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# Electricity Market Reform (EMF)
# DECC White Paper

## PLMR Briefing
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## Background and Overview

The Department of Energy and Climate Change (DECC) yesterday published a central policy document, entitled *"Planning our electric future: a White Paper for secure, affordable and low-carbon electricity."*

In this, the Government sets out its proposed measures for Electricity Market Reform (EMR) – intended to help reduce volatility of UK energy prices, reduce the UK's dependence on imported energy, and reduce overall carbon emissions. As the White Paper outlines, this could be achieved through steps to encourage greater investment in renewables projects and nuclear power stations, and an increase in the application of Carbon Capture and Storage (CCS) technology in coal and gas-fired power stations.

Adopting these proposals are vital, the Government argues, if we are to meet our targets for delivering 15% of the UK's energy consumption from renewable sources by 2020, and reducing our carbon emissions by 80% by 2050.

DECC also insists that a failure to reform the market now, reduce our dependence on fossil fuel sources and diversify beyond the current monopoly of the 'Big Six' for energy supplies, will end up costing consumers more in the future.

According to DECC, leaving the market as it is, would see household electricity bills increase by £200 by 2030; but the reforms would end up costing £160 per household a year by that time. The Government estimates, therefore, that more than £110 billion of investment is needed in new electricity supplies now, which it says the proposed measures for EMR would provide for.

## Four Key Elements in the White Paper

### 1) Carbon Price Floor (CPF)

- The White Paper builds on March 2011's Budget announcement of the introduction of a CPF in April 2013. This will require industries to pay a top up if the market price for carbon falls below a certain level
- Under the EU Emissions Trading Scheme, polluters pay a certain amount for permits, which give them the legal right to pollute. These can then be freely traded, and the price that polluters are willing to pay for them determines the relative cost of pollution for the polluters
- The price of these permits is still relatively low, and the CPF is required to top up the EU Emissions Trading Scheme and make up the competitive deficit that is currently faced by those wishing to invest in low carbon technologies
- The CPF announced in the Budget begins at around £15.70 per tonne of CO2 emitted, and increases to £30 by 2010, and to £70 in 2030

## 2) Capacity Mechanism

- A Capacity Mechanism will be introduced to ensure future security of energy supply. This is vital in the context that electricity demand is set to double by 2020, yet the UK will lose around a quarter of its generating capacity (representing around 20GW of output) over the same period, as old, polluting power stations shut
- In the worst case scenario, Government research suggests that this outstripping of demand from supply could lead to future black outs
- The White Paper proposes either a *targeted mechanism*, or a *market wide mechanism* to address this issue:
  - A *targeted mechanism* would involve centrally-procured capacity, which would then be removed from the market and utilised only in certain extreme circumstances, when demand on the National Grid is unusually high
  - A *market wide mechanism* would encourage all providers to offer extra capacity within a separate 'Capacity Market.' Capacity could then be purchased from any provider in this separate market willing to supply it, subject to its ability to be available when required
- A decision on which of these mechanisms to adopt will take place towards the end of this year
- In addition, the White Paper proposes measures for limiting demand to address capacity requirements. This could work through compensation fees, where energy intensive manufacturers could be encouraged to reduce their electricity consumption during peak times, which could help to reduce the burden of demand on the national grid

## 3) Emissions Performance Standard

- The White Paper proposes setting a maximum emissions limit of 450g of CO2 per KWh of electricity that is generated
- This would restrict new coal fired power stations from being built, unless they incorporate Carbon Capture and Storage technology in their design
- This measure would also encourage investment in less carbon intensive generating technologies, whose carbon emissions fall well within the limit

## 4) Feed in Tariffs with Contracts for Difference

- Designed to support growth for existing and prospective renewable energy developers, this measure would provide greater stability and predictable streams of revenue for investors. Upfront costs arising from the construction of new plants could be raised against guaranteed revenues from the plants, once they are built and generating
- This would take the form of a contract between an electricity generator and a counterpoint party. A strike price would be established and paid to the generator for its electricity. If the market price for the electricity were to rise above the strike price, the generator would pay back the difference to the counterpoint party (see Table One below)

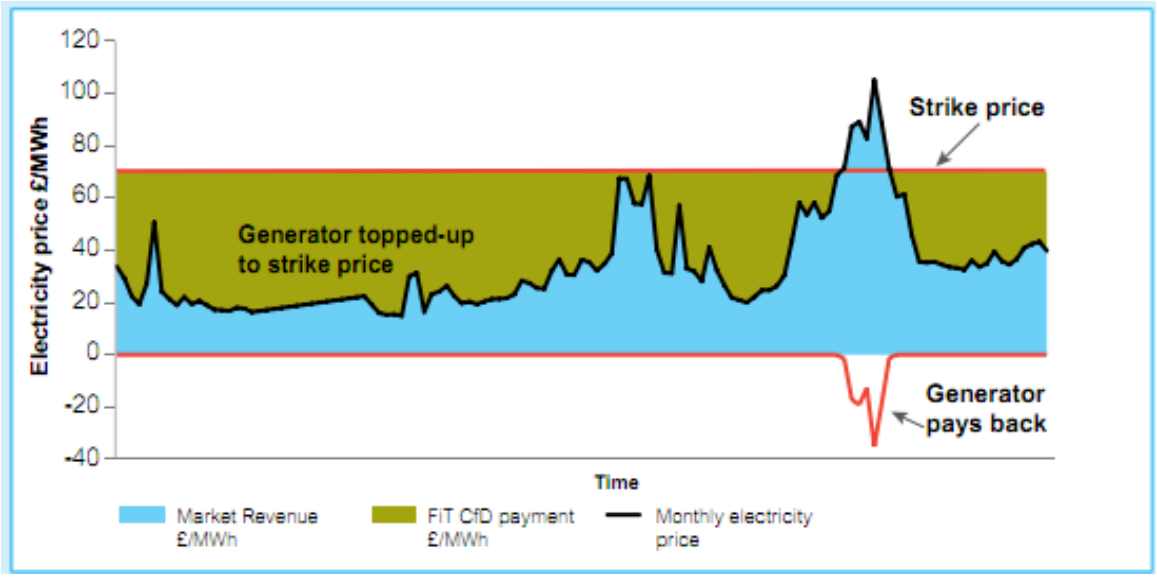


***Table One (taken from page 38 of the White Paper document)***

- Of direct relevance for biomass developers, analysis from Cambridge Economic Policy Associates suggests that Feed in Tariffs with Contracts for Difference would allow capital savings of 0.5% for biomass power stations. The contracts would stabilise revenues for suppliers, without excessively rewarding them when the market price of electricity is particularly high and support is not required
- To encourage investment in renewables straight away, the Government will put in place transitional arrangements (yet to be outlined), before the full introduction of Feed in Tariffs with Contracts for Difference in 2014

## Implications and Analysis for Renewables Developers

- Many industry professionals feel that the White Paper's proposals tend disproportionately in favour of large scale developers, who are better positioned to benefit from economies of scale. While the proposed Feed in Tariffs with Contracts for Difference are undoubtedly the most significant element in the White Paper, in support of existing or prospective renewable energy developers, the complexity of the new scheme will present a significant challenge for many small to medium sized firms
- Another concern has been that the proposed measures, in particular the Carbon Price Floor, will disproportionately benefit nuclear developers
- The White Paper also lacks the level of detail that is required to address the present issue of market uncertainty – such as the lack of clarity on how the proposed capacity mechanism might work. This will sustain industry concerns that the UK will continue to underperform in terms of attracting greater inward investment in renewables
- Some green commentators are concerned that the introduction of an Emissions Performance Standard will lead to a surge in the construction of gas fired power stations, which, whilst being less carbon intensive than their coal fired counterparts, do not reduce the UK's independence on fossil fuels

## Industry Responses

*"We welcome the publication of the Government's Electricity Market Reform proposals. It is vital for the UK to meet its climate change goals, and there is a lot of work for Government and industry still to do to ensure that energy generation loses its reliance on fossil fuels."*
**The Anaerobic Digestion & Biogas Association**

*"Measures which offer greater certainty for private sector investors can unlock large quantities of private sector investment in infrastructure, a crucial point considering the state of public finances. The energy market envisaged in this plan should go a long way towards achieving a secure long term future for energy consumers in the UK and a solid foundation for future economic growth, not to mention going some way to aiding the decarbonisation of the UK economy."*
**Civil Engineering Contractors Association**

*"A government which allows prices to rise is unpopular but a government which allows the lights to go out is unelectable."*
**Inenco**

*"This is a bold step by the government to give the electricity industry confidence to invest in a low carbon power industry. Electricity producers are already big investors in the UK, but the investment required by 2020 - about £200 billion across the energy sector - is enormous and far too much for the industry to contemplate without attracting new capital."*
**The Association of Electricity Producers**

*"We are also delighted to see the ambition for biomass and energy from waste substantially increased. These cost-effective, baseload technologies are an essential part of the mix and bring wide benefits."*
**Gaynor Hartnell, Chief Executive of the Renewable Energy Association**

*"Scotland is leading the development of renewable energy generation and carbon capture & storage (CCS) technologies. EMR provides an opportunity to accelerate that, to help tackle climate change, to deliver greater energy security and to help limit rises that consumers are expected to face in the coming decades.*

*"…While we support the principles underpinning EMR we have concerns about some of the detailed proposals. The EMR side-steps the fact that the final costs of nuclear remain unquantifiable. An energy policy that relies on nuclear is a policy with a black hole in its heart."*
**Alex Salmond MSP, Scottish First Minister**

**ENDS**