



Renewable Energy Power Purchase Agreements

Background

Quayle Munro is a financial advisor, actively engaged on renewable energy projects, most notably in the onshore wind market. We have advised on a number of transactions which have reached financial close in the last year, including:

- Bilsthorpe Wind Farm - Nottinghamshire (10.25MW);
- Høg Jæren EnergiPark – Norway (74MW);
- Carraig Gheal Wind Farm – Argyll (46 MW);
- Wadlow Farm Wind Farm – Cambridgeshire (26MW).

Our role as financial advisers gives us exposure to the PPA market and we regularly review different Power Purchase Agreement (“PPA”) offerings available. One of the key requirements for project financing an energy project is that the project has a bankable PPA, which typically needs to be at least as long as the debt tenor. We regularly undertake PPA tender processes for clients with onshore wind projects since the interaction between the PPA and the funding terms is a key area from which to drive value from a project.

This paper considers some of the issues and themes identified in our recent work and uses two specific tenders undertaken in August 2010 and more recently in February 2012 from which to draw examples. We thought it would be useful to pick two distinct points in time and chart movement in PPA’s/funder attitudes over that period, rather than dealing in generalities. All our other work in the area, including the numerous other funding processes we’ve worked on supports the analysis derived from looking at the two specific examples. Due to the confidential nature of these tenders, discussion here is limited to a qualitative assessment. In each case, information was obtained from potential PPA counterparties through a combination of written tender responses, subsequent clarifications and follow up discussions had with each respondent.

The two tenders referred to in this paper are:

- **August 2010** – We received terms from seven of the potential off-takers that were initially approached. All the terms received were for 15 year PPAs with indexing brown power¹ floors.
- **February 2012** – We received responses from six of the potential off-takers. Of these, only one provided a solution that would be acceptable to both senior funders and equity investors. One withdrew from the market to undertake an internal review of expected exposure to ROCs (as significant amounts of offshore wind is shortly to come online), and the remaining four offered unbankable positions - one in relation to imbalance risk and three due to issues related to the floor price for brown power. These points are discussed in more detail below.

¹ The brown power price refers to the price received for electricity and excludes the price received for any associated green benefits such as ROCs and LECs.



Issues Identified

Both senior funders and equity investors understand and are able to structure projects within the existing ROC regime. This has not been without issue, such as finding solutions for projects where the ROC accreditation date could fall within the existing or announced re-banding level, but has been resolvable. More challenging however for equity investors is decisions on projects in development. With continuing lack of clarity on the level of ROCs going forward beyond April 2014 and large gaps in understanding of the financial implications of the Contract for Difference, investors face increased uncertainty over investment return. When taken together with the limited PPA market this makes ongoing development investment decisions difficult.

We have noted the following issues in reviewing PPA offers received from potential off-takers. In each of these cases the off-takers' positions worsened from the point of view of the generator in the 18 month period between the two PPA tenders.

Imbalance Risk

In recent years it has been the normal market position that the off-taker will accept the imbalance risk associated with the intermittency of wind generation. In the more recent tender process an off-taker noted that it was unable to maintain this position and sought to pass this risk to the generator as part of their PPA offering. This was to be achieved through the off-taker having the right to an annual review of the discount applied to the brown power market price in respect of imbalance causing price uncertainty. The contract length and unknowns including both carbon floor pricing and the introduction of the Electricity Market Reform ("EMR"), were specifically cited as reasons for this change in position. The potential alteration of use of system prices and therefore the cost of imbalance was highlighted as the concern.

This poses significant problems for senior funders and shareholders since revenues are unable to be forecast relative to market prices with any certainty.

Floor Price

To obtain project financing for a wind farm, downside protection against changes in power prices is important to senior funders. This is generally provided via a floor on the brown power price or via an all-in floor on total revenues. An indexing floor, i.e. that maintains its real value throughout the life of the PPA and is not eroded by inflation, has been a requirement common to most senior funders.

In addition to providing downside protection, an inflating floor price also enables projects to be geared more highly since senior funders will view this element of the revenue as more stable than that not covered by the floor.

In 2010 all of the responders offered 15 year brown power floors with four of them also offering all-in floor prices. In the tender process earlier this year we observed all providers revising their position on floor prices with none offering an all-in floor. Some moved to a floor price which does not index, one offered a decreasing nominal amount, one no longer offered a floor price for the full PPA term and other providers no longer supported a floor price based offering. This significantly impacts on funding onshore wind projects and for some senior funders makes the PPA unbankable. In the months since the tender a number of senior funders have signalled that they are prepared to structure deals without a



PPA floor price, however the terms are less favourable. Examples of the consequences of this position are:

- A reduction in gearing since sizing mechanisms often require higher cover ratios for elements of the revenue stream not covered by the floor; and
- The introduction of a cash sweep to allow the senior funder to participate (through earlier repayment) in the upside created by high wind yields or high prices, in order to compensate for the absence of the downside protection provided by the floor price. This impairs the ability of the borrower to hedge its debt costs.

Equity

To date there has been sufficient availability of equity capital for onshore wind projects. However as returns from these projects are driven down by both funders' pricing and structuring requirements together with increasing demand for equity as a result of reduced gearing, projects become more expensive from an equity perspective and therefore less viable.

In addition to PPA providers' position changing in respect of floor price we also noted changes from the previous offer in respect of changes in law and ROC off-take. Notes on this follow.

Change in Law

Until recently change in law provisions in PPAs have been dealt with through the concept that under change in law, both parties would assess the impact of the change and amend the PPA accordingly in order to maintain the balance of risk and reward for both parties. This is a key concept in the PPA in order to provide revenue stability and a guaranteed off-take in the event of change in law.

Our recent tender process identified that this position is now changing under the backdrop of uncertainty in the markets caused by EMR and ROC rebanding. Our recent PPA tender exercise identified one instance where the change in law provision was amended such that it could change, or even remove the floor price on brown power and vary capture rates on ROCs. This position is unacceptable to both senior funders and equity providers as it removes any security over prospects of debt repayment/equity returns.

ROC and LEC Purchase

A PPA provides the generator with a route to market for the power it generates and the renewable benefits to which it is entitled. This is achieved through the PPA counterparty having the right and the obligation to purchase all power and renewable benefits generated.

In the recent PPA tender, one offer received was for only 50% of the ROCs, rather than 100% of them. In effect the off-taker was only willing to purchase half of the ROCs, albeit it would assist the generator finding a buyer for the other half. The reason given by the off-taker for this approach was that by purchasing 100% of the ROCs, it might be deemed to share in the risks and rewards of ownership of the wind farm and may therefore have to consolidate it into its accounts.

The recent tender also identified an instance where the off-taker was unable to commit to giving a price for LECs and would only commit to passing on any benefit received for them. In effect, the off-taker has reduced confidence over the future value and market appetite for LECs.



Both of these positions have significant implications on the ability to forecast revenues. Given that senior funders consider ROC revenue to be among the most secure revenue streams this also impacts significantly on debt sizing, and hence gearing.

Conclusions

We have seen significant adverse changes in the PPA market between 2010 and 2012, to the extent that projects are being severely impacted by the very limited number of credible PPA players who are able to offer bankable PPAs. Uncertainty over EMR and ROC rebanding appears to have a significant role in this, with off-takers either unwilling to commit to long term positions on floors or change in law, or in the more extreme example unwilling to offer terms at all until there is more clarity in the market.