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Our ref: EIR 12/0361

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Dear

**RENEWABLES OBLIGATION: CALCULATIONS OF FINANCIAL RETURNS FROM
ONSHORE WIND FARMS**

Thank you for your request for information about *"the calculations of financial returns from onshore wind farms used to calculate the necessity and appropriate level of Renewable Obligation Certificates and also, if it is not apparent from the information provided, from where the input data originated"*, which we received by email on 5 March. Your request has been considered under the Environmental Information Regulations 2004.

I enclose a copy of the information you requested in a spreadsheet at Annex 1.

It shows the calculations from the in-house DECC analysis for the Renewables Obligation banding review consultation of the different levels of ROC support required for investment to go ahead at different cost levels.

Onshore wind costs vary from project to project across a series of different parameters, including capital costs, operating costs and load factor (which depends on average wind speeds and reliability). These variations in different factors may act together, extending the overall cost differences between sites, or opposingly, reducing the overall cost differences. The analytical approach varies the capital cost from low to high levels, whilst all other parameters are kept constant at central values. The variation in capital costs is assumed to proxy the variation of overall costs between projects. Inputting these different capital cost levels into the investment decision model attached produces a range of 'ROCs required' for investment to go ahead, which it is assumed is representative of the ranges of ROCs required for new onshore wind projects and onshore wind in the planning pipeline.

The spreadsheet shows the range of ROCs required for onshore wind projects in England & Wales in 2014/15 is 0.6-1.6 ROCs/MWh; for projects in Scotland 0.3-1.2 ROCs/MWh; and 0-0.8 ROCs/MWh in Northern Ireland. These results are set out in the Impact Assessment accompanying the RO banding review consultation, available at:
http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx.

The underlying source data for onshore wind costs is drawn from Arup (2011),¹ available at the same web address. Electricity wholesale prices are sourced from Pöyry consultants modelling for the banding review consultation. It is assumed that when investors look at projects such as these, they have only five years of foresight of wholesale prices, after which they assume them to be flat. This reflects the known approach of some investors – others may differ. ROC values are set at the target ROC value when setting the Renewables Obligation each year, sometimes known as the 'long-term value of a ROC' (the value in given years may turn out to be higher or lower than this). Full details of the assumptions used are set out in Arup (2011), the Impact Assessment and Annex B of the Renewables Obligation banding review consultation.

The rationale for the proposal in the consultation to set the onshore wind band at 0.9 ROCs/MWh is set out in Chapter 3 of the consultation document, including the consideration of 'costs and incomes' as described above.

The Government will respond to the consultation on the RO banding review in Spring 2012.

If you are unhappy with the way the authority has handled your request, you may ask for an internal review. Please contact the Information Rights Unit (foi@decc.gsi.gov.uk) who will arrange an internal review of your case.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF.

Yours sincerely

Renewables Obligation Team

¹ Arup (2011), *Review of the generation costs and deployment potential of renewable electricity technologies in the UK*

