Don't ROC the boat





By publishing its final banding for Renewable Obligation Certificates, the government has given greater certainty to solar developers. But some questions over project viability remain

n December 2012 the UK government published its response to the consultation on the Renewables Obligation banding review. This will result in the level of Renewables Obligation (RO) support being cut for solar projects commissioned after 31 March 2013, with further cuts to follow.

Although the cuts will not be as severe as initially proposed, the reduction from the current 2 Renewable Obligation Certificates per megawatt hour will still be more severe than many in the solar industry had been hoping for and will have an effect on the number of viable projects. At the time of writing, we are already seeing a huge rush of large-scale projects under construction - or to be constructed - in order to be accredited before 31 March deadline. For example, Solarcentury is hoping to complete the construction of a 6.3MWp park at Chalcroft Farm near Southampton within three months; Hive Energy is investing £72 million in nine solar parks, all of which it hopes to be operational by the end of March.

A report by market analyst Solarbuzz notes that this push to complete large-scale projects will mean that the UK solar market will exceed 1.6GWp; 94% of this capacity will have been installed within the past two years. But what will happen after 31 March? We have set out below a few issues that will need to be considered when ascertaining whether a project will be viable.

Building-mounted v ground-mounted

Given that the level of support is to be higher for building-mounted projects than ground-mounted projects, we are likely to see developers aggressively pursuing larger-scale rooftop projects. Companies with substantial UK real estate, such as supermarket chains and manufacturing companies, may be inundated with proposals by developers to add solar PV to their rooftops.

However, that is not to say that groundmounted projects will not be viable after the cut in RO support. To ensure that a sufficient profit margin is sustained, generators are likely to look for economies of scale. Larger solar parks, up to and possibly greater than 10MWp, could become the norm, rather than parks of 5-6MWp. There is likely to be a drop in the number of ground-mounted projects, if only as a result of the current push to complete projects before the cut in RO support. A similar drop was experienced following the cuts to FIT.

European Commission investigation – the black cloud on the horizon

The cuts in RO support have been justified by DECC on the basis of significant decreases in PV equipment costs over the past few years, which it believes will continue. Recent indications, however, are that the solar industry could be hard pushed to sustain and continue such price reductions. The ongoing trade dispute in the EU regarding solar dumping by China will be critical to this.

If the EC investigations follow the US investigation last year, it seems likely that import tariffs will be imposed on imports of Chinese solar PV equipment into the EU. These tariffs would obviously increase the

cost of solar PV, and would also indicate that current equipment prices are not a true reflection of the cost of PV, being instead a product of Chinese market manipulation.

Given that the reduction in RO support is based on the current cost of PV (and the envisaged continuing decrease in costs of PV), it has to be asked whether the fall in equipment costs over the past few years has been natural and sustainable, or is in fact due to artificial market supression from dumping and subsidies.

If the EC investigations result in an increase in equipment prices, projects that would otherwise have been profitable (notwithstanding decreased RO support) may no longer be viable. If this turns out to be the case, DECC may then be forced either to increase support or to reconsider the Renewable Energy Roadmap, which, in its December 2012 guise, includes solar PV as a key technology.

Contracts for difference

The changes to the RO are only a temporary measure; a more fundamental change is expected in 2017.

Under the Energy Bill currently being



Rooftop solar: higher ROC support will attract developers

Date on which project accredited	Initial consultation proposal	Response to the consultation proposal	
		Ground-mounted	Building-mounted
	Level of RO support (ROCs/MWh)	Level of RO support (ROCs/MWh)	Level of RO support (ROCs/MWh)
1 April 2013 – 31 March 2014	1.5	1.6	1.7
1 April 2014 – 31 March 2015	1.3	1.4	1.6
1 April 2015 – 31 March 2016	1.1	1.3	1.5
1 April 2016 – 31 March 2017	0.9	1.2	1.4

DECC's proposed levels of support for solar, down from the current 2 ROCs/MWh

debated in parliament, the government is proposing that support for projects of over 5MWp be replaced with contracts for difference (CfD), which generators would enter into with a government-owned CfD counterparty. The CfD will set a "strike price" for the sale of electricity, so that if the market price is lower than the strike price, the government-owned CfD counterparty will "top up" the generator's income up to the strike price. Conversely - and this is the significant change - if the market price is higher than the strike price, the generator will have to pay the amount above the strike price to the counterparty, thereby losing the benefit that would be derived from the long-term escalation of energy prices.

The strike price will be specific to each technology, allowing DECC to set specific levels for solar and to prioritise energy sources in accordance with government policy. The strike prices for 2014-2018 are due to be published before the end of 2013, with strike prices for 2019-2020 due to be published in 2015. It is currently planned for CfDs to be introduced in 2014, but there are a number of issues that will need to be ironed out.

Duration of CfDs

Under the Energy Bill, CfDs will last for 15 years. This is less than the 20-year period of support under the RO, so investors such as pension funds may be put off by the reduced duration of revenue certainty, though 15 years should be enough to cover the time for repayment of senior loans. That said, if energy prices continue their upward rise, given the sting in the CfD's tail, it may be that a reduced term would be welcome.

Setting the strike price

Setting the strike price at the correct level will be crucial for all of the stakeholders. As the strike price will not increase with the price of electricity, investors will be wanting the strike price set at a level that brings them out at least even for the duration of the CfD; a strike price that is too low might provide certainty of return, but could mean that an accredited project is less profitable than a project that is allowed to ride the highs and lows of the market.

However, setting the strike price too high could result in a product significantly more profitable to generators than the ROC it replaces, and a long-term subsidy commitment on the utilities and (ultimately) consumers. DECC is proposing to have a ring-fenced budget for particular technologies, including solar; that said, it is unclear how a CfD (which could generate significant revenue for the utilities/consumers in the event that energy prices rise beyond the strike price) can be assessed against a budget without future energy prices being known.

Grid parity

The Holy Grail for solar generation in the UK is grid parity, where PV can directly compete on price with electricity fed into the grid from other sources, notably fossil fuel, without the need for support or subsidy.

Many factors affect the scope for grid parity, the main one being the cost of fossil fuel. There are many reasons to believe that the flooding of the US fuel markets with shale gas would not occur in the same way in the UK. Nevertheless, it is quite possible that energy prices will see downward pressure as a result of shale gas production, from the substantial reserves in Eastern Europe if not from the UK itself.

Grid parity is dependent upon a diversified energy mix. Overreliance upon one source of energy (particularly intermittent types such as wind or PV) would preclude grid parity for that energy source – a sunny day would flood the grid with solar generation and could drive down prices exactly at the time when generators would be hoping to reap the rewards of their generation. Even if grid parity were achieved, for example through a continuing reduction in module prices, a resulting rush to PV would be likely to drive down energy prices and remove parity again.

Generators would therefore be wise to take up the offer of a CfD even in the face of PV grid parity, to protect against future changes in the energy mix which could disrupt and drive down prices.

Watch this space

From some quarters, the reduction of RO support seemed inevitable. Now that the cut is coming into force, there is likely to be a period of uncertainty and experimentation whilst generators identify the type of projects that will be the most profitable based on the lower level of support.

Many factors will come into play when ascertaining the viability of future solar projects, giving generators plenty to think about. However, the cuts are not so severe as to completely stop development in the UK solar sector in the next few years – unless the EC investigations increase equipment prices to such an extent that projects are no longer viable.

The CfD proposals are still very much in their infancy, so further industry input will be needed in order to meet DECC's aim of instilling investor confidence. Generators and developers will need to keep up to date with DECC's policy in this area.

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Want to know more?

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