



Northern Ireland
Assembly

Research and Information Service Briefing Paper

Paper 124/14

28 April 2014

NIAR 308-14

Suzie Cave

Wind Farm Community Benefits

The following paper is in relation to a request from the Environment Committee on community benefits from wind farm developments. It considers the community fund rates offered in NI, how these compare with other jurisdictions and gives a number of case studies. Finally it looks at examples of other types of community benefit from other countries such as Denmark, Germany and Netherlands etc.

Introduction

Community benefit refers to a range of both monetary and non-monetary benefits that may be given to neighbouring communities due to the presence of a renewable energy development. They can be in the form of broader socio-economic benefits arising from a development, or specific mechanisms established directly by the developers to generate additional benefit to the local community.

There are 4 main types of community benefits from renewable energy developments:

1. Community funds: where a trust fund receives a lump sum and/or regular payments from the developer/operator and awards grants to support local community or environmental projects.
2. Benefits in kind: funded by the developer/operator and includes local infrastructure or other amenity improvements; direct support for local education

or community projects; and reduced energy tariffs for local homes and businesses.

3. Local ownership of the development (or part) by local people or community based organisations. Usually done by offering shares for sale or gifted by the developer, joint venture or majority ownership by a community- based enterprise.
4. Local supply chain, for example through contracting to local firms and other employment and training opportunities during the project design, construction and operation.¹

Community Benefits in Northern Ireland

The following section is more concerned with comparing the amount of community benefit received in Northern Ireland with other jurisdictions. In this case the section refers to community funds, as the direct monetary value received by a community is clearer and more readily available compared to other types of benefit. This section also considers a number of case studies in Northern Ireland, and where the detail was available it gives information on how communities have used the funds.

Community funds

The level of community fund is usually calculated in terms of pounds per megawatt (MW) of installed capacity, to be paid per annum.²

The level of community fund offered by projects appears to vary across jurisdictions, largely influenced by recommendations by the various UK industry bodies. Renewables UK's recommended minimum of £1000/MW/year has been increased to £5000/MW/year for England only following the UK Government's consultation on onshore wind energy in 2012.³ However, in England and Wales variations do apply and research by the Joseph Rowntree Foundation in 2012 identified an offer of £8,000 per megawatt in a Welsh scheme.⁴ The Scottish Government is also promoting a national rate equivalent to at least 5,000 per MW per year for the operational lifetime of the onshore wind development for community benefit packages. This is a minimum level and the Scottish Government would like to see opportunities for increased levels of

¹ Centre for Sustainable Energy (CSE), 2009, *Delivering Community Benefits from Wind Energy Development: A Toolkit*. <http://www.cse.org.uk/search/?keywords=COMMUNITY+BENEFITS+TOOLKIT>

² Cowell, Richard et al *Wind Energy and Justice for Disadvantaged Communities* (May 2012) www.jrf.org.uk/sites/files/jrf/wind-farms-communities-summary.pdf

³ Department of Energy & Climate Change *Onshore Wind Call for Evidence: Government Response to Part A (Community Engagement and Benefits) and Part B (Costs)* (June 2013) www.gov.uk/government/uploads/system/uploads/attachment_data/file/205423/onshore_wind_call_for_evidence_response.pdf

⁴ Cowell, Richard et al *Wind Energy and Justice for Disadvantaged Communities* (May 2012) www.jrf.org.uk/sites/files/jrf/wind-farms-communities-summary.pdf

community investment to be explored.⁵ However in NI, Northern Ireland Renewables Industry Group (NIRIG) still recommend the lower figure of £1000/MW/year in their Community Commitment Protocol.⁶

Comparing the amount of community fund levels between Northern Ireland and the rest of the UK, Fermanagh Trust have found that:

- only one out of 14 wind farms located in Northern Ireland had a community fund of £2000/MW or more, and
- the majority were much lower with 11 of the 14 between £500 and £1000 MW.

Their study which was based on a number of schemes from England, Wales and Scotland concluded that community benefit funds are much lower in Northern Ireland compared to the samples used from the rest of Great Britain, where in fact levels have been seen to be increasing.⁷

The DETI et al study⁸ compared the average annual amount of community benefit fund from Scotland, Wales and NI (unfortunately no figures are given for England). It highlights that the Drumlins project, which is clearly far greater in terms of benefits compared to other projects in NI, has a large impact on the average annual figure for community benefits. Table 1 figures show that with the Drumlins project included, NI's annual average is in fact the largest out of Scotland and Wales, however remove this figure and NI's average drops to the lowest.

⁵ Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments (November 2013) www.scotland.gov.uk/Publications/2013/11/8279/3

⁶ NIRIG Community Benefit Protocol <http://www.ni-rig.org/news/nirig-launches-community-commitment-protocol/>

⁷ Fermanagh Trust (2012). Maximising Community Outcomes from Wind Energy Developments full Report [http://www.fermanaghtrust.org/images/custom/uploads/127/files/Wind_REPORT_1\(1\).pdf](http://www.fermanaghtrust.org/images/custom/uploads/127/files/Wind_REPORT_1(1).pdf)

⁸ DETI/DOE/DARD, Communities and Renewable Energy: a Study (2013) http://www.detini.gov.uk/deti-energy-index/renewable_electricity-2/communities-and-renewable-energy-2.htm

Table1: Average level of community benefit in Scotland Northern Ireland and Wales

	Average community benefit £/MW/annum of sample	Average size of scheme (MW) of sample	Sample size (No of projects)
Scotland	£1916	37	45 ⁵⁶
Wales	£1785	20	15 ⁵⁷
Northern Ireland	£1939 (£1535 if Drumlins is removed from the analysis)	24	16 ⁵⁸
Total across the whole sample	£1986	31	81

Source: Communities and Renewable energy study (DETI et al)⁹

Formalising the process

It is difficult to quantify the exact amount of community benefit given as a whole throughout Northern Ireland as there is no formal record. It has been suggested that a register of community benefit such as that adopted by the Scottish government would help to keep a track record.

A form of register would add to the formalisation of the process, which according to Cass et al (2010) gives more certainty to communities. In their opinion communities want “contractual” certainty for their community benefit so that they are not dependent on what Cass et al describe as the “largesse of the developer acting out of a sense of corporate social responsibility”¹⁰.

The Communities and Renewable Energy study¹¹ recognised that the combination of a register (as in Scotland), a protocol (similar to ones developed by the Scottish Government and NIRIG), or a Concordat as developed by the Highland Council, would help to formalise community benefits. These are detailed below:

Scottish Register of Community Benefits

The Scottish Government Register of Community Benefits from Renewables is voluntary and relies on communities and developers sharing their details and experiences in relation to community benefits. It provides information to support local

⁹ Ibid (p.42)

¹⁰ Cass, N, Walker, G., & Devine-Wright, P. (2010). Good neighbours, public relations and bribes: The politics and perceptions of community benefit provision in renewable energy development in the UK as sited in Communities and Renewable Energy: a Study (2013) <http://www.detini.gov.uk/communities-and-renewable-energy>

¹¹ Communities and Renewable Energy: a Study (2013) <http://www.detini.gov.uk/communities-and-renewable-energy>

communities through the community benefit process by publishing the benefits communities have received and how they have used them.

It also details fund spend, and provides ideas and advice for communities to ensure their funds are spent wisely. The Register is voluntary and relies on communities and developers sharing their experiences and the lessons they have learnt.¹²

NIRIG Protocol

To integrate community benefits, NIRIG has launched a Community Commitment Protocol which sets out a protocol for NIRIG members, based on current industry positions across the UK and Ireland. The protocol has been inspired by the success of existing community benefit funds in Northern Ireland and states the following requirements:

- A community benefit scheme will receive support equivalent to a value of at least £1,000/MW of installed capacity per annum and will be index-linked for the lifetime of the project.
- Payments and/or benefits in kind under a community benefit scheme will commence not later than twelve months from the date of completion of commissioning of the wind farm (unless otherwise agreed by the developer/operator and any proposed recipient to be paid at a later date).
- Payments and/or benefits in kind shall be provided for the duration of the commercial operation of the wind farm. Annual payments may be wholly or partially aggregated over the permitted operational life, as agreed through consultation between the developer/operator and the community.¹³

Scottish Protocol

2013 saw the launch of the Onshore Wind Community Benefit Protocol published by Scottish Renewables and backed by government, which details a consistent approach to community benefits across Scotland. The protocol, which is the first of its kind for Scotland, outlines a number of key commitments from Scotland's onshore wind sector, including a commitment to explore the potential for greater community ownership from onshore wind farms and a pledge to sign up to the government's online Register of Community Benefits from Renewables.¹⁴

¹² The register can be accessed [here](#)

¹³ NIRIG Community Benefit Protocol <http://www.ni-rig.org/news/nirig-launches-community-commitment-protocol/>

¹⁴ Scottish Renewable Community Benefit Protocol <http://www.renewableuk.com/en/renewable-energy/communities-and-energy/community-benefits-protocol/index.cfm>

Highland Council Concordat

The Council has a policy for community benefit and has recently agreed a Concordat to set out the terms of a new relationship between the Council and developers. As part of this agreement it will be the Council's responsibility to provide the framework and infrastructure for receiving and then disbursing Community Benefit. Developers will then agree to provide not less than £5,000 per installed megawatt annually (this appreciates each year in line with the UK Retail Price Index)¹⁵

Case Studies

The following section looks at examples of community benefit funds provided by a number of wind farm developments in Northern Ireland and where detail is available, the case studies show how the funds have been used. Case studies are taken from a report commissioned by DETI, DOE and DARD.¹⁶

Callagheen Community Wind Farm Fund¹⁷

Project Timeline	operational since 2006
Location	Between Belleek and Garrison, County Fermanagh, Northern Ireland
Capacity	Total capacity of 16.9 MW, consisting of 13 turbines, each 1.3MW.
Local Community involvement	The Callagheen Community Wind Farm Fund is administered by The Fermanagh Trust. Each year, local community projects are invited to apply for funding. Priority is given to applications from communities and projects within 7km of the development, although projects beyond this area have been funded in the past. ¹⁸
Financial benefit to community	Scottish Power Renewables make annual payments to the Callagheen Community Wind Farm Fund of £1,000/turbine equivalent to £769/MW.
Additional benefits	In 2012, 13 local projects were funded from senior citizen's groups, women's groups, schools, arts and recreation, pre-schools and youth based activities. Local Primary Schools have received £1500 for their "Pot to Plot Project" environmental initiative. Young people benefited from an award to the Erne Music Club to hold master classes and workshops. A women's group in Garrison received a grant to run a health and fitness programme and Devenish GAA club was offered support towards an energy efficiency project aimed at reducing the Club's carbon footprint

¹⁵ For more information and to access the Concordat visit <http://www.highland.gov.uk/livinghere/communityplanning/communitybenefit/>

¹⁶ ibid

¹⁷ <http://www.scottishpowerrenewables.com/pages/callagheen.asp>

¹⁸ <http://www.fermanaghtrust.org/>

RES Multiple Wind Farms

The following table details the benefits received from the four operating wind farms in NI from RES¹⁹

Project Timeline	Altahullion and Lough Hill in operation from 2007 Gruig Wind Farm in operation from 2009 Altaveedanin development; currently in Planning
Location	Altahullion – near Dungiven (population ~ 3000) Lough Hill – near Drumquin (population ~ 300) Gruig – near Loughgiel (population ~ 2300) Altaveedan – near Loughguile (population ~ 2300)
Capacity	Altahullion I & II has a capacity of 37.7MW, consisting of twenty nine 1.3MW turbines Lough Hill has a capacity of 7.8MW, consisting of six 1.3MW turbines Gruig Wind Farm has a capacity of 25MW, consisting of ten 2.5MW turbines Altaveedan will have a capacity of approx. 18MW
Local Community involvement	Each of the communities are rural. RES give priority to communities within a 6km radius of a wind farm. The community funds accrued from each of the operating wind farms have been allocated to local community groups and associations. These groups are identified during the development phase of the project and enter into contracts with RES.
Financial benefit to community	Altahullion I & II – £29,000 p.a (+2%) – 769 £/MW (£1000/turbine) Lough Hill – £6,000 p.a (+2%) – £769/MW (£1000/turbine) Gruig – £10,000 p.a (+2%) – £400/MW (£1000/turbine) Altaveedan – £29,000 p.a (+2%) – £2000/MW (based on projections)
Additional benefits	Community groups have used funds for: <ul style="list-style-type: none"> • Staffing for a playgroup • General running costs including insurance, electricity and telephone bills • Reducing carbon footprints through energy efficiency • Improved community growing facilities • Building renovations • Local habitat renovation Local construction contractors, security, catering, operational staff etc. employed where possible. Use of local materials etc.

¹⁹ RES is a developer in renewable energy and operates at a global scale <http://www.res-group.com/contact-us/uk-ireland.aspx>

Scottish and Southern Energy (SSE) – Multiple Wind Farm Community Funds

SSE own and operate a number of wind farms in Northern Ireland. Payments to community funds are calculated as a percentage of wind farm revenue, which typically translates to £2,500 per MW installed, rising to £3,000 per MW installed on newer sites. As the community fund is calculated from revenue, it retains its real value for the lifetime of the project.²⁰

Project Timeline	SSE/ Airtricity wind farms have been operating for over a decade. Normal project timeline 20-25 years.
Capacity	Various capacities across 23 operational wind farms, including 3 located in Northern Ireland ranging from the 5MW (Bessy Bell) to 27.6MW (Slieve Kirk).
Local Community involvement	Priority is given to applications to the community fund from groups within 12 miles, with a particular emphasis on those sites within 3 miles. Local community groups and projects apply for funding from the Airtricity Community Fund. Airtricity have a dedicated Community Liaison Officer who manages the fund. Applications are considered annually from projects aimed at improving local energy efficiency and sustainability.
Financial benefit to community	Ranges from between £2500/MW to £3000/MW, index linked to revenue received by the site.
Additional benefits	Projects include: <ul style="list-style-type: none"> • Insulation and double glazing for schools, various sports clubs and community halls • Energy efficient pitch lighting for sports clubs and sports halls • Installation of solar panels • Energy efficient lighting for various community buildings • Composters for community projects • Rainwater harvesting systems • The installation of smart electric heating Local contractors and subcontractors are used in construction. In Kind Benefits <ul style="list-style-type: none"> • New car park for a local school • Football kits for local team • Enhanced roads, beyond those required for farm access • A visitor centre created as part of a larger site

Examples Worldwide

Appreciating that there are different forms of community benefits and that some are more suited to particular communities than others, the assessment of the value of such schemes may be difficult to conduct. For this reason the following section gives an account of a number of countries offering examples of community benefits. Due to the variety of community benefits explored, this section does not order them in terms of their value or as examples of best practice.

²⁰ <http://www.airtricity.com/uk/home/about-us/community-fund/>

Denmark

Denmark has a number of schemes which are offered to give support and benefits to local communities, some of these include:²¹

The loss of value Scheme

Any party erecting new wind turbines with a height of 25 meters or more, including offshore wind turbines erected without a government tender procedure, must pay for any loss of value on real property if the erection of the wind turbines results in a loss of at least 1% of the property value. This is carried out through the following process:

1. The developer must invite the neighbours to a public information meeting in order to give them the opportunity to assess the consequences of the wind turbine project. The material is to include a list of the properties lying within a distance of up to six times the turbines total height. The meeting must be advertised in local newspapers and must take place at least 4 weeks before the municipal planning process starts.
2. Property owners, who feel, based on the information and the information meeting, that the build will reduce the value of their property must notify the loss of value to Energinet.dk within four weeks of the meeting. If the property owner lives further than six times the turbines total height then they must pay a fee of DKK 4,000 to Energinet.dk, however this is repaid if the owner is granted the right to compensation for loss of value. Those who live closer to the project are not required to pay a fee.
3. The developer may enter into a voluntary agreement regarding compensation for property owners who have notified their claims to Energinet.dk. If this is not done then Energinet submits the owners' claims to a valuation authority. The Energy and Climate Minister has appointed five valuation authorities for assessing property value. The valuation authority decides by assessment, the extent to which the property owners can be compensated.
4. If the property owner's claim is successful, the turbine erector must pay the valuation authority costs. If the claim is rejected then Energinet.dk pays the costs not covered by the DKK 4000 fee. This cost is recouped from the electricity consumers as a public service obligation (PSO) contribution.²²

The option to purchase Scheme

Development of wind turbines over 25 meters in height, including offshore turbines built without governmental tender must offer for sale at least 20% of the wind turbine project to the local population. Anyone within 4.5 Km from the turbine or the municipality in

²¹ International Energy Agency (IEA) Task 28's "Recommended Practices on social acceptance of wind energy projects." (2013). Available at <http://www.socialacceptance.ch/>

²² Decisions of the valuation authority cannot be contested with another administrative body but may be brought before the courts as civil proceedings by the owner of the property against the wind turbine erector.

which it is located can purchase. If there is more interest than purchasing 20%, people who live closest have first priority on a share of ownership

The wind developer must hold an information meeting advertised by local newspapers. The meeting must include a run through of the sales material to give an indication of the nature and financial conditions of the project; this should include:

- Articles of association of the company that will be erecting the wind turbine,
- a detailed constructions and operating budget including the financing of the project,
- The liability per share; and
- The price of the shares on offer.

Energinet.dk must approve the sales material as a condition for the wind turbine erector obtaining the price supplement provided for in the Danish Promotion of Renewable Energy Act.²³

Germany

Germany has introduced the following which have been beneficial to communities associated with wind developments:

Distribution of Trade Tax – law requires that 70% of relevant trade tax remains with the municipality where the wind farm is located, whereas only 30% goes to the municipality where the operator is based.²⁴

Municipal Fund – For regions where residents are concerned about long payback periods it is possible to set up a municipal fund to support sustainable and innovative projects etc. It is also required that the depreciation schedule²⁵ should be such that local authorities start receiving tax revenues shortly after a given installation goes into service. The IEA (International Energy Agency) suggest that co-operative models or compensation arrangements such as municipal funds may be best suited to regions where project profitability depends more on economies of scale efficiencies from single owner/corporately owned projects.²⁶

Community Ownership – In North Frisia 90% of the wind power plants are citizen owned. Ownership of existing wind parks increased the public's engagement and interest in additional wind installations. In fact when all areas designated for wind had been used, the communities asked the government to appoint further areas for wind energy. Shares start at 200 Euros to ensure they involve as many residents as

²³ International Energy Agency (IEA) Task 28's "Recommended Practices on *social acceptance of wind energy projects*." (2013). Available at <http://www.socialacceptance.ch/>

²⁴ Ibid (p.23)

²⁵ According to DfP NI depreciation schedule is an accounting procedure for determining the amount of value left in a piece of equipment. This is usually calculated based on either the passage of time or the level of activity (or use) of the asset. Depreciation schedules are used in the calculation of taxes where a fraction of the total value of certain assets is allowed to be deducted each year. <http://www.dfpni.gov.uk/index/finance/eag/eag-glossary.htm>

²⁶ International Energy Agency (IEA) Task 28's "Recommended Practices on *social acceptance of wind energy projects*." (2013). Available at <http://www.socialacceptance.ch/> (p.23)

possible, and are prioritised for those living closest to the wind farm. This measure is also being used in the Republic of Ireland. According to the IEA, community ownership is most likely successful in windy regions where a wind resource is dependable and profitable.²⁷

Policy – Local German policy has encouraged and supported the development of citizen wind parks since the late 1980s. These projects, emerging from locally driven initiative, are owned by local shareholders creating a sense of responsibility amongst the community. In fact projects are seen as a cultural asset and in some cases shares are presented as gifts etc.

Japan

In Japan, to encourage investment in projects, certificates are offered for investors, names of applicants are inscribed on turbines, nicknames for turbines are asked for from the public, and turbine tours are held. The aim of these is to add value to local investment and motivate investors. Ceremonies are held to celebrate the completion of a turbine and events such as agricultural and eco tours are held to strengthen the local residents' relationships by helping to boost the local economy through the sales of local products. There is also a fund for local development which asks investors to contribute their dividends with match funds from an NGO and the local government.²⁸

Netherlands

This is an example of achieving community buy in. According to the IEA, the active involvement of the public proved to be a positive driver in the Wieringermeer municipality where a plan for building 110 new turbines in October 2011 received almost no objections. At the beginning a strong animosity existed among local politicians and residents against wind energy development in their area. However it was assured by the initiators of the project that they were committed to make a plan that would only count on support from the local community.

In the two and a half years of planning, two wind events were held in the town in order to involve the locals in the planning stage:

- In the first event, the public and inhabitants were engaged to express their opinion and requirements of wind energy, these included trips to existing turbines which also included events suitable for children. Ideas were recorded and translated into the plans of the wind farm.
- The second event involved a week long programme with public hearings; turbine design workshops; a contest for students of the local colleges; and discussions with politicians, landscape architects and artists.

²⁷ ibid

²⁸ International Energy Agency (IEA) Task 28's "Recommended Practices on social acceptance of wind energy projects." (2013). Available at <http://www.socialacceptance.ch/>

- The building plans were presented along with ideas for a participation community fund which resulted in a town owned turbine being accepted.²⁹

Distribution of revenue

In the north of the Netherlands and Wieingermeer, a turbine is owned by the community and financed by the public who enjoy the returns. Revenues from these projects are often used to develop and maintain common services within the communities.

The public can also buy bonds from projects which is considered to be less risky. Sustainability funds are also formed where a small fee on the returns of the wind energy contributes to the fund. Each year anyone in the community can submit plans to be supported by the fund.³⁰

Switzerland

The Mont Crosin wind farm which opened in 2012 has 16 turbines and is located in a rural area and has a large focus on promoting the local through the following means:

- Guided wind park tours in Switzerland's first wind park have attracted 40,000 visitors per year for over 10 years. The local restaurant benefits from these tours and in fact local farmers are also supported who work as tour guides. Farmers are also able to sell their products to visitors and offer tours by horse and cart.
- The operating company hires local farmers for basic supervision and maintenance work in the wind park.
- The local bakery and dairy offer "wind bread" and "wind cheese" produced entirely from power from the local wind park. These are sold both locally and outside the immediate community.
- When receiving guests or visitors the operating company offers local products (breads, cheese, apple, juice, dried meat etc.) served by local people instead of hiring professional catering companies.³¹

United States

Community wind has played a significant role in the United States to help build locally owned projects with relatively limited amounts of capital e.g. Minnesota, Iowa, Nebraska. Financial models use small amounts of local equity (1%-5% of total project cost) which is then leveraged with equity investments from institutional investors. Development of such financial models has led to the benefit of the broader industry capturing federal tax credits available for wind energy in the US. Other community ownership models include farmer- based cooperatives and investments by municipal

²⁹ ibid

³⁰ ibid

³¹ ibid

utilities. Such projects tend to be welcomed as they offer an additional income for rural farmers or residents.³²

³² Ibid