Department of Energy & Climate Change

Investing in renewable technologies – CfD contract terms and strike prices

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The Government's Electricity Market Reform (EMR) programme provides an ambitious package of measures to incentivise the investment needed to replace the UK's ageing electricity infrastructure with a more diverse and low-carbon energy mix. Up to £110billion of capital investment is needed from now until 2020.

EMR is designed to facilitate this vital investment by providing two new mechanisms: the Contract for Difference (CfD) and the Capacity Market. EMR is intended to enable competition between low carbon technologies as soon as practicable in order to achieve the Government's objectives at the least cost to consumers.

The CfD reduces the risks faced by low-carbon generators, by paying a variable top-up between the market price and a fixed price level, known as the 'strike price'. As well as reducing the exposure to volatile and rising fossil fuel prices, the CfD protects consumers by ensuring that generators pay back when the price of electricity goes above the strike price.

The CfD is a contract between the generator and a new Government-owned counterparty, and will provide the generator with clear contractual rights and therefore increased investor certainty. This reduction in risk and increased level of certainty reduces the borrowing costs that investors face – and this saving is passed through to consumers in the form of lower expected support costs to renewable generators.

Support under the new regime will fall further over time, as reflected by the strike prices (see Table 1), to take into account the expected cost reductions as technologies become more established. Where demand for contracts exceeds available budget, competition will be used to select the best value projects.

This document sets out decisions on the strike prices for renewable technologies[1] for the period 2014/15-2018/19. It also provides an update on the key contract terms for the CfD. This major milestone provides investor and industry certainty that will maintain the UK's position as one of the most attractive for low-carbon energy developers.

CfDs will make it cheaper to deliver low-carbon generation by lowering the cost of financing projects; reductions that cannot be achieved through existing policy instruments, such as the Renewables Obligation (RO) or carbon pricing.

[1] The strike prices apply to Great Britain. The Department of Enterprise, Trade and Investment in Northern Ireland will determine whether the GB strike prices should apply to Northern Ireland

Strike prices for renewable technologies

The strike prices have been set to meet the Government's objectives on renewable energy, decarbonisation, security of supply and minimising costs to consumers and are informed by the feedback and evidence received through the Delivery Plan consultation[2] conducted during the summer of 2013. The consultation included draft strike prices for renewable technologies, and was followed in August by the publication of further detail on CfD contract terms[3].

The strike prices set out in Table 1 will enable us to generate at least 30% of our electricity from renewable sources by 2020 - and provide a solid basis for further decarbonisation in the 2020s while keeping costs to consumers down.

The cost to consumers is controlled by the Levy Control Framework which ensures that the projected cost of the RO, the CfD and the small scale Feed-in Tariffs does not exceed £7.6bn (2011/12 prices) in 2020/21.

Using the underpinning assumptions informed by the consultation responses, National Grid carried out modelling to assess the impact of variation in technology costs, fossil fuel prices and electricity demand. This will be published alongside the final Delivery Plan, and will be accompanied by a report by the Panel of Technical Experts[4] on National Grid's analysis.

The Government is committed to low carbon technologies competing on price with other forms of generation and has clearly stated its intention to move to a competitive price discovery process for all low-carbon technologies as soon as practicable.

Through its consultation on EMR implementation, which closes on 24 December, the Government is currently consulting on the principle of the use of maxima (caps) and minima (floors) for particular technologies or groups of technologies within the budget available to the EMR Delivery Body for "generic" CfD allocation (i.e. the process applying to most renewables)[5]. The Government noted in the consultation document that it would consider moving immediately to allocation rounds and will also consider introducing competition for certain technologies or groups of technologies[6].

The pipeline of projects under development in the UK in established technologies is strong enough to permit earlier introduction of competition. The European Commission is expected to publish new Environmental and Energy Aid guidelines for consultation soon. Given the approach set out in the recent DG Energy guidance, it is expected that the new state aid

[2] Consultation on the draft Electricity Market Reform Delivery Plan: https://www.gov.uk/government/consultations/consultation-on-the-draft-electricity-market-reform-delivery

[3] Electricity Market Reform Contracts for Difference: Contract and Allocation Overview: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/233004/EMR__Contract_for_Difference__Contract_and_Allocation_Overview_Final_28_August.pdf

[4] See: https://www.gov.uk/government/policy-advisory-groups/141

[5] See question CFD3, page 60 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255254/emr_consultation_implementation_proposals.pdf).

[6] See paragraph 151 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255254/emr_consultation_implementation_proposals.pdf).

guidelines will require the UK to move to competition for more established technologies. The Government will confirm its approach and details of how this will operate through the Delivery Plan and engagement with stakeholders early in 2014.

Changes to strike prices in response to stakeholder feedback

More than a hundred responses were received to the July 2013 consultation on the draft EMR Delivery Plan from a wide range of individuals and organisations including generators, suppliers, consumer organisations and environmental groups. A full analysis of the responses has been conducted, and on the basis of the feedback and evidence received changes have been made to the following key assumptions[7]:

- Offshore wind: The Government has revised assumed learning rates in light of evidence that the offshore wind costs in the draft Delivery Plan were assumed to reduce too quickly.

- Cost of capital: The cost of capital assumptions have been adjusted to take account of evidence submitted through the consultation, and other existing evidence. The evidence supported a cost of capital reduction under the CfD for most renewable technologies.

- Maximum build rates: A number of the maximum build rates used in the modelling have been increased so that they are more consistent with the levels of deployment observed in the pipeline of projects (the Renewable Energy Planning Database, REPD), especially on onshore wind.

- Data on deployment: Analysis has been updated to provide consistency with the latest commercial data on investment decisions.

[7] There were a number of other issues that were raised in consultation responses where, on the basis of the analysis undertaken, it was not felt that this evidence warranted a change in assumptions. Full details will be set out in the final Delivery Plan.

Table 1 - Strike Prices

	Strike Prices £/MWh (2012 prices)				
	2014/15	2015/16	2016/17	2017/18	2018/19
Advanced Conversion Technologies (with or without CHP)	155	155	150	140	140
Anaerobic Digestion (with or without CHP)	150	150	150	140	140
Dedicated Biomass (with CHP)	125	125	125	125	125
Energy from Waste (with CHP)	80	80	80	80	80
Geothermal (with or without CHP)	145	145	145	140	140
Hydro	100	100	100	100	100
Landfill Gas	55	55	55	55	55
Sewage Gas	75	75	75	75	75
Onshore Wind	95	95	95	90	90
Offshore Wind	155	155	150	140	140
Biomass Conversion	105	105	105	105	105
Wave	305	305	305	305	305
Tidal Stream	305	305	305	305	305
Large Solar Photo-Voltaic	120	120	115	110	100
Scottish Islands Onshore				115	115

Notes:

The strike prices in Table 1 show the strike price for projects commissioning in the year stated in the column.

These prices are in all cases maximum strike prices. In the case that constrained allocation applies earlier, the actual strike price will be the outcome of the constrained allocation process if that is a lower value.

While strike prices have been set out for 14/15 in order to ensure comparability, the EMR consultation on proposals for implementation discussed a start date for CfD payments of April 2015.

Tidal range projects, which include both tidal lagoon and tidal barrage technologies, do not have a published strike price. Instead, given the lack of cost data available DECC will consider how best to price CfDs and the appropriate length of contracts for these projects on a case by case basis.

The strike prices for Tidal Stream and Wave are intended for the first 30MW capacity of any project.

The strike prices provide:

- A basis for renewable electricity to achieve at least 30 per cent of generation by 2020, in line with the EU renewables target;
- A strong foundation for offshore wind. DECC modelling suggests that 10GW is achievable (in line with the 8-16GW range in the draft Delivery Plan). This is not a target and actual deployment will depend on technology costs;
- Good value for money for consumers by ensuring that the overall level of support remains within the LCF and that where cost savings can be made they are reflected in revised strike prices; and
- Continued ambitions for other technologies that are expected to be in line with the draft Delivery Plan and the Renewables Roadmap

Key points on contract terms

Together with the strike prices, the approach to the contract terms determines the balance of risk and reward available to developers. Following responses to the documents published in August 2013, the Government has engaged with a wide range of stakeholders to develop its policy position on the CfD contract terms.

In summary, the approach to the standard CfD contract terms is as set out in August, with a 15 year contract for renewable technologies, with payments indexed to inflation (CPI), and obligations to deliver the contracted capacity in a timely manner[8].

The Government has made a number of changes that further support the ability of developers to bring forward investment at lower cost to consumers. In particular:

- Flexibility to reduce capacity: The Government has decided to allow developers to reduce the capacity of their proposed project by up to 25 per cent (without financial penalty) between the date of allocation and the date of 'Substantive Financial Commitment'. This allows developers to refine their plans post-signature before confirming their commitment to build. Developers will then be able to reduce capacity by a further 5 per cent between the Substantive Financial Commitment Milestone and the Longstop Date providing flexibility to cover problems during construction and commissioning (again without financial penalty).

- Protection against unexpected events: In addition to Force Majeure protections, the Government confirms its proposal to provide relief against delays caused by connection. It also confirms its protection allowing capacity to be reduced in the event a project discovers unexpected geological conditions that partially prevent construction, and this has also been extended to unexpected environmental events or archaeological finds.

- A targeted approach to generator collateral: The approach to collateral has been changed, so that generators that make payments in a timely manner will not be required to post collateral. Instead, collateral requirements will only apply if generators fail to comply with the payment obligations set out in the contract.

- Protection against changing circumstances: The Government confirms its overall approach to protection against changes in law will be extended to include revenue adjustments should the generator be prevented from generating without receiving reasonable compensation; and strike price adjustments to compensate for changes in charges covering transmission losses and balancing services costs.

- Greater certainty over the Reference Price: Government has decided that baseload generators will have the option, but not an obligation, to switch to a year-ahead reference price when this is introduced. The limited circumstances when the reference price can be changed have also been determined, to cover scenarios where the weight of the market has

[8] Electricity Market Reform Contracts for Difference: Contract and Allocation Overview: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/233004/EMR__Contract_for_Difference__Contract_and_Allocation_Overview_Final_28_August.pdf

shifted, or other events such as market splitting influence the validity of the price. As much as possible, changes will be mechanistic. Where this is not possible, a stated set of principles will be used to determine any necessary amendments. Full details will be set out in the forthcoming contract update.

In addition, for phased offshore wind projects, Government confirms its proposal that all phases will receive the same strike price, and that this price will be determined by the target commissioning date of the first phase. Furthermore, it has been decided to reduce the minimum capacity required in this first phase to 25 per cent of the total project capacity.

Next steps

The Government's full response to the consultation on the draft Delivery Plan is intended to be published later this month alongside the EMR Delivery Plan. The Delivery Plan will include further detail on the strike prices. In addition, the documents will be accompanied by a detailed explanation of the Government's final policy positions on the contract terms. The EMR Delivery Plan will also include:

- further details on renewable technologies and deployment;
- the underpinning analysis performed by National Grid and a report on that analysis from the independent Panel of Technical Experts;
- an outlook to 2030;
- a description of the mechanism for managing strike prices within the Levy Control Framework; and
- the reliability standard for the Capacity Market.

A consultation on detailed EMR implementation was published on 10 October alongside illustrative draft secondary legislation. An addendum to this, covering supply chain plans, was published on 25 November. The consultation closes on 24 December[9] and consultation responses will be taken into account in finalising the implementing secondary legislation which will be laid in 2014. The Government will engage through the Delivery Plan and early in 2014 on allocation, including the approach and details of operation for the introduction of competition.

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[9] Electricity Market Reform: Consultation on proposals for implementation: https://www.gov.uk/government/consultations/proposals-for-implementation-of-electricity-market-reform

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