Maximizing Local Acceptance through Benefit Sharing

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Executive Summary

Local opposition has been widely recognized as a potentially powerful barrier to the successful development of wind power projects. As a result, there has been increasing pressure put on industry proponents to adopt comprehensive strategies aimed at increasing local acceptance. The concept of benefit sharing is becoming more widely recognized as an effective method of doing so.

A comparative analysis of wind power projects throughout Europe has demonstrated considerable variability both in terms of the quantities and qualities of benefit sharing mechanisms applied. Despite this variability, however, there does appear to be a tendency toward establishing community funds to support certain initiatives in the host locality. Developers have also offered local ownership opportunities, electricity price reduction for community members, knowledge sharing and/or educational initiatives, local employment opportunities, and some have undertaken extensive environmental restoration or enhancement projects. The key factors influencing the development of a benefit sharing strategy are the national context, the organizational competencies of the developer and the local context. Careful consideration of these factors will inform the creation of an effective benefit sharing scheme.

However, the application of a benefit sharing scheme in itself does not guarantee acceptance, but rather must be integrated with effective public engagement and participation in decision making through which the needs, wishes and demands of the host community are addressed and incorporated into the project details, where possible. Overall, based on the influences of the national context in combination with the specific competencies of the developer, organizations are recommended to adopt formalized, yet flexible policies or strategies for benefit sharing in each country where they operate, which can then be adapted to the unique circumstances of each project and community.

**Keywords:** Wind power, social acceptance, local acceptance, public acceptance, benefit sharing, benefit sharing mechanisms, acceptance strategy
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1.0. Introduction

In light of the unprecedented growth of the wind industry in recent years, an increasing number of communities are being faced with the prospect of hosting wind power projects. However, in a growing number of cases, local opposition has proven to be a powerful barrier to development. In recent years, the issue has come under increasing attention not only by developers, but also by government authorities worldwide that have adopted aggressive renewable energy targets, for whom local resistance has become a very real threat to the successful implementation of their policies. As a result, pressure is mounting on industry proponents to adopt strategies to address and overcome local resistance.

One strategy that is gaining considerable recognition as a potentially effective method of attaining local acceptance relates to the concept of benefit sharing. Although there are a variety of methods to implement benefit sharing in practice, the fundamental notion involves sharing the financial, social, or other related benefits created by the project with the host community. In doing so, local stakeholders may derive value from the development and, consequently, be more willing to accept it.

In this study, the application of benefit sharing mechanisms (BSMs) as a means of attaining local acceptance will be examined. To do so, a comparative analysis will be performed on a number of case studies from Europe in which BSMs have been applied, in an effort to determine similarities, differences and other notable characteristics.

Additionally, this paper will discuss the role of benefit sharing in an overall local acceptance strategy and will highlight the key factors influencing decisions regarding the application of a benefit sharing scheme. Lastly, by combining these factors, this study will provide a general framework for the development of an effective local acceptance strategy.

2.0. Study Objectives

This study aims to build on the existing knowledge base surrounding the implementation of benefit sharing schemes as a method of attaining local acceptance toward wind power development. The study aims to analyze different approaches to benefit sharing that have been carried out by developers in different contexts and, subsequently, to make recommendations for an effective approach to developing and implementing a local acceptance strategy using BSMs.

The central questions to be addressed are as follows:

- What are the main characteristics of benefit sharing schemes that have been implemented in wind power projects throughout Europe and what are the similarities and differences between them?

- What role do BSMs play in an overall local acceptance strategy?

- What suggestions can be made for developing an effective overall approach to local acceptance for commercial wind developers?
3.0. Rationale

Although the concept of benefit sharing has been increasingly acknowledged as a potentially effective method of attaining local acceptance, little research specifically focusing on the subject has been carried out to date. A number of case studies are available from various sources which highlight different approaches to benefit sharing, but the research is fragmented and does not allow for a comparative analysis which may be used to support and guide project developers in making decisions about the application of BSMs in different contexts.

4.0. Scope and Limitations

4.1. Scope

This study focuses solely on commercially-driven wind power projects that have been initiated by developers who bear no significant relationship with the host community. The study draws on cases only from the European context.

4.2. Limitations

Throughout the course of conducting research for this study, several limitations emerged which may limit the applicability of the findings. The key limitations are as follows:

- **Scope of analysis:** Due to the time constraints involved in conducting this study, the scope is limited to commercially-driven projects. A more comprehensive analysis would include projects that were initiated by community groups, as these types of projects are also subject to local resistance and often employ benefit sharing schemes.

- **Geographical distribution:** The majority of existing case studies that focus on benefit sharing, and subsequently which are presented in this thesis, are based in the UK. Additional cases that were documented as part of this study are based in Sweden. Overall, given the somewhat narrow geographical distribution of these projects, it is uncertain to what extent the results of this analysis may be applicable to other contexts. Case studies drawn from a wider geographical area would allow for a more thorough analysis and potentially more accurate conclusions to be drawn.

- **Sample size:** Due to the limited number of case studies containing adequate information, this study analyzes 21 cases in total. A larger sample size would allow for a more thorough analysis and potentially more accurate conclusions to be drawn.

- **Breadth of case study information:** Information regarding the full range of BSMs applied in each case study was not always available. Therefore, the analysis may not fully reflect the entire range of BSMs that were applied in the actual projects.
5.0. Study Methodology

The following steps were carried out in conducting this study:

1. Literature review – existing case studies

The first step in the research process was to perform a literature review to discover case studies that highlighted projects utilizing benefit sharing schemes. Overall, three key documents were identified which contained adequate information to address the research objectives:

a) REShare [RebelGroup, COWI and ISIS, 2011]:

This publication displays the results of a study launched by the European Commission to determine methods of increasing local acceptance toward a range of large-scale renewable energy projects. The international study identified various models of best practices for projects to share economic or other benefits with the host community, and subsequently compiled a database of best practice cases.

Since the scope of this thesis is limited to wind power, the cases in the REShare database dealing with other renewable energy technologies such as solar, hydropower and biomass were not considered. In addition, only the commercially-driven cases were taken into consideration. A total of 8 cases from the REShare database were used in this analysis, representing projects in 7 European countries.

b) A Community Commitment: The Benefits of Onshore Wind [RenewableUK, 2011](32):

The second document from which case studies were taken was released by RenewableUK, the UK's leading renewable energy trade association. This publication highlights a number of best practice benefit sharing case studies from the UK. To remain within the scope of this study, only the commercially-driven projects were taken into consideration. A total of 5 projects from this publication were analyzed.

c) Delivering community benefits from wind energy development: A Toolkit [Centre for Sustainable Energy et al., 2009]:

This toolkit is part of a 3 document series released by the Renewables Advisory Board in the UK with the aim of identifying options for wind power proponents to share project benefits with the host community. Since the focus of this publication is commercially-driven projects, it fit well with the scope of this thesis.

In total, 9 case studies from this publication were taken into consideration. It should be noted, however, that 3 of these cases were also highlighted in the RenewableUK's 'Community Commitment' document (Earlsburn, Burton Wold and Cefn Croes) and one case was also highlighted in the REShare database (Altahullion). These duplicate case studies proved to useful in terms of providing both reinforcing and complementary information, which overall served to solidify the analysis.
Note: In addition to the information derived from these sources, in some instances additional information was obtained from company websites.

2. Primary research – additional case studies

In order to add greater depth to the analysis, the second step of the research process was to document additional case studies that have employed benefit sharing schemes. This part of the research was carried out at the office of Triventus Consulting AB (a subsidiary of Swedish wind power developer Triventus AB) in Östersund, Sweden.

To obtain information, a series of semi-structured interviews were carried out with employees at Triventus and its partner organizations (see Appendix 4). In total, 4 cases were documented during this part of the study.

A secondary aim of this research phase was to obtain a range of opinions and viewpoints from industry players who have either been involved in projects that have utilized benefit sharing schemes, or who otherwise may have an opinion or other insight into this approach. These viewpoints and insights are included throughout this thesis.

Overall, combining the primary and secondary case studies, a total of 21 cases from 8 countries throughout Europe were analyzed in this study (19 projects and 2 general models).

3. Comparative analysis of case studies

In order to make comparisons between the various approaches, each case or model was categorized based on which benefit sharing mechanisms it employed. The following framework was used as the basis for this comparison.

Following a basic categorization of these cases, the key similarities, differences and other noteworthy characteristics of each BSM category were highlighted and discussed.

4. Framework development

Based on the analysis of the various benefit sharing schemes, an effort was made to determine the key influences affecting the development of these schemes. The determination of these factors led to the creation of a general framework for the development of an effective overall local acceptance strategy.
6.0. Theoretical Framework

6.1. Defining Social Acceptance

Wüstenhagen et al. (2007) offered a comprehensive definition of the multi-faceted concept of social acceptance. The authors made a distinction between three dimensions of acceptance: socio-political; community; and market acceptance.

![Figure 1. The triangle of social acceptance of renewable energy innovation](image)

The authors described socio-political acceptance as that pertaining to the broadest, most general level of acceptance, such as that which is derived through public opinion polls. Community acceptance, on the other hand, is much more specific in scope, relating to siting decisions and local stakeholders, such as residents and local authorities. Lastly, market acceptance refers to the process of market adoption of an innovation, focusing more on investors and consumers.

Although it is not entirely possible to look at these interconnected dimensions of acceptance in isolation, this paper focuses primarily on the concept of community acceptance as it pertains to specific wind power developments.

6.2. The Paradox of Social Acceptance

In many countries the general public is highly supportive of wind power development. Studies have shown acceptance levels in the UK, Spain and Germany to be approximately 77%, 85% and 88%, respectively [Centre for Sustainable Energy and Garrad Hassan, 2005]. Similar figures can be found for New Zealand, with 88% of the population being supportive [NZWEA, n.d.], Australia with 95% in support [Natural Power, 2003], and the province of Ontario, Canada with 89% of the population...
supporting wind power development [CanWEA, 2010] (4). Overall, across a wide range of international studies, a high level of socio-political acceptance can be seen.

On the other hand, local opposition has sparked considerable debate both in countries where development is widespread, such as Germany, as well as in countries which are still in the earlier stages of development, such as the UK, the Netherlands, Switzerland and France [Wüstenhagen, Wolsink and Bürer, 2007]. The existence of local barriers goes against the notion that widespread public support will translate into local acceptance.

A noteworthy dimension related to local acceptance is the observation that it tends to evolve over time [Wolsink, 1997; Danborg, 1999]. More specifically, studies have shown that attitudes often change during the course of a project's development; before a project is introduced to a community, acceptance levels are generally high; during the planning and construction period, acceptance levels tend drop dramatically; but after the project is completed and operational, acceptance generally increases to near its original level.

*Figure 2. The u-shaped development of attitudes toward wind power and the evolution of the evaluation of turbines in the landscape*

Overall, the issue of social acceptance with respect to wind power development is often paradoxical and complex, giving rise to a certain level of speculation and uncertainty.

6.3. Causes of Social Resistance

Individual attitudes are influenced by a complex array of factors which cannot be easily predicted or explained. Consequently, the root causes of public attitudes toward wind power have been a source of debate [Wolsink, 1999; Wüstenhagen, et al., 2007]. However, many authors have attempted to define the key issues involved.

On the surface, local sources of discontent and resistance have been widely acknowledged to include the following [Wolsink, 1999; Horbaty and Huber, 2010](14):
• Visual or landscape impacts
• Nuisance impacts (i.e. noise, shadow, or flicker effects)
• Loss of property value
• Wildlife/ecosystem impacts (such as birds and bats)

Further insight was offered by Rebel Group, COWI and ISIS (2011), who classified local acceptance issues into three main categories:

• **Environment**: Threats to local flora and fauna; pollution of a pristine area; noise; health effects.

• **NIMBY**: Preservation of one's surroundings; threats to tourism; property devaluation; visual pollution; loss of identity of the rural surroundings.

• **Opportunism**: Defined as being “largely motivated by extracting the highest possible additional benefit (outside of the original scope of the project) or personal side benefit from a development” (pp. 8).

Many authors have also looked beyond these commonly sited factors in an attempt to shed light on the deeper underlying issues behind opposition.

### 6.3.1. Cost & Benefit Distribution, Participation and Trust

Although there are differing viewpoints regarding the deeper issues influencing social acceptance, many authors have highlighted the significance of an equitable cost and benefit distribution, active participation in the decision making process by all affected stakeholders, and trust.

First, looking at the issue of an equitable distribution of cost and benefits, given the fact that locally produced electricity is usually distributed to a much wider geographic area, it has been argued that “host communities...often feel that they bear a disproportionate share of the negative impacts associated with wind energy projects” [Horbaty and Huber, 2010, pp.7](14). In other words, certain communities or individuals feel that there is an uneven allocation of benefits and burdens with respect to developments in their community [Grin and Van de Graaf, 1996 cited in Rebel Group, COWI and ISIS, 2011].

Looking along these same conceptual lines, but taking the argument one step further, Wüstenhagen et al. (2007) highlighted the importance of “distributional justice (how the costs and benefits are shared), procedural justice (is there a fair decision making process giving all stakeholders an opportunity to participate?) and does the local community trust the information and intentions of the actors from the outside community” (pp. 2685).

With respect to the concept of procedural justice, it has been widely acknowledged that in many cases local people are left out of the decision making process, which in turn contributes to negative attitudes and resistance [Krohn and Danborg, 1999; Wolsink, 2007; Horbaty and Huber, 2010].
6.4. Methods of Attaining Acceptance

An important starting point when developing a strategy aimed at attaining local acceptance is the argument that “there is no 'one-size-fits-all' solution” [Horbaty and Huber, 2010, pp.1](14). In other words, each community and project is unique, therefore each approach to attaining acceptance must consider the distinct circumstances of each case. Additionally, it is important to keep in mind that “it is unlikely that 100% public support will be achieved for any individual project” [Horbaty and Huber, 2010](13).

Much of the existing research and literature regarding methods of maximizing local acceptance with respect to wind developments has focused on carrying out an effective public engagement process. However, in recent years there has been increasing attention placed on the concept of benefit sharing as an effective tool.

6.4.1. Benefit Sharing

The concept of benefit sharing has been increasingly acknowledged by academics, government authorities and wind industry stakeholders in many countries, with an increasing emphasis being placed on research in recent years. Across these various sources, it has been acknowledged that community support for a given project is highly linked with the ability of a project to share benefits with or otherwise support or enhance the local community. This may be achieved through financial means, job creation, or a number of other means. This concept was argued explicitly by Maruyama et al. (2007), who stated that “the important thing in boosting the social acceptance of a technology is whether or not a system is in place that can generate...a variety of benefits” (pp. 2768).

6.4.1.1. Benefit Sharing Mechanisms

Benefit sharing mechanisms can be broadly defined as “a means to transfer benefits to the local communities affected by the development, and in turn improve social acceptance” [RebelGroup, COWI and ISIS, n.d., pp. 3]. Although there are numerous methods through which a developer may implement BSMs, the primary instruments can be categorized as follows [Centre for Sustainable Energy et al., 2009].

- **Community Fund:** A lump sum and/or regular payment into a community-based fund for the benefit of local residents.

- **Local Ownership:** Offering ownership shares in a project to local citizens, either through their own investment or through a profit-sharing or part-ownership scheme.

- **Benefits in Kind:** The developer directly provides or pays for local community facility improvements, environmental improvements, visitor facilities, school and educational support, etc.

- **Local Contracting** and associated local employment during construction and operation.

While acknowledging and including these categories in their own definition of BSMs, RebelGroup,
COWI and ISIS (2011) also added the following categories:

- **Energy Price Reduction for the Local Community**: The local community consumes or purchases energy directly from the developer at a discounted price.

- **Compensation**: The developer compensates for possible damages associated with a development.

- **Indirect Social Benefits**: Any other benefit accruing to the community which is not directly quantifiable, such as prestige, eco-tourism, knowledge, etc.

These definitions will serve as the basis for the comparative analysis and discussion presented in this paper.

### 6.4.1.2. Implicit Benefit Sharing

Before discussing the application of BSMs in further detail, it is important to distinguish between those which are applied voluntarily by the developer and those which are automatically implied by other means. The difference is primarily one of context, depending on the circumstances in the host country. More specifically, there are two basic means by which local benefit sharing is implied in a development: through job creation and other spinoff economic benefits associated with local manufacturing; and through laws requiring payments or other financial benefits to be distributed to the host community (i.e. through local taxes or local ownership requirements).

For example, in countries which have seen high levels of wind development such as Spain, Denmark and Germany, it has been argued that local benefits are implied, partially due to local tax systems which automatically accrue funds to the host community, but also partially due to the fact that these nations have established a strong manufacturing sector related to the wind industry, which either directly or indirectly benefits a wide range of communities [Centre for Sustainable Energy et al., 2009]. As a result, the concept of voluntarily applying certain BSMs in these countries is unfamiliar, as some benefits accrue naturally through already-established mechanisms which are built into the fabric of the industry.

In addition to local jobs and taxes, in Denmark and Germany wind development has traditionally had a strong local ownership component [Centre for Sustainable Energy and Garrad Hassan, 2009]. In these countries, community members have often been the initiators of wind developments or have otherwise been able to participate in investments and thus share in the financial benefits associated with developments. As the industry evolves and becomes more dominated by large commercial developers, governments in both of these countries have enacted legislation to ensure this system of local benefits is carried forward (see Appendix 1).
6.4.1.3. Voluntary Benefit Sharing

Considering the commercial nature of the wind industry today, which is increasingly dominated by large-scale multinational entities, a different relationship now exists between project proponents (developers) and host communities than that of the early days when many projects were spearheaded by community members. This is due to the fact that, in contrast to community-led projects, commercial projects can be viewed by host communities as 'big business' invading the landscape [Bolinger, 2001]. In order not to be seen as invasive or exploitative, commercial developers need to carefully manage their relationships with the host community in order to 'earn citizenship' [CanWEA, 2010] (3). A key aspect of this process in many markets is the voluntary implementation of BSMs.

This concept has been applied in a range of commercially-dominated markets where benefit sharing is not built into the fabric of the industry, such as in the UK, Ireland and Sweden. In these markets, BSMs are increasingly being implemented on a voluntary basis in an effort to attain acceptance. Throughout these countries, however, there has been considerable variability and inconsistency in the approaches of various developers, resulting in uncertainty for communities facing the prospect of hosting a project, as well as uncertainty for developers in terms of deciding on an effective approach to benefit sharing in different contexts.

In light of this inconsistency, in some countries, such as Sweden and the UK, efforts have been made to establish minimum payments for community funds and, in Sweden, there have been recommendations put forth for minimum local ownership opportunities (see Appendix 2). If these recommendations become standard practice, the uncertainty faced by communities in terms of ensuring they are receiving a 'fair deal' will be greatly reduced. In addition, this would simplify the process for developers in terms of establishing an adequate approach for each project. Overall, the result would likely be positive for the industry.
7.0. Comparative Analysis

The following section will compare and analyze the benefit sharing schemes implemented in 21 selected case studies (19 projects and 2 general models) from 8 countries throughout Europe.

7.1. Comparison - Benefit Sharing Mechanisms Applied

Table 1 illustrates the mix of BSMs applied in the selected cases.

Table 1. Benefit sharing mechanisms applied in selected projects

<table>
<thead>
<tr>
<th>Project/Model</th>
<th>Location</th>
<th>Capacity (MW)</th>
<th>Community fund</th>
<th>Local ownership</th>
<th>Benefits in kind</th>
<th>Compensation</th>
<th>Electricity price reduction</th>
<th>Local employment/contracting</th>
<th>Indirect social benefits</th>
</tr>
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<td>Estimes</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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</tr>
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<td></td>
<td>✓</td>
<td></td>
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</tr>
<tr>
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<td></td>
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<td>✓</td>
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<td></td>
<td>✓</td>
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<td>Sweden</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Stattjärnåsen</td>
<td>Sweden</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parc Le Haut des Ailes</td>
<td>France</td>
<td>44</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wallenstam Model</td>
<td>Sweden</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O2 Model</td>
<td>Sweden</td>
<td>-</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: By author
Key observations that can be made from Table 1 include:

- Most projects applied multiple BSMs, although the specific mix is variable.
- The most widely applied mechanism was the community fund (used in 18 of 21 cases).
- In 5 cases, developers offered local ownership opportunities in combination with a community fund (but local ownership was never offered in the absence of a community fund).
- In all cases where neither a community fund nor local ownership was used (3 projects), benefits in kind were the main BSM applied. In all other cases offering benefits in kind, they were used in conjunction with a community fund.

Although the above cases illustrate a tendency toward the use of the community fund mechanism by developers, it should be noted that not this mechanism is not viewed favourably by all developers. In particular, many developers in Sweden have expressed an aversion to this method [Levin, Igel and Nord, 2011]. In most cases, the aversion is related to not knowing or having control over what the funds are to be used for. In some cases it is also due to concerns regarding the difficulty and uncertainty involved in ensuring the appropriate management of the fund for the project lifetime.

7.1.1. Community Fund Breakdown

Although community funds are becoming more widely applied, there is considerable variation in terms of the payment method, payment quantity and stipulated uses of various funds. The following section will discuss these discrepancies in further detail.

7.1.1.1. Payment Method

In the cases examined, four different approaches to community fund payments can be seen (Table 2):

- **Yield based**: Based on a percentage of revenues from electricity sales (and Green Certificates, where applicable).
- **Lump sum**: Single payment, usually coinciding with commissioning of the project or during early stages of operation.
- **Fixed annual payment**: Based on a predetermined amount (index-linked with inflation).
- **Tax-based**: Based on local taxes.\(^1\)

\(^1\) Although local taxes are not voluntary and thus cannot be directly compared to the other payment methods, it is interesting to include some examples in this analysis in order to compare the quantities involved.
Table 2. Comparison of community fund payment methods and quantities

<table>
<thead>
<tr>
<th>Project/Model</th>
<th>Location</th>
<th>Installed capacity (MW)</th>
<th>PAYMENT METHOD</th>
<th>QUANTITY OF PAYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yield based</td>
<td>Lump sum</td>
</tr>
<tr>
<td>Bears Down</td>
<td>England</td>
<td>9.6</td>
<td>£30,000</td>
<td>£3,000</td>
</tr>
<tr>
<td>Stentjärnäsen</td>
<td>Sweden</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vectis</td>
<td>England</td>
<td>11.5</td>
<td>£23,000</td>
<td></td>
</tr>
<tr>
<td>Deeping St. Nicholas</td>
<td>England</td>
<td>16</td>
<td>£30,000</td>
<td>£10,000</td>
</tr>
<tr>
<td>Nover</td>
<td>Scotland</td>
<td>17</td>
<td>£1,000</td>
<td></td>
</tr>
<tr>
<td>Burton Woold</td>
<td>England</td>
<td>20</td>
<td>£40,000</td>
<td>£10,000</td>
</tr>
<tr>
<td>Windy Standard</td>
<td>Scotland</td>
<td>22</td>
<td>£10,000</td>
<td></td>
</tr>
<tr>
<td>Altahullion 3 (proposed)</td>
<td>Ireland</td>
<td>27.6</td>
<td>£55,200</td>
<td></td>
</tr>
<tr>
<td>Crumch Mhor</td>
<td>Scotland</td>
<td>30</td>
<td>£21,000</td>
<td></td>
</tr>
<tr>
<td>Lake Ostrowo</td>
<td>Poland</td>
<td>30.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earlsburn</td>
<td>Scotland</td>
<td>37.5</td>
<td>£35,000</td>
<td></td>
</tr>
<tr>
<td>Altahullion 1</td>
<td>Ireland</td>
<td>26</td>
<td>£20,000</td>
<td></td>
</tr>
<tr>
<td>Altahullion 2</td>
<td>Ireland</td>
<td>11.7</td>
<td>£0,000</td>
<td></td>
</tr>
<tr>
<td>Park Le Haut des Ailes</td>
<td>France</td>
<td>44</td>
<td>€6000/ turbine/year</td>
<td></td>
</tr>
<tr>
<td>Cofn Cross</td>
<td>Wales</td>
<td>58.5</td>
<td>£68,500</td>
<td></td>
</tr>
<tr>
<td>Estinnes</td>
<td>Belgium</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farr</td>
<td>Scotland</td>
<td>92</td>
<td>£1,000,000</td>
<td>£100,000</td>
</tr>
<tr>
<td>Havanda</td>
<td>Sweden</td>
<td>95.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O2 Model</td>
<td>Sweden</td>
<td>-</td>
<td>(0.25%)</td>
<td>-</td>
</tr>
<tr>
<td>Wallenstam Model</td>
<td>Sweden</td>
<td>-</td>
<td>✓</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: By author

Key observations related to payment methods seen Table 2 include:

* Payment estimate based on a 30% capacity factor, using the 2010 Swedish average annual electricity price of 0.55 kr/kWh [Telge Energi, 2011] and Green Certificate price of 0.270 kr/kWh [Krafto Vind, 2011].
• All UK-based projects used the fixed annual payment method, whereas all projects in Sweden used production-based payments.

• In 4 UK projects, a combination of a fixed annual payment with a lump sum payment was used, but lump sum payments were not seen in any Swedish cases, nor were they ever used in the absence of a fixed annual payment.

• Projects in Poland and France allocate money to the community in the form of local taxes.

7.1.1.2. Quantity of Payments

Another key consideration illustrated in Table 2 is the variability in the quantity of community fund payments. Key observations regarding these quantities can be summarized as follows:

• **Fixed annual payments:** Quantities ranged significantly, from £1,000 to £100,000.

• **Lump sum payments:** 2 projects paid £30,000, one paid £40,000, while one project allocated £1,000,000 to the fund, again demonstrating significant variability.

• **Yield-based payments:** All projects paid between 0.2-0.5% of production.

• **Tax-based payments:** The highest payment quantity of all community funds was achieved through a tax-based system in France (Parc Le Haut des Ailes), which required payment of €6,000 per turbine per year.

• The cumulative value of community fund payments over 20 years ranged from £20,000 to €5,280,000 (£4,620,000), again demonstrating considerable variation.

• The size of the project (in terms of MW installed) bears no clear relationship with quantity of fund payments.

With the variability of these figures in mind, it is important to note that efforts have been made to establish more consistency in fund payment in some countries. In the UK, a proposal released in February 2011 recommended a minimum of £1,000 per MW installed to be allocated to a community fund, which has purportedly been widely accepted by industry stakeholders [RenewableUK, 2011] (34) (see Appendix 2).

Conversely, recommendations made in Sweden have not gained wide acceptance by the industry. Swedish NGO Hela Sverige ska leva has recommended 0.5-1% of revenues to be diverted to a community fund [Andersson, n.d] (see Appendix 2). Comparing these suggested amounts to the figures

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2 However, it must be taken into consideration that these funds will used for ordinary municipal affairs and thus cannot be directly compared to a voluntary community fund that is much more limited in scope (see Section 7.1.1.3).

3 In the cases for which financial data was available, the (simplified) lifetime payment quantity was estimated by multiplying the annual payment amount by an estimated 20 year lifetime (and adding lump sum payments where applicable). It should be noted that this method assumes the funds will be paid for the full 20 years, whereas this is not always the case. In phase 1 & 2 of Altahullion, the fund was only available for 8 years, whereas in the proposed Altahullion 3 project it will be paid for the full project lifetime of up to 25 years [RES UK & Ireland Ltd., 2011].
illustrated in Table 2, these recommendations seem excessive. Furthermore, some municipalities in Sweden have demanded as much as 2% of production revenues to be allocated to a community fund in exchange for allowing wind developments in their area [Levin, 2011].

Hela Sverige ska leva has also recommended changes in the tax system to divert taxes collected in connection with wind power projects to the host municipality instead of the state. The current tax system allocates funds to the state based on 0.2% of the assessed value of the project (Andersson, n.d.). If this practice were implemented, there would likely be less need for developers to voluntarily establish community funds.

7.1.1.3. Community Fund Uses

Another important aspect to consider when looking at community funds is the fact that developers often stipulate restrictions or guidelines on the use of the funds. In most of the cases examined in this study, these stipulations were broadly defined, stating for example that the money must be used “in a democratic manner” [Wickman, 2011], “for charitable, educational or environmental purposes” [RebelGroup, COWI and ISIS, 2011, pp.37], to “provide some measure of economic, environmental, educational, social or cultural benefit for people living in the area” [Falck Renewables, 2011], or for other similarly broadly defined objectives.

Looking at all of the cases examined in this study, the following categories of fund stipulations could be seen (see Table 3):

- Educational programs/initiatives
- Environmental enhancement, protection, or other related initiatives
- Energy-related activities, such as supporting energy efficiency and conservation measures, or providing education at local schools regarding energy efficiency
- Community-based projects or activities, such as events or projects which may have been neglected and have difficulty raising funds otherwise
- Charitable purposes
- Social or cultural benefit
- Other reasons, including specifications of what the fund cannot be used for. Examples of such exclusions include:
  - financing the community's ordinary obligations
  - “any activity deemed to be for political or religious objectives or deemed to be adverse to the interests of the wind farm” [Department of Environment, n.d.]
Table 3. Developers' stipulations for community fund usage

<table>
<thead>
<tr>
<th>Project/Model</th>
<th>FUND USES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td>Estinnes</td>
<td></td>
</tr>
<tr>
<td>Cruach Mhor</td>
<td>✓</td>
</tr>
<tr>
<td>Altshullion (1&amp;2)</td>
<td></td>
</tr>
<tr>
<td>Lake Ostrava</td>
<td></td>
</tr>
<tr>
<td>Bears Down</td>
<td>✓</td>
</tr>
<tr>
<td>Burton Weld</td>
<td></td>
</tr>
<tr>
<td>Cefn Cross</td>
<td></td>
</tr>
<tr>
<td>Deeping St. Nicholas</td>
<td></td>
</tr>
<tr>
<td>Earlburn</td>
<td></td>
</tr>
<tr>
<td>Nover</td>
<td></td>
</tr>
<tr>
<td>Windy Standard</td>
<td></td>
</tr>
<tr>
<td>Vectis</td>
<td></td>
</tr>
<tr>
<td>Farr</td>
<td>✓</td>
</tr>
<tr>
<td>Havenäs</td>
<td></td>
</tr>
<tr>
<td>Wallenstam Model</td>
<td></td>
</tr>
<tr>
<td>O2 Model</td>
<td></td>
</tr>
</tbody>
</table>

Source: By author

7.1.2. Local Ownership Models

The concept of local ownership, which served as the foundation of both Denmark and Germany's wind industries, has become more widely recognized by developers as an effective means of gaining local acceptance.

The most common approach taken by developers in the examined cases was to offer ownership shares to the local community in one or more specific turbines within a project. Subsequently, ownership was
transferred to a local cooperative society who earned a profit from electricity sales.

A slightly different and more innovative approach is taken by Swedish developer O2, who also offers ownership shares for individual turbines within a larger project, but in a slightly different fashion. The company's policy is to offer shares to the local community first, and subsequently to other interested buyers within Sweden. However, rather than earning a direct profit from the revenues, shareholders are entitled to a reduced electricity price for the duration of the project, or for as long as they hold the tradable shares. This price is based on the operational cost of production. It has been noted by this company that during times of rising energy prices, sales of these shares increase dramatically [Magnusson, 2011].

Diverging yet further from the conventional model of local ownership, one particularly innovative and unique approach was taken by developers RDC and Falck Renewables in the UK's Earlsburn project. During the public consultation, the community put forth a proposal for an additional turbine to be installed and owned by the community itself, with all profits going toward a community fund [RenewableUK, 2011](32). In this way, the village believed that this would allow the benefits of the project to be realized by more than just those who could afford to purchase shares. To accommodate this request, the developers established an innovative financial package whereby they paid for all initial costs associated with the additional turbine, which the community will pay back over 15 years using production revenues from the turbine. In this manner, the entire community was able to enjoy the financial benefits of the project without any initial investment.

It is important to keep in mind, however, that the local ownership model introduces a notable element of administrative and legal complexity to a project. Therefore, in order for this approach to be successfully implemented, the developer needs to have sufficient resources and competencies to be able to handle this increased complexity.

7.1.3. Local Employment & Contracting

Many developers have recognized the benefits of employing local people and using local contractors wherever possible, not only for practical purposes, but also as a means of involving and engaging the local community, ultimately serving to increase acceptance. Although employment information was not available for all of the cases examined, in several instances local people were employed during the construction phase (in some cases up to 100 local workers) as well as in ongoing positions related to operations and maintenance during the operational phase.

A noteworthy observation regarding local employment was expressed by one project manager who saw a significant attitude change in local people who were employed in the project. More specifically, his organization often employs local people to maintain the power supply for meteorological masts in the early stages of the project. In some cases, people who were against the proposed development were employed in this role. What is interesting to observe is that the attitudes of these individuals toward the project often changed from negative to positive during the course of their employment [Levin, 2011]. According to the project manager, by having closer contact with the project and gaining a better understanding of it, as well as by realizing that there was an opportunity for financial gain (in this case due to employment), many of these individuals' attitudes changed noticeably.
Although this example demonstrates attitude change in only a small number of individuals, it is an interesting example of the role that knowledge dissemination, active participation and financial incentives play in shaping individual perceptions toward a given project. If these concepts were effective in altering perceptions of a few individuals, perhaps the concept can be carried forward to the broader context of an entire community.

7.1.4. Benefits in Kind

Although the construction and/or reinforcement of local roads or access roads, which is necessary for most wind developments, is often considered to be a benefit to the local community, some developers have implemented benefits in kind that go far beyond what is required to achieve their own objectives. The three most common types of benefits in kind observed in this study were environmental improvements, educational initiatives and financial support for community facilities and/or events.

7.1.4.1. Environmental Improvements

ScottishPower has demonstrated a particular competency in environmental enhancement and restoration. For example, during construction of their Cruach Mhor project, it was discovered that a pair of Hen Harriers (birds of prey) was nesting in the construction area. In response, the developer undertook an extensive habitat management program in the surrounding area, encompassing almost 300 hectares [RebelGroup, COWI and ISIS, 2011]. The program was aimed at regenerating grassland and habitat for the birds, who have returned to breed every year [ScottishPower, 2011](37).

The company took a similar approach at the Beinn an Tuirc project, during which a pair of golden eagles was discovered nesting in the area. In response, they initiated a £2,000,000 habitat enhancement scheme (the largest of its type in the UK) [ScottishPower, 2011](38). The scheme was led by an ornithologist and included increasing important prey species such as grouse, as well as attempting to make the habitat more sustainable in the long term by managing and enhancing the natural habitat and by controlling predator populations. A full-time ranger has been employed by Scottish Power to oversee the management of the site. The result of these actions has been a successful enhancement of the habitat in which the eagles have been shown to favour and in which they are successfully breeding.

A third environmental enhancement project undertaken by ScottishPower, Black’s Law, also involved environmental restoration, although using a different approach. In this project, they completely transformed and regenerated the landscape of an abandoned open-cast coal-mine [RenewableUK, 2010]. The area surrounding the site was restored to allow for the regeneration of wetlands, in turn improving the wildlife habitat.

7.1.4.2. Educational Initiatives

Another approach to benefits in kind involves participation in local educational initiatives. As an example, in the Bears Down project in Scotland, developers National Wind Power and Fred Olsen took part in a local energy efficiency advice scheme. In addition, the company implemented sustainable energy projects at 19 local schools, involving approximately 2,000 students [RebelGroup, COWI and ISIS, 2011]. The company also donated funds for computer equipment at these schools, and also makes annual donations to certain schools in the area.
7.1.4.3. Community Facilities & Events

Another approach to benefits in kind is to directly fund local facilities, projects, events, or other similar activities. For example, in the Lake Ostrowo project in Poland, developer DONG Energy contributed a school bus to the community, in addition to making financial contributions to an annual festival and providing clothing for the local soccer team [RebelGroup, COWI and ISIS, 2011].

A further example can be taken from the Hornberget project in Northern Sweden. Initially, the developer needed to install broadband cable in the area for its own use, but upon realizing that the broadband infrastructure was undeveloped in the area, the company decided to expand the installation to the broader community [Levin, 2011].

7.1.5. Compensation

Only two cases examined in this study highlighted compensation as a benefit sharing mechanism. The first, Scotland's Cruach Mhor project, required the developer to establish a bond of £115,000 prior to any work being performed, in order to ensure the land would be restored to its original state following decommissioning [RebelGroup, COWI and ISIS, 2011].

Secondly, in Belgium's Estinnes project the developer financially compensated not only landowners who hosted turbines (as is standard procedure for most wind developments) but also those in the wider area [RebelGroup, COWI and ISIS, 2011]. This area included not only properties hosting turbines, but also included neighbouring properties which were similarly affected by the development. This area was divided into four separate zones, with each zone receiving a different level of compensation.

A similar approach is taken by Swedish developer Triventus, who also divides the area surrounding turbines into zones. In this case, compensation is based on either distance from the turbine or on sounds zones [Nord, 2011]. Either way, compensation decreases with distance from the turbines, but nevertheless some level of compensation is offered to all those living in the prescribed zones.

As these examples demonstrate, the concept of compensation to landowners seems to have evolved from compensating only those who host turbines on their property to a more egalitarian approach that also compensates those in the adjacent area who may be impacted by the presence of the turbines. However, since this method of benefit sharing still only compensates landowners, other community members who do not receive these benefits may develop negative attitudes toward the project if they are not also offered some other form of benefit.

7.1.6. Energy Price Reduction

The approach of offering local community members reduced electricity tariffs was undertaken in three of the cases examined in this study. However, each approach was slightly different.

At the Vectis wind farm in England, local residents could sign up as members of a local non-profit renewable energy organization, which was established specifically for the project between the developer and an existing electricity supplier [RenewableUK, 2011](32). Depending on their proximity to the wind farm, members were eligible for different benefits; those living in close
proximity to the farm receive a 10% discount on their electricity bill plus an annual £100 rebate for up to 25 years; those in the wider community receive only the 10% discount; and other eligible homes receive a one-time benefit.

A different approach is taken by Swedish developer O2 who sells ownership shares in individual turbines within a project. Each share represents 1,000 kWh and entitles shareholders to purchase that amount of electricity for the operational cost of production, which is considerably lower than the market price of electricity and will stay essentially stable for the duration of the project [O2, n.d.].

A similar approach is also taken by Swedish developer Wallenstam, who offers a discount of 1-2 öre per kWh to all members of the host community [Igel, 2011].

7.1.7. Indirect Social Benefits

All indirect benefits observed in this study are related to either tourism, education, or a combination of the two.

In some cases, tourism was observed to increase without any direct attempt made by the developer to do so. This phenomenon was noted in specific projects in Belgium, Poland and Ireland [RebelGroup, COWI and ISIS, 2011]. In other cases, a more active approach was taken to increase tourism. For example, at the Altahullion wind farm in Ireland a footpath to one of the turbines was constructed, complete with signage and a car park area [RebelGroup, COWI and ISIS, 2011]. The stop has been promoted in tourism literature for the area and the local council now markets it as a tourist attraction on its website [Limavady Borough Council, 2011].

In addition to increasing general tourism levels, the Altahullion project also provides opportunities for locals to tour the project. The developer organizes tours and annual school visits in which hundreds of school children and other local residents have been able to participate [Centre for Sustainable Energy et al., 2009].

Similarly, at the Deeping St. Nicholas project in England, the site has regular days in which visitors and tour groups, such as school groups, are welcome to see the site. Over the course of 2006-2007 approximately 4,000 people attended these open days [Centre for Sustainable Energy et al., 2005].

Lastly, at the Havsnäs project in Sweden, during the public consultation process members of the community expressed an interest in starting a training program for turbine operations and maintenance personnel [Levin, 2011]. This led to the development of Sweden's first wind power technician training program, which is located in the host community and which has evolved into a well-known educational centre throughout Sweden.

7.2. Community Involvement

In several of the cases examined, community members were given an opportunity to directly participate in decisions regarding the application of BSMs. This notion was most evident with respect to the application of community funds. In many cases, an in-depth public consultation process determined what activities the funds would be used for, and which local groups would be in charge of managing
and administering them. In many cases, developers empowered a local group with this responsibility; normally a community-based organization that was involved in charity or other community-related activities; in other cases, a local trust was established specifically for the project funds, with a locally-appointed committee established to manage it.

One example of participation in decisions regarding the application of community funds can be seen in the Burton Wold project in England. During the public consultation process, the community stated a desire to receive cheap, locally derived energy [Centre for Sustainable Energy et al., 2009]. Although the regulatory framework did not allow for this directly, based on this input the developer stipulated that the community fund was to be used to support energy efficiency measures, which would in turn help to reduce electricity consumption and associated costs in the community.

Community participation regarding BSMs can also be seen in other mechanisms besides community funds. For example, in the Altahullion project in Ireland, a local group expressed a desire for the project to include a touristic component. In response, the developer constructed a car park area, complete with signage and a path to one of the turbines [RebelGroup, COWI and ISIS, 2011].

Perhaps the greatest level of public participation in the application of BSMs can be exemplified in the Earlsburn project in Scotland. In this project, the community came up with the idea of installing an additional turbine which would be owned by the entire community, with revenues going toward a community fund [Centre for Sustainable Energy et al., 2009].

Aside from being involved in decisions related to the application of BSMs, many projects also involved the local community in decisions about other factors that may affect them. For instance, in the Parc Le Haut des Ailes project in France, the developer worked closely with the community to develop a charter of principles that included aspects such as noise limits and other important factors, which was subsequently agreed upon during the early stages of the project [Rebel Group, COWI and ISIS, 2011]. The developer also empowered local citizens to gather views of the community related to layout and siting, as well as established a committee of territorial cooperation which was comprised of local residents, state departments, elected officials, farmers and local associations [GDF Suez and Erelia, 2008]. As a result of this extensive community involvement, it was noted that the project generated no appeals against the development. Considering the project impacted 50 municipalities, this is surely a sign of the successfulness of this approach.

Overall, it is good practice for developers to take the suggestions of the local community into account when making choices about implementing BSMs as well as when making decisions about other aspects of the project which may significantly impact them.

8.0. Discussion

8.1. Development of an effective benefit sharing strategy

As demonstrated in the comparative case study analysis, there is significant variability in the benefit sharing schemes that have been implemented by developers in different contexts. This variability
makes it very difficult to draw general conclusions or make general statements about an optimal approach to benefit sharing that may be universally applicable. In turn, this observation supports the argument made by Horbaty and Huber (2010) that “there is no ‘one-size-fits-all’ solution” (pp.1).

Despite this variability, however, the analysis did provide insight into three key factors influencing the development of an effective benefit sharing strategy; the national context; the organizational competencies of the developer; and the local context. Careful consideration of these factors will inform the development of an effective benefit sharing scheme.

8.1.1. National Context

The first key factor influencing the approach to benefit sharing is the national context. More specifically, the combination of legal and historical/cultural factors in each country will set the overarching framework in which a benefit sharing strategy shall be rooted.

First, looking at the legal factors, in nations that have tax laws allocating funds to host communities and/or have requirements for local ownership opportunities in connection to wind power projects, financial benefits are automatically transferred to the host community. In turn, it may not be necessary for developers to undertake a voluntary benefit sharing scheme. On the other hand, voluntarily implementing BSMs in these cases would demonstrate a commitment on behalf of the developer to enhancing the community, which may serve to increase acceptance and create a positive corporate image. In such cases, the focus of the voluntary schemes should be on non-financial BSMs, such as contributing to the development of local facilities or events, engaging in local education programs, undertaking environmental restoration or enhancement programs, or by other similar initiatives that can be seen as 'goodwill' on behalf of the developer.

Conversely, in countries without laws that automatically bestow financial benefits to the host community, developers should voluntarily implement benefit sharing schemes. The primarily focus of these schemes should be extending the financial benefits of the project to as wide a range of individuals in the host community as possible. The most effective approach to doing so is the community fund, which can also be combined with local ownership opportunities and/or other, non-financial mechanisms, such as sponsoring community projects or events. In any case, the focus of voluntary schemes should be financial, with the non-financial mechanisms being a secondary priority.

Looking at the relevance of historical/cultural influences of the host country, in nations with a history of cooperatively-owned projects (whether related to wind power or otherwise), commercial developers may increase acceptance by offering local ownership opportunities, as the underlying culture is already familiar with this approach. Familiarity with the cooperative structure is evident in Sweden, which has a long history of joint ownership of public goods such as playgrounds, roads, parking lots and sewage systems, as well as in Denmark, with a strong history of agricultural cooperatives [Bolinger, 2001]. It comes as no surprise then that cooperative ownership with respect to commercial wind power projects has been successful in these countries.

Conversely, the concept of local ownership is less familiar in the UK, and therefore the local ownership approach may not be as effective there. Similarly, in highly individualistic cultures such as the United States and Canada, this approach may not be as easily implemented. This is not to say that local
ownership will not work in these countries, but rather developers will need to take greater effort to educate the public about this structure and its benefits. Combined with the increased administrative complexity involved with local the local ownership mechanism, the trade-offs between additional effort required versus the benefits received may not be as favourable as in countries such as Sweden and Denmark.

Overall, there are a wide range of approaches to benefit sharing that can be taken in any given country, but the foundation of each approach must be framed in the legal and historical/cultural influences of the host country.

8.1.2. Organizational Competencies & Resources

The second set of factors informing the development of an effective benefit sharing strategy are the competencies and resources of the developer. These factors will greatly affect which mechanisms are possible to implement within the overarching national framework.

For instance, looking at the local ownership mechanism, due to the significant administrative complexity involved in carrying out this approach, it will only be suitable for organizations with sufficient resources to handle the increased complexity. On the other hand, some organizations have particular competencies in other business areas, such as real estate development or environmental restoration, in which cases these competencies should be extended to the local community and be included in the overall benefit sharing strategy. For example, this may be achieved by providing extensive environmental enhancement programs, or by sharing knowledge to improve local facilities such as schools.

Overall, based on the influences of the national context in combination with the specific competencies of the organization, developers should adopt a formalized, yet flexible policy or strategy for benefit sharing in each country of operation, which can then be adapted to the unique circumstances of each project and community. Although there are no universal rules for creating an effective strategy, some general observations and recommendations can be made based on the analysis of projects in this study:

• The community fund mechanism is the simplest means for a developer to extend the financial benefits of a project to the host community and should be achievable for almost any organization, regardless of internal competencies. This mechanism has proven to be successful in a number of commercially-driven projects throughout Europe.

When implementing a community fund, stipulations regarding its use should be based on the needs, demands and wishes of the local community. Additionally, a locally-based organization should be empowered with the management of the fund.

In the UK, community funds should be based on the newly established guidelines of £1,000/MW installed. In Sweden, funds should be based on approximately 0.2-0.3% of production revenues. In both cases, however, these figures may be exceeded, depending on the specific circumstances of the host community. Conversely, it is not recommended to go below these amounts.
• When implementing a local ownership scheme, a community fund should also be used in conjunction. This will spread the financial benefits beyond only those who can afford to purchase shares and thus avoid conflict and potential resistance.

• When looking at financial compensation for landowners, those in the surrounding area (i.e. those who do not have turbines directly on their property, but are otherwise impacted by their presence) should also be compensated. This can be achieved through creating zones and/or creating a community fund.

• A lump sum payment should not be used on its own, as financial benefits should be ongoing for the lifetime of the project.

• Employing local workers and using local contractors whenever possible will likely increase acceptance.

• Involving and sharing knowledge with as many people as possible in the community will likely increase acceptance.

8.1.3. Local Context

The third set of factors influencing an effective benefit sharing scheme are the unique characteristics of the host community. More specifically, as previously mentioned, the general approach to benefit sharing needs to be adapted to each individual community in order to maximize its effectiveness in terms of attaining acceptance. Each community has its own unique set of needs, wishes and demands which should be acknowledged and, where possible, incorporated into the details of the BSMs.

For instance, it may be determined that the community has an interest in ownership opportunities in the project, or perhaps there are community facilities or activities which need attention but which lack financial resources, or perhaps there is a desire to create a touristic component related to the project. The specific desires of each community will vary, but in any case they should be taken into consideration as part of the overall acceptance strategy, with BSMs and other project details being adapted to them, wherever possible.

8.2. Benefit sharing and public engagement – an integrated approach

When developing a comprehensive local acceptance strategy, BSMs cannot be looked at in isolation. On the contrary, they must be considered in conjunction with effective public engagement (see Appendix 3). It is through the public engagement process that the local community gains trust in the developer and becomes involved in the project by having an opportunity for input into certain details, such as decisions about certain BSMs and other factors that may impact them.

Taking into consideration the combined importance of benefit sharing and public participation, this thesis argues in support of the contention made by Wüstenhagen et al. (2007) who claimed that the key factors influencing social acceptance are “distributional justice (how the costs and benefits are shared), procedural justice (is there a fair decision making process giving all stakeholders an opportunity to participate?)” and does the local community trust the information and intentions of the actors from the
outside community” (pp. 2685). It is through benefit sharing schemes and an effective public engagement process that these factors are addressed, in turn leading to increased acceptance.

Overall, the concepts outlined above can be combined to create a general framework for the development of an effective local acceptance strategy (Figure 4).

**Figure 4. Framework for the development of an effective local acceptance strategy**

*Source: By author*
8.3. A Cautionary Approach

When considering the implementation of a benefit sharing scheme, developers need to be cautious to ensure the offer is not looked at as a form of bribery. Achieving this, however, is fraught with a certain level of ambiguity and uncertainty which must be kept in mind and managed carefully.

One particularly contentious issue pertains to the relationship between BSMs and decisions regarding planning permission. On one hand, national planning policy for renewable energy in the UK, for example, states that the economic benefits of a project should be given significant weight in planning decisions [Centre for Sustainable Energy, 2007]. Similarly, in Sweden it has been argued that benefits should be offered before planning permission is granted [Andersson, n.d].

On the other hand, it has been argued that planning proposals should not be influenced by additional payments or contributions offered by a developer [Centre for Sustainable Energy, 2007]. Overall, this leads to ambiguity for the developer in terms of deciding when and how to go about making an offer related to BSMs. If the process is not managed carefully, it may give rise to arguments that planning permission is being 'bought'.

A proposed solution is to ensure that the local planning authority is not involved in discussions about community benefits until after a decision regarding planning permission has been made, or to separate the planning process from discussions about community benefits and to run the two processes in parallel with different actors involved [Centre for Sustainable Energy et al., 2009].

9.0. Conclusion

The contentious issue of local acceptance toward wind power development is putting increasing pressure on developers to create local acceptance strategies that include an element of benefit sharing. This is especially the case in countries where benefits do not automatically accrue to the host community through taxes or by other means. The cases examined in this study demonstrate considerable variation both in terms of the nature and quantity of benefit sharing mechanisms applied. Despite this variability, however, these case studies demonstrate the prominence of the community fund mechanism, although certain developers have also had success with local ownership schemes, electricity price reduction for community members, environmental restoration or enhancement projects, knowledge sharing and/or educational initiatives, and by offering local employment opportunities.

The key factors to consider when developing an effective benefit sharing strategy are the overarching influences of the host country, the competencies of the developer, and the needs, wishes and demands of the host community. More specifically, the legal framework of the host country will greatly influence the need to voluntarily implement a benefit sharing scheme, depending on whether or not benefits are automatically transferred to the community through taxes or local ownership requirements. Furthermore, the historical/cultural characteristics of the host country will impact which mechanisms
may be most suitable, based on the characteristics of the culture and its underlying familiarity with various approaches.

The second set of factors influencing a benefit sharing strategy are the internal competencies of the developer, which will ultimately inform which mechanisms are possible to apply. More specifically, some organizations lack the resources to handle the increased complexity associated with certain mechanisms, such as local ownership or offering a reduced electricity price.

Based on the influences of the host country, combined with the organization's internal competencies, developers are encouraged to establish a formalized, yet flexible benefit sharing policy for each country they operate in, which can be adapted to the unique circumstances of each host community. Although there is no universal approach to creating an effective benefit sharing strategy, it should be noted that regardless of an organization's internal competencies, establishing a community fund is perhaps the simplest method of extending financial benefits to the host community and should be possible for almost any developer. Another important consideration is to distribute the benefits as equitably as possible across the widest range of individuals possible in the host community. For example, when implementing a local ownership scheme, a community fund that extends the financial benefits to the wider population should be used in conjunction, in order to spread benefits beyond only those who can afford to purchase shares. Similarly, financial compensation to landowners should include not only those with turbines on their property, but also those in the surrounding area who are similarly affected by the project. Lastly, financial benefits should be ongoing for the lifetime of the project (i.e. not one-off lump sum payments), local workers and contractors should be used whenever possible, and involving and sharing knowledge with as many people in the host community as possible will likely lead to increased acceptance.

The framework provided in this paper can be used as a general guideline for developing an effective benefit sharing strategy. As the framework demonstrates, a benefit scheme cannot be looked at in isolation. A comprehensive local acceptance strategy must integrate the concepts of benefit sharing and effective public engagement. It is through the public engagement process that the local community is given an opportunity to participate in decisions that will affect them. If managed effectively, this process will help to earn the trust of the local community and ultimately increase acceptance.

Considering the extent of variation in developers' approaches to benefit sharing, there is a movement in some countries toward standardization, either by recommending or requiring set amounts of money to be allocated to the host community and/or requiring minimum local ownership opportunities. Overall, this would likely be favourable for the industry; if standardized approaches become widely adopted, the uncertainty faced by communities in terms of ensuring they are receiving a 'fair deal' will be greatly reduced, which may lead to increased acceptance. Additionally, if minimum payments are guaranteed, this may serve as an incentive for communities to encourage development, rather than oppose it. Standardization would also be beneficial for developers, as it would simplify the process of determining adequate payment quantities for each project. Lastly, a standardized approach would increase transparency of the overall benefit sharing process, which may reduce concerns over community payments as being a form of bribery, or 'buying consent'.

Going forward, as benefit sharing strategies become more widely adopted, more and more communities are likely to demand some form of benefit sharing when considering the prospect of hosting wind
developments. With this in mind, developers who choose not to voluntarily implement benefit sharing schemes are likely to face increased resistance.

10.0. Further Research

Further research is recommended to document and analyze additional case studies from a wider geographical area, both internal and external to Europe. This would allow for a more detailed comparative analysis that may provide further insight into underlying similarities, differences and/or other notable trends. In particular, it would be valuable to determine the traits of effective benefit sharing strategies in different national contexts in order to provide a basic framework for developers operating in, or considering entry into, different markets.

Also, a comparative analysis that includes projects which were initiated by community groups would provide a more well-rounded perspective on different approaches to benefit sharing in different contextual frameworks.

Lastly, research is recommended to determine individual perceptions in host communities with respect to different benefit sharing mechanisms that have been offered and/or implemented in their community. This may provide insight into which specific approaches may offer the greatest opportunities for maximizing acceptance.
References


(20) Levin, S., 2011. Personal interview regarding experiences with the application of benefit sharing mechanisms. Interviewed by Evan Koebel at the office of Triventus Östersund, 4 May 2011.


(46) Wolsink, M., 1999. Wind power and the NIMBY-myth:institutional capacity and the limited


Appendix 1. Benefit sharing legislation in Denmark and Germany

According to new Danish legislation, wind developments must offer the option to purchase shares in the project [Sperling, 2010]. Supporting the theme of local ownership, 20% of the shares must be offered to residents who live within 4.5 kilometers of the site. Additionally, the legislation requires the establishment of a community fund for the first 22,000 peak load hours, which the municipality can use to fund projects aimed at increasing landscape and recreational value or local, cultural and informative activities aimed at increasing acceptance of renewables [Sperling, 2010].

A different approach has been taken in Germany, where legislation was passed in 2009 to increase the amount of tax being diverted to local communities that host wind power projects. The law requires 70% of the tax to go toward the host municipalities and 30% to go to the municipality that houses the company's headquarters [Andersson, n.d].

Appendix 2. Toward a uniform application of benefit sharing mechanisms

Acknowledging the absence of uniform guidelines in Sweden with regard to the application of benefit sharing schemes, NGO Hela Sverige ska leva released a series of recommendations for municipalities hosting wind power projects. The document recommends local ownership opportunities for at least 20% of each project (in terms of MW installed) and/or production-based community funds ranging from 0.5-1% of production, in addition to using local workers and contractors whenever possible [Andersson, n.d.]. It should be noted, however, that these guidelines have not gained acceptance by either industry or the Swedish government, but rather the proposal is serving as a base for further discussion by various industry stakeholders.

Also recognizing the need for a more consistent approach to benefit sharing, RenewableUK released a Protocol in 2011 specifying minimum community fund payments to be made by wind power producers in the UK (£1,000/MW/year over the lifetime of the project, to be tailored to each individual community based on consultation) [RenewableUK, 2011] [36]. Decisions regarding the allocation of these funds are to be made by the host community. Realizing the importance of this methodology in terms of increasing acceptance levels, the initiative has gained the full backing of industry stakeholders and the government. Similar initiatives are planned for release in Wales and Northern Ireland in late 2011.

Appendix 3. Public Engagement Toolkits

Recognizing the integral role that effective public engagement plays in increasing acceptance of wind power projects, various industry associations, government authorities and independent researchers have compiled guidance documents, toolkits and recommended best practices for developers or other project proponents. The following section will highlight the most comprehensive documents of this type that were discovered through a detailed literature search.
One of the most comprehensive toolkits available is the ESTEEM tool (Engage stakeholders through a systematic toolbox to manage new energy projects). This toolkit, which was the main outcome of the European Commission's Project Create Acceptance, provides a step by step approach to anticipating, analyzing and overcoming issues related to social acceptance [European Commission, 2008].

Source: European Commission, 2008
UK Protocol for Public Engagement with Proposed Wind Energy Developments

Considering the extent of social resistance towards wind development in the UK, the Renewables Advisory Board commissioned a series of reports in an effort to outline key principles of public engagement. One of these reports, The Protocol for Public Engagement with proposed Wind Energy Developments in England (2007), outlines a series of reciprocal commitments to be made by project stakeholders, including the developer, local authorities, statutory consultees and the local community, which represent good practice for public engagement and which will lead to a more consistent development process [Centre for Sustainable Energy, 2007].

Before putting forth a detailed framework which developers can use to define, carry out and evaluate public engagement, the Protocol argues five key principles which represent a high quality approach to public engagement:

1. Access to information
2. The opportunity to contribute ideas
3. The opportunity to take an active part in developing proposals and options
4. The opportunity to be consulted and make representations on formal proposals
5. The opportunity to receive feedback and be informed about progress and outcomes

CanWEA's Best Practices for Community Engagement and Public Consultation

Staying within the same conceptual boundaries as the UK Protocol for Public Engagement, the Canadian Wind Energy Association (CanWEA) contends that the community engagement process should be guided by three key elements; opportunity; information; and response.

By opportunity, CanWEA argues that every member of the community should have a realistic opportunity to attend meetings or otherwise receive information, emphasizing that “it is the proponent's responsibility to inform the community and not the community's responsibility to learn about (the) project” (pp.11). The document also argues for multiple channels of access for communication and information sharing.

In the second point – information – CanWEA suggests that multiple forms of information transmission should be used and messaging should be consistent (pp.11).

Thirdly, the document argues that the responsiveness to questions from the community is a crucial
element in the community engagement process. The document states that reasonable standards should be set for the speed and the amount of detail for responses, arguing that responses should be made within 24-48 hours or receiving the request for information (pp.11).

Overall, although variations exist between these guidance documents, common themes include a proactive approach to public engagement that conveys consistent, comprehensive information through a regular, two-way, transparent communication process.

**IAP2 Spectrum of Public Participation**

Both the UK Protocol for Public Engagement and the CanWEA Best Practices document make reference to the International Association for Public Participation (IAP2) Spectrum of Public Participation. In a broad sense, the IAP2 states that there are varying levels of public participation which may be adopted for a given project or a given stage of particular project, which vary by the amount of public input into the decision making process desired or required by the developer or other project stakeholders. Different levels of participation may be appropriate for different projects and for different stages or activities within a single project, depending on the interests of the stakeholders involved and the nature of the project [Centre for Sustainable Energy, 2007].
### IAP's Spectrum of Public Participation

<table>
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<tr>
<th>INFORM</th>
<th>CONSULT</th>
<th>INVOLVE</th>
<th>COLLABORATE</th>
<th>EMPower</th>
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<td><strong>Public Participation Goal:</strong></td>
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<td>To provide the public with balanced and objective information to assist them in understanding the problems, alternatives, opportunities and/or solutions.</td>
<td>To obtain public feedback on analysis, alternatives and/or decisions.</td>
<td>To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.</td>
<td>To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.</td>
<td>To place final decision-making in the hands of the public.</td>
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<tr>
<td>Promise to the Public:</td>
<td>Promise to the Public:</td>
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<tr>
<td>We will keep you informed.</td>
<td>We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.</td>
<td>We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.</td>
<td>We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.</td>
<td>We will implement what you decide.</td>
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<td><strong>Example Techniques to Consider:</strong></td>
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| • Fact sheets  
• Web sites  
• Open houses | • Public comment  
• Focus groups  
• Surveys  
• Public meetings | • Workshops  
• Deliberate polling | • Citizen Advisory Committees  
• Consensus building  
• Participatory decision-making | • Citizen juries  
• Ballots  
• Delegated decisions |

*Source: International Association for Public Participation, 2004*
**IAP2's 5 Steps for Public Participation Planning**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Tasks</th>
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</table>
| 1.   | Gain Internal Commitment | **Activity 1:** Identify the decision maker(s)  
**Activity 2:** Profile sponsoring organization's approach to P2  
**Activity 3:** Clarify the scope of the decision  
**Activity 4:** Identify preliminary stakeholders and issues  
**Activity 5:** Assess sponsor's view of the IAP2 Spectrum level |
| 2.   | Learn from the Public | **Activity 1:** Understand how people perceive the decision  
**Activity 2:** Develop a comprehensive list of stakeholders  
**Activity 3:** Correlate stakeholders and issues  
**Activity 4:** Review/refine the scope of the decision |
| 3.   | Select the Level of Participation | **Activity 1:** Assess internal and external expectations  
**Activity 2:** Select level on the IAP2 Spectrum  
**Activity 3:** Assess “readiness” of sponsoring organization |
| 4.   | Define the Decision Process and Participation Objectives | **Activity 1:** Understand the existing decision process  
**Activity 2:** Set P2 objectives for each step in the process  
**Activity 3:** Compare decision process with P2 objectives  
**Activity 4:** Check to confirm objectives meet needs |
| 5.   | Design the Public Participation Plan | **Activity 1:** Determine plan format  
**Activity 2:** Integrate baseline data into plan format  
**Activity 3:** Identify the public participation techniques  
**Activity 4:** Identify support elements for implementation  
**Activity 5:** Plan for evaluation |

*Source: Canadian Wind Energy Association, 2010*
Appendix 4: Semi-structured interview questions

1) Please describe your company's approach to attaining local acceptance.

2) What types of resistance have you faced, if any, during the various stages of project development? How was resistance addressed?

3) Has your company implemented benefit sharing mechanisms in relation to any specific project(s), or do you have a specific approach to doing so? If so, please describe the mechanisms that were applied.

4) (If yes to question 3) Why were these mechanisms chosen (i.e. was there local resistance toward the project, did community members request certain mechanisms, was it part of a company policy, was it an ethical decision, etc.)?

5) (If yes to question 3) At what stage during the development process was the decision made to use these mechanisms (i.e. pre-permit, post-permit)?

6) (If yes to question 3) How important do you feel these benefit sharing mechanisms were in attaining acceptance from the local community?

7) (If no to question 3) What is your general opinion of benefit sharing as a means of attaining local acceptance?