

## Overview of UK Offshore Wind Market

The UK benefits from ideal conditions for offshore wind farms, with strong wind and relatively shallow waters around its coast line.

There is currently more installed offshore wind capacity in the UK than the rest of the world put together. Taking into account the pipeline of projects under constructed and to be constructed, this is likely to remain the case until 2020<sup>1</sup>.

However, offshore wind farms are expensive to construct by comparison to other forms of generation (with capital costs approximately 30 - 50% higher than those associated with onshore wind projects) and there is ongoing debate as to whether the Government subsidies required in order to attract investment can be justified or sustained, notwithstanding improvements in technology and reductions in costs.

The Crown Estate is the body responsible for granting leases over the seabed in the UK and it has done so through a series of "Rounds". Round 1 resulted in leases being awarded in respect of 18 sites at 13 locations in April 2001. Round 1 sites were limited to a maximum of 30 turbines.

Following the success of Round 1, Round 2 sites (which were awarded in 2003) and Round 3 sites (awarded in 2010) were larger, requiring more powerful turbines and located further from the shore. The terms of the leases granted at each of the subsequent Rounds were varied to take into account issues which had been identified at the previous Rounds.

The growth in scale of more recent projects has encouraged a number of the utilities to form consortia to bid for, build and operate such projects. It is not currently clear to what extent the utilities will continue to fund offshore projects in the UK and there has been a considerable amount of secondary market activity in interests in offshore wind projects.

Most of the UK utilities are foreign-owned and have other commitments outside of the UK. In particular, the German utilities such as RWE and E.ON have divided loyalties following the German government's decision to withdraw from nuclear power following Fukushima, and the resulting drive to increase renewable energy generation capacity in Germany. Similarly, following the recent presidential elections in France, there is also some speculation that the French utilities will come under pressure to devote more attention to their domestic markets.

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<sup>1</sup> Source: Renewable UK

The total amount of funding required to build out Round 3 projects has been estimated to be in excess of £100bn and given the other concerns outlined above, there has been a desire on the part of a number of lease holders, to reduce their exposure to the significant capital expenditure costs associated with their projects. Much of the interest on the buy-side has come from overseas and includes both industry participants (such as utilities, contractors and supply chain manufacturers) and financial investors.

An equity investment in an offshore project may represent a strategic move for construction companies and turbine manufacturers looking to secure lucrative construction contracts and turbine supply contracts respectively in relation to that project.

A number of financial investors regard UK offshore wind as an opportunity to buy into an investment with a stable, long term, government subsidised return. In contrast to many solar and onshore wind generating projects in Europe, which tend to be too small to attract investment from major pension and infrastructure funds, the scale of investment required for an offshore project means that they may appeal to such investors.

The UK government needs to ensure that its subsidy regime is attractive when compared with the regimes of other EU states in order to ensure ongoing investment in UK renewable projects and to meet its overall target of achieving a 15% renewable energy target for the UK by 2020.

## **The UK Subsidy Regime for Renewable Electricity Generation**

The main support mechanisms for renewable energy projects in the UK are:

- the Renewables Obligation;
- the Feed-in Tariffs scheme; and
- the Renewable Heat Incentive.

For the purposes of offshore wind projects, the Renewables Obligation is the relevant subsidy regime. There follows an outline of the terms and applicability of each of the Renewables Obligation and the proposals which have recently been made for its replacement.

### **The Renewables Obligation**

The Renewables Obligation (the “RO”) came into force in England and Wales in 2002<sup>2</sup> and is currently the main support mechanism for renewable electricity projects in the UK. The RO will no longer be available to new projects which are accredited after 31 March 2017.

The RO places a mandatory requirement on UK electricity suppliers to source an increasing proportion of electricity they supply to customers from renewable sources.

Ofgem<sup>3</sup> issues Renewables Obligation Certificates (“ROCs”) to operators of accredited renewable generating stations for every megawatt hour (“MWh”) of eligible renewable electricity they generate. Generators sell their

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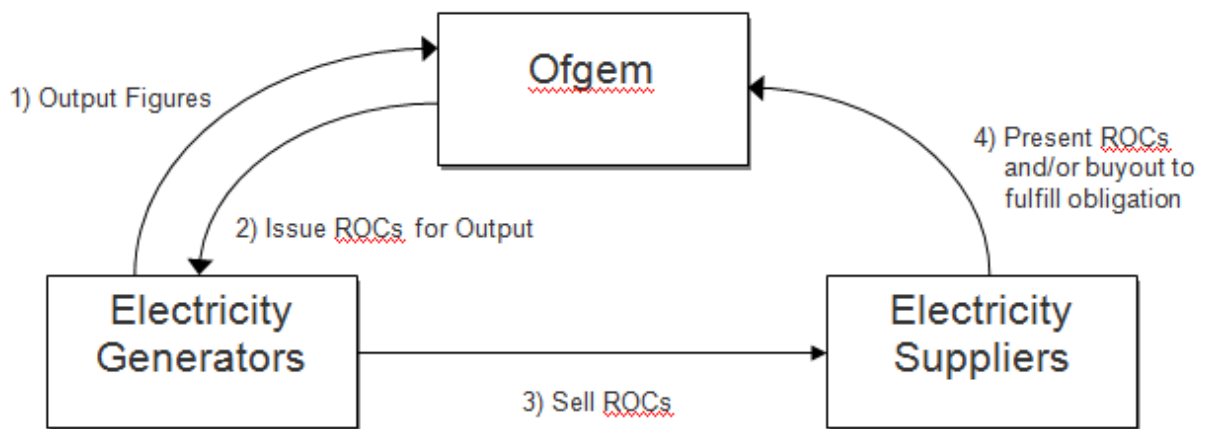
<sup>2</sup> The RO came into force in 2005 in Scotland.

ROCs to operators, which allows them to receive a premium in addition to the wholesale electricity price. Operators can then trade the ROCs with other parties, with the ROCs ultimately being used by suppliers to demonstrate to Ofgem that they have met their Renewables Obligation.

Those suppliers who fail to comply with their Renewables Obligation are required to pay a penalty for the shortfall in ROCs which they present. This penalty is known as the buy-out price and it is paid into what is known as the buy-out fund. For the year 2012/2013 the buy-out price is £40.71 per ROC<sup>4</sup>. The price is announced each year by Ofgem and is increased to take account of changes in the Retail Prices Index.

At the end of each year, the proceeds of the buy-out fund are paid out to those suppliers who presented ROCs on a pro rata basis (after having deducted administration costs).

In circumstances where there is a ‘relevant shortfall’ in the buy-out fund as a result of one or more suppliers not being able to meet their obligations, suppliers that have met their obligation are required to make additional payments to make up the shortfall. This is known as “mutualisation” and is subject to a maximum level which is determined on an annual basis (known as the “mutualisation ceiling”)<sup>5</sup>.



## What is the Level of Support Under the RO Regime?

The level of support (i.e. the number of ROCs awarded) will vary according to the form of technology in respect of which it is being sought. At present, onshore wind generation attracts 1 ROC/MWh and offshore wind generation attracts 2 ROCs/MWh (reducing to 1.5 ROCs/MWh from 2014/2015).

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<sup>3</sup> Ofgem is the Office of Gas and Electricity Markets. It is governed by the Authority, which determines strategy, sets policy priorities and takes decisions on a range of matters, including price controls and enforcement pursuant to the Gas Act 1986; the Electricity Act 1989; the Utilities Act 2000; the Competition Act 1998; and the Enterprise Act 2002.

<sup>4</sup> Source: DECC.

<sup>5</sup> The mutualisation ceiling for the 2012-13 Obligation will be £245,212,161.70 in England and Wales, and £24,521,216.16 in Scotland (source Ofgem).

The Government is entitled to review the applicable banding levels every four years and does so to ensure that as technology improves and costs come down within the various sectors, the levels of support are reduced accordingly.

Changes to the banding levels do not apply in respect of existing generating stations accredited before the date on which the change in banding is due to take place. This policy, known as “grandfathering”, ensures a constant level of support for the full lifetime of a project’s eligibility for the RO<sup>6</sup>.

## **How is the Value of a ROC Determined?**

ROCs are issued in respect of generation, and are tradeable commodities which have no fixed price. The amount an electricity supplier pays for a ROC is decided by agreement between the supplier and generator.

## **The Replacement of the RO**

The RO will close to new generation on 31 March 2017<sup>7</sup>, although any projects which were accredited under the RO will continue to receive support on for the full lifetime of the project. The RO will cease altogether with in 2037.

The UK Government published the draft Energy Bill on 22 May 2012, providing more detail on how the Government’s Energy Market Reform process (commonly known as the “EMR”) would be implemented. One of the key changes is the proposed replacement of the RO with a Contract for Differences (“CfD”) mechanism. The CfD will support low carbon technologies including both renewable and nuclear energy generation.

The CfD regime will come into operation from the middle of 2014, so there will be a period of overlap with the existing RO. New generation coming on line between the commencement of the CfD regime and 31 March 2017 (when the RO closes to new generation) will be able to choose between the RO and the CfD.

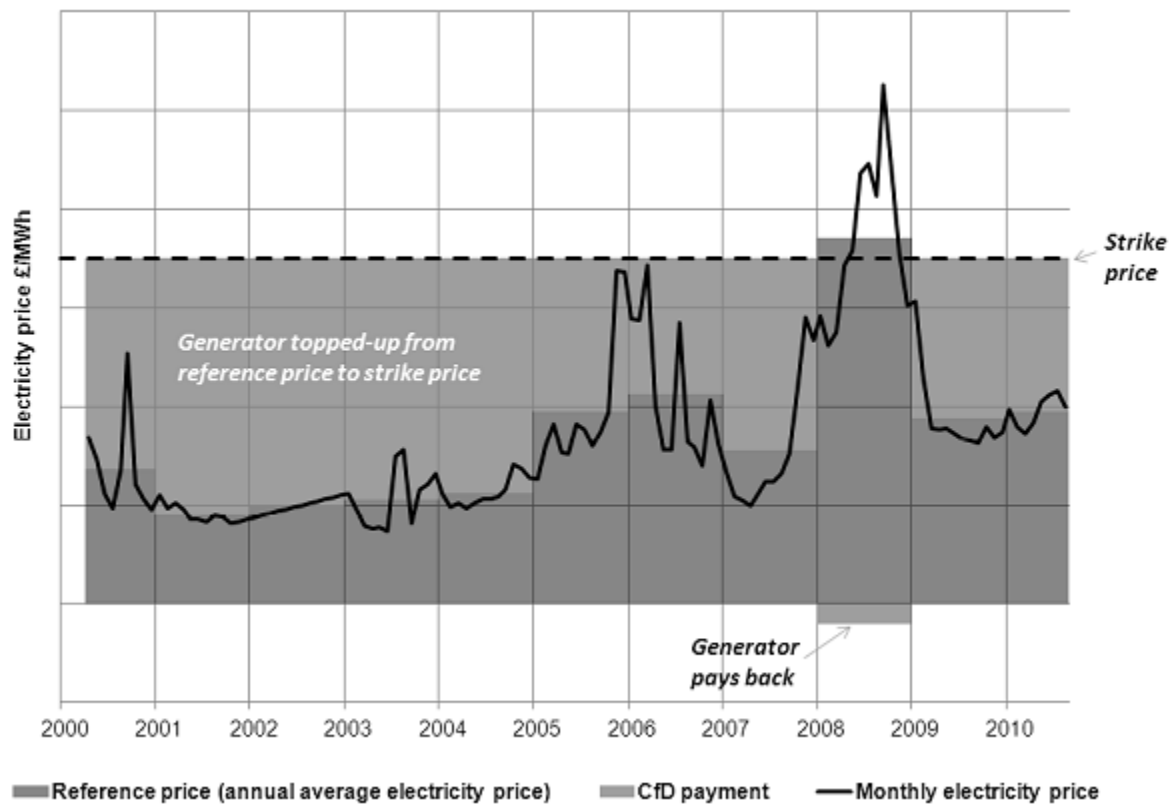
The aim of the CfD is to provide stable revenues for generators at a fixed price level known as the “strike price,” establishing certainty from the point of view of potential investors in generating projects. Generators will continue to receive revenue from selling their electricity into the market in the ordinary way. If the wholesale electricity market price is lower than the strike price they will receive an extra payment equal to the difference. Conversely, if the wholesale electricity market price is higher than the strike price, the generator must pay back the difference.

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<sup>6</sup> Grandfathering does not, currently, apply to all technologies such as bioliquids and standard co-firing.

<sup>7</sup> Although there is some flexibility around is date where projects are delayed for reasons beyond their control.

The diagram below illustrates how the CfD will operate<sup>8</sup>.



National Grid will act as the System Operator and will be responsible for administering the CfD mechanism. Ofgem will oversee the performance of National Grid in its capacity as System Operator. There will be no Government guarantee in respect of the CfD payment obligations.

The strike price will vary according to the particular technology (as is currently the case under the RO). The Government will decide upon the initial strike prices in the latter part of 2013 and they will be subject to review every five years. Nuclear generators will negotiate their strike price directly with the Government.

The final version of the CfD operational framework and the detailed terms of the CfD is expected to be published in the latter half of 2012. Following further consultation the Energy Bill is likely to be debated in Parliament throughout 2013 and should receive Royal Assent towards the end of that year.

<sup>8</sup> Source: HM Government Draft Energy Bill, 22 May 2012.