



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



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# Executive Summary – Onshore Wind Call for Evidence – Part A (Community Engagement and Benefits) and Part B (Costs)

## Background

1. The Renewables Obligation (RO) is currently the main financial mechanism that the Government uses to incentivise the deployment of large-scale renewable electricity generation. The RO places a mandatory requirement on licensed UK electricity suppliers to submit a specified number of renewables obligation certificates (ROCs) in respect of each megawatt hour of electricity they supply to customers, or to pay a penalty. ROCs are issued for the generation of electricity from eligible renewable sources.
2. Under the RO, different technologies receive different levels of support (bands) having regard to a range of matters such as their costs and potential for large scale deployment. Reviews are conducted to ensure that as market conditions and innovation within sectors change; developers continue to receive the appropriate level of support necessary to maintain investment in the renewables industry, whilst ensuring the consumer receives value for money.
3. A review of the RO bands was carried out in 2011/12 and the Government response published on 25 July 2012<sup>1</sup>. The review set onshore wind support at 0.9 ROCs/MWh for new generating stations accredited in the period 2013/17. This represented a 10% reduction in previous support levels and was based on evidence under the banding review. We recognised that costs could fall more or less swiftly than expected. Therefore, the Government response to the RO Banding Review announced that Department of Energy and Climate Change (DECC) would issue a call for evidence on onshore wind industry costs, as well as community engagement and benefits. DECC issued a two-part call for evidence on 20 September 2012 that ran for eight weeks, closing on 15 November 2012.
4. Part A of the call for evidence covered community engagement and benefits, focused on how communities can have more of a say over, and receive greater economic and wider social benefits from, hosting onshore windfarms. We asked 17 specific questions grouped into the following four themes:
  - Strengthening community engagement;

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<sup>1</sup> A copy of the Government Response can be viewed on the GOV.UK website at: <https://www.gov.uk/government/consultations/supporting-large-scale-renewable-electricity-generation>

- Community Benefits – investing in communities;
  - Encouraging community ownership;
  - Increasing local economic impact.
5. Part B examined the latest UK onshore wind costs, including capital, financing and operating costs in relation to the amount of lifetime electricity generation. It has been used to update the evidence received through the Renewables Obligation Banding Review, to allow us to assess whether there has been any significant change that would lead to a further review of the onshore wind ROC rate from April 2014.

### Summary of responses

#### Part A (community engagement and benefits)

6. DECC received a total of 1,111<sup>2</sup> responses from across the UK to Part A. Of these 929 were from individuals and 182 from groups or organisations. Responses were received via email and post.
7. The responses were very polarised, reporting either strongly positive or strongly negative views on onshore wind. Around 970 responses, largely from individuals, including MPs, reported negative experiences with onshore wind developments and expressed concerns about Government policies on onshore wind energy and planning. A number of these responses did not reply directly to the questions asked in the call for evidence document.
8. Of the individual responses, 687 were organised from three campaigns:
- ‘I DEMAND a FAIR DEAL for Wind Farm Victims’ (580);
  - ‘Stop Dorcas Lane Turbines’ (78);
  - ‘Shropshire North against Pylons’ (29).
9. Around 140 of the responses were assessed as supportive or neutral on onshore wind energy. Many provided detailed information, case studies and other documentary evidence in their replies of positive engagement practices, as well as innovative and well received types of community benefits. These tended to be mainly from organisations including developers, local authorities, community groups and academia.

#### Part B (costs)

10. For Part B, DECC received responses for around 70 separate projects; around half of these are in England and Wales, a quarter in Scotland and the remainder in Northern

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<sup>2</sup> Includes 14 cases where the same individual sent two different responses (e.g. one using the proforma and one separate letter).



Ireland or did not specify their location. These include projects commissioning between 2009 and 2017; from those in pre-development stages to fully operational windfarms.

11. Data received includes pre-development, capital, fixed and variable operating costs, insurance and connection charges, and financing costs. This review considers the data received for large scale onshore wind (>5MW). If cost data did not include all of the necessary components, for instance if capital costs failed to include the cost of the turbines, this cost data was removed from the final dataset. In addition, if cost data were more than two standard deviations from the mean it was removed as a statistical outlier. These decisions were taken on an individual cost component basis; in other words if capital costs were removed for a project as a statistical outlier, it does not follow that pre-development, operating, insurance and connection charges were removed: each was subjected to an individual test.

### Government response and conclusions – Part A

12. The Government's response to Part A sets out a package of measures and an action plan aimed at strengthening engagement and empowering local people. This will enhance community benefits, improve local economic impacts and increase community ownership. The key elements comprise:

#### Compulsory pre-application consultation with local communities in planning for onshore wind

13. The Department of Communities and Local Government (DCLG) will **look to introduce legislation making it compulsory for developers to consult local communities before submitting planning applications for more significant onshore wind applications in England**. This will ensure that the views of communities are taken into account at an early stage, and will give local people a genuine opportunity to influence and shape decisions about projects affecting their area.

#### Empowering communities in planning

14. To support communities to participate in planning, DECC will provide access to **clear and reliable evidence on the impacts of onshore wind, through an evidence toolkit**. In addition, to support local decision makers and community representatives in planning decisions, DECC have commissioned a series of **local seminars** on the costs, benefits, impacts and opportunities for positive action on climate change with a focus on renewable energy and onshore wind. The Planning Advisory Service will publish **examples of local policies** on renewable energy in accordance with the National Planning Policy Framework, and DCLG will issue **updated, streamlined planning practice guidance on renewable energy, including onshore wind**, in the summer, to assist local councils.

### Engagement guidance – bench marking and monitoring good practice

15. DECC will set out the high standards we expect to see in engagement through a **suite of good practice guidance for use by those parties involved in onshore wind developments, including communities, developers and local authorities**. This will be monitored through a **community engagement register**, enabling communities and developers to report on engagement openly and transparently.

### Fivefold increase in community benefit package value to £5,000/MW/year

16. In response to the Government report, DECC is expecting the onshore wind industry to announce a revised a revised Community Benefit Protocol, including **an increase in the recommended community benefit package in England from £1,000/MW of installed capacity per year, to £5,000/MW/year** for the lifetime of the windfarm.

### Transparency and flexibility of benefits – register and guidance

17. DECC will support communities to negotiate an appropriate benefit package by producing **guidance on how best to engage with developers**. In addition the Department will set up a **register of community benefits**, where the benefits associated with projects will be publicly and transparently recorded.

### Community ownership and buy-in

18. By owning or co-owning renewable energy developments, communities can have a real stake in, and share in the profits of, energy generation in their local area. DECC will be issuing a **Community Energy Strategy** later this year, that will look at what more can be done to facilitate community ownership of all renewable technologies including onshore wind, where local people want it.

### Enhancing local economic impacts

19. Onshore wind can bring substantial new economic benefits and job opportunities to the country as a whole and at local level. To maximise these benefits we intend to work with industry to **produce guidance for potential supply-chain business** on how to access the opportunities provided by onshore wind developments. This will be supported by a **DECC- sponsored supply chain event** later in the year.

### Government response and conclusions – Part B (Costs)

20. The Renewables Obligation Order 2009 enables the Secretary of State to carry out a review of some or all of the support levels under the Renewable Obligation (RO) if one or more of the conditions listed in article 33(3)<sup>3</sup> of the Order are met. The condition that is relevant to the call for evidence is where “the costs of generating electricity [... by onshore wind ...] are significantly different from the costs of

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<sup>3</sup> See <http://www.legislation.gov.uk/ukxi/2009/785/contents/made>

generating electricity in that way to which the Secretary of State had regard when making the banding provisions”.

21. DECC does not consider the difference in levelised costs between the RO banding review and the onshore wind call for evidence dataset to demonstrate a significant change. There are three main reasons for this:
  - There is a substantial overlap between the high and low range of onshore wind levelised costs estimated using the data received through the onshore wind call for evidence, and the levelised costs estimated using the RO banding review dataset.
  - The central estimate of onshore wind levelised costs is less than 5% higher in each year of the banding review period (2013-2017), compared to the cost data used for the RO Banding Review.
  - DECC re-ran its internal cash flow model, used for the RO banding review with the updated capital and operating costs, insurance costs and connection charges. The model does not show a reduction in deployment of onshore wind compared to the modelled projections for the RO Banding review, given the granularity of the model.
22. Therefore, **DECC does not intend to commence a review of the band for onshore wind under the Renewables Obligation.**

### Next steps on Part A (community engagement and benefits)

23. We will continue to work closely with industry and other stakeholders over the coming months to deliver the actions set out in the action plan in the Government response.



# 1. Introduction

**This chapter sets out the background and scope of the onshore wind call for evidence. It explains the structure of this Government Response document, and describes next steps.**

## Background

- 1.1. The Renewables Obligation (RO) is currently the main financial mechanism that the Government uses to incentivise the deployment of large-scale renewable electricity generation. The RO places a mandatory requirement on licensed UK electricity suppliers to submit a specified number of renewables obligation certificates (ROCs) in respect of each megawatt hour of electricity they supply to customers or to pay a penalty. ROCs are issued for the generation of electricity from eligible renewable sources.
- 1.2. Under the RO, different technologies receive different levels of support (bands) having regard to a range of matters such as their costs and potential for large scale deployment. Reviews are conducted to ensure that as market conditions and innovation within sectors change; developers continue to receive the appropriate level of support necessary to maintain investment in the renewables industry, whilst ensuring the consumer receives value for money.
- 1.3. A review of the RO bands was carried out in 2011/12 and the Government response published on 25 July 2012<sup>4</sup>. The review set onshore wind support at 0.9 ROCs/MWh for new generating stations accredited in the period 2013/17. This represented a 10% reduction to previous support levels and was based on evidence under the RO banding review.
- 1.4. The Government's response to the RO Banding Review announced that DECC would issue a call for evidence on onshore wind industry costs as well as community engagement and benefits.
- 1.5. DECC launched a two-part call for evidence on onshore wind on 20 September 2012. The call for evidence ran for eight weeks and closed on 15 November 2012.
- 1.6. Part A of the call for evidence, covered community engagement and benefits. This focused on how communities can have more of a say over, and receive greater economic and wider social benefits from, hosting onshore windfarms. The scope of this work as set out in the call for evidence document, was:
  - To Identify and consider UK and international measures to strengthen engagement with host communities by windfarm developers, including before planning applications are made;

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<sup>4</sup> A copy of the Government Response can be viewed on the DECC website at:  
[http://www.decc.gov.uk/en/content/cms/consultations/cons\\_ro\\_review/cons\\_ro\\_review.aspx](http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx)

- To Identify and consider UK and international measures to improve the economic benefit for host communities, outside of the planning system, but including: local economic content of windfarm development; support levels for community-owned projects; local benefit packages and innovative ways of delivering them; and the transparency of these arrangements.
- 1.7. Stakeholders were asked to provide responses to 17 specific questions grouped into the following four themes:
- Strengthening community engagement;
  - Community Benefits – investing in communities;
  - Encouraging community ownership;
  - Increasing local economic impact.
- 1.8. Part B examined the latest UK onshore wind costs, including capital, financing and operating costs in relation to the amount of lifetime electricity generation. It was used to update the evidence received through the Renewables Obligation Banding Review, to allow DECC to assess whether there has been any significant change that would lead to a further review of the onshore wind ROC rate from April 2014.

### Devolved Administrations

- 1.9. The Part A (Community Engagement and Benefits) covered all parts of the UK. The Devolved Administrations in Scotland, Northern Ireland and Wales are already carrying out work on community engagement and the benefits for onshore wind. They are fully engaged in this call for evidence, but reserve the right to use the evidence and adapt the outputs as appropriate for their countries.
- 1.10. The Part B (costs) also covered all parts of the UK. The Renewables Obligation system works on the basis of three complementary obligations, one covering England and Wales, and one each for Scotland and Northern Ireland. Decisions regarding the details of the Obligations, including the carrying out of banding reviews and the setting of the RO banding levels in Scotland and Northern Ireland are for the Scottish Government and Northern Ireland Executive respectively.

### Governance

#### Stakeholder Advisory Group for Part A (community engagement and benefits)

- 1.11. A stakeholder advisory group was established to assist DECC in analysing the responses to the Part A call for evidence. The group recommended practical actions for Government and stakeholders on community engagement and benefits for inclusion in the final report. Details of the group's membership and terms of reference are at **Annex C**.

## Structure of this document

- 1.12. An overview and statistical analysis of the responses to **Part A (community engagement and benefits)** call for evidence is set out in **Chapter 2** with a more detailed summary of the replies to the questions at **Annex 1**. These seek to reflect all of the views expressed, although it has not been possible to describe all responses in detail.
- 1.13. The Government's response to the **Part A** call for evidence is set out in **Chapter 3**. This includes a clear action plan focusing on measures to: strengthen engagement and empower communities; provide community benefits that are fair and meaningful; encourage greater uptake of community ownership where people want this; and maximise the value to communities of the local economic and wider social benefits that onshore wind development can bring.
- 1.14. A summary of the responses to the **Part B (costs)** call for evidence is set out in **Chapter 4**, together with details of DECC's analysis and conclusions.

## Next steps on Part A (community engagement and benefits)

- 1.15. We will continue to work closely with industry and other stakeholders over the coming months to deliver the actions set out in the action plan in the Government's response.

## 2. Overview of Responses and Evidence Received for Part A (Community Engagement and Benefits)

**This chapter provides a statistical analysis of the responses received to Part A and outlines the key themes raised. A more detailed summary of the responses to the 17 questions posed in the call for evidence document is at Annex A.**

### General

- 2.1. DECC received a total of 1,111<sup>5</sup> responses from across the UK of these 929 were from individuals and 182 from groups or organisations. Responses were received via email and post.
- 2.2. Not all respondents chose to answer the specific questions or use the proforma provided. Some people preferred to provide their views in more general terms and where possible we have included information from these responses in the appropriate section.
- 2.3. To gain a more in depth understanding of some of the points raised in the written evidence DECC held a series of meetings and telephone interviews with a cross section of respondents, community groups, local authorities, Non-Government Organisations (NGOs), environmental groups, statutory consultees, onshore wind developers and operators. DECC also attended a workshop with a community energy group network in the South West of England to hear the views of local communities and attended a developer forum to hear the views of the onshore wind industry.

### Responses falling out of Scope

- 2.4. A number of the responses discussed planning and some made recommendations for actions that would impact on current planning policies. Measures that require changes to planning policy fall outside the scope of the call for evidence, although in the interests of transparency we have recorded this information.
- 2.5. Similarly, some of the responses raised issues relating more generally to Government policies on climate change, renewable energy and onshore wind energy, including health, noise and environmental impacts, questions around the

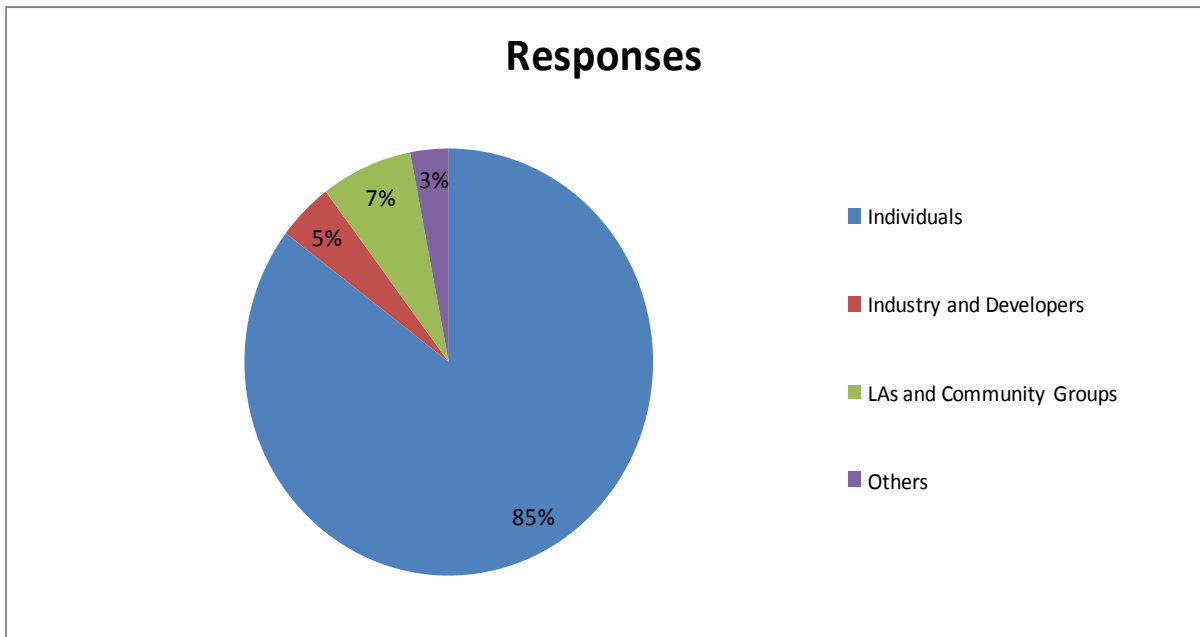
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<sup>5</sup> Includes 14 cases where the same individual sent two different responses (e.g. one using the proforma and one campaign letter).

efficiency of wind turbines and their carbon savings and potential impacts on tourism and house prices. Again these are outside the scope of the call for evidence. Further information on DECC’s policy on onshore wind is available on the Department’s website<sup>6</sup>.

## Types of responses

**Figure 1: Breakdown of consultation responses by respondent type**



The Table below provides a detailed breakdown of overall responses by type. A full list of the organisations that responded is at **Annex B** to this document.

Respondent		Number of Responses
<b>Individuals and MPs</b>		<b>929</b>
<b>Group/Organisation</b>		<b>182</b>
<i>Type</i>	<i>Number</i>	
Industry and Developers	48	
Local Authorities and Community Groups	64	
Other Organisations <sup>7</sup>	70	

<sup>6</sup> <https://www.gov.uk/onshore-wind-part-of-the-uks-energy-mix>

<sup>7</sup> This group includes responses from Non Governmental Organisations, wind campaign groups, academic and financial institutes.



The following Members of Parliament responded to the call for evidence:

Members of Parliament (MP)
Stephen Phillips (Sleaford and North Hykeham), Nigel Adams (Selby and Ainsty), Stephen Barclay (North East Cambridgeshire), Andrew Bingham (High Peak), Aidan Burley (Cannock Chase), William Cash (Stone), Graham Evans (Weaver Vale), Chris Heaton-Harris (Daventry), Karen Lumley (Redditch), Karl McCartney (Lincoln), David Nuttall (Bury North), Simon Reevell (Dewsbury), Mark Spencer (Sherwood), David Tredinnick (Bosworth), Martin Vickers (Cleethorpes), Heather Wheeler (South Derbyshire) <sup>8</sup>
Mark Simmonds (Boston and Skegness)
Brandon Lewis (Great Yarmouth)
Christopher Pincher (Tamworth)
Andrea Leadsom (South Northamptonshire)
Andrew Miller (Ellesmere Port & Neston)

## Analysis of replies

2.6. Our analysis indicated that the responses were very polarised, reporting either strongly positive or strongly negative views on onshore wind. Around 970 responses, largely from individuals, including MPs, reported negative experiences of onshore wind developments and expressed concerns about Government policies on onshore wind energy and planning. Points were raised in particular about the effectiveness and low carbon credentials of onshore wind. As well as its impact on property prices, the environment, landscape, public health, the rural economy and tourism. A number of these responses did not respond directly to the questions asked in the call for evidence document.

2.7. 687 of these responses were from the following three campaigns:

- ‘I DEMAND a FAIR DEAL for Wind Farm Victims’ (580);
- ‘Stop Dorcas Lane Turbines’ (78);
- ‘Shropshire North against Pylons’ (29).

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<sup>8</sup> One letter jointly signed by 16 MPs.

2.8. Around 140 of the responses were assessed as supportive or neutral to onshore wind energy. Many provided detailed information, case studies and other documentary evidence in their replies of positive engagement practices as well as innovative and well received types of community benefits. These tended to be mainly from organisations including developers, local authorities, community groups and academia.

### Common themes in the responses

#### Community Engagement

2.9. Responses were polarised with large volumes of replies recording negative experiences of engagement between communities, developers and other parties involved in onshore wind planning decisions. Some of these replies made suggestions that fall outside the scope of the call for evidence, for example removing the need for engagement by introducing mandatory buffer zones/minimum separation distances or setting strategic zones for development away from rural areas.

2.10. Others provided some detailed evidence of more positive engagement. There was a general consensus that early, open, and honest communication was important. The idea of ‘upstream engagement’<sup>9</sup> was also seen as an important means of encouraging and empowering communities to have constructive discussions around opportunities for onshore wind and other low carbon development in their areas.

2.11. Other key themes to emerge were:

- Developing or consolidating good practice guidance for local authority decision makers, developers and communities and making sure this is adhered to;
- Providing additional independent evidence on the impacts of onshore wind;
- Providing support for communities to enhance their capacity to engage.

#### Community Benefits

2.12. Responses on community benefits generally recognised that benefits should be flexible and geared towards the wishes of specific communities but many suggested that some strategic advice and common standards would be helpful for all parties, especially given the wide range in different benefit packages being offered across the UK. There was particular support for benefit packages that included the provision of low-cost electricity and/or linked benefits to longer lasting legacy schemes such as energy efficiency or environmental enhancement programmes and/or local job

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<sup>9</sup> This can be defined as proactive, constructive discussions with communities and local people about what is involved in the transition to a low carbon economy, the implications for their lives and the impact on local landscapes amenities. It takes place in advance of, and separate from proposals or planning applications for specific projects and can include exploring the opportunities for onshore wind and renewable energy infrastructure in the area and the role it might play in that transition.

creation. There was widespread support for the establishment of a community benefit register to aid transparency, and guidance to help communities and developers agree on the best type of benefit package for their particular circumstances.

2.13. Some suggested that that benefits should be mandated through either setting a minimum rate, requiring compensation linked to house prices, or making community benefits a material planning consideration. Many of the responses from individuals opposing onshore wind considered that community benefits were “bribes” to encourage people to accept onshore wind development in unsuitable locations.

### Community Ownership

2.14. Increased community ownership - where local people want it - was seen as by some as providing greater economic return to communities (compared to more traditional community benefit payments). Responses from academic organisations reinforced the views that community ownership could also provide many social benefits for communities, including the development of new local knowledge and skills as well as encouraging cooperation and social interaction.

2.15. Suggestions to increase community ownership covered:

- Delivering communication campaigns to raise awareness;
- Providing financial and technical advice (or funding to cover such advice) to communities to carry out feasibility studies;
- Setting targets and preferential support rates to encourage uptake;
- Introducing a community right-to-bid/buy into commercial developments.

### Local Economic Impact

2.16. These questions received the smallest number of responses. A number of the responses from individuals questioned the benefits, suggesting that there would be longer term negative impacts, for example on tourism and property values, that would outweigh any short term opportunities that might arise from the construction of the wind farm. Developers provided a lot of information about direct and indirect local spend for projects and a few individuals gave examples of how windfarms had benefitted business and infrastructure in their area, for example through meet the developer events and locally placed contracts.

2.17. Proposals for enhancing local economic impact focused on:

- Promoting good practice;
- Up-skilling local businesses;
- Government support for building up UK supply chains and making local economic impact a material consideration in planning.

## Geographical coverage and role of the Devolved Administrations

2.18. Responses were received from all parts of the UK. DECC are sharing information with the Devolved Administrations, who are also carrying out work on community engagement and benefits for onshore wind. They intend to use the evidence and adapt the outputs as appropriate for their territories.

## 3. Government Response and Action Plan

This chapter sets out DECC's response to the Part A call for evidence, organised around the four main areas of 'strengthening community engagement', 'community benefits', 'encouraging community ownership' and 'enhancing local economic impacts'. It includes an action plan detailing the new measures that we will be taking forward over the next twelve months.

### Strengthening Community Engagement

We want to ensure local communities have a full say in the development of onshore wind in their area. To do this we will take action to ensure that communities are informed and empowered to influence and shape decisions affecting their areas.

#### Ensuring early and meaningful engagement – compulsory pre-application consultation with local communities on planning applications

- 3.1. Responses from the call for evidence have underlined that honest, open and early dialogues is key to building effective relationships between communities and developers. It is also accepted that more needs to be done to encourage this good practice. Good quality pre-application discussion can enable improved outcomes for the community.
- 3.2. To ensure that early and meaningful engagement between developers and communities take place, **DECC will work together with DCLG to introduce a requirement in England, for compulsory pre-application consultation with local communities for more significant onshore wind applications** that fall within the scope of the Town and Country Planning Act. This will ensure that the views of local communities can be taken into account at an early stage, and will give local people a genuine opportunity to influence, shape and change decisions about more significant onshore wind projects affecting their area. Compulsory pre-application engagement is already part of the planning process for nationally significant infrastructure under the Planning Act 2008, which applies to wind farms over 50MW.
- 3.3. Local people can have a unique knowledge of the place where they live and could provide useful input to enhance the design of projects. The evidence we have seen is clear that where developers already carry out pre application consultation on a voluntary basis, the design and siting of projects can be enhanced in a way that is mutually beneficial.
- 3.4. DCLG will look to introduce new secondary legislation, to make it compulsory for prospective planning applicants for more significant onshore wind developments to



consult local communities before submitting planning applications. This would utilise a provision of the Localism Act 2011 (section 122).

### CASE STUDY 1 – EARLY ENGAGEMENT – EDF Energy, Durham, England

Sheraton windfarm is a 10MW project on agricultural land in County Durham where developers, EDF Energy, initiated community engagement following the initial project scoping phase.

Through hosting two public exhibitions and issuing questionnaires local residents were informed about the project, were shown visual representations of the windfarm using a 3D interactive computer model and had the opportunity to raise concerns.

As a result of the early engagement adjustments to all five turbines were made before the planning application, taking into account local residents' concerns and to help optimise the separation distance with the closest houses.

### Benchmarking and monitoring good engagement practices

- 3.5. DECC is disappointed by some anecdotal evidence received describing ineffective engagement, breakdowns in relationships and unhelpful behaviour by developers and other parties involved in proposals for onshore wind projects. At the same time we have seen some useful examples of local communities, the wind industry and other organisations working in partnership throughout the development and planning process to deliver projects successfully and to the benefit of all. This good practice must become the norm.
- 3.6. Because close and meaningful engagement between developers and local communities is so important, we will **establish clearly the high standards of engagement we expect through best practice guidance. Designed for use by communities, developers and local authorities.**
- 3.7. The guidance will be developed in partnership with community and industry stakeholders and we expect it to be available by early 2014.
- 3.8. Because guidance alone will not always be sufficient to change behaviours, **we will improve accountability and transparency by creating a register or similar tool to capture information about community engagement best practices for all new developments.** By enabling developers and communities to report on their engagement practices and experiences in an open and transparent manner, this will ensure that poor engagement is exposed and good practice becomes the norm. The register will be set up in partnership with community and industry stakeholders and will be launched by early 2014.

### CASE STUDY 2 – ENGAGEMENT METHODS

Infinergy have an onshore wind project portfolio in England, Scotland and Wales with an approximate capacity of over 500 megawatts.

As part of their engagement process with local communities Infinergy use a number of methods including; face-to-face; online, telephone and post; printed materials; and media, aiming to engage communities at an early stage, prior to planning application, into proposed wind developments.

- Face-to-face and group meetings help to inform local community members about the proposed project, provide more information about wind energy and any common concerns or questions such as visual impact, construction, electricity production, noise and shadow flicker. Methods include house visits, parish council meetings, community open days and public exhibitions, trips to the proposed windfarm site and other operational wind farms, noise workshops, liaison groups and presentations.
- A dedicated project website, freepost address and Freephone numbers allows individuals to contact or comment about the project at no cost to the individual.
- Printed materials include the provision of newsletters and FAQ sheets to inform members of the scheme and the answers to local issues around the project.
- Local media is actively engaged through press statements, adverts to publicise upcoming events and interviews with local journalists.

### Empowering community involvement in planning

- 3.9. A key theme in the response was that local people felt “disempowered” and “unqualified” to respond to planning proposals for onshore windfarms. We are clear that communities should be at the heart of successful planning. This is why we will take actions to up skill, inform and support local communities.
- 3.10. We have already taken action to reform the planning system. As of 20 May 2012 we removed top down regional spatial strategies. The National Planning Policy Framework, published in 2012, explains that up-to-date local plans are the key to delivering sustainable development that reflects the vision and aspirations of local communities. We are encouraging local councils to use their plans and to work with communities to help shape where developments for renewable energy should and should not take place, as the Framework suggests. Having a clear and up-to-date plan in place can help reduce speculative planning applications and avoid unnecessary appeals.
- 3.11. We will do more to ensure that local people and Local Authorities are equipped with the necessary information, evidence and resources to enable them to make objective and effective decisions around opportunities for onshore wind in their area, to inform both the local plan making process and in respect of individual proposals for onshore wind development. We are putting in place a number of measures to facilitate this:

### Access to clear and reliable evidence on the impacts of onshore wind

- 3.12. A number of respondents highlighted the existence of conflicting information about the impacts of onshore wind. In particular, respondents questioned the reliability and accuracy of this evidence, for example on the efficiency of turbines, the noise and health effects as well as the impact on property prices. It was suggested that this lack of clarity was hindering the consultation and decision making process, with local communities in particular unclear on where to go for reliable information.
- 3.13. To help address this, DECC will seek to develop an ‘evidence toolkit’ to provide access to robust, up-to-date and accessible evidence on the effects of onshore wind, to aid communities and local decision makers.
- 3.14. In addition, DECC will collate and make public, full references to the evidence that informs Government policy decisions on onshore wind, wherever appropriate. This could involve the collation of relevant research and peer reviewed articles in an ‘evidence statement’.

### Developing local planning officers’ expertise for renewable energy

- 3.15. Some respondents were concerned about the way that the benefits and impacts of onshore wind are taken into account in plans and planning decisions.
- 3.16. We note that Local Authorities and community representatives may also need additional targeted support around planning for renewable energy and onshore wind. **DECC has therefore commissioned Sustainability East (part of Climate Partnership UK – a not-for-profit community interest company) to develop and run local seminars for local planners and decision makers in England on the costs, benefits, impacts and opportunities from proactive and positive action on climate change, with a particular focus on renewable energy and onshore wind.** The events will be held this year in June/July. Sustainability East will follow them up with the production of supporting documentation for wider dissemination to the planning community.
- 3.17. **The Planning Advisory Service (PAS) will be publishing some examples of where local planning authorities have developed local policies on renewable energy in accordance with the National Planning Policy Framework.**
- 3.18. **Furthermore, DCLG has announced that they intend to issue updated and streamlined planning practice guidance on renewable energy including onshore wind in summer this year to assist local councils in developing local plans and assessing individual planning applications.**

### Upstream engagement on the low carbon economy to assist with the development of community energy strategies and local plans

- 3.19. As well as providing additional information, training and practical resources to help communities and decision makers respond more effectively to current planning applications, several respondents pointed to the need for more early ‘upstream engagement’ to encourage communities to have constructive and objective conversations around possible opportunities for onshore wind (and other renewables) in their area. It was suggested that this should take place outside of the planning process, and could form wider local discussion on the transition to a low carbon economy.
- 3.20. We agree that ‘upstream engagement’ is a key to empowering local communities – for example, giving them the power to shape their local areas through the local and neighbourhood plan making process, as well as making decisions over whether to collectively own and control their own energy and how to benefit from renewable energy developments in their area. As part of the Call for Evidence, a stakeholder workshop considered how best to increase this ‘upstream engagement.’ Because this is a significant issue, which applies across renewable technologies, we will continue to work with DCLG, with our stakeholders around the country and through the forthcoming Community Energy Strategy, to consider how we can contribute to more and better upstream engagement.

#### **CASE STUDY 3 – UPSTREAM ENGAGEMENT – Wadebridge, Cornwall, England**

Many community energy projects report that using community energy groups or energy champions to encourage involvement in various community energy opportunities (i.e. community-owned renewables, energy saving, energy management, collective purchasing schemes) can lead to a greater awareness of and engagement in wider energy and climate change issues, including engaging local people in changes to national energy infrastructure.

Wadebridge Renewable Energy Network (WREN) is a community energy co-operative with over 800 members, working to develop a local energy economy in the town and surrounding parishes and who have set a target to generate 30% of Wadebridge’s electricity from local renewable resources by 2015.

WREN are working with Communities for Renewables CIC, a community interest company set up by Regen SW and Green Trust CIC, for business planning, setting up a local energy company and developing community energy generation projects in the area.

WREN have also worked to facilitate the repowering of the existing local St Breock windfarm with plans to replace the current 11 turbines with up to 5 modern turbines, significantly improving the efficiency of the site. REG Windpower, who will develop the site, carried out a range of stakeholder engagement, consultation and communication prior to submitting planning application. Surveys demonstrated strong support from the local community for the repowering of St Breock windfarm.

## Community Benefits – Investing in Communities

Communities hosting renewable energy installations play a vital role in meeting a national need for secure, clean energy and it is right that that local people should be recognised and rewarded for their contribution to helping the UK achieve its wider energy security and low carbon goals.

We will take actions to help communities and developers work together to provide the types of benefits that local people truly want, in a way that is fair to all concerned, and through a process that is clear and transparent.

- 3.21. The call for evidence responses demonstrated the differing experiences within the UK and suggested that more could be done to ensure communities consistently receive a fair share of the benefits associated with onshore wind and are properly empowered to discuss and negotiate with developers the types of benefit packages that best suit their needs.

### **Increase in recommended minimum community benefit package value to £5,000 per MW installed capacity per year**

- 3.22. In many cases the onshore wind industry are already providing a variety of different amounts and types of community benefits on a voluntary basis and outside the planning system<sup>10</sup>. In Scotland community benefits tend to be higher, in part due to higher wind speeds, windier conditions and greater land availability. There is also an expectation, set out by Scottish Ministers, for exemplary community benefits from commercial developments on the public estate in Scotland. This has resulted in community benefit packages of £5,000 per MW installed capacity per year for projects on the National Forest Estate.

- 3.23. Across the UK community benefit packages range from grants to carry out immediate one off improvements to local amenities (e.g. new playgrounds for children) through to annual funding to support longer term projects which could have a wider and more lasting legacy (such as environmental enhancement schemes and energy efficiency programmes).

- 3.24. We are however, clear with industry that it needs to do more to improve the level and quality of community benefit packages. In response to the Government report, DECC is expecting the onshore wind industry, as represented by RenewableUK (trade body for England), to announce a revision to their existing community benefit protocol to increase the **current recommended community benefit package value in**

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<sup>10</sup> There is a strict principle in the planning systems in all parts of the UK that a decision about a particular planning proposal should be based on planning issues; it should not be influenced by additional payments, or contributions offered by a developer which are not linked to making the proposal acceptable in planning terms. Current planning legislation also prevents local planning authorities from specifically seeking developer contributions where they are not considered necessary to make the proposal acceptable in planning terms. This is to ensure that unacceptable development is never permitted because of unrelated benefits being offered by the applicant.



**England fivefold from £1,000/MW of capacity per year to £5,000/MW of capacity per year for the lifetime of the windfarm (usually around 25 years).** To put this in context £5,000/MW for a 20MW windfarm (or around eight turbines) would mean £100,000 per year that could be used to fund programmes to roll out energy efficiency measures, employ neighbourhood energy advisors, establish local skills and training projects, provide meaningful electricity bill offsets for many individual households or other community initiatives that local people might want.

### **CASE STUDY 4 – BENEFIT PACKAGE – EDUCATION SCHEMES**

#### **Carbon Free Development – Earlseat Windfarm, Fife, Scotland**

Earlseat Windfarm is a recently consented eight turbine windfarm on the site of a former open cast coal mine in Fife, Scotland with a number of nearby communities that experience a very high overall level of unemployment. In 2010 the Carbon Free Development signed a contract to provide funding of the equivalent of £3,000/MW (RPI) for six new apprenticeships each year, once the windfarm is operational, to provide students at the local college with the training and qualification to find employment in the renewable energy industry.

Up to £10,000 will be made available per apprentice and over the lifetime of the windfarm the scheme should fund over 150 apprenticeships for school leavers and adults returning to work.

### **CASE STUDY 5 – BENEFIT PACKAGE – LOCAL ENVIRONMENTAL SCHEME**

#### **RWE npowers renewables – Little Cheyne Court Windfarm, Kent/East Sussex, England**

Little Cheyne Court is a 26 turbine windfarm with a capacity of 59.8MW situated near the coast in the South East of England.

Developers, RWE npowers renewables offer a diverse community benefit package. In addition to a community benefit fund of £60,000/year, a local Habitat Management group, with representatives from natural England and the RSPB was set up and £450,000 placed on deposit to be used to fund initiatives such as bird monitoring and habitat creation for bees.

A number of initiatives have taken place such as habitat creation, where, in consultation with Natural England, it was agreed the planting of clover species on land isolated from main agricultural use would take place. After several years management surveys have demonstrated the habitat creation to be successfully with very strong numbers of locally rare bumblebees recorded.

## **Community benefits register and guidance**

3.25. We note that the consensus from developers, organisations and most individuals was that it is important to maintain a degree of flexibility in the types and levels of benefit packages offered. This reflects the needs and desires of different local communities

## ONSHORE WIND CALL FOR EVIDENCE – GOVERNMENT RESPONSE

and takes into account the economic rates of return of different developments that can vary according to the wind farm's size and location.

- 3.26. DECC do not therefore consider it necessary to link the provision of benefits to the planning process or set any other types of legal requirements in this area. However, **to help communities and developers better engage in discussions on all aspects of wind energy, we will issue best practice guidance. This will consolidate the most useful parts of existing guidance and protocols. The guidance will also address specific concerns raised through the call for evidence including the need for a clearer steer on how and when to begin discussions on community benefit provision, and maintaining mutually beneficial relationships throughout the lifetime of the project.**
- 3.27. Whilst DECC believes that it is ultimately for local people to decide, in discussion with developers, on the package that best suits their needs, DECC agree with many respondents that there can be many advantages to schemes linking community benefits from onshore wind to wider and longer term legacy packages. For example, funding for energy efficiency measures, investments in local skills training, youth opportunities and new businesses and environmental enhancement programmes. Moreover we have seen evidence of clear benefits where developers have offered communities an ownership stake as part of their community benefit package (See 3.29 - 3.36).

### CASE STUDY 6 – BENEFIT PACKAGE – ENERGY EFFICIENCY MEASURES

#### Kettering Borough Council, England

In 2004 planning permission was granted for ten turbines at Burton Wold in the borough of Kettering, England. Working closely with developers, local press, schools and community groups, the council has worked to encourage community engagement and increase local knowledge of renewable energy.

A community benefit fund was set up from the windfarm which has been used for a number of renewable projects bringing benefits to many in the local area. The first project funded was at Yeoman's Court, a sheltered housing scheme where a solar powered water heating system was put in place providing hot water to all communal areas with major saving benefits.

Other projects included the heating at a local Guiding Centre to deliver efficient heating and hot water to the community facility, the installation of sun pipes at a local school to provide natural daylight and a solar powered lighting scheme in the town centre providing light for the church.

#### Aikengall Community Windfarm, East Lothian, Scotland

Aikengall is a community windfarm with a total installed capacity of 48MW.

As part of the windfarm, community Windpower Ltd provides community benefits to the local area including £100,000 per annum to the BeGreen Dunbar Energy Advice Centre to assist its operation and provide funding for energy efficiency measures in the local area such as loft and cavity wall insulation, draft proofing etc and domestic renewables (collar PV, solar thermal, air source heat pumps etc.).

Other benefits include education presentations to local schools and support and sponsorship of £10,000 for the Young SET Ambassadors programme in the Lothians and Edinburgh area which includes guided tours of the windfarm and support on project work.

- 3.28. **To provide an overview of the types and values of benefits being provided we will work with community and industry stakeholders to set up a register of community benefits.** This will provide a tool to record publicly the range of benefits offered from different projects in a transparent manner and will help support communities in engaging and negotiating benefit packages that best suit their needs. It should act as a positive driver for developers to promote and distinguish themselves from their competitors and will enable them to explain any variations in the levels or types of community benefit payment that may occur from site to site.

### CASE STUDY 7 – BENEFIT PACKAGE – DISCOUNTED ELECTRICITY

#### RES – Carmarthenshire, Wales

In 2012 RES launched a Local Electricity discount Scheme (LEDS) as part of a proposed community benefit package at a site in Carmarthenshire. Through the scheme qualifying residential, community and business properties can receive a minimum discount of £100 per year on their electricity bill.

Following positive feedback, RES launched the scheme at four further proposed windfarms, bringing the proposed community benefit package at new sites to a value of £5,000 per installed megawatt, made up of LEDS and a community benefit fund.

In addition to this, in May 2013 RES launched LEDS at two of its windfarms that are in the final stages of construction. At these windfarms – Meikle Carewe in Aberdeenshire and Tallentire in Cumbria – first discount payments will be made to participating eligible properties in 2014.

#### Good Energy – Delabole Windfarm, North Cornwall, England

In 2011, Delabole windfarm was redeveloped by Good Energy and the ten original turbines were replaced by four more powerful ones, increasing the windfarm's capacity by roughly two-and-a-half times to 9.2MW.

In late 2012 Good Energy launched the Delabole Local tariff providing residents within a 2 kilometre radius of the site a 20% discount on Good Energy's standard electricity prices, saving the average local Good Energy customer around £100 a year on their electricity bill. If the wind turbines generate more electricity than expected, there will be an additional credit of up to £50 per year.

Through its Development Charter, Good Energy will offer a local tariff at the company's other windfarm sites over 4MW.



## Community Ownership and Buy In

By owning or co-owning renewable energy developments, communities can have a real stake in – and share the profits of – energy generation in their local area.

In addition to communities acting proactively to purchase wind turbines, we have seen some excellent examples of joint venture/partnership working between communities and developers.

This response will encourage more developers to offer an ownership stake in windfarms as part of their community benefit package and through our forthcoming community energy strategy we will look at what more can be done to facilitate community ownership where local people want it.

3.29. We note that many respondents suggested that community owned onshore wind projects can provide attractive economic returns, as well as potentially delivering wider social benefits. This includes developing local knowledge and skills and encouraging cooperation and social interaction.

### Community Energy Strategy

3.30. Government recognises the potential of community energy projects to effect change in society, and the Coalition Agreement included a commitment to supporting community energy projects.

3.31. DECC is developing a Community Energy Strategy, that will be published in Autumn 2013. It will look at how community projects or initiatives focused on energy generation, energy saving and management, collective purchasing and collective switching can realise their potential.

3.32. To inform the Strategy, we will shortly publish a Call for Evidence on community energy. This aims to get more evidence about the benefits of community energy projects. Through the Call for Evidence, DECC also aims to build a more detailed picture of the barriers faced by community energy projects and to seek views on how to overcome these.

### Onshore wind community ownership models

3.33. The responses provided examples of a number of successful community ownership models that currently exist for onshore wind. In addition to 100% community ownership of smaller projects, usually single turbines, we have also seen some interesting examples of developers voluntarily offering communities the right to buy into schemes (as part of or instead of the more traditional community benefit package) and in some cases also helping with funding or loans for the necessary 'start up' costs.

- 3.34. We are keen to examine what more can be done to encourage developers and communities to participate in this sort of joint venture/partnership working for onshore wind – and indeed other renewable technologies – and the forthcoming call for evidence on DECC's proposed community energy strategy aims to gather further views and evidence on this.

### CASE STUDY 8 – COMMUNITY OWNERSHIP – Earlsburn, Scotland

Earlsburn is a fifteen turbine windfarm in Stirlingshire, Scotland. RDC and Falck Renewables initially proposed a 14-turbine windfarm. Through engagement with the local residents of Fintry and Fintry Renewable Energy Enterprise (FREE), RDC and Falck Renewables helped with the planning permission, financing and operation of a fifteenth community turbine.

Under the scheme Falck Renewables paid for the initial cost of the turbine and FREE pay it back over time. Whilst the initial cost is being repaid over the first 15 years FREE gets a return of around £50,000 - £100,000 a year depending on electricity prices and this is expected to increase to about £400,000 a year after the debt has been paid off.

The income from the community turbine has been used to deliver projects such as insulation of properties, installation of heaters in the local community hall and the provision of a new wood chip boiler for the local sports hall.



- 3.35. The onshore wind call for evidence responses also flagged a number of barriers to increased community ownership, including lack of awareness, lack of capability and capacity of communities to develop projects, and lack of access to finance to get projects off the ground. It is DECC's view that these barriers are also relevant to other technologies and again we are exploring further how they might be tackled through our work on the community energy strategy.
- 3.36. In the meantime the Government is finalising arrangements for a Rural Community Renewable Energy Fund. This will provide grants and loans to rural communities in England and enable them to pay for the feasibility, pre-planning and planning stages of renewable energy projects necessary to obtain planning permission. Communities which are successful in obtaining planning permission will repay the loans at a premium out of the income generated from their renewable energy project. In this way the fund can be recycled and used to support further community renewable energy schemes in the future. All renewable energy technologies will be eligible for support, including solar, wind, hydro and biomass. Communities which are interested



in applying should contact the Waste and Resources Action Programme (WRAP) who are administering the fund on behalf of the Government<sup>11</sup>.

### Enhancing Local Economic Impacts

As well as contributing to our energy security and low carbon objectives, onshore wind can bring substantial new economic benefits and job opportunities to the country as a whole and at a local level.

Maximising local and regional impacts is not only beneficial for the communities in which wind farm projects are located, but also for the developer investing in the project.

- 3.37. We received some useful documentary evidence about the direct and indirect ways that windfarms have benefited local economies particularly during the pre-development and construction phases of projects. As well as investing in local service, transport and logistics, and hospitality businesses, wind energy projects support a wide range of employment relating to project design, environmental studies, legal agreements, and project funding and planning, as well as construction, including site preparation, turbine installation (and in some cases turbine manufacture) and connecting to the grid.
- 3.38. However, we received fewest responses overall to this section and many of those who did respond questioned the economic benefits that the onshore wind industry provides. It is therefore clear that action is needed to demonstrate more widely the local economic and employment potential of onshore wind projects and ensure that all parties – developers, local business and local people are aware of and equipped to respond to these opportunities.
- 3.39. RenewableUK have committed to produce **guidance for potential supply-chain businesses and developers on how to maximise local economic benefits arising from onshore wind developments by the end of 2013**. This will build on good practice to date highlighted through this call for evidence and will take into account lessons learnt from wider Government industry work on developing an industrial strategy for offshore wind.
- 3.40. **In addition, DECC will organise an onshore wind supply chain event later this year to show case the economic opportunities generated by onshore wind development and current beneficiaries and to publicise the guidance.** The event will be aimed at developers, relevant supply chain companies and business representatives.

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<sup>11</sup> renewables@wrap.org.uk

### CASE STUDY 9 – ECONOMIC IMPACT – Argyll and Bute Council, Scotland

The development of the onshore windfarm sector has assisted in generating jobs and stimulated economic activity in the Argyll and Bute Council area of Scotland. The Wind Towers Scotland factory at Campbeltown, Machrihanish employs over 130 full time staff and brought with it supply chain opportunities for local businesses to meet the development, construction and operation and maintenance needs of windfarms.

Campbeltown/Machrihanish is identified as a key manufacturing location for onshore wind development within the National Renewables Infrastructure Plan (NRIP). The development of this NRIP site linked to the Wind Towers Scotland manufacturing factory has resulted in an investment of £11.7million to secure the upgrade of Campbeltown New Quay and the associated access routes to the harbour. The funding was secured from Argyll and Bute Council and the European Regional Development Fund.

In 2011, the total annual community benefit payment made from operational windfarm developments in Argyll and Bute was over £162,000. This funding is paid directly to the local communities and used by them to deliver local community projects. Community ownership of renewable energy developments such as onshore wind, has also allowed remote and fragile communities to deliver socio-economic benefits back into their local communities. For example, on the islands of Gigha and Tiree, 100% of net profits from their community owned wind projects are reinvested in jobs and infrastructure in the local community.



### CASE STUDY 10 – ECONOMIC IMPACT – Vattenfall, Wales

Vattenfall is developing the Pen y Cymoedd Wind Energy Project, a c.250MW windfarm in Wales. In 2012 Vattenfall launched tender opportunities worth £90million for the grid works and main windfarm civil and electrical works with companies based in Wales featuring prominently in those competing for contracts.

Over a period of three years Vattenfall actively engaged with the local supply chain, which included a two day supply chain event in Swansea, for possible contractors that resulted in 260 potential contract opportunities being identified for businesses in the region, with more opportunities available as the project progresses through construction phase into operation.



## Action Plan

Description	Action Owner	Delivery timetable
<b>Community Engagement</b>		
Introduce compulsory pre-application consultation with local communities for more significant onshore wind applications (3.3)	DCLG with input from DECC	DCLG will publish details
Best practice guidance and monitoring of community engagement/consultation (3.7)	DECC in partnership with community and industry stakeholders	Early 2014
Access to clear and reliable evidence on impacts of onshore wind (3.13, 3.14)	DECC and Government Partners	End 2013
Training and provision of information for local authority planners and decision makers (3.16, 3.17)	DECC and Sustainability East DCLG and Planning Advisory Service	June and July 2013 Summer 2013
Up-dated and streamlined guidance on the planning system for renewables, as recommended by the Taylor Review (3.18)	DCLG	Summer 2013
<b>Community Benefits</b>		
New industry protocol setting a minimum level of community benefits in England £5,000 per MW installed capacity per year (3.24)	RenewableUK	Summer 2013
Good practice guidance and online register of community benefits (3.26, 3.28)	DECC, in partnership with community and industry stakeholders	Early 2014
<b>Community ownership</b>		
Publication of community energy strategy (3.31, 3.32)	DECC	Autumn 2013
Launch DECC/Defra Rural Community Renewable Energy Fund (3.36)	DECC and Defra	Summer 2013

Description	Action Owner	Delivery timetable
<b>Local Economic impact</b>		
Publish guidance for developers and local businesses on making the most of local economic opportunities provided by onshore wind development (3.39)	RenewableUK	End 2013
Event on onshore wind supply chain opportunities (3.40)	DECC	End 2013

## 4. Government Response to Part B: Costs

**This chapter sets out the details of the responses to the Part B (costs) call for evidence, and explains DECC's analysis and conclusions.**

### Responses Received

- 4.1. DECC received responses for around 70 separate projects; half of these were in England and Wales, one quarter in Scotland and the remainder in Northern Ireland or did not specify their location. These consisted of projects commissioning between 2009 and 2017, including projects in pre-development stages to fully operational windfarms. This response focuses on those projects over 5MW.
- 4.2. Data received includes pre-development, capital, fixed and variable operating costs, insurance and connection charges, and financing costs. This review considers the data received for large scale onshore wind (>5MW). If cost data did not include all of the necessary components, for instance if capital costs failed to include the cost of the turbines, this cost data was removed from the final dataset. In addition, if cost data were more than two standard deviations from the mean it was removed as a statistical outlier. These decisions were taken on an individual cost component basis; in other words if capital costs were removed for a project as a statistical outlier, it does not follow that pre-development, operating, insurance and connection charges were removed; each was subjected to an individual test.

### Methodology

#### Costs data

- 4.3. As part of the call for evidence, DECC received data on pre-development, capital, fixed and variable operating costs, insurance and connection charges, summarised in Annex A. DECC have used this new cost data to calculate levelised costs for onshore wind. A 'levelised cost' is the average cost over the lifetime of the plant per MWh of electricity generated. The levelised cost only reflects the cost of building a generic plant, potential revenue streams are not considered.
- 4.4. As specified in the call for evidence, the purpose of this analysis is to update assumptions on costs. All other input assumptions and methodology remain consistent with the RO banding review, explained below.

## Finance costs

- 4.5. Six responses were received on financing costs. Financing costs are captured within the assumed hurdle rate, which for the RO banding review was based on an average of the hurdle rates published in research reports by Arup (2010)<sup>12</sup> and Oxera<sup>13</sup> (2011). Because of the low response rate in the question about hurdle rates in Call for Evidence, DECC decided not to update these assumptions. Therefore, the hurdle rate assumed in the levelised cost calculations below remains that used for the RO Banding review at 9.6%<sup>14</sup> (pre-tax real). However, as part of the EMR Delivery Plan process currently underway, DECC are updating all assumptions – including assumed hurdle rates – which will be reflected in the strike-prices setting process.
- 4.6. It should be noted that the six responses received quoted a slightly higher hurdle rate, which would increase the levelised cost estimate. Four of these responses were within the ranges presented in the Arup and Oxera reports; the remaining two were slightly higher. Qualitative responses also expect financing costs to increase over the Banding Review period due to the macroeconomic circumstances, particularly the limited availability of long term debt agreements and larger drive for equity financing.

## Other input assumptions

- 4.7. Assumptions such as lifetime of onshore wind plants, capital cost learning rates, revenues and load factors remain consistent with the RO banding review, details of which can be found in the impact assessment accompanying the Government response published in July 2012<sup>15</sup>. As specified in the call for evidence, this enables DECC to make a consistent comparison between the cost data received as part of the call for evidence and the dataset used for the RO banding review, in order to ascertain whether or not there has been a significant change in costs.
- 4.8. Since the RO banding review was published in July 2012 the following assumptions would be updated if DECC were to undertake a review of the ROC band for onshore wind:
- Load factors; an additional years' data was published in Dukes 2012<sup>16</sup>.
  - Revenues; DECCs wholesale price projections have been updated following the publication of DECCs 2012 fossil fuel price projections<sup>17</sup>.

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<sup>12</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/42843/3237-cons-ro-banding-arup-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42843/3237-cons-ro-banding-arup-report.pdf)

<sup>13</sup> <http://hmccc.s3.amazonaws.com/Renewables%20Review/Oxera%20low%20carbon%20discount%20rates%20180411.pdf>

<sup>14</sup> Note that in 2016/17 it is assumed for simplifying modelling purposes that all new projects deploy under EMR Contracts for Difference, the hurdle rate in 2016/17 is assumed to be lower under CfDs, at 8.6% (pre-tax real).

<sup>15</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/42847/5945-renewables-obligation-government-response-impact-a.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42847/5945-renewables-obligation-government-response-impact-a.pdf)

<sup>16</sup> [https://restats.decc.gov.uk/cms/historic-regional-statistics/#load\\_factorsv](https://restats.decc.gov.uk/cms/historic-regional-statistics/#load_factorsv)

4.9. These factors are not used to calculate the levelised costs below. However, for completeness, a table of load factors are provided in **Annex D** and revenue assumptions are discussed further on page 37.

## Levelised Costs

**Table One: Renewables Obligation Banding Review (£2012)<sup>18</sup>;**

			Commissioning Year <sup>19</sup>			
Onshore wind > 5MW; England and Wales			2013/14	2014/15	2015/16	2016/17
Levelised cost		High	125	125	124	115
	£/MWh	Central	105	104	103	96
		Low	86	85	85	80

**Table Two: Onshore wind call for evidence (£2012);**

			Commissioning Year			
Onshore wind > 5MW; England and Wales			2013/14	2014/15	2015/16	2016/17
Levelised cost		High	136	135	135	125
	£/MWh	Central	110	109	108	101
		Low	88	87	87	81

<sup>17</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/65698/6658-decc-fossil-fuel-price-projections.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65698/6658-decc-fossil-fuel-price-projections.pdf)

<sup>18</sup> The low and high ranges of levelised costs are based on low and high capital cost assumptions.

<sup>19</sup> Also known as operation year; i.e. the year in which a project begins generating electricity.

4.10. The following cost components are driving the difference in levelised costs between the two datasets in the central scenario:

- Pre-development costs are £4/MWh higher in the central estimate of the call for evidence dataset
- Capital costs are £2/MWh lower in the central estimate of the call for evidence dataset
- Operational costs are £3/MWh higher in the central estimate of the call for evidence dataset.

4.11. The overall difference in levelised costs in the central estimates is £5/MWh, less than a 5% increase in commissioning year 2013/14 between the data used for the RO banding review and the cost dataset collected as part of this call for evidence.

4.12. The range of levelised costs under the RO Banding review dataset, based on low and high capital costs, is £40/MWh. The high end of the range under the call for evidence dataset is £10/MWh higher; the range from low to high levelised costs is £48/MWh. The range of levelised costs overlaps significantly and is large compared to the difference in the central levelised cost estimates between the two datasets.

4.13. The call for evidence did not specifically request information to examine the reasons for differences in levelised costs compared to the RO banding review dataset. However, based on qualitative evidence provided as part of the call for evidence detailed in **Annex D** and DECCs stakeholder engagement, we are able to identify some factors which may in part explain some of the differences:

- **Higher pre-development costs;** respondents and the wider stakeholder community are giving a consistent message that planning hurdles and requirements are having an upward pressure on pre-development costs, due to increasing public sensitivity around onshore wind and the reducing availability of good sites. Factors include an increased likelihood of legal proceedings (public inquiry, appeal), increased expectations for greater community engagement and higher failure rates in the consenting stage.
- **Higher operating costs;** In general, the industry is moving from an ad-hoc, to a more pro-active operation and maintenance (O&M) approach, which may result in slightly higher O&M costs in the short term. In the longer term this is expected by industry to increase operational availability of the windfarm. Some stakeholders report that the cost of renewing previously agreed O&M contracts have also been higher than expected, resulting in increased operating costs.

### Projections of deployment and spend

4.14. To analyse the options in the Impact Assessment accompanying the Government response to the RO banding review DECC commissioned Pöyry to run their Eureka

electricity market despatch model and ROcket renewable electricity model<sup>20</sup>. In addition, DECC developed an in-house discounted cash-flow model to estimate the range of ROC's required, deployment and spend for each technology. The in-house analysis was used to cross check the results from Pöyry.

4.15. DECC re-ran the in-house discounted cash-flow model with cost data received through the call for evidence, including capital costs, operating costs, insurance and connection charges. The model does not show a reduction in deployment of onshore wind compared to the projections for the RO Banding review, given the granularity of the model.

### Additional data and analysis

#### Revenues

4.16. In October 2012 DECC published fossil fuel price projections (2012). These differ from the 2011 fossil fuel price projections used for the RO banding review analysis in two key aspects in the central scenario:

- Gas and coal price projections to 2017 are lower in the 2012 projections compared to 2011 projections.
- Oil price projections are higher in all years, as are coal and gas prices post-2017.

4.17. DECC updates its fossil fuel price projections annually. Due to the volatility of fossil fuel prices, it is particularly likely that short and medium-term price expectations will change from year-to-year even if longer-term price expectations are largely unchanged, and it is movements in spot prices that explain the majority of the change in the fossil fuel price projections between 2011 and 2012.

4.18. To estimate the impact of the updated fossil fuel prices (and carbon prices) DECC undertook analysis on its in-house Dynamic Dispatch model, using the baseline from the Electricity Market Reform Impact Assessment (£2012) as reference. Using an assumption of five year foresight on wholesale prices (consistent with the RO banding review), on average the wholesale electricity price is around 5% lower due to the updated fossil fuel (and carbon price) assumptions. However, wholesale electricity price projections are inherently uncertain. Differences in the short term wholesale price projections narrow over time and by the end of this decade wholesale price projections are very similar.

#### Locational analysis

4.19. DECC analysed cost data received from across the UK in response to the call for evidence, which allowed a limited comparison between the costs across Great Britain (there was insufficient data received for projects over 5MW in Northern Ireland to

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<sup>20</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/183238/potential\\_impact\\_of\\_revised\\_renewables\\_obligation\\_technology\\_bands\\_updated\\_poyry\\_report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/183238/potential_impact_of_revised_renewables_obligation_technology_bands_updated_poyry_report.pdf)



undertake a UK analysis). Capital costs, fixed and variable operating costs and insurance charges were broadly similar across Great Britain. Connection charges were higher in Scotland and can vary considerably by location but constitute a relatively small portion of overall costs in the call for evidence dataset. However, given the relatively small number of returns from Scotland any comparisons need to be treated with caution. Load factors are also higher in Scotland – which is consistent with the analysis for the Renewable Obligation Banding Review, where we used a higher load factor for Scotland.

### Summary of qualitative responses

4.20. The call for evidence also asked for qualitative responses on the key drivers of costs and how these are expected to change over the banding review period. These responses may explain some of the reasons for the difference in levelised costs between the RO banding review and the data received for the call for evidence. This section summarises the qualitative responses received; a fuller description is provided in **Annex E**.

#### Pre-development costs

4.21. Respondents suggested that planning hurdles and requirements are having an upward pressure on pre-development costs. Factors include an increased likelihood of legal proceedings (such as a public inquiry or appeal), higher failure rates in the consenting stage and increased costs to comply with environmental requirements.

#### Capital costs

4.22. Respondents explained that the main drivers of construction costs are exchange rates, steel prices and labour costs. Exchange rates are expected to appreciate in the future, driving up the cost of turbines. Respondents also noted that construction firms may no longer be willing to accept lower margins they receive now, once the macroeconomic circumstances improve.

#### Operating costs

4.23. Respondents attributed cost rises over the banding review period (2013 - 2017) to increasing labour costs and fuel costs. In addition, the cost of renewing previously agreed O&M contracts, after the five year warranty from the manufacturer comes to an end, have been higher than expected, resulting in increased operating costs.

### Conclusion

4.24. The Renewables Obligation Order 2009 enables the Secretary of State to carry out a review of some or all of the support levels under the RO if one or more of the conditions listed in article 33(3)<sup>21</sup> of the Order are met. The condition which is

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<sup>21</sup> See <http://www.legislation.gov.uk/uksi/2009/785/contents/made>

relevant to the call for evidence is where “the costs of generating electricity [... by onshore wind ...] are significantly different from the costs of generating electricity in that way to which the Secretary of State had regard when making the banding provisions.”

4.25. DECC does not consider the difference in levelised costs between the RO banding review and the onshore wind call for evidence dataset to demonstrate a significant change. There are three main reasons for this:

- There is a substantial overlap between the high and low range of onshore wind levelised costs estimated using the data received through the onshore wind call for evidence, and the levelised costs estimated using the RO banding review dataset.
- The central estimate of onshore wind levelised costs is less than 5% higher in each year of the banding review period (2013 - 2017), compared to the cost data used for the RO Banding Review.
- DECC re-ran its internal cash flow model, used for the RO banding review with the updated capital and operating costs, insurance costs and connection charges. The model does not show a reduction in deployment of onshore wind compared to the modelled projections for the RO Banding review, given the granularity of the model.

4.26. Therefore, **DECC does not intend to commence a review of the band for onshore wind under the Renewables Obligation.**

# Annex A – Detailed Summary of Responses: Part A

This Annex provides a detailed summary of the responses received to the 17 questions posed in the call for evidence document.

It should be noted that the views expressed in this Annex are those of the respondents only, and should NOT be taken as the views of the Government

## Community Engagement

We asked:

Q1.	Do you have examples of where you have seen positive community engagement?
Q2.	Have you experienced difficulties when trying to engage with a developer, local planning authority or other local organisation about a proposed onshore wind development?
Q3.	Do you have any details/experience of how community engagement is carried out outside the UK?

## Examples of good and bad practice between developer, community and other parties

Responses to these questions were polarised. We received a large volume of anecdotal evidence from individuals and a few organisations about ‘unprofessional behaviour’ by developers, breakdowns in relationships and lack of meaningful engagement between developers and local communities. We also received a few reports of ‘poor practices’ by anti-wind campaigners.

Conversely, we received some very detailed information from developers, some community groups and a few individuals about positive engagement between communities and developers. In some cases this was backed up by case studies, surveys, press releases and other documentary evidence.

Examples of useful practice included; developers working with Local Authority staff to set up and support community liaison groups to help local people to understand and assess proposed developments; and employing a range of traditional and more innovative media to reach all parts of the community (such as leaflets, newsletters, web based material, meetings and exhibitions, 3D modelling of sites, visits to existing sites and online feedback forms).

In all cases respondents considered that early, and transparent engagement was key to provide communities with the opportunity to fully consider proposals although it was recognised that the precise timing could be an issue and trying to engage too early in the process before a project was fully scoped could be counterproductive.

### Good practice guidance

Several respondents recognised and supported the work that industry and other organisations have carried out to date to develop voluntary engagement protocols and good practice guidance such as that published by the Scottish Executive in August 2011<sup>22</sup>, the RenewableUK Community Benefit Protocol launched in February 2011<sup>23</sup> and various charters issued by individual developers. However, the point was made that the basic principles were not being adhered to in all cases and further action was needed to enforce standards more consistently throughout the UK.

### Planning

The point was made by many individuals, MPs and some parish councils that local people felt that they had little if any influence on the siting of windfarms in their area, especially where decisions by local councils to reject planning applications were overturned on appeal by Government Planning Inspectors. Many of the individual replies from anti wind campaigners and a few organisations, mainly local authorities, suggested introducing minimum separation distance between windfarms and housing, generally 2km, within which windfarms cannot be built. A few went further and suggested removing the right for developers to appeal against decisions by local planning authorities to reject applications.

Many of the replies from individuals (pro-wind and anti-wind), developers and some other organisations highlighted the general point that communities lacked the resources and expertise needed to properly investigate the economic/environmental justification for wind developments in general as well as the particular proposal in their area. It was suggested that the problem was compounded by recent confusion over Government's onshore wind policy as well as a lack of what was perceived as truly independent evidence and information about the impacts and benefits of wind, energy.

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<sup>22</sup> For further information see the Good Practice Wind website at : <http://www.project-gpwind.eu/index.php>

<sup>23</sup> For further information see RenewableUK website at: <http://www.renewableuk.com/en/renewable-energy/communities-and-energy/community-benefits-protocol/index.cfm>

## Engagement practice in other countries

We were interested in finding out more about how engagement works for onshore wind projects overseas and a few respondents, mainly developers and academics, provided some detail of practices in France, Netherlands, Germany, Spain, Denmark and South Africa. This information indicated that procedures for involving local people throughout the development phase varies from country to country. Several countries such as France, Denmark and South Africa appear to have detailed provision for community engagement and public consultation periods written into their planning laws. For example France also has an industry ‘Ethical Charter for the Good Development of Wind Farms’ which the main onshore wind trade body France Energie Eolienne requires all members to sign up to. This charter lays down standards of consultation, independence, quality of life for local inhabitants, security of construction sites and decommissioning.

## Community Benefits – Investing in Communities

We asked:

<b>Community Benefits</b>	
<b>Questions for developers</b>	
<b>Q4.</b>	<b>What types and amounts of community benefit do you currently offer?</b>
<b>Q5.</b>	<b>Are there types of community benefit that you would like to offer but are not able to? Why not? Are there regulatory barriers?</b>
<b>Q6.</b>	<b>Have you seen examples where the provision of community benefits have changed local people’s attitude towards a windfarm?</b>
<b>Community Benefits</b>	
<b>Questions for Communities</b>	
<b>Q7.</b>	<b>What types and amounts of community benefit have you been offered?</b>
<b>Q8.</b>	<b>What types of community benefits would you most like to be offered?</b>
<b>Q9.</b>	<b>Have community benefits changed your attitude towards a windfarm in your area?</b>

Q10.	Do you feel like you have a stake in the windfarm development in your area? If not what types of community benefits, or actions from developers, Government or other organisations would make you feel more positive about a windfarm development?
<p><b>Community Benefits</b></p> <p><b>Questions for All</b></p>	
Q11.	Do you have views on who in the community should benefit from any funding?
Q12.	Do you think it would be a good idea to establish a standard level or value for community benefit packages either nationally or across the UK? If so, do you have views on what an appropriate value might be for all parties and how this could be calculated?
Q13.	Do you think it would be useful to have access to a central/national register of benefits, recording details of benefit packages provided at existing onshore wind developments (for example, along the lines of the Scottish Government Register of Community Benefits from Renewables)?

### What do people think about community benefits?

A few organisations and the majority of individuals responding through the anti-wind campaigns felt that community benefits were simply “bribes” to encourage people to accept onshore wind in unsuitable locations and could not compensate for what they considered to be the negative impacts that the development could have on house prices, quality of life, health, landscape and local business.

There was a general consensus amongst this group of respondents that if wind turbines did go ahead, direct compensation and/or compulsory purchase of nearby houses should be provided to make good loss in property prices.

The point was also made by many individuals, and some other organisations including LAs and developers, that community benefits had the potential to be divisive due to differences in support/opposition for a wind project and the varying level of that the community was likely to experience community benefit funds.

Respondents to the ‘Shropshire North Against Pylons’ campaign questioned why community benefits are not provided to people impacted by the planned National Grid Power Line through Shropshire. They considered this to be inextricably linked to the planned growth of wind power.

Conversely the point was made by some academics, community/LA groups and developers that the wind industry is fairly unique in voluntarily providing benefits to communities as developers and energy providers are only required to mitigate any substantial dis-benefits of their existence. Some respondents expanded upon this and suggested that, in the interests of fairness, windfarms should be required to do only what other developers and energy providers are required to do. Linked to this several respondents (mainly developers and trade bodies) expressed concerns that any intervention from Government on windfarm community benefits could set precedents in other sectors.

### Types and rates of benefits currently provided

We received a large volume of information, mainly from developers and community groups about the wide variety of benefits currently provided or proposed. Levels of support varied from project to project and between developers but in general, for commercial windfarms, benefits took the form of a set amount, between £1,000 - £5,000 per MW per annum for each year of operation (usually 25 years), paid into a community benefit fund and distributed through grants to projects decided by community representatives. There were however examples of other benefits provided to host communities such as ownership and investment schemes, and funding of apprenticeships. It was suggested by developers that the variation represented the different economics associated with the location of projects, grid connection and land costs as well as the varying sizes, types and requirements of communities. As a rule community benefit payments appeared to be higher for newer developments and for projects in areas with higher wind speeds and load factors.

There was a strong consensus across all groups that there should be no ‘one size fits all’ solution to benefits and flexibility was key to enable schemes to be designed according to the nature and needs of the community whilst also taking into account the varying economics of different projects. It was recognised that there are difficulties in defining “communities” and determining exactly who should benefit and to what extent. A number of respondents, particularly individuals, suggested that benefits should be targeted at those in the closest vicinity and therefore considered to be “most affected” by the development. Providing discounted electricity to nearby residents was recognised by developers as a popular request and was seen as a positive move by many individuals and some organisations, although regulatory and legal barriers were highlighted and a few questioned the sustainability and practicalities of this initiative. The point was made by several respondents – both individuals and organisations – that benefits should be invested in ways that leave the communities with a longer lasting low carbon and or economic legacies (for example by investing in energy efficiency measures, skills and training or environmental enhancement projects).

A number of replies referenced the RenewableUK community benefit Protocol but many of the comments from individuals (and some other organisations) suggested that the minimum rate currently recommended at £1,000/per MW/per annum seemed low in comparison to likely rates of returns for developers and schemes already being offered. There were split views over whether a higher rate or range should be set as a benchmark and how this might be calculated.



### Community benefits register

There was almost universal support for a UK wide register of community benefits to ensure transparency and provide a source of information for use by communities, developers and local authorities. The point was made by some that the register should not become overly bureaucratic but would need to be detailed enough to provide meaningful comparisons of a wide range of projects (such as provide information on the size of communities, average wind speed and other benefits such as apprenticeship schemes).

### Clarifying the status of community benefits in the planning system

The question of the legality of the benefits within the planning system was also raised by quite a large cross section of the respondents. Some felt that making the community benefits package a material consideration in planning would avoid the perception of benefits being seen as a bribe and allow planning officers to engage fully in the negotiation of amount and distribution of benefit funds. Others felt that benefits should not be linked to planning, but guidance from DCLG DECC on when and how benefits should be discussed was needed.

## Encouraging Community Ownership

We asked:

<b>Community Ownership</b>	
<b>Question for Developers</b>	
<b>Q14.</b>	<b>Do you have experience in working with communities or individual local people to provide a share in your development? Please give details.</b>
<b>Community Ownership</b>	
<b>Question for Communities</b>	
<b>Q15.</b>	<b>Would you personally, or as part of a wider community group, consider investing in a stake of an onshore wind development community? If not why not? Please explain your reasoning.</b>

Several developers, community groups and other organisations provided detailed information on various community ownership models being operated in the UK and internationally. They suggested that in general local communities can derive greater economic return through ownership rather than traditional community benefit

payments. Responses from academic organisations reinforced the views that community ownership could also provide many social benefits for communities, including the development of new local knowledge and skills as well as encouraging cooperation and social interaction.

Several organisations suggested that the UK learn lessons from Europe where, **according to the SCENE Connect report<sup>24</sup>, in Denmark and Germany respectively, approximately 86% and 50% of wind energy generation is locally owned.**

They flagged a number of barriers to wider uptake of community energy in the UK such as lack of awareness of opportunities, reluctance by developers to work in partnership with communities and lack of resources and technical expertise for communities to assess the feasibility of potential projects. It was suggested that Government could address these issues by introducing a community right to bid/buy in the Localism Act and providing more targeted financial and practical support to communities, for example through the promotion of a community/commercial developer partnership model.

Some others, mainly individuals and some developers considered community ownership to not always be appropriate or desired and should not be presented as the ‘silver bullet’ for gaining local acceptance of onshore wind. In response to question 15, some individuals said that they would be interested in investing in a community wind project in their area provided it was in the right location, but the majority, who were not supportive of wind, said that they would not wish to be involved.

## Enhancing Local Economic Opportunities

We asked:

Local economic impact	
Question for Developers and Communities	
Q16.	<b>How much of development, construction and operational costs for your projects are expended locally? Is there potential to increase this? What would the impact be?</b>
Q17.	<b>Have you or your business benefited economically from the development of a windfarm in your area? Can you see greater scope for local economic involvement in a windfarm project?</b>

<sup>24</sup> ‘A Report on Community Renewable Energy in Scotland’ published in May 2012.

## ONSHORE WIND CALL FOR EVIDENCE – GOVERNMENT RESPONSE

We received the least number of responses to these questions. Developers provided a lot of information about direct and indirect local spend for projects and a few individuals gave examples of how windfarms had benefitted business and infrastructure in their area, for example through meet the developer events and locally placed contracts. Several developers made the point that local economic benefit was largely limited to the construction phase of a wind project and in order to enhance local spend further, the UK supply chain would need to be developed. It was also highlighted that there was a need for more local skills training around turbine installation – which is subject to stringent health and safety standards.

Many of the responses to this section from individuals questioned the benefits of onshore wind to local economies and considered that long term negative impacts, for example on tourism and property values, to outweigh any short term opportunities that might arise from the construction of the windfarm.

## Annex B – List of Respondents: Groups and Organisations: Part A

List of Groups and Organisations
Abundance Generation
Acciona Energy UK Limited
Action with Communities in Rural England (ACRE)
AES Wind Generation Ltd
Airvolution Energy Limited (AEL)
Anglesey Against Wind Turbines (AAWT)
Antrim Borough Council
Argyll and Bute Council
ATAG
Baildon Friends of the Earth
Banks Renewables Ltd
Baywind Energy Co-operative Ltd
Belstead Parish Council (ADD)
Boarhills and Dunino Community Council

List of Groups and Organisations
Bolton Parish Council
Bond Pearce LLP
Bozeat and Lavendon Oppose the Turbines (BLOT) and CPRE Northamptonshire
Brechfa Forest Tourism Cluster Association
Brighton Energy Co-Operative
British Horse Society – Bedfordshire committee
Bro Dyfi Community Renewables Ltd
Bryson Energy
BT
Burnaston and Etwall Residents Against Turbine Exploitation (BERATE)
Burnham-on-Crouch Chamber of Commerce
Bwlch & Peniarth Residents Against Windfarm Developments (BRAWD)
Campaign to Protect Rural England (CPRE)
Carbon Free Developments Ltd
Carno Community Trust Fund/Cronfa Ymddiriedolaeth
Carsphairn Renewable Energy Fund Ltd (CREF Ltd)

### List of Groups and Organisations

Centre for International Business and Sustainability, London Metropolitan Business School

Centrica

Chartered Institute of Environmental Health (CIEH) Northern Ireland

Colne Area Committee (Local Planning)

Communities Against Turbines Scotland (CATS)

Community Energy Plus

Community Energy Scotland

Community Foundation Network

Community Places

Conservation of Upland Powys/Cadwriaeth Ucheldir Powys

Consumer Focus

Co-operatives UK

Copeland Borough Council

Corilois Energy

Cornwall Council <sup>25</sup>

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<sup>25</sup> Two separate responses received.

List of Groups and Organisations
CPRE Oswestry Branch
Craigengillan Estate
Craven Action for Renewable Energy (CARE)
Draughton Parish Council
Drayton Parslow Parish Council
Dunbar Community Energy Company
E.ON
East Lindsey District Council
Eastbourne & District Friends of the Earth
Ecotricity
EDF Energy
Eggleston Parish Council
Eneco Wind UK
Energiekontor UK Ltd
Energy UK
Energy4All Ltd



List of Groups and Organisations
Facilitating Change UK Ltd
Falck Renewables Wind Ltd
Force 9 Energy
Fowey Renewable Energy Enterprise (FREE)
Fred Olsen Renewables Limited
Friends of Eden, Lakeland and Lunesdale Scenery (FELLS)
Friends of Rural Cumbria's Environment
Friends of the Earth
Galloway Landscape and Renewable Energy
GeoCapita
Glencairn Community Council
Glenorchy and Innishail
Good Energy
Great Paxton Parish Council
Infinergy

List of Groups and Organisations
Infinis <sup>26</sup>
Invicta
Joseph Rowntree Foundation
Kelburn Wind Farm Community Initiative Limited
Kettering Borough Council
Kirklees Council
Knockin Parish Council
KWTPG
Lauderdale Preservation Group and Lauderdale Community Council
Levington and Stratton Hall Parish Council
Lidgett and Beyond <sup>27</sup>
Lincolnshire County Council
Llandrinio & Arddleen Community Council
Llandysilio Community Council
Llansanffraid Local Action Group (LAG)

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<sup>26</sup> Two separate responses received.

<sup>27</sup> Two separate responses received.

List of Groups and Organisations
Llwybrau Bro Cader/Pencader and District Walks and Trails Group
MAP – Montgomeryshire Against Pylons <sup>28</sup>
Marsh Road Residents & Members of SIEGE
Melchbourne and Yelden Parish Council
Muirhall Energy Ltd
New Marske Residents Association and member of CPRE
Newton Longville Parish Council
Northern Ireland Renewables Industry Group (NIRIG)
Northern Ireland Environment Link (NIEL)
Northern Ireland Local Government Association (NILGA)
Northumberland County Council
Number of anti-wind groups <sup>29</sup>
Origin Energy CIC
Partnerships for Renewables Development Company Ltd

<sup>28</sup> Four separate responses received.

<sup>29</sup> Response from number of anti-groups: Conservation of Upland Powys; STOP Windfarms and Pylons; CPRE Shropshire; Montgomeryshire Against Windfarms and Pylons; Rhiwcynon Against Pylons; Action Group; Mochdre Action Group; Llansantffraid Action Group; GALAR; Abergorlech Llansawel and Rhydcymerau; Shropshire North Against Pylons; Mountain Society; Country Guardian; Artists Against Windfarms; Rainbow Trails Project; Llangadfan and Trefeglwys Against Power Plans; Brechfa Forest Energy Action Group.

List of Groups and Organisations
Peasenhall Parish Council
Pegasus Group
Pennine Landscape Action
Portpatrick Community Council
Pro Wind Alliance <sup>30</sup>
REAP
REG Windpower
Regen SW
Regeneco
RENERCO Renewable Energy Concepts AG
Renewable UK
RES UK & Ireland <sup>31</sup>
Residents Against Great Edgre Turbine Development (RAGED)
RidgeWind
Roseland Community Energy Trust Wind Farm CIC

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<sup>30</sup> Two separate responses received.

<sup>31</sup> Two separate responses received.

List of Groups and Organisations
RSPB
RWE NPower Renewables
Scottish Community Foundation
ScottishPower
Shropshire North Against Pylons <sup>32</sup>
Soulbury Parish Council
South Brent Community Energy Society
SSE
St Mary the Virgin Church Burnham on Crouch
Statkraft
Stewkley Parish Council (SPC)
Stonewall Hill Conservation Group
Stop Dorcas Lane Turbines (SDLT) <sup>33</sup>
Stop Molesworth Wind Farm Action Group
Stop Subsidised Windfarms Around Tamworth (SSWAT)

<sup>32</sup> Three separate responses received.

<sup>33</sup> 15 separate responses received.

List of Groups and Organisations
Stop Turbines Over Clare (STOC)
Strabane District Council and Omagh District Council
The Co-operative Group
The Fermanagh Trust
The Forest Hills Alliance Against Windfarms
The Resilience Centre
Totnes Renewable Energy SOCIety (TRESOC)
Trustees F.J Wallis 1994 Settlement
Udny Community Wind Turbine Co Ltd
Ulster Farmers' Union
University of East Anglia
Vattenfall
Vento Ludens
Villages of the Cliff against Turbines (VOCAT)
Watford Parish Council
Welsh Government

**List of Groups and Organisations**

West Coast Energy

West Cornwall Community Renewables

Western University, Canada (formerly the University of Western Ontario)

Wiltshire Community Wind Energy

Windbyte.co.uk

Woodborough Park

WWF



# Annex C – Stakeholder Advisory Group: Part A

## Terms of Reference

### Aim of stakeholder advisory group

The aim of the stakeholder advisory group will be to assist DECC to publicise the onshore wind call for evidence Part A – community engagement and benefits, analyse the responses, and recommend practical actions for Government and stakeholders on community engagement and benefits for inclusion in the interim and final reports.

### Key Activities

Key activities will include:

- Assisting DECC to raise awareness of/and encourage responses to the call for evidence amongst UK and international stakeholders including community organisations and local government groups, environmental groups, the onshore wind industry, and academia;
- Helping to analyse the responses to the call for evidence;
- Providing advice/putting forward proposals for possible actions and measures by Government and/or industry and other stakeholders aimed at:
  - addressing barriers to community engagement (Including best practice on local consultation);
  - maximising participation by local businesses in the economic supply chain for wind projects;
  - developing innovative ways to reward host communities, such as offsetting electricity bills, and development of legacy schemes (such as energy efficiency programmes or environmental enhancement schemes) which provide wider environmental and social benefits;
  - Facilitating community ownership of onshore wind projects.

- Providing input into the interim and final reports on community engagement and benefits including specific practical advice on how to take forward any recommended actions which will need to be delivered by stakeholders outside of Government.

### Key Activities

DECC chairs meetings and provides the secretariat for the Group.

Representatives will be drawn initially from the following organisations:

- Campaign to Protect Rural England
- Centre of Sustainable Energy
- Community Energy Scotland
- Consumer Focus
- Cornwall Council
- SSE
- Regen SW
- Renewable UK
- RES
- Royal Society for the Protection of Birds
- World Wildlife Fund
- Department of Communities and Local Government (observer)

Additional expertise may be commissioned on an ad hoc basis from other organisations as required.

## Annex D – Cost Data Comparisons and Load Factors: Part B

Table D1: Renewables Obligation Banding Review Levelised Costs (£2012)

Onshore wind > 5MW			Commissioning Year			
			2013/14	2014/15	2015/16	2016/17
Pre-development and capital costs		High	2,000	2,000	1,900	1,900
	£/kW	Median	1,600	1,600	1,600	1,500
		Low	1,200	1,200	1,200	1,200
Fixed opex (Years 1-5)	£/MW/y	Median	14,700	14,700	14,700	14,700
Fixed opex (Years 6+)	£/MW/y	Median	34,600	34,600	34,600	34,600
Variable opex	£/MWh	Median	3	3	3	3
Insurance	£/MW/y	Median	6,500	6,500	6,500	6,500
Connection and UoS charges	£/MW/y	Median	10,200	10,200	10,300	10,300

**Table D2: Call for Evidence levelised costs (£2012)**

Onshore wind > 5MW			Commissioning Year			
			2013/14	2014/15	2015/16	2016/17
Pre-development and capital costs		High	2,100	2,100	2,100	2,000
	£/kW	Median	1,600	1,600	1,600	1,600
		Low	1,200	1,200	1,200	1,200
Fixed opex	£/MW/y	Median	37,000	37,000	37,000	37,000
Variable opex	£/MWh	Median	5	5	5	5
Insurance	£/MW/y	Median	3,000	3,000	3,000	3,000
Connection and UoS charges	£/MW/y	Median	4,500	4,500	4,500	4,500

**Table D3: Assumed load factors for large scale onshore wind over the banding review period (2013-2017)**

		ROBR assumption – 13 year average	Updated assumption – 14 year average
Onshore wind > 5MW	England and Wales	25.5%	25.5%
	Scotland	28.7%	28.6%
	Northern Ireland	33.3%	33.0%

## ONSHORE WIND CALL FOR EVIDENCE – GOVERNMENT RESPONSE

Source: All new build and existing capacity assumed to have net load factors as above, based on historic trends as published in DUKES<sup>34</sup>. The RO banding review included data between 1998 and 2010. Since then load factor assumptions were published for 2011 in Dukes.

The fixed operating costs received as part of the call for evidence were provided as averages over the lifetime of a project. These are not directly comparable to the 1-5 year and 6+ year fixed costs presented above in the RO banding review table. For comparison, the average fixed cost used for the RO banding review over the lifetime of the project is £30,500 in commissioning year 2013/14. This is slightly lower than the data received as part of the call for evidence.

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<sup>34</sup> [https://restats.decc.gov.uk/cms/historic-regional-statistics/#load\\_factorsv](https://restats.decc.gov.uk/cms/historic-regional-statistics/#load_factorsv)

# Annex E – Detailed Summary of Responses: Part B

This section provides a summary of qualitative responses received for Part B.

## Pre-development costs

We asked:

Question	
Q1.	<b>What do you consider the key drivers to be behind pre-development costs?</b>

DECC received 20 unique responses. Planning costs and hurdles were a key driver of the costs for a large majority of the respondents, including appeal costs. Other concerns for the majority of respondents were aviation mitigation costs, grid connection costs, and costs related to the compliance to environmental requirements.

We asked:

Question	
Q2.	<b>What are your expectations of the likely cost changes in pre-development costs over the banding review period (2013 to 2017)?</b>

DECC received 16 unique responses. The majority of respondents indicated that they expect pre-development costs to rise, while a small minority expect these costs to remain flat. The majority of responses point to increased planning hurdles as a key driver as well as community engagement costs and legal costs. Furthermore, a number of respondents expect it to become more difficult to obtain suitable sites with viable grid access. Additional qualitative responses received confirmed the above. One local authority commented on the fact that planning applications put costs on communities. One respondent suggested that the cost related to visual impacts of turbines should be taken into account during the planning process.

We asked:

Question	
<b>Q3.</b>	<b>What do you consider the key drivers to be behind construction costs?</b>

DECC received 19 unique responses. Three elements of construction costs were noted as the key cost drivers, namely; steel costs, exchange rates, and turbine costs. A couple of the respondents noted that most manufacturing takes place outside of the UK, which drives up prices due to transportation costs and exposes suppliers to volatility in exchange rates. Two respondents specifically mentioned the uncertainty around the euro/pound sterling exchange rate.

We asked:

Question	
<b>Q4.</b>	<b>What are your expectations of the likely cost changes in construction costs over the banding review period (2013 to 2017)?</b>

DECC received 16 unique responses. The majority of respondents expect construction costs to increase or remain stable. Among those who expect cost rises, a key concern is the price of steel.

Mixed evidence was provided by four respondents on costs of turbines. Some respondents referenced falling turbine costs while others pointed to an increase in these costs.

Four respondents commented on expected technological advances noting that they only expect marginal advancements. A returning concern amongst them was that planning barriers prevent the use of more efficient designs that are available in other countries and the achievement of economies of scale. One respondent commented that even if cost reductions take place due to innovation and competition, these will be offset by higher steel prices and exchange rate fluctuations.

In addition, respondents expect higher costs as the availability of good sites diminishes. Current reductions in costs are believed to be driven by construction firms' willingness to accept lower margins during a recession.



We asked:

Question	
<b>Q5.</b>	<b>What do you consider the key drivers to be behind operational costs?</b>

DECC received 19 unique responses. The majority of responses mentioned turbine Operations and Maintenance (O&M), business rates and labour costs as the key cost drivers. A smaller proportion of the respondents mentioned fuel costs and aviation mitigation as a substantial cost driver.

We asked:

Question	
<b>Q6.</b>	<b>What are your expectations of the likely cost changes in operational costs over the banding review period (2013 to 2017)?</b>

DECC received 14 unique responses. Most of the respondents expect operational costs to increase, with some expecting them to be flat lined. The expected increase ranges from an increase by RPI yearly to an increase of up to 10% per annum expected by three respondents.

The main elements that drive this expected cost increase are labour costs, fuel costs and maintenance costs. The latter includes an expected increase in the cost of post-warranty O&M turbine costs as well as of spare parts.

The qualitative responses received in addition to the questionnaire confirmed the above. Five respondents expect costs to rise and be higher than DECC's assumed costs under the RO Banding Review, and one did not see evidence of falling costs. Cost rises according to these six responses are driven by increases of the prices of O&M costs after the first five years as more turbines come out of warranty, and by labour costs which are high partly due to the lack of skilled personnel.

We asked:

Question	
<b>Q7.</b>	<b>What are your expectations of the likely cost changes in financing costs over the banding review period (2013 to 2017)?</b>

DECC received 18 unique responses. The majority of respondents indicated that they expected financing costs to rise. It was indicated that while base rates are currently low, developers have not experienced lower borrowing costs. Additionally, respondents indicate that there is less long-term debt financing available, so they expect to face re-financing costs after 7-10 years rather than 15. The expectations of these respondents ranged from an increase in the cost of finance over the banding review period of 0.5% to 5%.

Additional qualitative responses confirmed the above. Key concerns amongst these respondents included limited loan availabilities due to the current macroeconomic situation and future uncertainties, with explicit references made to a risk premium on debt paid in Northern Ireland as well as the difficulties faced by independent generators to obtain purchase power agreement's (PPA) and thereby financing. For those firms that do still obtain PPA's, respondents comment that they are able to capture a smaller value of the wholesale price than in past years.

Furthermore, two respondents commented on the increasing amount of wind energy that is curtailed. This occurs when wind plants are required to or choose to reduce their generation output due to factors such as congestion on the transmission grid. This reduces the output of wind generators and thus decreases their expected revenues.

### Policy

It was commented upon several times that a stable and predictable policy environment is necessary to stimulate investment, with respondents referencing DECC's commitment to evidence based policy making.

## Annex F – Respondents: Part B

Respondent
AEL
Banks Group
Broadview
Ecotricity
ELDC
ESB Wind Development
GDF Suez
Good Energy
IESIS
Infinergy
Infinis
Nirig
REG Windpower
Regeneco
RES
RUK
Scottishpower
SSE
UFU
West Coast Energy

