

Biomass & Biogas Sustainability Implementation Group (BABSIG)

Thursday, 14th July 2011

Agenda

14.00	I. Introductions and welcome (Chair)
14.05	II. New policy documents and bioenergy content (DECC) <ul style="list-style-type: none"> - Electricity Market Reform (EMR) - Renewables Roadmap
14.30	III. Panel Discussion (DECC, Forestry Commission, Ofgem, Environment Agency) To include: <ul style="list-style-type: none"> - Criteria, GHG tool & guidance going forward - Update on sustainable forest management proposals - General concerns and issues
15.15-15.30	<i>Comfort break</i>
15.30	IV: Continuation of Panel & Group Discussion
16.30	<i>Close.</i>

UK's Electricity Market Reform (EMR)

14th July 2011

AGENDA

- Aims of the EMR
- EMR package of 4 'C's
 - *2 sticks*
 - Carbon Price Floor
 - (Carbon) Emissions Performance Standard (EPS)
 - *2 carrots:*
 - Contract for Difference - FIT for low-carbon generation
 - Capacity Mechanism – for flexibility
- Key Q&As

Aims of the EMR



- Existing market served us well but we face huge challenges
- Quarter of existing UK generating capacity closes over next decade
- Up to £110 billion investment needed in next decade
- Demand for electricity could double in 40 years as use for transport and heat increases
- Ambitious renewables and energy targets
- Take us off the hook of imported fossil fuels
- Delivering security of supply, decarbonisation and affordability
- Putting the UK at forefront of low-carbon technological development
- And ready to lead the next energy revolution!

1: Carbon Price Floor

- Carbon Price Floor strengthens the **carbon price signal** to investors.
- Gives greater support and certainty to the price of carbon in the power sector, providing a credible early signal to encourage investment in low-carbon technology now.
- Announced in the Budget 2011 with a starting date of **April 2013**.
- CPF will be introduced by removing from the **Climate Change Levy (CCL)** the current exemption for supplies of fossil fuels which are used to generate electricity in the UK.
- Renewable technologies and nuclear are **zero rated**.
- Begins at around **£15.70/tCO₂ in 2013** and follows a straight line to **£30/tCO₂ in 2020** (2009 prices).
- Estimate that CPF will reduce emissions from electricity generation by a total of **263 million tonnes of carbon dioxide** over the period to 2030.
- Over this period the power sector will reduce purchases of EU ETS allowances by around **£7.2 billion**.

2: (Carbon) Emissions Performance Standard (EPS)

- An EPS equivalent to **450g/kWh** will be introduced as part of the EMR package.
- Requiring new coal plant to reduce their emissions by around 40%, with an **exception for** plant in the **CCS** Demonstration programme, or benefiting from European funding for commercial scale CCS.
- The EPS will use an **annual limit**. This will ensure that there is flexibility to meet security of supply objectives as coal or gas plant will be able to come on stream in times of high demand.
- The EPS will include a principle of '**grandfathering**' (i.e. a guarantee that the EPS will not be subject to change for an agreed period once applied to a plant) in order to give certainty to investors on the emissions limits they will face in the future.

3: Contract for Difference (CfD) Feed-in Tariff (FIT)

- Contracts for Difference will provide **long term** support for all forms of low carbon generation
- Enabling more investment to come forward, sooner at a **lower cost of capital** - allowing us to meet our decarbonisation goals while reducing consumer bills in the medium and longer term.
- We are minded to introduce the CfD as a long-term instrument set at a **fixed level** where **variable payments** are made ensuring the generator receives the agreed tariff (assuming electricity is sold at market price).
- So the Generator sells its electricity in the market, and is paid a variable premium to **top this up** to the strike price.
- But if the market price is higher than the strike price, generators will **pay back** the difference between the market price and the strike price.
- We intend to set tariffs using an **administrative process** for projects coming forward before 2020, and a systems of **auctions** after that
- Further information on indices and reference prices due in year end paper

3: Contract for Difference (CfD) Feed-in Tariff (FIT)

	<u>Intermittent</u>	<u>Baseload</u>
<u>Contract Form</u>	Two-way FiT CfD	Two-way FiT CfD
<u>Strike Price</u>	Annual inflation indexation	Annual inflation indexation Minded not to include fuel indexation for biomass.
<u>Market Reference Price</u>	Day-ahead price Choice of baseload or hourly prices Not averaged over a longer period	Year-ahead Baseload Price Choice of price sources
<u>Contract Volume</u>	Metered output	To be confirmed, metered output or firm volume

CfD FIT in action

Figure 4: The operation of a baseload Feed-in Tariff with Contract for Difference

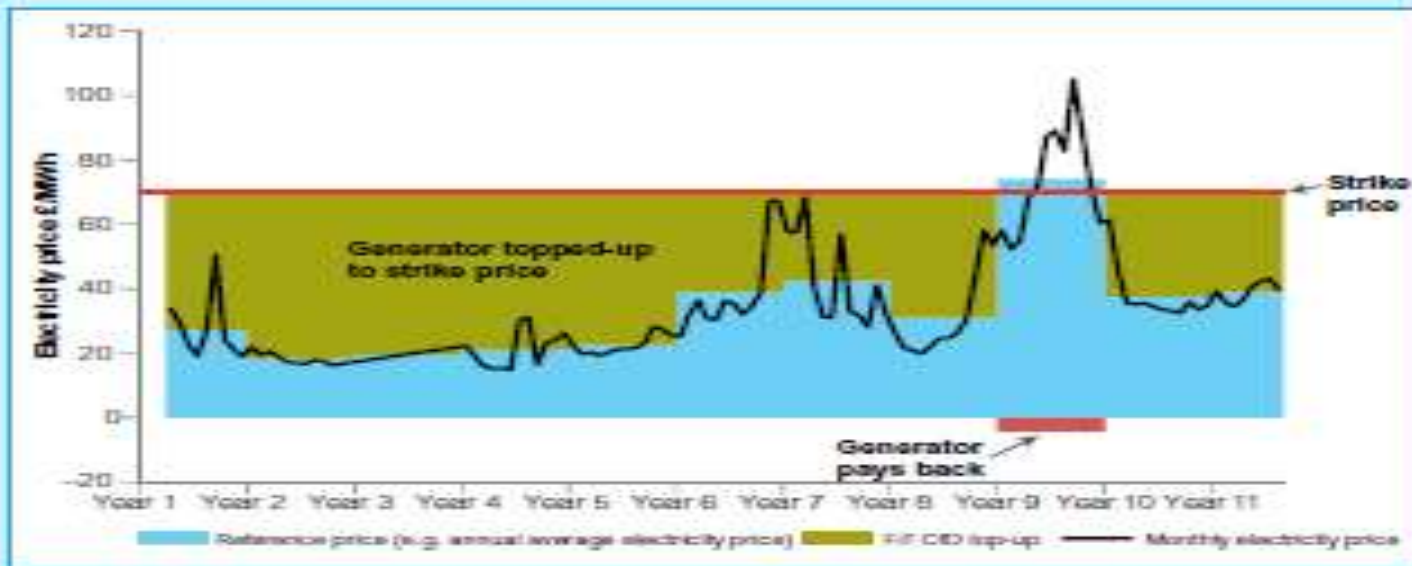
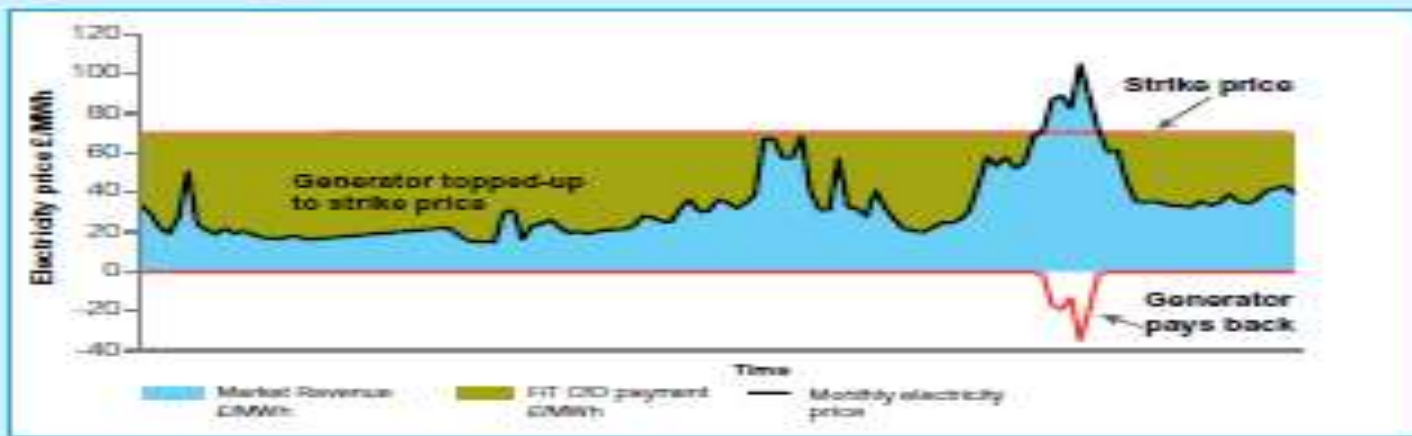


Figure 5: The operation of an intermittent Feed-in Tariff with Contract for Difference



4: Capacity Mechanism

- Capacity Mechanism is needed to ensure security of supply, i.e. That there is sufficient reliable and diverse capacity to meet demand when demand is high and wind generation low for a number of days.
- We are consulting on the type of mechanism to be introduced through the White Paper:
 - a targeted mechanism, with a proposed model of a **Strategic Reserve**;
 - a market-wide mechanism, in the form of a **Capacity Market**. In particular we have considered one version of a Capacity Market called a Reliability Market, though other forms of market-wide Capacity Mechanism remain under equal consideration.
- Any Capacity Mechanism will be designed to enable the participation of **non generation technologies** and approaches including **demand side response (DSR) and storage**.
- We will publish a technical update to the white paper, responding to the consultation and confirming the chosen Capacity Mechanism, around the turn of the year

Very important Q&A

1. Will the sustainability standards for the CFD FIT be the same as the RO?

Yes, we will continue to apply the same sustainability standards to biomass and biogas under the new support framework

2. Can I choose the RO instead of the CfD FIT?

We have developed in-depth transition arrangements for moving from the RO to provide industry with certainty. These include providing flexibility by offering a choice of mechanism for new generation developed between the introduction of the FiT CfD and the closure of the RO on 31 March 2017

3. What if I miss the closure deadline?

We intend to introduce limited grace periods for generators wishing to receive RO support but who miss the 31 March 2017 cut-off date due to factors beyond their control, such as delays to grid connection or delay to the planned installation of necessary radar.

UK Renewable Energy Roadmap

14th July 2011

Renewables Roadmap



- **UK wide** - signed by all Devolved Administrations - **plan of action** to drive renewables deployment and reduce costs.
- **Focuses on 8 key technologies** which have either the greatest potential (more than 90%) to help meet the 2020 target in a cost effective and sustainable way, or offer the greatest potential for the UK in the decades that follow. The 8 technologies are;
 - Onshore wind
 - Offshore wind
 - Marine energy
 - **Biomass electricity**
 - **Biomass heat**
 - Ground source heat pumps
 - Air source heat pumps
 - Renewable transport

Renewables Roadmap



- It sets out a **comprehensive suite of targeted, practical actions** to remove barriers. It includes an **action plan for each of the 8 technologies which show;**
 - Estimated changes in capacity and growth rate
 - Identified challenges to their deployment
 - A bespoke package of actions to address those challenges
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- The Roadmap shows that while we are starting from a relatively low base (3.3% at the end of 2010) and **expect stronger growth in future:**
 - **Renewable electricity pipeline is strong** with 22 GW in construction, consented or planning.
 - **World's first renewable heat incentive** could deliver as many as 123,000 renewable heat installations by 2020.
 - **Renewable transport energy consumption is set to grow to 4% by 2014.** New policy will be set for the period 2014-20 next year.

Biomass:

- Roadmap sets out **greater potential** for biomass electricity, in particular the prospect of **converting coal power stations to biomass**. We're seeing the first of these – the pilot project at Tilbury, largest in the world – coming on-stream around the end of the year.
- The central range for deployment indicates that biomass electricity could contribute **up to 6 GW by 2020**. Achieving this level of capacity equates to an annual growth rate of 9%.
- The advantage of conversion is that it is both **cost-effective and transitional** – the life of a conversion is shorter than new build so avoids locking in supplies long term and meanwhile will do a lot to build the global supply chain
- But the scale of ambition for biomass electricity depends entirely on the availability of sustainable feedstocks to fuel it. We're developing a **Bioenergy Strategy** to be clear about the availability and best use of this resource, and put in place sustainability standards in the financial incentives

Priorities for biomass

- **Minimising investment risk:** Accelerate RO banding review and implement proposed Electricity Market Reform to improve revenue certainty for projects. Publish a UK Bioenergy Strategy later this year. .
- **Ensuring use of sustainable feedstocks:** Align incentives to feedstock sustainability and from 2013 make payment of incentives dependent on meeting these. Make available a GHG lifecycle tool.
- **Planning and consenting:** Work with Defra, the Welsh Government, the Environment Agency and stakeholders to ensure legislation does not have an unintended impact on renewables, including EfW.
- **Access long-term waste fuel contracts:** Expand supply chains for waste wood and solid recovered fuel and provide improved information on available waste. Consult on measures to divert waste from landfill including possible landfill restrictions for waste wood.
- **Access to finance:** Government created the Green Investment Bank which could play a role in supporting these technologies. DECC will announce details of potential funding to support innovation, in areas such as the advanced conversion of waste, subject to value for money assessments and conclusion of innovation needs work.

Cross-cutting actions

- Reform of the planning system. **Set the decision making framework for nationally significant infrastructure projects** through ratification of the National Policy Statements.
- Ensure a **smooth transition from the Renewables Obligation** to the new electricity market support scheme and bring forward RO Banding Review from original 2012 timescale .
- **The Renewables Roadmap is a first of a kind.** It recognises that the constraints to deployment, technology costs and innovation breakthroughs will change with time and establishes a process for monitoring and evaluating progress which will enable us to adjust our approach. **We propose to publish updates on an annual basis.**

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