

# Community benefits from offshore renewable developments

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## Key Points

- Offshore renewable developments could have significant impacts on local and regional economies through a number of channels.
- Two primary channels by which onshore renewable developments have economic links to the area in which they are located are: through the provision of “Community Benefit” payments – annual payments from the development owner to a local group or a range of local groups; and through the local community taking an ownership share in the developments.
- The payment of Community Benefit-style transfers from offshore wind projects in the UK to local communities is less developed than for onshore wind. Round 1 and Round 2 offshore wind projects display a range of financial links to local communities and groups, with community incomes from this source far below what might be achieved were communities to have an ownership share in these developments.
- Ownership shares by communities would appear to offer a route by which they would benefit directly from developments, and the financial benefit would be significantly greater than under Community Benefit-style transfers. Barriers to a greater degree of community ownership might include, but not be limited to: access to finance for what could be considerable upfront costs; uncertainty about the financial risks to which the community may be exposed under ownership; and, a lack of appropriate skills and experience within the local community.

## 1. Background

The Scottish Government Renewables Routemap team asked ClimateXChange to review examples from the rest of the UK and overseas of community benefits schemes offered by existing and proposed commercial offshore renewable energy developments. The Renewables Routemap team sought evidence in particular about: (i) schemes for payments to communities (whether to community groups, or to local or national governments, that are labelled as community benefits); and, (ii) financial benefits to local communities/groups through ownership of assets directly, or through community investments.

We take the term “communities” to refer to local, charitable or public organisations and we have focused on those which have a financial interest in offshore energy developments. Some communities are geographic (i.e. local to the project) and others are “communities of interest” (e.g. through shareholding).

This note draws on experiences from outwith Scotland of particular forms of involvement of a financial nature between communities – as defined above – and offshore renewable energy projects.

The intention is to give examples of specific cases where communities and community groups are involved in renewables projects, and describe the features of the involvement in some detail. There may be lessons for how communities and community groups in Scotland might benefit from offshore renewable energy development.

## 2. Introduction

Offshore renewables projects represent a considerable capital investment for the companies. While operational expenditures could retain some financial linkages between the project and the local economy, this is not guaranteed to arise in each case when offshore operators make their construction and operational phase supply chain decisions.

Ownership of the project would allow all profits from the project to accrue to the community group, giving financial payoffs in excess of what would be achieved under other ownership structures. The availability of capital with which to fund what are considerable upfront costs represents a significant hurdle to the involvement of community groups in offshore projects. Other barriers may include the reluctance of communities to take on the financial risks associated with ownership and the lack of appropriate skills and experience within the local community.

Formal community benefit payments between projects and local community groups have become a mechanism through which communities close to renewable energy projects have financially benefited from renewable energy. This applies particularly to onshore wind projects.

There is a less formal history of community benefit-style payments in the offshore environment. Some offshore UK Round 1 and Round 2 projects are making annual payments to local charities or groups, and information to date suggests that the monies being put aside are comparable to, or slightly less (on a per capacity basis) than, onshore projects.

## 3. Types of links between communities and offshore renewable projects

There are a number of channels that link offshore renewable projects with the economy of the area to which the project is closest.

In the UK, offshore wind projects typically have high project costs and the same is likely to be true for marine (wave and tidal) energy. These expenditures are temporary and are therefore unlikely to contribute continuing economic impacts.

Research has shown however that in the regional economy, economic impacts might both anticipate and persist after the period of direct expenditures. The precise scale and duration of impacts in these cases appear to depend on: the extent to which migration into the region occurs; whether firms and individuals perceive the expenditures to be temporary; and the advance warning given of the expected expenditures.

Evidence to date suggests that firms involved in the supply chain for the construction phase of an offshore wind farm in the UK will be spread across the country. Only a very small portion of the contract value of the direct expenditures made in the construction phase will be spent in the vicinity of the project.

The most obvious links with the local economy come through the servicing of the supply chain in the operational phase of these projects. This includes the use of local harbours, local suppliers for parts and direct employment by the project in the local area.

There are a number of additional routes through which communities and the local economy close to the project site might benefit financially from offshore renewable energy developments.

Several mechanisms are possible. These reflect, to a varying degree, the extent to which the community is directly involved in the ownership and management of the projects. Two extreme examples are: first, a wholly passive role for the community in the project, where the community receives “transfers” from the offshore project operator, akin to the (onshore) use of “Community Benefit” payments; and second, the community taking an ownership stake in the offshore project, and receiving ownership profits.

Other structures between full ownership and “Community Benefit”-style options are possible. These include co-ownership between community and a private group, a cooperative structure, or a community group having a part ownership share in a project through equity or debt holdings. The financial risks and exposure to community groups involved in each type of structure could be quite different.

This note is primarily focused on the first two points above – the direct financial flows between projects and community groups.

#### **4. Offshore wind farms - market, structure and development to date**

At the end of 2012, there was a total of 4,620 MW of offshore wind power installed globally. Much of this is in the seas around Northern Europe, including the North, Baltic and Irish Seas, and the English Channel, although there are also sizeable projects in China.

The leading countries in terms of installed capacity in Europe are the UK and Denmark, followed by the Netherlands, Germany, Sweden, Finland and Ireland (Global Wind Energy Council, 2012). A total capacity of 4,336 MW was operating in Northern Europe in 2012. The UK offshore wind roadmap has ambitions for 18 GW of offshore wind by 2020, while some scenarios for Europe as a whole see around 40 GW capacity installed by that same year.

#### **5. Community involvement in directly funding offshore developments**

Development of offshore wind farms across the globe has had differing amounts of direct involvement of community groups. In Denmark, Soerensen et al (2001) note that co-operatives, “have played an important role, especially providing acceptance at a local level, where the possibility of resistance is otherwise high due to visual or noise impacts”. The same paper notes that proposed role for co-operatives and shareholders “consisting of local people and neighbouring municipalities” in the Samsøe project.

The Middlegrunden offshore wind farm (40MW, costing €49m in 2000 prices) was developed between Copenhagen Energy (the local utility, owned by the Municipality of Copenhagen) and the Middelgrunden Wind Turbine Cooperative. Larsen et al (2005) note that Middlegrunden Cooperative was the world’s largest wind turbine cooperative.

The cooperative’s ownership extended to 40,500 shares, which by October 2000 were all privately held, “primarily from the local area”. In 2005, only 100 shares were owned by people outside Denmark. Each share was sold for €567. Under assumptions about the financial return, Larsen et al (2005) estimate that the project paid an annual return to shareholders of 7.5%.

An example of community ownership of an offshore farm is the purchase by PensionDanmark – Denmark’s largest occupational pension company – of 50% of the Nysted offshore wind farm for \$700million, which was announced

in September 2010. Ownership of that 165.5MW capacity windfarm is evenly split between Pension Denmark and DONG Energy. Additionally DONG Energy is almost 80% owned by the state of Denmark.

Under the agreement between PensionDanmark and DONG Energy, it was reported that “DONG Energy will provide an operating guarantee to PensionDanmark, and in return DONG Energy receives a larger share of the operating profit if the power price increases over the current power price level”.

## 6. Community involvement through receiving community benefit-style “compensation” payments

### Onshore

Currently a large number of onshore wind energy projects in Scotland and across the UK receive Community Benefit payments. These are voluntary financial payments agreed after the project has been given planning consent, and are associated with projects having a long term impact on the environment in which they are sited.

Some Scottish local authorities administer the receipts from these payments centrally, while other projects make direct payments to community groups, such as Community Councils. These groups are free to use the funds as they see fit - they are typically used for local capital and current spending.

Payments range between zero and £5,000 per MW per year (which is typically linked to inflation), or might be linked to the output of the site on an annual basis.

### Offshore

The payment of Community Benefit-style transfers from offshore wind projects to local communities is less developed than for onshore. In part this could reflect uncertainty about the specific local area which would be the “community”, which is not a problem (or at least much less of a problem) for onshore projects.

Some offshore wind projects in the UK make payments to the local community. However there are some differences between these payments and those for onshore wind energy projects (Versace, 2011).

For Round 1 offshore wind projects, typically the size of the payment to the local community is not linked either to capacity or annual output. Payments of £1,000/MW from offshore Round 1 projects to local communities have been identified in the literature, while one-off payments ranging from £25,000 to £115,000 have been noted, typically for specific community projects.

In Round 2 of the UK offshore wind developments, while we have been unable to get information from many offshore wind sites, the following farms make funds available for the local community:

- a. At the Gwynt y Mor wind farm, RWE npower is looking to distribute £768,000 per year (linked to inflation), making a total of £19m over 25 years. The project has an operational capacity of 567MW, so this equates to just under £1,400 per MW per year. Additionally, the project will pay into a tourism fund, £690,000 over three years to support local tourism initiatives.
- b. At the Rhyl Flats wind farm, RWE npower contributes an annual figure of £90,000 (linked to retail price inflation) throughout the operational life of the farm, to which local groups can apply for funding packages. These funds are split between local wards in the areas in the vicinity of the facility. With an operational capacity of 90MW, this payment equates to £1000 per MW per year.
- c. At the London Array wind farm, the operators have established a £300,000 community fund which is managed by the Graveney and Goodneston community, as well as a £200,000 fund for nature conservation, to be implemented by Kent Wildlife Trust. Additionally, the farm will pay for three years university fees (of £3,000 per

year) for one student every year for ten years. With inflation, this bursary scheme has a total cost of around £100,000.

- d. The Sheringham Shoal wind farm, operated by Statoil and Statkraft, has established the Sheringham Shoal Community Fund which funds projects in the nearby area. Between 2010 and June 2012, the fund gave out around £100,000 in total.

## 7. Conclusions

1. Offshore renewable projects represent a considerable capital investment for the companies. While operational expenditures could retain some financial linkages between the project and the local economy, this is not guaranteed to arise in each case when offshore operators make their construction and operational phase supply chain decisions.
2. Ownership of the project would allow all profits from the project to accrue to the community group, giving financial payoffs in excess of what would be achieved under other ownership structures. The availability of capital with which to fund what are considerable upfront costs represents a significant hurdle to the involvement of community groups in offshore projects. Other barriers may include the reluctance of communities to take on the financial risks associated with ownership and the lack of appropriate skills and experience within the local community.
3. Formal community benefit payments between projects and local community groups have become a mechanism through which communities close to renewable energy projects have financially benefitted from renewable energy. This applies particularly to onshore wind projects.
4. There is a less formal history of community benefit-style payments in the offshore environment. Some offshore UK Round 1 and Round 2 projects are making annual payments to local charities or groups, and information to date suggests that the monies being put aside are comparable to, or slightly less (on a per capacity basis) than, onshore projects.

## 8. References

Global Wind Energy Council (2012), "Current status and future prospects: potential for mass rollout", Energy and environment management magazine, October 2012, available online at <http://www.gwec.net/global-figures/global-offshore/>

Soerensen, H.C., Hansen, L.K., Hammarlund, K. and Larsen, J.H. (2003), "Experience with and strategies for public involvement in offshore wind projects", paper for National Planning Procedures for Offshore wind energy in the EU, Institute for Infrastructure, environment and innovation, Brussels, June 2003.

Larsen, J.H.M. (2005), "Experiences from Middlegrunde 40 MW offshore wind farm", paper for Copenhagen Offshore Wind, October 2005.

Versace, P. (2012) *Community Benefits from offshore wind farms in Scotland: current practice and future benefits*. Thesis submitted in partial fulfilment of MSc Renewable Energy Development, Heriot-Watt University.