

The **Electricity Market Reform** - the most significant change to the electricity market since privatisation

The impact of Electricity Market Reform

On 16 December 2010, the Government released a consultation document proposing major reform to the electricity market. This will have a widespread financial impact given that the Department of Energy & Climate Change's (DECC's) forecasts show a real increase in electricity bills by 2026 - 2030 of 38% for domestic consumers and 70% for industrial consumers.

The Electricity Market Reform proposal includes mechanisms to support all forms of low-carbon generation, including nuclear. These are:

- the carbon price floor mechanism
- a new low-carbon generation revenue support mechanism, Feed-in tariff (FIT)
- an emissions performance standard, and
- capacity mechanism

A key component of the proposed reforms is to phase out the existing system of support for renewable electricity, the Renewables Obligation (RO) and replace it with a FIT. The FIT is intended to increase revenue certainty for big low-carbon energy projects. While the RO will be phased out over several years, given the magnitude and complexity of this change, it is likely to unsettle investors and may delay major renewable projects.

The planned phasing is that for new investments only, the FIT will be available in 2013 or 2014 but that investors will still be able to opt for the RO until 2017. Existing projects receiving the RO will be grand-fathered and so will continue to receive the RO. From 2017, only the FIT will be available.

The mechanisms to support low-carbon generation

DECC's analysis indicates that if the current regulatory environment is maintained, the Government's legally binding climate change targets for 2050 will not be met. DECC has determined that to achieve these targets all the proposed mechanisms would need to be implemented together.

Carbon price floor

The carbon price floor mechanism would work in conjunction with the EU Emissions Trading System (ETS) which applies market determined carbon prices to power generators and energy intensive industries.

Historically, the carbon price under the EU ETS has been unstable and attracted insufficient investment into carbon reduction. The Government's proposal is to implement complimentary measures to the EU ETS that should stabilise the carbon price. The support

element may operate as a variable levy added to the cost of fossil fuels used to generate electricity in order to achieve a planned combined carbon price. Further details on how this could operate are included in the HM Treasury consultation document.

This implementation of a carbon price floor would result in an increase in wholesale electricity prices (closely linked to the cost of carbon) thus making investment into low-carbon generation more attractive.

Low-carbon generation revenue support

Instead of the RO, low-carbon investors will be given a FIT which will apply to new projects and drive future investment by increasing revenue certainty.

Three models of FIT are being considered:

FIT with Contract for Difference (FIT with CfD)

Generators sell electricity to the market, then receive a top-up payment (or repayment). The top-up (re)payment is calculated as the difference between the average market wholesale price and the Government determined tariff level. The net result is that the generator will receive a total price close to the Government tariff level.

Premium FIT

Generators receive a fixed premium on top of the variable wholesale electricity price. In this case the generator will receive a total price which varies with wholesale electricity prices.

Fixed FIT

Generators receive a government determined tariff, regardless of the wholesale price.

DECC currently considers the FIT with CfD the most beneficial, as generators gain increased long term revenue certainty while still being subject to short term price risk, which encourages efficient operational decisions.

Emissions Performance Standard (EPS)

The EPS would provide a regulatory limit on the carbon dioxide emissions from electricity generation. It would be implemented prospectively and at present is being considered at a level that would only reduce generation by coal plants, but would increase costs for all generators using fossil fuel.

Security of supply reforms

In addition to incentivising low-carbon generation, the market reforms have an objective of maintaining security of energy supply.

This is particularly important as low-carbon technologies, including nuclear, tend to be inflexible (production cannot be matched to demand) and therefore controllable capacity is also required to meet demand spikes and meet shortfalls from intermittent plant. This objective is addressed by a 'capacity mechanism' which would reward 'spare' electricity generation capacity with the aim of achieving a pre-established capacity margin. Several models for the capacity mechanism have been considered and the proposed criteria for selecting the preferred option are:

- **centralising the capacity mechanism:** this would increase transparency, decrease barriers to entry (through discouraging the vertical integration of large players) and enable a targeted approach as outlined below
- **setting the capacity volume rather than price:** this increases certainty that the desired capacity margin will be met
- **moving to a targeted approach:** compared to a market-wide approach, this requires a smaller market intervention and allows for targeting specific generation sources (i.e. flexible generation).

To further enhance security of supply, the proposed reforms also support Carbon Capture and Storage (CCS), demand side response and international grid interconnection.

Analysis of packages

The Government has considered three packages of reforms, all of which include a carbon price floor, EPS, a targeted capacity mechanism and one of the FIT models. The Government has identified the CfD package, including the FIT with CfD, as its preference.

The impact of the three packages on the average annual domestic electricity bill is shown below.

Estimated impact on real domestic electricity bills²

	Baseline	Difference from baseline		
		CfD package	Premium package	Fixed package
2010	£493	0%	0%	0%
2011-15	£477	1%	1%	1%
2016-20	£497	2%	3%	3%
2021-25	£559	6%	5%	7%
2026-30	£682	-4%	-1%	-3%
Average	£551	0.9%	1.7%	1.6%

Source: DECC Impact Assessment¹

² A positive number shows a cost to the consumer, a negative number a benefit.

¹ www.decc.gov.uk/assets/decc/Consultations/emr/1042-ia-electricity-market-reform.pdf

Implementation issues

In order to achieve the Government's objectives including emissions targets, the proposals need to be implemented within a reasonable timeframe. However several important implementation issues are yet to be resolved:

- **value of subsidy:** ensuring an appropriate level of low-carbon revenue support is given to achieve the desired affect while also being affordable
- whether the subsidy will be **technology specific** as is the case with the RO
- **institutional capability and framework:** the Government plans a review of the electricity market institutional framework in light of these proposals
- **ensuring a smooth transition:** clarifying how the transition period impacts on current investments and investor confidence.

Who should I contact?

Grant Thornton's Energy, Environment & Sustainability team have analysed these proposals are submitting a response to the Electricity Market Reform and the Carbon Price Floor consultations. The Government expects to issue a White Paper in Spring 2011, with a view to implementing the new policies in 2013/2014.

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