultaneous and faster project approvals.

Procedures in each region vary with respect to the criteria for EIA, any regional capacity targets, industrial plans or investment in the region, and the degree of project development and investment required prior to project authorisation.

Industrial plans on the part of the developer are normally required for the approval of a wind project under the Strategic Wind Plan. In some regions a commitment is required from the developer to produce a minimum percentage of the main wind turbine components in the region and also to invest a minimum percentage of the total project costs in local companies.

For example, Galicia has fixed percentages of 65% and 75% respectively, whereas other plans have been approved on a competitive basis, where the level of local investment is one of the criteria against which bids are assessed.

The Galician government states that this is not an obligation, rather a natural evolution for a growing industry to avoid transportation of large equipment across the country.

In Aragon, developers bid to the government for rights to construct under the Strategic Wind Plan. The average percentage of total investment committed within the region under this approach is 60%.

6.3.4 Spanish Public Attitudes

A survey undertaken in Navarra in 2002^{xvi} found that 85% of people were supportive of wind energy. 75% ranked wind energy the highest of all renewables. The main advantages of wind energy were seen as it being a clean energy source (93%) and creation of jobs and wealth (37%).

Officials from Galicia and Aragon interviewed for the study both report very high levels of public support from their own opinion testing. Objections to wind proposals are rare, and usually from groups with site-specific ecological concerns.

The project team did not identify any national attitude surveys. In their absence, the perception of GH staff in Spain is of support where there are few sources of income in the municipality. Rural areas in Spain suffer from economic emigration. Galicia, Castilla-La Mancha, Aragon are examples of this. There is more objection in regions such as Catalonia with a high incidence of second homes.

6.3.5 Spanish Community Involvement

Ownership

Spain embarked on wind energy with a defined mission to deliver volume in both installed capacity and jobs. From the outset, small-scale developments have not been on the main agenda. The levels of investment required to meet Spain's objectives have meant that the Spanish wind industry is rooted in the private sector.

Only a few developers are focused exclusively on renewables. Dominant players tend to be the utilities, with the remainder comprising small commercial companies, often diversifying from other industrial sectors. Foreign investors are also latterly entering the Spanish market. Regional governments may also act in a development role.

Ecotècnia, a developer and manufacturer employing 250 staff, is a co-operative and since 1999 has been part of the Mondragon Co-operative Group. The Mondragon Group is the world's largest co-operative company and the ninth largest group in Spain, with interests in financial and retail, as well as industrial sectors. This does not mean that the wind farms it develops are co-operatively owned by local people, but it does mean that the company is run and operated on co-operative principles.

Shares in wind farms can be offered, but it is not the norm. In one case, a region has negotiated the right to purchase shares in wind farms, the profits of which are then distributed to municipalities which have no direct benefits from wind farms, but which are affected by their impact (visual, road access, overhead lines etc).

Local income

Land owner agreement is required on the amount of rental to be paid. This is a significant benefit to the community in Galicia region because of the large numbers of smallholdings. The typical number of land owners per wind farm is 200-400.

A construction licence must be purchased, the price of which is negotiated but which is normally a percentage of the civil costs. There are wide price differentials between municipalities. Negotiations may encompass a contribution to the community to accompany the application. These may include not only fees but also 'in kind' contributions such as improving access roads, new libraries, sponsoring local sports teams or paying for 'fiestas'.

Business rates are payable to the Municipality, and can be up to 1% of wind farm revenue.

Jobs

Spain's defining community benefit is its wind energy industry, which benefits directly through orders from Spanish wind farms. As discussed in Section 6.3.3, planning permission is often contingent on investment in the region. The Spanish wind industry employs approximately 12,000 people, with an estimated 35,000 indirect jobs created as a result.

Spanish practice in securing community benefits

The scale and nature of these benefits is made concrete by examining the figures relating to two 20 MW wind farms in Northern Spain (one in Galicia and one in Aragon) commissioned in 2001.

These reveal sizeable direct financial contributions to the municipalities (e.g. €30,000 construction licence plus business rates of €29,000 per year, equivalent to more than £1,000/MW annually). In both cases, local contractors were used for the balance of plant and for ongoing O&M activities. For the wind farm in Aragon, 65% of the wind turbine contract value was placed within the region, including the hubs and towers (compared with a condition requiring 60%).

For both projects, the concept of community liaison is limited to the local mayor and municipal officials together with securing landowner agreement. For regional officials, they view the percentage of investment in the region as the justification for granting building permits.

6.4 Ireland

6.4.1 Ireland Profile

Ireland has a similar story to the UK – a large resource, rather small installed capacity and little pro-active community involvement. This is in part because the support mechanism in Ireland was based on that NFFO system in the UK. Planning permission has not however been the bottleneck it has in the UK.

As well as a pressing need to reduce greenhouse gas emissions, there is a need for more power generation in general in Ireland, driven by rapid economic growth which has not been matched by power system development. At present, the (non)availability of grid capacity is dominating the wind farm debate in Ireland.

6.4.2 Irish Wind Power Promotion

Market support for renewables in Ireland has been through a NFFO-type mechanism, the Alternative Energy Requirement (AER), of which there have been six rounds. Projects have also received capital support through the EU ENERGIE (formerly THERMIE) R&D programme, and have benefited from green supply companies being afforded enhanced access to demand customers.

The sixth AER round differed from its predecessors in making planning permission a pre-requisite for award of a contract. This prompted widespread planning activity and resulted in several hundreds of MW in receipt of planning permission.

Over the last few years the situation in Ireland has become rather confused. This is because while many projects have held planning permission for several years, projects also require a market for their output (an AER contract and / or a green supplier willing to sign a contract) and a grid connection agreement. Not all projects in receipt of planning were successful in securing an AER, and even fewer have a grid connection agreement.

Because of constraints on the grid, there was a lengthy moratorium on new grid connections. This has now been lifted with the publication of the Grid Code for Wind but it may mean that past project planning permissions will lapse if outstanding grid issues are not resolved within the 5 year construction approval provided by planning permission.

In December 2003, the government issued a consultation document on the future framework for renewable energy in Ireland. Amongst other things, it asks if new renewable energy targets should be set, and considers alternative support mechanisms such as a feed-in tariff or an obligation with tradable certificates. No decision has yet been made.

6.4.3 Irish Planning System

Ireland's planning system is similar to that of the UK, in so far as planning permission is issued by the local authority, which in turn pays regard to national guidelines. However, it differs from the UK in two key respects. The first difference is that planning decisions on individual projects are taken by a top-ranking official called the County Manager (as opposed to the UK where, wind farm applications are usually decided by a committee of elected councillors).

The official's decision is taken within the context of a politically-determined county Development Plan which is the main instrument for regulation and control of development. This has to be revised not less than every six years by elected councillors. Some counties have adopted clear policies on wind farms (e.g. Kerry, Cork, and Leitrim) setting out areas in which they may be acceptable and areas in which they would not be accepted.

The second difference is that Ireland has an independent planning appeals system, presided over by the Planning Appeals Board, An Board Penal. It is fairly common for the Board to assess wind farm planning applications.

Planning permission is not at present a bottleneck on project realisation – the lack of grid capacity and a market have been more significant constraints. However, planning approval rates are cited by industry observers as low. New national wind energy guidelines have been published in 2004 to update those issued in 1996.

6.4.4 Irish Public Attitudes

A recent survey commissioned by Sustainable Energy Ireland (SEI), 'Attitudes towards the development of wind farms in Ireland', echoes results found in other studies. It comprised a national survey on public attitudes to renewable energy and a wind farm catchments area survey (including: homes in sight of a wind farm; homes within a 5km radius of a wind farm, but not in sight of the wind farm, and; homes in areas with wind farms that have received planning permission).

Two thirds of national survey respondents were either very or fairly favourably disposed to having a wind farm in their locality. This positive

attitude was mirrored in the catchments areas – over 60% of those living in close proximity to a wind farm would favour another wind farm or an extension to an existing one.

Fewer people in the catchments areas than in the national survey believed that wind farms disturb the natural habitats of birds and animals, or are an eyesore on the landscape. Similarly fewer people in the catchments areas see wind as an unreliable source of energy.

6.4.5 Irish Community Involvement

Ownership

Again like the UK, the development model in Ireland is commercial company developers, either major utilities or small, specialist developers. Ownership is largely utilities, a specialist green energy supplier, or groups of investors. There are two small-scale “community” based schemes, one of which is co-operatively owned.

On the premise that enhanced community benefits could be expected to improve planning success rates, a study was commissioned in 2002 examining factors which influence ownership and community participation. It concluded that a combination of national policy, development costs, the AER bidding process, access to information for communities, the nature of financial incentives and the developer-oriented planning system conspired to dissuade community involvement.

The study concluded that 100% community ownership was unrealistic until such time as barriers were addressed. In the meantime, it suggested that the most promising investment option might be that of participating in commercial projects once such projects have secured planning consent, a grid connection agreement and a market.

Local income

Community funds are offered on an ad-hoc basis – there is no industry standard practice. Operational wind farms pay business rates which accrue to the local authority. In one currently planned project studied for this research, these local rates would amount to approximately £5,000/MW.

The planning officials for this project regard any community fund as outside the planning remit and more for the community itself to deal with than the planning authority or the local councillors. Project developers contacted for this study took the view that community funds had little impact on the planning process since elected councillors were not the decision-makers

and were set to gain from the generally more significant payments of local rates anyway.

Jobs

Apart from some components (e.g. turbine transformers), local manufacture is not possible as the domestic market has not yet been sufficiently large to justify establishment of any factories in Ireland. Local jobs are however provided in construction and operation and these socio-economic benefits are (reportedly) considered by the planning official when determining the project.

7 Comparing the UK and leading EU countries

There are some very significant differences in installed capacity between the countries examined. Summary statistics for each country are shown in Table 7.1.

Country	Installed Capacity (MW)	% of technical potential	Population density
UK	815	2	246
Denmark	3016	27	126
Germany	14655	134	231
Ireland	230	2	56
Spain	6420	20	80

Table 7.1 Country Statistics

Germany, Spain and Denmark stand out as having reached significant levels of installed capacity, and clearly this has necessitated planning approvals in these countries. So what is it about these countries which enables these levels of approval?

7.1 Wind Power Promotion

Wind power support mechanisms can be grouped as follows:

The UK NFFO and Irish AER systems – competitive bidding for power purchase contracts with power utilities. Both have resulted in relatively low levels of installed capacity, partly as a result of low political targets and partly because of planning difficulties.

Spain, Germany and Denmark – a form of feed-in tariff where any approved, connected project receives a defined price for its power. This price is either set in advance by legislation, set as a percentage of a variable market value, or periodically set by government. These have all been instrumental in securing capacity.

The UK's Renewables Obligation – based on tradable green certificates, where projects negotiate power purchase contracts with utilities mandated to source a defined amount of renewable energy. The RO has stimulated a massive increase in development activity in the UK.

Many commentators speculate that simplicity of support mechanisms like a feed-in tariff encourage community-owned schemes. This is because such systems do not necessarily involve high levels of risk or expertise in power sales negotiation. They are also not inherently geared towards large projects (requiring high levels of investment) which out-compete smaller projects through economies of scale.

This is certainly part of the picture, but it does not tell the whole story. The UK, Irish and Spanish markets are dominated by commercially-driven companies. Development tends to be based on wind farms rather than individual turbines. Germany and Denmark both exhibit high levels of individual and co-operative ownership of wind farms, and Denmark especially has many dispersed individual turbines.

Spain has a feed-in tariff but commercial development of wind farms. Its tariff structure is arguably more complex, and less certain, than that in Denmark and Germany. Its planning system, with a strong bias towards economic gain from volume installation, is also heavily weighted towards commercial-scale projects.

7.2 Planning system

Table 7.2 below compares elements of each planning system. Denmark is the only country in which there is pre-approval of wind farm locations, and in which the local authority conducts a significant amount of the development appraisal. The UK is the only country where politicians make individual wind farm determinations, and where there are no formal, direct economic benefits to the local authority.

Feature	UK	Denmark	Germany	Ireland	Spain
Pre-approval of locations	No	Yes	No	No	No
Consenting authority involvement in development process	No	Yes	No	No	No
Direct benefits to consenting authority	No	Yes	Yes	Yes	Yes
Official (rather than political) determination of decision	No	Yes	Yes	Yes	Yes

Table 7.2 Planning System Comparison

The fact that it is officials who make the principal planning decisions on individual wind power projects should not, however, be interpreted as depoliticising wind power planning in these other countries. These decisions typically take place within the context of a local planning framework which has itself been subject to extensive public and political consultation. Political discussions on the merits (or otherwise) of further wind power development in a locality is therefore one step removed from individual project proposals.

There is much debate in the UK on the merits or otherwise of a more strategic planning approach to wind power development. The benefits of a strategic approach, based on experience from these other countries, are:

- faster consent timescales for individual projects
- more predictable planning outcomes, which in turn lead to more predictable orders for local manufacturing industry

The main disadvantage of a strategic approach is that it can be rather inflexible. For instance there is usually a trade off between energy capture and the environmental impact of each turbine, and this trade off changes as technology evolves. An inflexible siting policy can compromise energy capture efficiency, resulting in the need for more turbines to achieve a given amount of energy.

Danish and German support systems have both recently altered to promote the use of the most efficient sites. The extent to which Spanish policy prescribes siting varies between regions.

It is important to note that in all cases a strategic approach is in the context of removing political influence from individual decisions. This means that once the factors which make a good project are agreed, projects meeting those criteria should be approved. It is not difficult to conclude that this approach helps provide wind power developers in these other countries with clearer and consistent decision-making on individual projects, a factor which, in itself, reduces the risk (and therefore cost) of development.

It is also important to note that once the 'rules of engagement' are defined, any changes will result in winners and losers. When Germany changed its support system to encourage more efficient sites, this was at the expense of projects already proposed on less efficient sites.

7.3 Public Attitudes

Table 7.3 compares public attitude survey results. It shows a broadly comparable attitude in all countries, which appears to be unrelated to levels of installed capacity, or indeed the nature or scale of community benefits offered.

Question	UK	Denmark	Germany	Ireland	Spain
In favour of wind power	77		88		85
In favour of an increase in wind	74-82	65	66-77	66	

Table 7.3 Public Attitudes Comparison

There is certainly a widely held belief that provision of certain community benefits does feed through to acceptance and support for wind power projects. In the present study, this sentiment was expressed by a number of interviewees in the context of local economic gain – principally jobs but also local taxes. The majority view was also that provision of a local fund had no impact on public acceptance. However, both a tax and a fund result in local monetary gain, the difference being one is mandatory and the other is, in theory, voluntary.

Although there is no empirical evidence, it would be reasonable to surmise that levels of public support in Denmark, Germany and Spain are *sustained* by, in part, some form of gain for localities hosting wind power, be that jobs, taxes, local ownership or compensation.

There is also a sense that no-one wishes to be seen as “buying” favour (or having been bought). This does not however over-ride the belief that local gain is desirable, in some shape or form.

7.4 Community Involvement

Table 7.4 compares “typical” community involvement practice. Some form of community consultation is present in all countries, and indeed is a requirement under European EIA law. The UK is the only country in which a direct cash contribution to some form of community fund has become the norm. The UK and Ireland have also tended not to feature other kinds of community benefits. Denmark, Germany and Spain each have a variety of benefits – local taxes are common to all three, as are jobs.

Benefit / Feature	UK	Denmark	Germany	Ireland	Spain
Community fund contribution	Yes	No	No	No	No
Community compensation	No	No	Yes	No	No
Pre-approval contribution	No	No	No	No	Yes
Local taxes	No	Yes	Yes	Yes	Yes
Jobs	No	Yes	Yes	No	Yes
Individual investments	No	Yes	Yes	No	No
Co-operative investments	No	Yes	No	No	No

Table 7.4 Community Involvement Comparison

There is a perception that Denmark offers a model for community benefits. When people ask for the UK to mirror Denmark, they are asking for:

- business taxes to accrue to the local authority
- a wind power manufacturing industry
- for individuals to invest their own money in a wind turbine

The last of these, individual investments, are as much a reflection of culture of co-operative or individual investment in local initiatives (rare in the UK) as it is of the relatively low risk of such investment which are readily supported by Danish ‘High Street’ Banks.

Jobs and manufacturing benefits

Figure 7.1 illustrates annual installed capacity and domestic manufacturer's turbine sales, and Figure 7.2 shows the same data as a percentage of world installed capacity and sales. They show very clearly the link between installed capacity in each of Germany and Spain, and the fortunes of German and Spanish turbine manufacturers.

In these two countries in particular, the development of wind power projects at home have direct and tangible economic benefits in terms of manufacturing capacity and jobs. Denmark has taken full advantage of its early lead in wind power technologies and manufacturing such that it is now gaining economic benefits from developments elsewhere in the world as well as within its own borders.

The graphs also show how much more intensive wind power development activity has consistently been in Denmark, Spain and Germany compared with the UK.

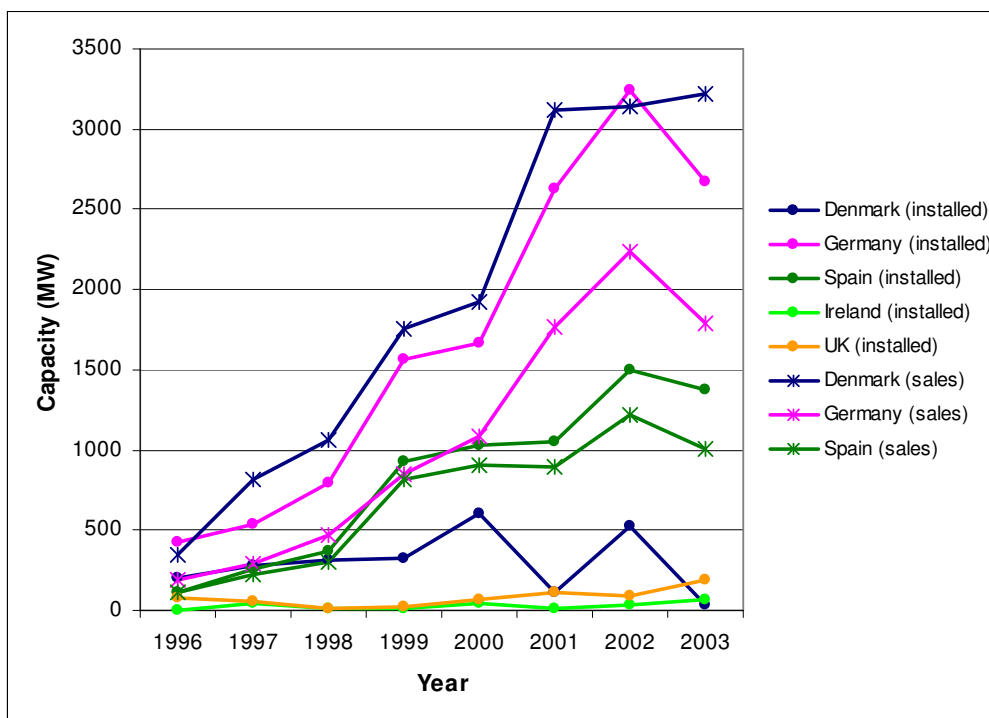


Figure 7.1 Annual installed capacity and manufacturer sales

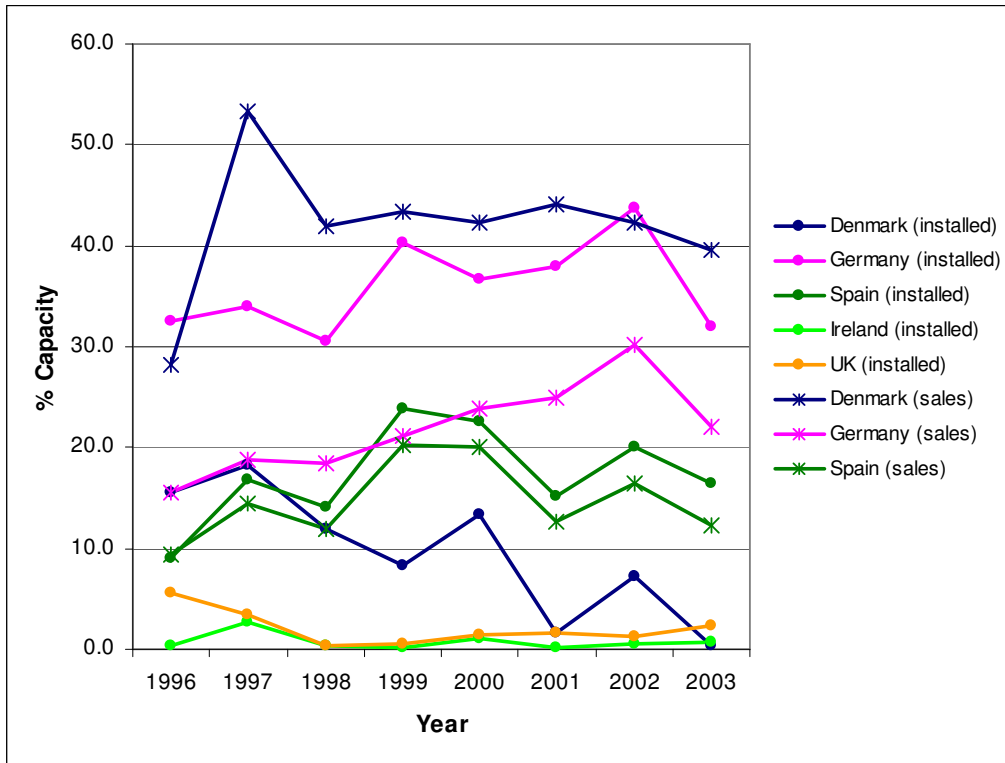


Figure 7.2 Percentage installed capacity (of global activity) & manufacturer sales

7.5 Lessons for the UK from European comparison

The concept of community benefits appears to be less contentious in other countries compared with the UK. This issue is explored in more depth in the next section, but there are some key findings which might explain this:

- Benefits accruing to local communities from wind power projects in Spain, Denmark and Germany – where levels of wind power development significantly exceed the UK – are generally higher than in the UK.
- Jobs and local taxes appear to be important and significant benefits in each of these countries. Payments to community funds are rare. Local ownership is a feature of Denmark and Germany, partly as a by-product of a simple and relatively low-risk mechanism for supporting wind power which has created low entry costs and enabled a preponderance of smaller wind farms (cf the UK where the opposite is true)
- There is no strong evidence that these higher benefits are necessarily securing higher levels of public acceptance in general (since these are already high in all countries studied including the UK). However, it is

likely that they are important in sustaining acceptance as wind development becomes more intensive, and in limiting local opposition to a specific project.

- There is also no indication that the higher levels of benefits result from deliberate policy to stimulate community benefit in the narrow 'community fund' sense it has tended to be used in the UK. Instead there has been, in Germany and Denmark, deliberate intention to create simple support mechanisms which enable wide participation in development and ownership of wind power projects and, in Spain, deliberate intention to secure significant regional economic benefits.
- There is a perception that national and/or regional economic benefits derived from the wind power industry are strong factors in public acceptance in these countries. Wind power *demonstrably* creates jobs in these countries - potentially creating a virtuous circle that greater development is now stimulating more orders for turbines manufactured 'at home' and supporting existing or new jobs and local economies.
- Planning decisions for individual project proposals tend to be taken by officials within local or regional planning strategies established with political and public input, making decisions about individual projects less contentious and less subject to specific objection (though not necessarily any quicker).

The clear picture to emerge from this study is that, unlike the UK, community benefits are effectively built into the fabric of the process of wind power development in other leading EU countries.

It is tempting to use experience abroad as a 'rod' for the UK to improve practices, but it is very clear that each country's approach to local gain is very much a function of a mix of specific circumstances. These circumstances include the scale and nature of development, culture, and even a point in time. As the UK looks to other countries, practices in Denmark and Germany are changing as they learn from their own experiences.

It would be presumptuous to assume that experiences abroad are either desirable, or replicable, in the UK context. There is, in this context, some truth in the adage 'abroad is foreign'.

The principal lesson to be imported therefore has less to do with precise policy mechanisms and more to do with the importance of securing

community benefits in some way to sustain public support as development intensifies.

8 Analysis and conclusions

The clear picture to emerge from this study is that in leading EU countries, unlike the UK, community benefits are effectively built into the fabric of wind power development. So much so, that the issue of 'community benefits' is not contentious in the way that it has become in the UK. It is useful to examine why has this situation arisen.

Community benefits have become an issue in the UK because:

- (a) Historic levels of development have been too low and too unpredictable to secure the wider available economic benefits of wind power development in terms of manufacturing and servicing jobs – so there isn't the 'it's a good thing for Britain/the region' economic argument;
- (b) the UK support mechanisms for renewables have created market conditions with high entry costs, leaving the main development activity to 'outside' commercial interests, particularly 'big' utilities, rather than locally-owned initiatives;
- (c) key local benefits such as payment of business taxes do not accrue to the locality;
- (d) both the financing structure of wind projects and the financial regulations governing an offer of investment to members of the public combine to discourage community involvement in ownership as complex and potentially costly to establish;
- (e) the planning system does not address community financial benefits explicitly or transparently, leading to a somewhat shady picture of offers of benefit packages being 'in the background' in what is a politicised planning process focusing on individual project proposals.

This is in direct contrast to Spain, Denmark and Germany where community benefits are more-or-less assured by various combinations of local or regional wind turbine manufacturing and construction jobs (all, but particularly Spain), local taxes (all), and local ownership facilitated by simple support mechanisms (principally Denmark and Germany). Planning systems in these countries also tend not to involve the public and politicians in decisions about individual projects, leaving them instead to

focus their input on establishing local planning frameworks (within which wind power may be generally enabled).

These countries have seen far higher levels and faster rates of wind power development than the UK and it is likely that such routine provision of meaningful community benefits has been a key and uncontentious factor in enabling this success.

Could an effective combination of these conditions for success be created in the UK?

The UK's policy for wind power development has emerged out of much stronger underlying commitments to achieving policy objectives through the use of market mechanisms, to our strict interpretation of EU procurement rules, to national business taxation frameworks, and to unimpeachable local planning process which focuses political decision-making and public involvement on individual project proposals.

These underlying policy positions make it difficult to create conditions in the UK in which strong and explicit community benefits (local or regional jobs, locally-driven and owned development, local taxes) are as much part of the fabric of wind power development as they are in the more successful EU countries.

For example, if the UK is unwilling to adopt an explicitly parochial policy of obliging regional or local sourcing of manufacturing and construction contracts, then it is unlikely that the principal economic benefits of manufacturing jobs will ever be realised as a 'standard' local benefit in the way that it is in these other countries – either through deliberate policy (Spain) or as a consequence of the sheer scale of development activity (Germany and Denmark).

The commercial, utility-driven nature of wind power development in the UK has resulted directly from its market-based support mechanisms for renewables and the competitive framework for the electricity system as a whole. These combine to create a relatively high risk, high entry cost wind development process which thereby tends to exclude all but the most determined community-led initiative.

As a result (and in stark contrast to much Danish and German wind power development), most wind power developments are about what the 'outsider' developer is proposing to do to 'our' countryside. Providing opportunities for local community ownership (e.g. through a share issue) may be rare in the UK (and 'not yet proven' as an approach to improve planning prospects), but adopting such approaches, however complex, may

be increasingly important to public acceptability as levels of development increase.

The lack of local tax income in the UK is clearly a weakness compared with these other countries, though addressing this would require a significant change to current structures of local business taxation.

In terms of community ownership, the UK does not have an impressive track record in establishing either co-operative, community or mixed (i.e. public, community and commercial sector) ownership of local assets. It is not common and is therefore not built into the fabric of our financial system – neither in terms of financial institutions expecting and being familiar with structuring deals to take account of these different interests nor in terms of safe, simple and low cost mechanisms for raising finance from members of the local public. This could change, but only with direct intervention to improve understanding amongst financiers and develop robust and ‘bankable’ models for financing projects and raising community investment.

The UK planning system focuses local political decision-making and public involvement on individual project applications within relatively loose local, regional and national policy frameworks. These frameworks – which vary significantly between localities, regions and nations/devolved administrations – tend not to be used to ‘clear the way’ for wind power as they are in other countries. And even if they highlight the value and desire for community benefits, these aspects of the frameworks may have little material influence on individual planning decisions since planning legislation and case law point away from considering such local financial benefits as material.

As mentioned above, these are considerable obstacles to building community benefits into the fabric of wind power development in the UK in the way that they have been in other EU countries. Yet failure to deliver such benefits on a routine basis in the future may undermine public support for (and ultimately the achievement of) otherwise reasonable ambitions for the future growth of UK wind development.

As a result of these obstacles, the focus for how local communities engage with, and gain from, wind power developments in the UK has tended to be on:

- the nature and openness of engagement with local communities during the planning process;
- direct financial contributions – a community fund of some kind – and/or
- opportunities for community ownership or ‘dividend’.

In the absence of policies which will ensure other clear community benefits emerge as a matter of course (jobs, local taxes etc), it would be legitimate to focus on perfecting these approaches as ways of capturing for the local community some of the benefits of a wind project which in other countries would be accruing as a matter of course.

However, from this study's findings, to do so will clearly require some changes to the way in which these issues are dealt with in the planning process. It would also gain from good practice 'standards' for developers and planning authorities which create a clear and transparent framework of benefits which could become routine in future. Effective and 'finance able' models of community ownership (or related dividend) would also be useful to remove some of the complexities which currently afflict attempts to achieve this end.

More particularly, it requires:

- The issue of community benefits to move 'out of the shadows' of the planning process into more explicit consideration, with recognition that community benefits are a legitimate aspect of a wind power project which should be considered as material to planning decisions.
- A national good practice 'toolkit' on community benefits providing guidance on the nature and scale of benefits available nature together with a clear justification for their provision and detail of those aspects which should be considered routine and those which are project-specific.
- Good practice guidance – or more effectively, a protocol agreed between different stakeholders – on how to liaise effectively with local communities during the project development process and, in particular, how to explore and negotiate community benefits with communities and other stakeholders.
- Reliable and 'bank-approved' models of project commercial structure which enable local community ownership without great complexity – either as a result of direct investment by local individuals or within some form of community fund.

In combination, these measures would remove any sense that the levels of community benefit are dependent on developer largesse or, equally, limited by concerns of being seen to 'buy consent'. They would make the issue of community benefits a legitimate and potentially routine aspect of wind power development in the UK.

In the absence of other measures to create the conditions of success found in more successful EU countries for wind power development, these measures have the potential to create the basis for long-term and significant improvements in UK wind development rates based on sustained public support.

9 Recommendations to the Renewables Advisory Board

In drawing up recommendations, it has been assumed that there will not be a wholesale change of UK policy on supporting renewables through market mechanisms or in the government's strict interpretation of EU procurement rules. However, it is the project team's view that there is room within planning policy (particularly with the emergence of PPS1 and PPS22) to give more legitimacy, transparency and support for community benefits. Bearing in mind the potential value of local business rates, there is also merit in exploring whether more of the value of local rates could accrue locally for renewable energy projects.

Recommendation 1 – a good practice 'toolkit' on community benefits

- Develop a national good practice 'toolkit' on community benefits for developers, planners and community groups, providing guidance on the nature and scale of benefits available together with a clear justification for their provision and detail of those aspects which should be considered routine and those which are project-specific.

These should be drawn up through a process of stakeholder engagement and consultation to ensure widespread 'ownership', preferably in tandem with the review planned by the BWEA of its own guidance. Once finalised, the objective should be set to see the guidance integrated into Regional Spatial Strategies and planning guidance and local development frameworks.

Recommendation 2 – planning best practice guidelines to legitimise community benefits within planning process

- Draw up planning best practice guidelines, to be subsequently integrated into future planning policy guidance, which treats community benefits explicitly as a legitimate and relevant aspect of a wind power project that shall be considered as material to planning decisions.

This would enable the issue of community benefits to move 'out of the shadows' of the planning process into more explicit consideration in

planning terms without . This may require community benefits to be considered more as mitigation or compensation (rather than ‘good neighbourliness’) for the impact on visual amenity and/or use of ‘the commons’ by extracting energy from the local wind.

Recommendation 3 – guidance on community engagement

- Establish new good practice guidance – or more fruitfully, a protocol agreed between different stakeholders – on how to liaise effectively with local communities during the project development process and, in particular, how to explore and negotiate community benefits with communities and other stakeholders.

The new South West Public Engagement Protocol for Wind Energy (and associated guidance) provides a good example of both an effective process to develop a protocol with widespread ‘buy in’ and a sound framework within which developers, planning authorities and public interest and community groups may work. Recommendations 1 and 3 could be undertaken as one process.

Recommendation 4 – a review of the potential for local taxes to accrue locally

- Review the potential for existing local business taxes for wind power projects to benefit the locality more directly and proportionately (thus ensuring some local financial benefit is consistently applied and routine rather than case specific and voluntary)

The UK is the only country studied here which does not allow local tax payments by a wind power projects to accrue to the ‘host’ local authority. Changing the rules for wind power projects would, in a single step, ensure that some local financial benefit was guaranteed, and would move the UK some way towards building such benefits into the fabric of wind power development.

Recommendation 5 – research into the impact of new planning policy framework

- Investigate how the new planning policy framework coming through from PPS22 and PPS1 in England, NPPG6 in Scotland, and, in due course, a revised TAN 8 in Wales, is influencing what is and what isn’t being considered material in planning decisions.

This is a period of transition in planning policy and guidance with respect to the role of local benefits within the determination of planning decisions. With new guidance now coming into force, it would be sensible to monitor its impact on planning decisions.

Recommendation 6 – bankable models for community ownership

- Undertake research, in collaboration with the finance sector, to establish reliable and ‘bank-approved’ models of project commercial and financing structure which enable local community ownership without great complexity – either as a result of direct investment by local individuals or within some form of community fund.

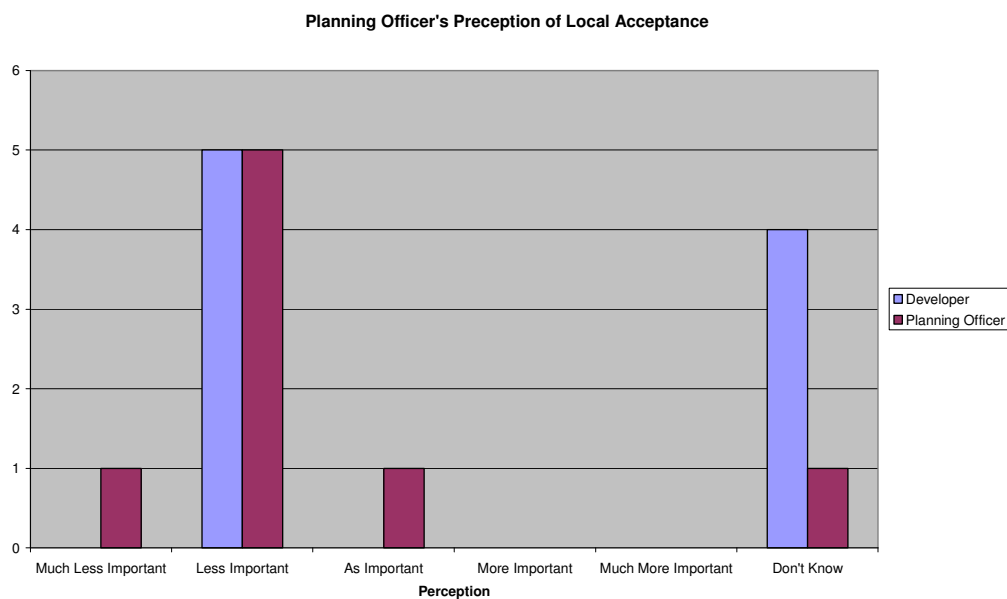
The provision of well-documented, bank-approved models of community ownership of part of a wind power project would significantly reduce the perceived barriers to (and actual costs of) offering communities the opportunity to own a stake in a projects (whether through direct financial investment or, more equitably, by way of ‘gifting’ shares to a community body).

APPENDIX 1: Perceived links between local acceptance & planning consent

While it is not strictly related to the way in which community benefits play out within the planning system, the project did gather planning officer and developer perceptions of the role which perceived levels of local acceptance played in the planning process. The analysis shows that, while local acceptance is not a strong influence on planning officers, it is considered to be a factor which is 'as' or 'more' important than other factors for planning committees.

Impact of perceived local acceptance on planning officer recommendation

The graph below shows that the majority of developers and planning officers felt that the level of local acceptance was less important than other considerations when the planning officer made their recommendation. The officer for Tees Wind North was the only responder that felt that local acceptance was as important as other considerations.

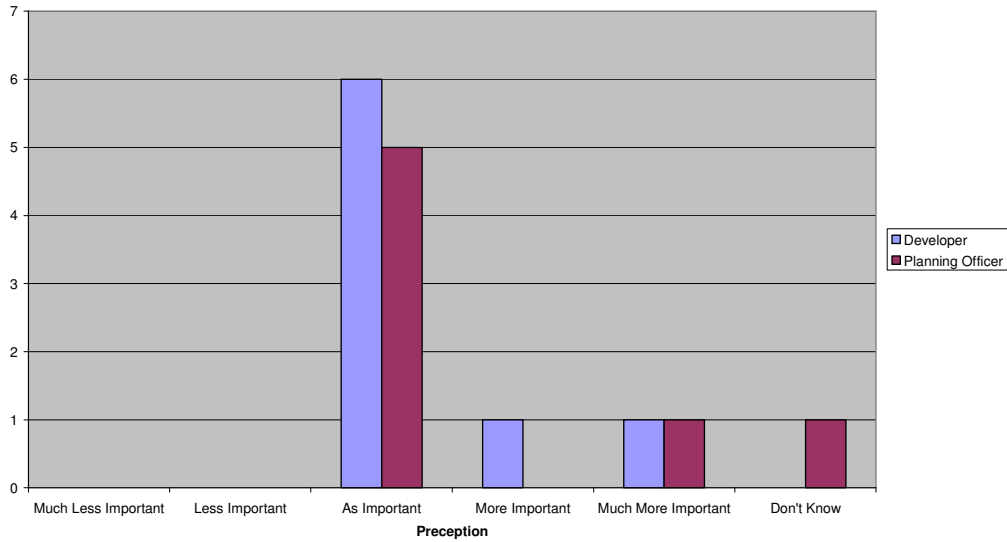


Impact of perceived local acceptance on planning committee recommendation

The majority of developers and officers felt that the level of local acceptance was as important as other factors in the planning committee reaching a decision. Furthermore, for the Out Newton development both the developer and the officer agree that the level of local acceptance is much more important than other considerations.

The results clearly show that local acceptance is more important to the planning committee when reaching a decision on consent than it is to planning officers in coming to a recommendation.

The Planning Committee's Perception of Local Acceptance



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