

# Feed-in Tariffs

## Government's Response to the Summer 2009 Consultation



## Foreword by Minister of State

The Department of Energy and Climate Change was set up to lead this country's effort to avoid dangerous climate change and to lead the transition to the low carbon economy. We were the first country in the world to make carbon reduction targets legally binding through our Climate Change Act 2008, and our Low Carbon Transition Plan outlined how we will decarbonise our economy over the next decade and beyond. This document, and the policies it contains, will build on and complement the action we are already taking.



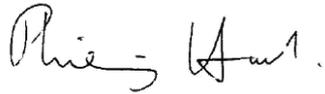
A key part of our effort is to increase the amount of electricity generated from renewable sources. Since its introduction in 2002, the Renewables Obligation has tripled eligible renewable generation. Yet, we have much further to go. We are currently seeking Parliamentary approval for the changes to the Renewables Obligation that are needed to increase renewable electricity generation nearly six-fold by 2020.

I know that many people want to play their part by taking their own action through generating clean electricity at home, in their communities or their workplace. The Renewables Obligation, the mechanism through which we have historically supported renewable electricity generation and which continues to be the support for large scale renewable electricity, was not originally designed with small scale projects in mind. It can be difficult to understand and navigate for those not familiar with the electricity market, and at the very small scales the returns offered were not sufficient to justify investment. That is why one of the first changes that we made, weeks after the Department was formed, was to take powers to introduce Feed-in tariffs for small scale low carbon electricity generation.

Following our consultation published with the UK Low Carbon Transition Plan, this document now sets out details of the Feed-in tariff scheme. This "clean energy cashback" will allow many people to invest in small scale low carbon electricity, in return for a guaranteed payment for the electricity they generate.

It will trigger a small scale electricity revolution, bringing the direct benefits of renewable electricity to the wider general public. Engaging more people in directly tackling climate change this way should help bring about greater acceptance of the behavioural changes that we need to make. I also believe that those who generate their own electricity, are likely to value it more and use it more responsibly and efficiently.

As we move out of recession, we have a historic opportunity to green the economy and build a cleaner future. We are putting the financial framework in place to unlock the considerable interest and dynamism around this agenda. I am confident that these measures will mean that small is not only beautiful but also worthwhile.

A handwritten signature in black ink, appearing to read "Philip Hunt". The signature is written in a cursive, flowing style.

The Rt Hon Lord Hunt of Kings Heath OBE

**Minister of State for the Department of Energy and Climate Change**

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## 1. Executive summary

### Support for small scale low carbon electricity generation

The Government will use powers in the Energy Act 2008 to introduce a system of feed-in tariffs to incentivise small scale, low carbon electricity generation by providing “clean energy cashback” for householders, communities and businesses – to allow them to become generators of electricity, as opposed to simply consumers. These feed-in tariffs (FITs) will work alongside the Renewables Obligation, which will remain the primary mechanism to incentivise deployment of large-scale renewable electricity generation, and the Renewable Heat Incentive (RHI) which will incentivise generation of heat from renewable sources at all scales.

The FITs scheme is intended to encourage deployment of additional small scale low carbon electricity generation, particularly by individuals, householders, organisations, businesses and communities who have not traditionally engaged in the electricity market. For these investors, delivering a mechanism which is easier to understand and more predictable than the Renewables Obligation, as well as delivering additional support required to incentivise smaller scale and more expensive technologies were the main drivers behind the development of this policy.

It is expected that by 2020 the scheme will support over 750,000 small scale low carbon electricity installations and will have saved 7 million tonnes of carbon dioxide.

### Scheme design

The GB FITs<sup>1</sup> will consist of two elements of payment, made to generators, and paid for, by licensed electricity suppliers. The largest suppliers (mandatory FITS suppliers) will be obliged to offer FITs, and smaller suppliers may participate if they wish. The first element is a **generation tariff** that differs by technology type and scale, and will be paid for every kilowatt hour (kWh) of electricity generated and metered by a generator. This generation tariff will be paid regardless of whether the electricity is used onsite or exported to the local electricity network.

The second element is an **export tariff** which will either be metered and paid as a guaranteed amount that generators are eligible for, or will, in the case of very small generation, be assumed to be a proportion of the generation in any period without the requirement of additional metering.

Therefore a FITs generator may use electricity generated onsite, thus avoiding having to purchase that electricity from their supplier, or may export their generation directly to the grid, or (in many cases) some combination of the two. For exported electricity, they can either opt to receive a guaranteed payment of 3p/kWh exported, or may opt out of the export tariff and sell their electricity on the open market.

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<sup>1</sup> The Scheme will apply across England, Scotland and Wales. Northern Ireland will need to develop their own legislation.

## Eligibility

The specified maximum capacity for the scheme will be set at 5 megawatts (MW). When the scheme is launched it will support new anaerobic digestion, hydro, solar photovoltaic (PV) and wind projects up to that 5MW limit, with differing generation tariffs proposed for different scales of each of those technologies. The scheme will also support the first 30,000 micro combined heat and power (mCHP) installations with an electrical capacity of 2 kilowatts (kW) or less, as a pilot programme. The scheme will not initially support solid and liquid biomass technologies, though these will continue to be supported under the Renewables Obligation at all scales.<sup>2</sup>

Wind, solar PV and hydro projects of 50kW or less, and microCHP projects supported through the pilot, will have to use Microgeneration Certification Scheme (MCS) eligible products installed by MCS accredited installers to be eligible for FITs support. This requirement does not apply to those microgenerators transferring to FITs having already gained accreditation under the RO. As part of the installation the MCS installer will lodge required information with the MCS and this will form the basis of their FITs registration. Any other technology and scale of project must register their installation through a process based on the existing Renewables Obligation process, known as the ROO-FIT process, in order to be eligible for FITs support.

Generators may, if they wish, assign the rights to their FITs payments to another body through a contractual arrangement.

## Tariffs

All generation and export tariffs will be linked to the Retail Price Index (RPI), and FITs income for domestic properties generating electricity mainly for their own use will not be taxable income for the purposes of income tax.

We have made changes to the banding of the anaerobic digestion (AD), hydro and wind tariffs to provide more effective support to these technologies. We have introduced a band to provide additional support to farm scale (<500kW) AD projects, and improved the wind and hydro banding structure to introduce a new "community scale" band providing additional support between 100kW and 2MW for hydro projects, and 500kW and 1.5MW for wind projects.

Tariffs are set through consideration of technology costs and electricity generation expectations at different scales, and are set to deliver an approximate rate of return of 5-8% for well sited installations. Accordingly, the tariffs that are available for new installations will "degress" each year, where they reduce to reflect predicted technology cost reductions to ensure that new installations receive the same approximate rates of return as installations already supported through FITs. Once an installation has been allocated a generation tariff, that tariff remains fixed (though will alter with inflation as above) for the life of that installation or the life of the tariff, whichever is the shorter.

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<sup>2</sup> For information about eligibility and registration requirements for biomass installations under the Renewables Obligation see <http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Pages/RenewablObl.aspx>

At scheme reviews we will reassess the costs of technologies, electricity price forecasts and whether the target rate of return is still appropriate and consider revision of tariff levels accordingly. Scheme reviews will also consider technologies not currently supported through FITs and whether or not it is appropriate to allow those technologies to access the scheme and set appropriate generation tariffs.

### **Installations completed before the launch of the FITs scheme**

Any installation completed before 15 July 2009 (the publication date of the Renewable Energy Strategy and the Consultation on Renewable Electricity Financial Incentives 2009) that had not applied for accreditation under the Renewables Obligation before this date will not be eligible for financial support through FITs.

As of 1 April 2010, microgenerators (50kW capacity or less) in renewable technologies supported through FITs (AD, hydro, solar PV and wind) will not be able to access support through the RO. Installations with a capacity greater than 50kW, or installations of any capacity in technologies not covered by FITs, will still be eligible to apply for support through the Renewables Obligation.

Microgenerators that had applied for accreditation under the RO before 15 July 2009 will join the FITs scheme at an RO transfer tariff when the scheme launches, and will continue to receive support through FITs until 2027 (the same duration of support as they would have received under the RO). Microgenerators who applied for accreditation under the RO on or after 15 July 2009 and before 1 April 2010 will receive FITs at the appropriate tariff level for their scale and technology, and will receive support for 20 years (25 years for solar PV).

Installations greater than 50kW that are in technologies eligible for FITs and joined the RO after 15 July 2009 have a one-off opportunity of moving to FITs support. Those that installed before 15 July 2009 will not be eligible for FITs but will continue to be eligible for support through the RO.

### **Licensed electricity suppliers**

FITs are primarily implemented through modifications to electricity supply licences which require holders of electricity supply licences to make FITs payments to eligible generators. The overall costs of the scheme will be shared by all supply licence holders in proportion to their share of the electricity supply market. Small suppliers will have the right to reject prospective generators where their installed capacity is greater than 50kW, but large suppliers will be obliged to accept any eligible generator that they supply and that approaches them for a FIT.

The draft electricity supply licence modifications will be laid in Parliament in February 2010. These modifications are subject to Parliamentary scrutiny and other approvals before they can be made by the Secretary of State.<sup>3</sup>

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<sup>3</sup> The scheme must receive clearances from the EU Commission in relation to State Aids and Technical Standards. These processes are ongoing.

Ofgem<sup>4</sup> will act as the FITs scheme administrator, maintaining a central register of all FITs installations receiving support, referred to as the "Central FIT Register", and also receiving data from suppliers to enable it to operate the levelisation process where FITs scheme costs are shared equitably amongst all holders of electricity supply licences in proportion to their share of the electricity supply market.

### **Launch of the Scheme**

The FITs scheme will start from 1 April 2010. In the run-up to the scheme information will be available for individuals, households, community groups and small business on how they will be able to benefit from the scheme. Guidance will be provided by Ofgem, and help will be available from the Carbon Trust and the Energy Saving Trust as well as through DECC.

Once the scheme is up and running it is expected to play a big part in transforming the way individuals, households, communities and businesses think about electricity usage and generation. The scheme will reward those who generate their own low carbon electricity at a small scale, so that electricity will no longer be the sole domain of large industry. In addition, the scheme will also create jobs both for manufacturers and installers.

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<sup>4</sup> The legal powers and duties are given to the Gas and Electricity Markets Authority, which governs Ofgem. In this document we refer to Ofgem as the administrator of the FITs scheme.

## 2. Introduction

### Supporting small scale low carbon electricity generation

1. The Renewable Energy Strategy, published in July 2009, set out our intention to put the right incentives in place for the right sectors. The Renewables Obligation encourages renewable electricity generation as part of the wider electricity market, but it is a complex scheme intended for professionals in the energy sector. Through the Energy Act 2008, the Government put in place powers to enable the introduction of feed-in tariffs (FITs) for installations up to 5MW electricity generation capacity.
2. As was outlined in the Consultation on Renewable Electricity Financial Incentives 2009<sup>5</sup> (Summer 2009 consultation) we believe that FITs will encourage non-energy professionals to invest in small scale low carbon electricity generation by providing them with clean energy cashback. Engagement and investment, driven by the FITs, will help contribute to meeting our challenging carbon reduction and renewable energy generation targets, as well as bringing a greater number of individuals into everyday contact with electricity generation technologies. We believe this greater contact will lead to greater understanding of electricity and energy issues, which could lead to additional energy saving efforts across Great Britain.

### The FITs consultation process

3. The Energy Act 2008 identified modifications to electricity supply and/or distribution licences as the vehicle for establishing FITs. It also imposes an obligation on the Secretary of State to consult licensees and other interested parties before making modifications.
4. On 15 July 2009, alongside the publication of the Government's UK Low Carbon Transition Plan and Renewable Energy Strategy, we published our proposals for the design of a FITs scheme in the Consultation on Renewable Electricity Financial Incentives 2009 (the Summer 2009 consultation). The consultation document built on responses received to the preliminary consultation on FITs published as part of the Renewable Energy Strategy consultation 2008<sup>6</sup> and subsequent policy development, and sought views on scheme design and proposed tariff levels.
5. The Summer 2009 consultation closed on 15 October 2009 and in total we received 733 responses. 53% of these were from individuals; 23% were from organisations, including Regional Development Agencies, existing and potential low carbon generators, licensed electricity suppliers, technology manufacturers, installers and supply chain companies; and 11% were from

<sup>5</sup> [http://www.decc.gov.uk/en/content/cms/consultations/elec\\_financial/elec\\_financial.aspx](http://www.decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx), URN 09D/677

<sup>6</sup> Renewable Energy Strategy Consultation Annex 2, <http://www.berr.gov.uk/files/file46799.pdf>. Analysis of responses available from <http://www.berr.gov.uk/consultations/page46797.html>.

trade associations from a wide range of industries, Government bodies, statutory agencies and academia. The remainder included responses from the finance industry, consultancies and technology developers. The summary of consultation responses is available from the DECC website.<sup>7</sup> We also received a number of letters and emails after the official close of the consultation, many of which were expressing views already expressed by others in formal response to the consultation. We endeavoured to consider these responses as well as the formal responses we received as we continued to develop our policies. We would like to thank all of those who took the time to engage with and responded to the consultation, either directly or through other organisations, and those who took part in the events through the consultation process.

6. Following the publication of the policy design consultation we worked with Ofgem, licensed electricity suppliers and trade associations to develop draft licence modifications which would be used to implement the main elements of the FITs scheme. As required by the Energy Act 2008 we further consulted on these draft modifications, with the consultation published on 18 December 2009 and closing on 15 January 2010. We are particularly grateful to all licensed electricity suppliers, the UK Business Council for Sustainable Energy (UKBCSE) and others who took part in the workshops before the launch of this consultation, who responded to the consultation and who have engaged subsequently. As a result of the consultation we made a number of changes to the draft modifications in order to clarify the roles of electricity suppliers. This aspect of the project has involved a great deal of time and effort from all involved to ensure that the FITs scheme functions efficiently alongside the rest of the GB electricity market and is operable and understood by all who are affected by the scheme.
7. Following the passage of the FITs enabling powers in the Energy Act in late 2008, the FITs design has been produced in a short space of time, and the time remaining until the proposed start of the FITs scheme in April 2010 is short. Some new aspects to the tariff structure and level have been introduced in this document following extensive consultation with industry and further analysis. The anticipated reviews of the scheme once it is operational will provide opportunities for any further adjustment to the scheme if necessary.

## Implementation

8. As allowed for by the provisions of the Energy Act 2008 (s. 41–43)<sup>8</sup>, the FITs scheme will be implemented by amendments to standard conditions of supply licences under section 6(1)(d) of the Electricity Act 1989. In accordance with the process laid out in the Energy Act, a consultation process with electricity suppliers, industry code administrators and licensees on the proposed electricity supply licence modifications for the purpose of

<sup>7</sup> [http://www.decc.gov.uk/en/content/cms/consultations/elec\\_financial/elec\\_financial.aspx](http://www.decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx)

<sup>8</sup> [http://www.opsi.gov.uk/acts/acts2008/ukpga\\_20080032\\_en\\_5#pt2-pb2](http://www.opsi.gov.uk/acts/acts2008/ukpga_20080032_en_5#pt2-pb2)

introducing the FITs scheme was launched on 18 December 2009 and closed on 15 January 2010. The draft amendments will be laid before Parliament in February 2010.

9. The draft amendments will be supported by an order that sets out the roles and duties for Ofgem, including administration of the Central FITs Register, the levelisation process, and compliance monitoring and enforcement, and for the Secretary of State. This will be laid before Parliament in the near future.

### **Next steps for FIT development**

10. From enactment of the Energy Act 2008, which gave the Government enabling powers to introduce a feed-in tariffs scheme, to the publication of this document has been less than 15 months. We have tried during this time to engage with as wide an audience as possible both informally and through formal consultation, to be open to input and suggestion and respond to enquiries. The introduction of FITs will represent a major change in policy supporting low carbon electricity generation technologies and in the operation of the GB electricity market.
11. Delivery of a FITs scheme, which will provide thousands of individuals, businesses, communities and other organisations with more predictable and higher levels of income than previous schemes have delivered, brings many benefits but also has costs. These are costs that we expect will eventually be passed through to all electricity users through higher bills, and need to be considered alongside the costs of other measures. We have worked to deliver a scheme that meets public and Parliamentary aspirations for this sector and also delivers value for money for taxpayers and the public.
12. The timetable for moving forward is tight to get FITs up and running by 1 April 2010. The next milestone for the Government will be the laying in Parliament of the draft modifications to electricity supply licences, soon after, the FITs order. In addition Ofgem, suppliers and the MCS are working to ensure that all of the necessary systems are in place to allow the start of the scheme in April. We will continue to undertake to work with key stakeholders including consumer groups; generators; manufacturers and installers of generation equipment; Ofgem; and suppliers and others that may be involved in the administration of the scheme.
13. We are committed to assessing the success and operation of the scheme, working with Ofgem, suppliers and organisations like the Energy Saving Trust and Carbon Trust and those that represent consumers to ensure the scheme is clearly explained and understood by consumers, manufacturers and installers throughout the life of the scheme.

### 3. Overview

14. The Summer 2009 consultation document proposed a system of FITs that rewarded generation and provided a guaranteed price and market for exports and savings on imports – and that together these aimed to deliver returns of approximately 5-8% for investors. We confirm that this will be the final structure to be adopted. However, following the responses to the consultation and the further analysis we intend to implement certain changes to the proposed structure. These include:
  - indexation of all tariffs by RPI in future years;
  - support for electricity generation from biomass (other than anaerobic digestion) will not be provided by FITs and it will continue to be supported through the RO instead;
  - a pilot programme for support of domestic scale microCHP through FITs;
  - changes to the banding structure for AD, hydro and wind;
  - deferral of the start of degeneration of tariffs by one year with a steeper profile thereafter.
15. This chapter sets out the final model for the structure of FITs, and provides further information on the policy changes made since the Summer 2009 consultation.

#### Structure of tariffs

16. FITs will be paid to individuals, households, communities and businesses when they generate electricity from eligible small scale low carbon energy sources, including solar photovoltaic, wind, hydro, anaerobic digestion and domestic-scale microCHP. Payments will be made by electricity suppliers and the cost will be shared among them by a process called “levelisation” so that each supplier pays an amount that is proportional to their share in the electricity market in Great Britain.
17. In this document we refer to the individuals, communities and businesses who are supported by FITs as “generators”.
18. In the Summer 2009 consultation document, we proposed the following basic structure for FITs:
  - A fixed payment from the electricity supplier for every kilowatt hour (kWh) generated (the “generation tariff”).
  - Another payment additional to the generation tariff for every kWh exported to the wider energy market (the “export tariff”). Generators will be guaranteed a market for their exports at a long-term guaranteed

price. The generator may opt out of this guarantee and negotiate a price for exported electricity in the open market.

- In addition, generators will benefit because they can use the electricity they generate on-site to offset some or all of the electricity they would otherwise have had to buy.
19. We confirm that this will be the tariff structure. While some respondents to the Summer 2009 document suggested alternative tariff structures, the vast majority supported the generation and export tariff structure as proposed.
  20. FITs will be paid to generators by licensed electricity suppliers, and all licensed suppliers will be required to make their fair contribution to the cost of the scheme. Licensed suppliers with more than 50,000 domestic customers will be obliged to pay FITs (known as “mandatory suppliers”), whereas those with fewer than 50,000 domestic customers (known as “voluntary suppliers”) may choose whether or not to offer tariffs to generators above 50kW. Further detail is provided in the “Suppliers” section on page 38.

### Generation tariff

21. As outlined in the Summer 2009 document, the generation tariff will be a fixed price per kilowatt hour, set at different levels for different technologies and installation sizes. See page 47 for the scheme’s tariff levels. We confirm our expectation that we will lower the tariff levels for certain technologies for new projects over the years, both to reflect and to encourage and drive cost reductions from the relevant sectors. But any individual installation, once starting to receive a tariff at a certain level, will continue to receive the same generation tariff level throughout its entire support period under the FIT scheme. This tariff will however be increased annually for inflation.

### Export tariff

22. We confirm that FITs generators will be able to opt to receive a guaranteed market and price for that electricity. We propose that there will be a single export tariff that applies across all generators who chose to benefit from it, and that the tariff will be adjusted for inflation (see Table of Generation Tariffs to 2020).
23. Evidence from investors is that uncertainty around the value of returns results in those returns being discounted by financiers, i.e. that part of the future income stream cannot be used in full as part of the security for a loan. Analysis suggests the impact is that investors require an increase in the rate of return of one percentage point.
24. Therefore, it’s expected that the system outlined in the Summer 2009 consultation will provide long-term certainty for export payments. The best way to achieve this is to require suppliers to purchase exports from FITs generators at a guaranteed price, which will enable investors to forecast with

increased certainty the revenue they will achieve from their installation. See the "Level of tariffs" section on page 21 for how this price will be set.

25. We also consider it important that the guaranteed export tariff does not distort the competitive market for electricity: FITs generators who are able to follow market peaks should be able to be rewarded for doing so; and as the market develops for small scale low carbon electricity, competition in the market may be able to provide a better position for generators. We therefore propose to retain the option for generators to opt out of the export tariff if they wish to take the risks that such a move would bring, and for that decision to be reversible.

### Onsite use of electricity

26. Small-scale distributed generation realises the benefits of using electricity at the point where it is generated. A proportion of electricity generated in large power stations (such as coal, gas or nuclear) is lost when it is transmitted from the power stations to the centres of demand where it is used; around 2% of electricity is lost in transmission and around 5% in distribution.
27. Based on that concept, small-scale generators will be incentivised, where possible, to use the electricity they have generated in their houses or at their business premises, as that will be the most efficient use of that electricity. There is a general expectation that it is appropriate to allow someone who has purchased and installed generation equipment to be able to use the electricity they have generated at no further cost.
28. A key aspiration of FITs is to drive behavioural change. There is evidence that people who install small-scale generation may develop a greater understanding of energy and become more efficient energy consumers.<sup>9</sup> Unless generators are able to use the electricity they generate, FITs may be seen merely as an ethical investment opportunity rather than something with a direct energy impact on the generator.

### Eligibility

#### Capacity

29. Section 41(4) of the Energy Act 2008 provides that the Secretary of State may specify the maximum capacity for FITs by order, but that this cannot exceed 5MW. We confirm that 5MW is to be the limit we use for all renewable technologies when the scheme is implemented.
30. From 1 April 2010 FITs will be the only support available for installations with installed capacity of 50kW and below that are eligible for FITs. Technologies not eligible for FITs e.g. non-anaerobic digestion (AD) biomass, will continue to be eligible for support under the RO even at capacities of 50kW or lower. However, larger installations – with installed capacity of 50kW to 5MW – will

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<sup>9</sup> Sustainable Consumption Roundtable (2005), Seeing the Light: the impact of micro-generation on how we use energy. [www.sd-commission.org.uk/publications/downloads/Micro-generationreport.pdf](http://www.sd-commission.org.uk/publications/downloads/Micro-generationreport.pdf)

have the right to choose between the RO and FITs (for further details, including how this affects generators installed before the start of the FITs scheme, see the 'FITs Interaction with the Renewables Obligation' section on page 44). This will provide individuals and householders, businesses, communities and other organisations with an opportunity to select the scheme which best suits their requirements for the lifetime of the project. Generators will only be able to choose once, before they start receiving support under either RO or FITs.

### Definition of an installation / site

31. Given that the Energy Act 2008 places a total capacity limit on individual FITs installations, and that the tariffs will be banded by technology and total installed capacity, we recognise the need to establish how an individual installation is defined in order to verify capacity limits per installation. We aim to avoid creating perverse incentives such as under-sizing plants or registering two installations by splitting one installation artificially into two in order to benefit from FITs or a higher tariff within FITs (e.g. a 6MW wind farm made up of four 1.5MW turbines "split" into two 3MW wind farms made up of two 1.5MW turbines). However, we believe that the structure and levels of FITs and their interaction with the RO are such that the risks of this behaviour will be small. The draft licence modifications and the FITs order will set out provisions to minimise these risks. The key provisions are:
  - if a generator installs two different technologies on a single site (e.g. a PV panel and a wind turbine) they will be classed as two different installations;
  - if the generator has multiple installations of the same technology, they will be classed as a single installation site when determining the tariff;
  - site is defined in relation to a number of factors including address, map reference and electricity meter identification;
  - any expansion of an installation within 12 months (of the same technology) will be treated as an increase in the capacity of the installation; if an expansion takes place more than one year after confirmation in the Central FITs Register, the expansion will be treated as a separate station - the original installation will be treated as having continued in the same class, while the new installation will be rated at the capacity of the aggregate of the two stations.

### Technologies

32. FITs for small-scale low-carbon electricity are intended primarily to support the widespread deployment of proven technologies now and up to 2020, rather than to support development of unproven technologies.
33. Taking that into account, on the launch of FITs in April 2010, we will only be offering tariffs to those technologies which we consider can realistically and effectively be deployed in the short term.

34. Therefore, from the start of the scheme, we will offer tariffs to the following technologies, which we believe are the technologies available for domestic and small-scale generation in the short term:
- Wind;
  - Solar PV;
  - Hydro;
  - Anaerobic digestion; and
  - Domestic scale microCHP (with a capacity of 2kW or less)

### ***Biomass***

35. The Summer 2009 consultation document also included biomass and biomass CHP as well as non-renewable microCHP in the list of technologies potentially eligible to receive FITs. Following extensive consultation and analysis of the issues surrounding the inclusion of these technologies in the scheme, we have decided these technologies will not receive FITs at this time.
36. Within the time available for the development of the scheme it was not viable to include non-anaerobic digestion biomass because of complex issues with accreditation and the ongoing management and monitoring of compliance for solid and liquid biomass plants. There are no clear existing definitions or standards that could be used, the issues are too complex to be resolved within the FIT scheme and current time constraints, and any procedures that were developed would be at least as complex or onerous for small generators as those that exist under the RO.
37. There is also a range of wider issues (including fuel sustainability, diversion from more efficient end-point uses and air quality concerns) that cannot be effectively addressed under the FIT scheme at this time.
38. Biomass will continue to be eligible to receive support through the Renewables Obligation at all scales. Our analysis suggests that the main driver for the installation of biomass generation is the expected reward for the heat output from biomass CHP plants through the RHI, so would still expect significant deployment of biomass CHP.
39. As with all technologies, eligibility within FITs will be considered when the scheme is reviewed and there is scope to include biomass in FITs at a later date. This will include exploration of the potential for simplified fuel monitoring procedures jointly with the RHI.

### ***Non-renewable Micro Combined Heat and Power (mCHP)***

40. The consultation document did not include generation tariffs for non-renewable microCHP technologies. At the time of the consultation publication we took the view that we were unable to set tariffs for microCHP on the same basis of other technologies. This was for the following reasons:

- the assumptions and methodology used to develop FITs for renewable technologies may not apply to non-renewable technologies;
  - domestic scale microCHP technologies are at an early stage of their development and products are not yet available in commercial quantities;
  - deployment of microCHP will generally be undertaken in response to an identified heat need.
41. We recognise the important role that microCHP could play in meeting our carbon objectives as part of comprehensive low carbon solutions for housing and other buildings and we have been undertaking detailed analysis, and working with the industry to develop methodologies for inclusion of non-renewable microCHP in FITs.
42. We are therefore announcing that we will include as part of the FITs scheme a microCHP “pilot” (for installations with an electrical capacity of 2kW or less) that will provide FITs support for the uptake of domestic scale microCHP installations up to 30,000 units. Because the industry is yet to become established we will review the support level as soon as 12,000 installations is reached, which we expect to be (based in part on industry projections) sometime in mid-2012. We believe this funding provides certainty for the industry and allows us to provide initial support for an industry that will help deliver carbon savings for the UK.
43. Though the enabling powers in the Energy Act 2008 allow us to consider providing support for non-renewable microCHP technologies up to 50kW, we are not proposing that at this stage. We believe that larger microCHP installations can benefit from other policies which encourage and require greater carbon efficiency from organisations. We will keep support for microCHP up to the capacity allowed through the Energy Act under review alongside other carbon saving policies and incentives, and will continue to work with the industry and other stakeholders on these issues.

#### *Innovative technologies*

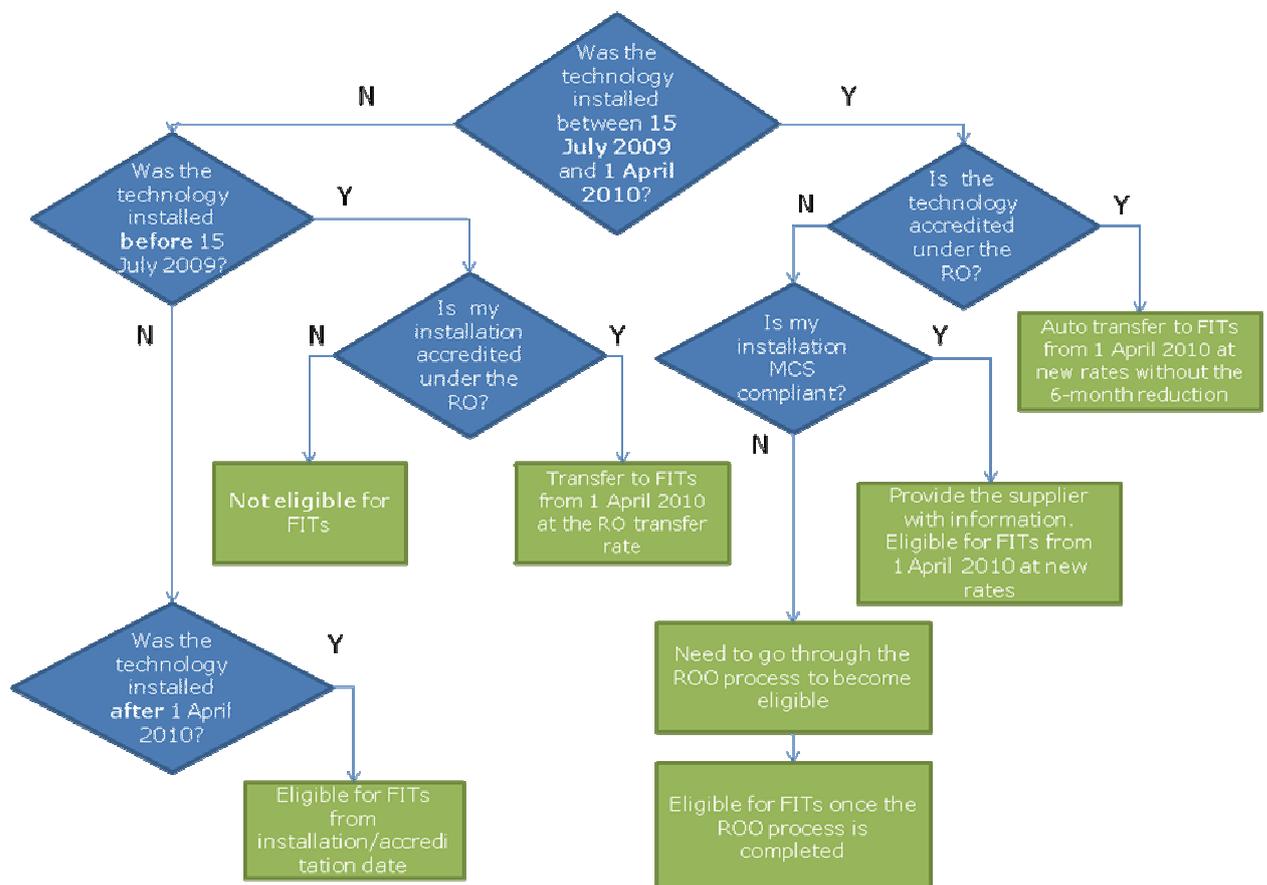
44. The consultation document sought views on how it would be best to incorporate new technologies within FITs as they become closer to market. We consider that as technologies become deployable at scale, the FITs scheme has the potential to develop the market for these technologies further because of the long term support compared to grants, and the higher returns and greater certainty compared to the RO. We are keen therefore to consider new technologies and their eligibility for FITs at scheme reviews.
45. However, uncertainties over cost and performance make it difficult to set appropriate tariffs. Therefore we intend to consider whether any such technologies should be added as appropriate at the time of regular reviews of the scheme. We consider that a “default tariff”, which would apply to technologies other than in the table of tariffs on page 26, would be too difficult to administer in the context of the broader eligibility issues and that it

would not be able to be set at a level which provided a meaningful incentive and assure value for money. The eligibility for the RO of renewable technologies that are not included in the FITs scheme will not be affected.

### Microgenerators installed before 15 July 2009

46. In the Summer 2009 consultation, we proposed a position whereby existing microgeneration installations that had installed before the publication of the consultation and had not been accredited to receive support through the RO would not be eligible for FITs support. This was on the basis of the understanding that these installations already exist and have been installed and are operating without financial support. Many consultees disagreed with this. However, we continue to believe that allowing all existing installations access to FITs would not only increase the overall costs of the scheme but would not encourage additional generation. We therefore confirm that we will not be allowing FITs for microgeneration installations completed before 15 July 2009 that had not applied for accreditation under the RO before this date.
47. Figure 1: Microgenerators FITs scheme eligibility flow chart, illustrates the prospective paths for microgenerators to receive FITs.

**Figure 1: Microgenerators FITs scheme eligibility flow chart**



### Refurbished and second-hand installations

48. The objective of the FITs scheme is to encourage new entrants into renewable and low carbon electricity generation. We have designed the tariff structure on the basis of cost assumptions for new technologies as outlined in the Element Energy / Pöyry study that accompanied the publication of the Summer 2009 consultation.<sup>10</sup>
49. As stated in paragraph 46 we will not be allowing existing installations that were not receiving support through the Renewables Obligation to access FITs, and those that were receiving RO support will get FITs at an equivalent level. Accordingly we will only allow new equipment to access FITs support, as it is on the basis of new technology costs that our tariffs are set.
50. Similarly, capacity created by installing refurbished equipment (where refurbished is understood to mean 'renovated') has a different cost base to new technology., and so refurbished installations will not be eligible for FITs.
51. We will keep this issue under review and consider whether or not there are merits to allowing renovated or refurbished technologies to receive FITs support in the future, bearing in mind the different costs and the fact that equipment may have received other financial support through its life.

### Off-grid generation

52. An overwhelming majority of respondents thought that off-grid generators (who are not connected to the national electricity system) should be eligible for FITs. The most commonly cited reason for this view was that off grid consumers generally use much more polluting forms of generation such as diesel generators, and they should be incentivised to move away from these. We confirm that the off-grid electricity supply will be eligible for FITs. There are, however, potential issues with how the electricity generated by off-grid generators is used. For off-grid FITs generators we will replicate the procedures currently used under the RO and require them to declare that the electricity generated has been used and that they comply with the scheme requirements in relation to metering. Details of these will be included in the Ofgem guidance for the FITs Scheme.
53. We received a number of responses in relation to the eligibility for FITs for off-grid remote communities in regard to metering and the use of different standards from the RO. These issues are being considered further within the context of the MCS installation standards. However as set out in the consultation document, within the timeframe for the implementation for FITs, it has not been possible to develop new standards. These issues will therefore be considered at future reviews of the scheme.

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<sup>10</sup> Quantitative Analysis of the Design of Feed-in tariffs,  
[http://decc.gov.uk/en/content/cms/consultations/elec\\_financial/elec\\_financial.aspx](http://decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx)

54. We also confirm that off-grid generators will receive a generation tariff. Like on-site generators, they will also receive benefits from avoiding the cost of generating electricity by other means, e.g. diesel.
55. As off-grid generators do not have a direct relationship with a supplier they will have the right to approach any mandatory FITs supplier, who will be required to pay their FITs. Voluntary FITs suppliers may also agree to provide FITs to off-grid generators.

### Energy Efficiency

56. Energy efficiency is being tackled directly as part of the Household Energy Management strategy through mechanisms such as the Carbon Emissions Reduction Target (CERT), the post CERT supplier obligation and the Community Energy Saving Programme (CESP). The Government's response to the HESS consultation<sup>11</sup> will be published shortly, setting out the Government's strategy for a step change in delivering in this area.
57. Given that the introduction of FITs will incentivise the rollout of electricity generating technologies to households, communities and small and medium enterprises (SMEs), we have considered the arguments for using it as a vehicle to introduce and improve energy efficiency measures at those premises.
58. Where exported electricity is metered – which at the very small scale will include when smart meters are deployed – the tariff structure provides an incentive to increase energy efficiency because reduced electricity consumption means that more electricity generated should be available for export, and so receive an export tariff.
59. It would also be possible to require that FIT applicants undertake energy efficiency assessments before being eligible for FIT payments, and this was considered. However, this would further complicate the eligibility criteria for the scheme and would be difficult to monitor and enforce. At the outset the scheme should be as clear and streamlined as possible, and therefore specific energy efficiency measures or standards will not be a pre-requisite for the payment of FITs, nor are higher tariffs being provided to those who have taken energy efficiency measures. It may be appropriate to revisit this issue at future reviews.
60. Moreover, the installation of generating equipment and the tariff payment process could be used as a route to better information provision (e.g. applicants would be provided with wider energy efficiency information when installing their generation equipment). We will therefore continue to work closely with Ofgem, the Energy Saving Trust and the Carbon Trust to ensure information is provided to potential FITs beneficiaries about energy saving measures they should consider before proceeding with purchasing and installation of energy generation technologies.

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<sup>11</sup> <http://hes.decc.gov.uk/>

61. In the case of new-build homes and non-domestic buildings we want to avoid the situation where builders pursue lower standards of energy efficiency than would have been the case in the absence of the FITs – particularly in advance of the more demanding energy efficiency standards that will come into effect in 2013 and 2016<sup>12</sup>. In practice, we anticipate that this is less of an issue for renewable electricity than for renewable heat, and we are not therefore proposing any specific measures to address this risk at this stage under the FIT. However, this issue will be kept under review as part of the 2013 review of the FITs scheme and in setting the details of the 2013 changes to Building Regulations.

## Level of tariffs

### Rates of return

62. The final generation tariffs are set out in the “Table of Generation Tariffs to 2020” table on page 47. These tariffs should encourage investment in small scale low-carbon generation that will contribute towards meeting our challenging renewable and carbon targets, and do so in a way that ensures value for money for the scheme as a whole, bearing in mind that the costs of support are shared by all electricity consumers. The specific tariff levels are also set to ensure compatibility with other policies so that we do not create distortions in the market and perverse outcomes in regard to the potential overlaps between FITs and the RO and the Renewable Heat Incentive (RHI)<sup>13</sup>.
63. Tariff levels have been set to provide an expected rate of return, in real terms, of approximately 5-8% for well sited installations, taking into account the risks associated with deploying the different technologies and the likely effect those risks would have on investors’ willingness to invest. As the tariffs are linked to inflation, in nominal terms this rate of return could then be considered to be approximately 7-10%.
64. There have been a number of changes to eligibility and to the structure bands, these are set out in the “Eligibility: Technologies” section on page 15. In addition to these changes, there have been adjustments to tariff levels that have been necessary as a result of other changes that have occurred to the design of the scheme, or to external factors. These are:
- updated assumptions regarding current and future electricity prices and how they affect returns to generators to reflect latest projections;
  - updated all prices to 2010 levels;
  - changes in the level of export tariffs offered.

<sup>12</sup> See Part B of <http://www.communities.gov.uk/publications/planningandbuilding/futureofcodeconsultation> for Government’s proposals for the energy efficiency standards that will apply for new homes from 2013 and 2016.

<sup>13</sup> The RHI consultation is published alongside this document and is available at <http://www.decc.gov.uk/en/content/cms/consultations/rhi/rhi.aspx>

65. This section of the Summer 2009 consultation document received a strong response, with many arguing for higher rates of return. However given the commitment to maintain tariff levels until April 2012 thus postponing degeneration, combined with the indexation of those levels over the entire life of the tariff (see paragraph 66 below), the guaranteed, long term revenue stream resulting from rates of return of 5-8% should deliver a step change in the deployment of small scale and microgeneration low carbon electricity generation technologies.

### **Indexation**

66. Many respondents to the consultation proposed that the level of tariffs should be indexed to account for inflation - for both individual installations, and for new installations coming on. All tariff levels (including export tariffs) will be indexed by RPI. This will ensure that the target rates of return are maintained in real terms for the life of the FIT for each individual investor.

### ***How indexation will work***

67. The 'Table of Generation Tariffs to 2020' on page 47 shows the tariffs calculated on the basis of 2010 prices for all years of the FITs scheme, incorporating annual degeneration where this is applied. Each year, all of the figures in the table will be adjusted on the basis of changes in RPI in the previous year; so in year 2, an installation made in year 1 will be paid the updated "year 1" tariff; similarly an installation made in year 2 will be paid the updated "year 2" tariff – and so on future years.

68. Indexation is calculated by the percentage increase or decrease in the retail prices index over the 12 month period ending on 31 December in the previous year.

### **Tax issues**

69. Sections 20 and 21 of the Finance Act 2007<sup>14</sup> set out the current income tax exemptions for domestic microgeneration in respect of the sale of electricity and the income from ROCs. In the 2009 Pre-Budget Report<sup>15</sup>, the Chancellor confirmed that households who use renewable technology to generate electricity mainly for their own use will not be subject to income tax on feed-in tariffs.

### **Tariff lifetimes**

70. We confirm that tariffs will be paid for 25 years for photovoltaic generators, and for 20 years for anaerobic digestion, hydro and wind generators; projects within the micro CHP pilot will be paid for 10 years. Installations in place before 15 July 2009 and transferred from the RO will receive FITs support until 31 March 2027.

<sup>14</sup> [http://www.opsi.gov.uk/acts/acts2007/pdf/ukpga\\_20070011\\_en.pdf](http://www.opsi.gov.uk/acts/acts2007/pdf/ukpga_20070011_en.pdf)

<sup>15</sup> [http://www.hm-treasury.gov.uk/prebud\\_pbr09\\_index.htm](http://www.hm-treasury.gov.uk/prebud_pbr09_index.htm)

## Generation tariffs

### *Degression*

71. “Degression” is where tariffs for new installations are set at a lower level each year than for installations made in previous years. This is to reflect, and also to encourage and drive, decreases in technology and installation costs.
72. Through the consultation process it became clear that there was some confusion as to how degression would work in practice. Any eligible installation that is installed would be allocated a generation tariff according to the table of tariffs on page 47. This is the generation tariff that would apply to generation from that installation for the life of the tariff, subject to alterations as a result of indexation.
73. When tariffs are degressed, they are degressed only for new installations from that point forward. So tariffs paid to existing generators at that time are not affected, only tariffs allocated to new installations from that date. An installation in Year 1 will receive the Year 1 tariff for its lifetime, an installation in year 2 will receive the year 2 tariff for its lifetime, etc (though the tariffs will vary each year with indexation, as detailed in paragraph 67.
74. Several responses to the consultation argued that early degression would provide a disincentive for new businesses setting up. We have therefore decided that for these technologies subject to degression, its introduction will be delayed until April 2012, providing generators with tariffs at initial levels for two years. We believe this delayed start to degression will provide technology supply chain industries an indication of the cost reductions that will need to be achieved so that the tariffs can still deliver a sufficient return to encourage investment from potential generators.
75. In order to encourage further cost efficiencies from the solar photovoltaic industry, whose products will make up the majority of installations supported under FITs and whose costs per kilowatt hour of electricity produced are the amongst the highest under the scheme, we propose at this stage to increase the degression rate by a further 0.5% from 2015. This gives a clear indication to the industry of Government intent, although the first review period will be an opportunity to consider whether this increase should be maintained, or indeed increased as may be required should the cost reductions that the industry have delivered historically be continued or improved.<sup>16</sup>
76. The effect on the tariffs of the degression rates can be viewed in the generation tariff table on page 26 and in the full table of tariffs on page 47.

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<sup>16</sup> For example the European PV Industry Association (EPIA) state that the cost of solar energy has dropped by an average of 10% per year (<http://www.epia.org/solar-pv/faq.html#c3998>) and some commentators forecast “grid parity” for solar PV by 2013, e.g. <http://www.solarcentury.co.uk/Press/Press-Releases/Solar-electricity-as-cheap-as-conventional-electricity-in-UK-by-2013>

### **Anaerobic Digestion**

77. Responding to consultation feedback, we have decided to change the structure of rewards for anaerobic digestion (AD). We have:
- removed the distinction between electricity-only and combined heat and power (CHP) AD; and
  - introduced different levels of support for plant at different scales.
78. These changes will have the effect of providing greater support for smaller “farm scale” anaerobic digestion schemes. The analysis which accompanied the initial FIT policy development accounted mainly for large-scale urban food waste based plants. Evidence put forward by respondents demonstrated that there are greater all-round benefits from farm-scale AD systems (see the ‘Generation tariff to 2020’ table on page 47).

### **Wind and hydro**

79. Also, we have decided to change the structure of bands for hydro and wind generation to provide additional support for “community scale” wind (500kW – 1.5MW) and hydro (1MW – 2MW) projects. These changes to wind and hydro banding will help smooth the transition from high (low-capacity installation) tariffs to the RO equivalent tariffs offered at higher capacities and limit the risk of downsizing projects to take advantage of higher tariffs at lower capacities, which is undesirable.
80. The revised tariff structure aims at increasing attractiveness of projects owned by communities without a great deal of expertise in the UK energy market structures to encourage greater development in this area. However it is still necessary to ensure that boundary between FITs and the RO is smooth, and therefore the level of support offered to large scale FITs projects from 1.5-5MW for wind and 2-5 MW for hydro projects (which are mostly owned by professional developers) is set to ensure that projects are not downsized to fit within FITs capacities.

### **Building integrated PV**

81. We also received a number of responses advocating enhanced support for building integrated PV. Having considered the arguments, we have decided that we will not provide tariffs that differentiate between building integrated solar PV and other PV installations at this time, but we will consider this technology at future scheme review points alongside all other potential technologies for which we may want to offer tariffs as they come closer to deployment at the small scale.<sup>17</sup>

### **Multiple technologies at the same site**

82. There will be instances of generators installing two types of technology on the same site (e.g. a school may install a wind turbine and solar PV panels). We confirm that each technology will receive its own tariff so the generator

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<sup>17</sup> Qualitative issues in the design of the GB feed-in tariff, June 2009, Pöyry Energy Consulting and Element Energy, available from [http://decc.gov.uk/en/content/cms/consultations/elec\\_financial/elec\\_financial.aspx](http://decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx)

will receive different payments per unit generated from the different technologies as though they are separate installations.

83. In order that the differentiated tariff payments are possible, the generator will have to have a generation meter for each technology in order to measure the output individually. This is not necessary for export tariffs as the export tariff is uniform across all installations.

***Microgenerators installed before 15 July 2009***

84. Existing microgenerators who are accredited under the RO will transfer to the FITs scheme at an RO equivalent rate.
85. We heard representations through the consultation process from individuals who were already benefitting from an export tariff provided by their electricity supplier, and they argued that our proposal to transfer them to FITs at an RO equivalent rate was going to make them worse off than they were currently. Many of these export tariffs offered by suppliers were paid only on electricity exported by microgenerators, and required Renewable Obligation Certificates (ROCs) obtained by the generator to be surrendered to the electricity company. These tariffs were offered by suppliers on a commercial basis and whether they continue or alter these tariffs following the introduction of the FITs scheme is a commercial matter for each individual supplier.
86. In a scheme where a tariff is paid only on electricity exports but requiring the surrender of any ROCs received, and assuming that 50% of generation is used onsite and 50% exported to the local grid, a generator surrenders 9p/kWh of ROC value on every kWh generated to receive the export tariff on 50% of their generation. Under our RO transfer tariff, the generator will receive the full 9p/kWh for their generation as well as a 3p/kWh payment for metered or deemed exports. Therefore the generator will receive 10.5p/kWh generated (9p/kWh of generation plus 3p/kWh on half their generation). We believe this compares favourably with many of the tariffs that were historically offered, which would have had to have exceeded 20p/kWh exported to exceed the FITs rate. Also these tariffs were not guaranteed and could be removed or modified by the supplier at any time, so our RO transfer tariff will provide more certainty for generators.

**Generation tariffs 1 April 2010 – 31 March 2013**

Technology	Scale	Tariff level for new installations in period (p/kWh) [NB tariffs will be inflated annually]			Tariff lifetime (years)
		Year 1: 1/4/10 – 31/3/11	Year 2: 1/4/11 – 31/3/12	Year 3: 1/4/12 – 31/3/13	
Anaerobic digestion	≤500kW	11.5	11.5	11.5	20
Anaerobic digestion	>500kW	9.0	9.0	9.0	20
Hydro	≤15 kW	19.9	19.9	19.9	20
Hydro	>15-100 kW	17.8	17.8	17.8	20
Hydro	>100 kW-2 MW	11.0	11.0	11.0	20
Hydro	>2 MW – 5 MW	4.5	4.5	4.5	20
MicroCHP pilot*	≤2 kW*	10*	10*	10*	10
PV	≤4 kW (new build**)	36.1	36.1	33.0	25
PV	≤4 kW (retrofit**)	41.3	41.3	37.8	25
PV	>4-10 kW	36.1	36.1	33.0	25
PV	>10-100 kW	31.4	31.4	28.7	25
PV	>100kW-5MW	29.3	29.3	26.8	25
PV	Stand alone system**	29.3	29.3	26.8	25
Wind	≤1.5kW	34.5	34.5	32.6	20
Wind	>1.5-15kW	26.7	26.7	25.5	20
Wind	>15-100kW	24.1	24.1	23.0	20
Wind	>100-500kW	18.8	18.8	18.8	20
Wind	>500kW-1.5MW	9.4	9.4	9.4	20
Wind	>1.5MW-5MW	4.5	4.5	4.5	20
Existing microgenerators transferred from the RO		9.0	9.0	9.0	to 2027

\* Note the microCHP pilot will support up to 30,000 installations with a review to start when the 12,000<sup>th</sup> installation has occurred

\*\* Definitions of terms used here are included with the table on page 47

87. Note that where a technology is on a banding boundary, the installation will be eligible for the higher tariff (i.e. it will be classed as in the lower capacity band). A full table of tariff levels to 2020 is available on page 47.

## Export tariff

88. As stated in the consultation document, an important part of delivering FITs is to reduce uncertainty and the difficulty of dealing electricity markets for small and non professional generators by providing a guaranteed price for electricity exported from the site. The consultation document proposed a long term fixed price for exports of 5p/kWh, intending to reflect the value of exports to suppliers purchasing that electricity. It was also proposed that generators who wished to participate in the competitive energy market could have a once only chance to opt out of the export tariff.
89. For the majority of installations supported under the FIT the export tariff is a very small proportion of the benefit that the overall scheme receives. For example, for a domestic PV installation it would represent less than 4% of the revenue received for every kWh generated.
90. Guaranteed returns for exports was widely supported by respondents to the consultation, with many identifying it as a key advantage of the proposed scheme. However, feedback from suppliers and others and further independent analysis has confirmed that the actual value to suppliers is likely to be less than the proposed value of 5p/kWh given the costs to suppliers of realising the benefits of this generation in the competitive electricity market. This would have a number of potential impacts: it would be necessary to compensate suppliers through the levelisation process for the additional cost of buying electricity at above market rates; further it would potentially discourage suppliers and others from entering the market to buy electricity from small scale generation, as they would not be able to compete against artificially high prices.
91. In addition, most respondents proposed some adjustment of export tariffs over time rather than a long-term fixed price; proposals included indexing to RPI, linking to electricity prices, or adjustment as a result of reviews.
92. Implementation of the export tariffs, particularly at the domestic scale, is challenging. Although potential generators place considerable value on the guaranteed return on exports, most suppliers have claimed that the difficulties and costs in ensuring that meters are installed and registered for settlement may delay implementation of the scheme, and others, particularly small suppliers, claim that the tariff would affect their participation in the market. Respondents also raised the point that installation of meters for exports potentially represent a stranded cost given the Government's current proposals for smart meters.
93. We have therefore decided to set the export tariff at 3p/kWh (instead of the 5p/kWh proposed in the Summer 2009 consultation). Note that the generation tariffs have been adjusted to maintain total rates of return (since approximate rates of return were derived through consideration of the combined benefit of generation tariffs, export tariffs and avoided costs of importing electricity). As for generation tariffs, the export tariff will be

indexed annually by RPI. We have also decided that generators will have greater flexibility in regard to opting out of the export tariffs; generators will be able to opt in or out on an annual basis.

94. We have also decided that, strictly as an interim measure, for domestic scale generators, it will be possible to pay export tariffs on the basis of estimated (deemed) exports. More detail is provided in the section on Meters.
95. We propose that at this level of tariffs it will not be necessary to include consideration of export tariffs when considering the distribution of costs between suppliers. We estimate that the proposed tariff level is below likely value to suppliers of the exports at all scales. We also consider that the contestability provided by the ability to opt out of the export tariffs will provide protection against excessive supplier returns if the value of exports to suppliers significantly exceeds the export tariff.

## 4. The scheme for generators

### Getting information

96. We have heard anecdotally from many companies in the small scale electricity generation supply industry that the number of enquiries from potential customers has increased significantly since the publication of the feed-in tariffs proposals in the summer of 2009. A number of other companies have been set up to provide advice to consumers on how best to take advantage of the proposed Clean Energy Cashback schemes, both FITs and the Renewable Heat Incentive, and which technologies they should consider installing.
97. We expect that, going forward, these companies and the licensed electricity suppliers that offer FITs will be the main route through which consumers will learn about the scheme and how it will apply to them. The Energy Saving Trust provide guidance and advice for individuals and householders, and the Carbon Trust provide similar information for businesses. Both organisations will inevitably provide information about FITs as they do currently about other financial support that's available. Both these organisations already provide independent information on the technologies that are covered by the scheme.<sup>18</sup>
98. We will also be work with Ofgem prior to the launch of the scheme, and subsequently, to provide additional information to ensure confidence in the scheme and to make clear what the obligations and requirements are that the licensed electricity suppliers must meet.
99. As was outlined in paragraph 60, we will continue to work closely with Ofgem, the Energy Saving Trust and the Carbon Trust to ensure information is provided to potential FITs beneficiaries about energy saving measures they should consider before proceeding with purchasing and installation of energy generation technologies.

### Financing of FITs revenue streams

100. FITs provide regular payments over a number of years. For most eligible energy installations, however, most of the cost is concentrated in the up-front price of the generating equipment and its installation. We hope that the market will provide the necessary loans or other finance packages to drive the uptake of small-scale technologies.
101. Through discussions during and after the consultation period and consultation responses received we believe that there is interest from a

<sup>18</sup> See Carbon Trust web pages at <http://www.carbontrust.co.uk/emerging-technologies/technology-directory/pages/default.aspx> and Energy Saving Trust web pages at <http://www.energysavingtrust.org.uk/Generate-your-own-energy>

number of organisations and sectors in delivering innovative financial products that make access to FITs revenue streams easier. We therefore confirm that central Government will not provide a mechanism for up-front capitalisation of FITs revenues. This does not preclude other organisations from offering such schemes.

#### **Local Government and social housing**

102. Local authorities can play a vital role in tackling climate change through their role on planning, building control, through action on their own estates and operations including social housing, and procurement. We want local authorities to develop their leadership role on this agenda and we are piloting the concept of local carbon frameworks.<sup>19</sup>

103. Local authorities will be able to access the FITs to support investments in renewable electricity generation, for example on their own buildings, and announced in the Pre Budget Report that they would consider the scope for local authorities to borrow against the income streams from FITs (and the Renewable Heat Incentive). We are also keen for local authorities to work with other partners on community scale renewable electricity schemes which can be supported by FITs.

#### **FITs for low-income households**

104. The Government wants all households to have the opportunity to play a part in generating low carbon energy. Although feed-in tariffs and the Renewable Heat Incentive will make payments over the life of installations, low-income households may still find it difficult to meet upfront costs. Building on the experience of pilot projects for Pay as You Save financing and Warm Front, the Government will consult later this year on measures to help low-income households take advantage of clean energy cashback.

#### **Accreditation**

105. There will be a central accreditation and registration system for FITs generators to ensure the integrity of payments and to minimise the burden on suppliers to undertake audits. A prospective generator that demonstrates that they comply with the eligibility criteria for the scheme will be entered into the Central FITs Register which will be overseen by Ofgem, and this register will be used by suppliers to verify eligibility, to ensure that payments are made at the appropriate levels and to minimise the potential for abuse. The Central FITs Register will include details of the site, technology and ownership in order to identify the generator unambiguously, assign the correct tariff and prevent double counting. There will be two main routes for eligible generators to be registered for FITs:

106. For technologies where there is a viable Microgeneration Certification Scheme (MCS) process<sup>20</sup> (wind, solar PV and hydro up to 50 kW, and

<sup>19</sup> See <http://www.communities.gov.uk/news/corporate/1449033>

<sup>20</sup> <http://www.microgenerationcertification.org/>

domestic scale microCHP), generators will need to ensure that the installation is recognised by MCS; they will then approach a FITs supplier, who will manage the process of registration for them.

107. For other technologies, generators will need to approach Ofgem and seek accreditation under a similar process as exists currently for the RO; once accredited generators may approach a FITs supplier.

### **The role of the Microgeneration Certification Scheme (MCS)**

108. The MCS is an independent certification scheme accredited by the United Kingdom Accreditation Service (UKAS), which assesses installer companies and products against robust standards. It enables the provision of accurate forecasts of energy outputs to generators as well as a level of consumer protection which meets the Office of Fair Trading requirements. In addition, MCS gives assurances about the likely quality, durability and performance of installations.

109. MCS, which is industry-led, is capable of providing independent assurance and legitimacy to small-scale onsite energy installations. As such, it is the basis for eligibility for grants under the Low Carbon Buildings Programme and CERT.

110. We confirm that the MCS has a role to play in the accreditation and registration of microgeneration wind, hydro, solar PV of 50kW or less and eligible and microCHP installations. We have worked with the MCS steering committee and Gemserv who currently administer the scheme to ensure that the MCS installation standards enable the collection and provision of information from completed installations, through an MCS database that we have commissioned Gemserv to develop and administer. This database, along with modification to the MCS installer standard, will facilitate the provision of information on wind, solar, hydro and microCHP microgeneration installations, which are expected to make up the majority of FITs supported installations, to electricity suppliers. Such information that would be recorded automatically through the MCS installation will include

- Installation details such as technology type, total installed capacity, date of installation, location and MCS installer details
- Metering details such as supply and (where relevant) export MPANs, serial numbers of generation meters

111. We expect that this process will hugely simplify the accreditation and registration process for most installations, ensuring that consumers who have MCS products installed by MCS installers are not overburdened with additional requirements to be eligible to receive their FITs payment.

### Connection issues

112. Prospective generators intending to receive FITs will need to ensure they have any necessary physical connections to the electricity distribution and transmission system and, if necessary, the right to export to the market.
113. Further information on connection requirements can be found in the document 'Guidance on the Electricity, Safety, Quality and Continuity Regulations 2002'.<sup>21</sup>

### Assigning rights to payments

#### *Ownership of installations*

114. In general, generating equipment that will be eligible for FITs will be purchased by an individual or organisation who will then receive the FITs payments as well as the benefits of that generating equipment.<sup>22</sup> It will be up to landlords and tenants of domestic or commercial property to come to an arrangement about the receipt of payments and on-site electricity use benefits through bilateral agreements.
115. Given the length of FITs payments (10 to 25 years), there will be frequent instances where the ownership of the property hosting the generating equipment on which FITs is paid changes. We expect standard property ownership rights to be applied to the ownership of the generating equipment. When ownership of that property changes we will expect the ownership of the generating equipment and FITs payments to also change and pass to the new owner of the property and this will need to be notified to the scheme administrator. It will be left to the market for the previous owner to be compensated for the remaining value of the FITs payments and on-site benefits (e.g. through a higher price paid for their property).
116. How a change in the ownership of a FITs installation is managed is covered in the Supplier Issues section below.

#### *Assigning rights*

117. In the consultation we proposed that owners of FITs installations could assign their rights to FITs payments to others. An overwhelming majority of respondents to the Summer 2009 consultation document agreed with this proposal. We confirm that a generator may assign the benefit of the FIT payment to a third party subject to controls to ensure that the risk of fraud and abuse is minimised. Assignment in this way will allow for financing arrangements, for the provision of FITs generation in the context of social housing, and to allow for innovative arrangements to share the cost and benefits of renewable generation between builders and purchasers of new housing. Any assignment of rights to any person(s) or organisation other than the legal owner of the premises will need to be supported by evidence,

<sup>21</sup> <http://www.berr.gov.uk/files/file26709.pdf>

<sup>22</sup> The Energy Act 2008 defines that "owner" in relation to any plant subject to a hire purchase or conditional sale agreement, or similar, means the person in possession of the plant under that agreement.

e.g. presentation on request of a legally binding contract between the owner of the installation and the assignee.

## Models for FITs in practice

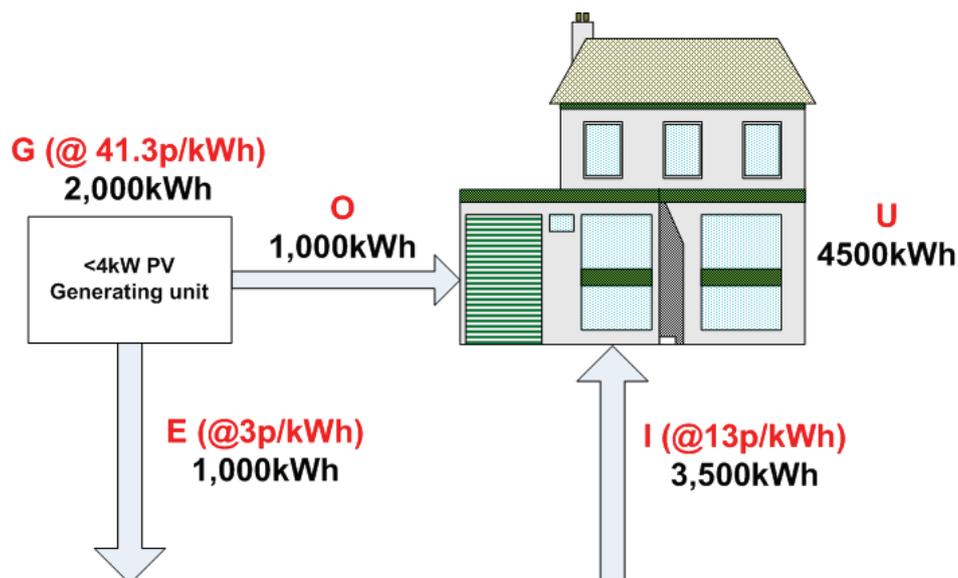
### Onsite generation

118. Under the final tariff model, a householder or business that uses energy on-site will receive three different strands of benefit from FITs:

- A fixed price for each unit of electricity generated by their installation determined according to the generation tariffs table on page 26. This price will remain the same throughout the lifetime of the installation's eligibility for FITs payments (subject to indexation);
- An export tariff providing a fixed payment for exported electricity (strictly as an interim measure, this may be based on an estimated (or "deemed") amount the very small scale
- The benefit from reducing their imports of electricity by using a proportion of the electricity they generate in their premises. This means they will be likely to be purchasing a reduced number of kWh of electricity from their supplier leading to lower electricity bills and also being at least partially shielded from future price rises in electricity.

119. The generation tariff and (deemed or metered) export tariff will be paid by the supplier that offers FITs selected by the generator, expected (in most cases) to be the generator's electricity supplier.

**Figure 2: Illustration of potential electricity flows for an on-site generator**



120. In this illustrative example, the site generates (G) 2,000 kilowatt hours (kWh) per annum (here a retrofitted <4kW solar PV panel) which is metered using the site's generation meter. They are then assumed to have exported (E) 50% of their generation onto the local electricity network (either as metered

exports or deemed exports, see paragraph 131 on Meters) when the electricity is generated at times when the household does not use it. The other 50% of generation is used on-site (O). The household uses (U) a total of 4,500 kWh per annum, therefore, they need to import (I) 3,500 kWh from their electricity supplier.

121. Using this illustrative example, the generator will receive a FITs payment of £856 per annum (made up of a generation tariff payment of 2,000 kWh x 41.3 p/kWh = £826 plus an export tariff payment of 1,000 kWh x 3p/kWh = £30). They also derive a benefit from the 1,000 kWh they generate and use on-site as that will offset 1,000 kWh they would otherwise have had to buy from their electricity supplier. Assuming an import price of 13 p/kWh this would be a saving of £130 (1,000 kWh x 13 p/kWh).

### Generation with 100% export / no use onsite

122. Generators who have no direct on-site use for their electricity, for example small commercial wind farms or communities with a shared installation, will receive two strands of benefit from FITs:

- A fixed price for each unit of electricity generated by their installation; and
- A price for each unit of electricity exported onto the electricity grid by their installation.

123. In practice, given that such installations will export virtually all their generation, those that opt to receive the export tariff will effectively receive a single per unit payment for all their electricity (the sum of the generation and the export tariff). Therefore, given a fixed tariff, the only variable in their reward will be the quantity of electricity they generate.

124. The generation tariff and export tariff will be paid by the supplier that offers FITs selected by the generator. As many 100% export sites may not have an electricity supplier the generator will need to approach FIT licensees to receive their FIT payment. Mandatory FIT licensees are obliged to provide FITs to these generators. Voluntary FITs suppliers may also choose to do so (see "Suppliers" section on page 38 for more information).

### Finding a supplier

125. The Energy Act 2008 provides that modifications to electricity supply and distribution licences will be the basis for the delivery of the FITs scheme. We confirm that electricity suppliers will be responsible for paying FITs and in order to receive FITs, a prospective eligible generator will need to approach a supplier that provides FITs.

126. Suppliers with over 50,000 domestic customers are obliged to participate in FITs; they are obliged to make FITs available to generators on sites to which they supply electricity; they are also obliged to offer FITs to any generators

on sites that are not served by a mandatory FITs supplier, including off-grid generators;

127. Other suppliers may participate in FITs if they wish; they are obliged to make FITs available to generators of 50kW or less on sites to which they supply electricity, they will have the right, however, to decline provision of FITs to larger generators.
128. Generators will have to advise their chosen supplier of their intention to receive FITs and the supplier will register or confirm the generator's details with Ofgem and the installation will be entered on the Central FITs Register. The Register will include the relevant details of the installation and assign a tariff code – which will identify the generation tariff which the generator must be paid. The generator will also need to advise the supplier whether they intend to opt out of the guaranteed export tariff. If they do so, they will be required to forego any reward for export, or to negotiate their own arrangements for the sale of their exports e.g. through a power purchase agreement (PPA).
129. The supplier will provide the generator with a details of their registration and a statement which sets out a summary of the terms under which the supplier will pay FITs to the generator and the rights and obligations of both the generator and the supplier. This will include obligations on the generator to provide information e.g. sending regular meter readings from generation and export meters and notification of any change of status.
130. It will be up to the suppliers paying FITs to decide their own procedures for paying generators subject to minimum standards (e.g. quarterly payments) to ensure consistency and fairness for generators and prevent abuse by suppliers, as well as to ensure the functioning of the levelisation process. This will allow suppliers to integrate metering and payments into their existing processes and deliver cost savings to their customers, and will allow for flexibility and innovation in the design of systems. We ultimately expect that FITs will be fully integrated into existing electricity market structures, including the process for switching suppliers.

## Meters

131. We confirm that all generation will be metered and FITs payments will be made to generators on the basis of generation in accordance with the strict requirements of existing regulation in the Electricity Act 1989 and subsequent legislation and regulations.<sup>23</sup> We believe that there is a strong case for ensuring that all electricity flows benefiting from FITs, including exports, should be subject to accurate measurement. This will be particularly important as exports from small scale generation becomes a larger part of the electricity market. We note however the points raised in

<sup>23</sup> Schedule 7 of the Electricity Act 1989, The Meters (Approval of Pattern or Construction and Manner of Installation) Regulations 1998, The Meters (Certification) Regulations 1998, Measuring Instruments (Active Electrical Energy Meters) Regulations 2006, Balancing and Settlement Code

regard to the economics of providing export meters for small scale generators and potentially stranded costs arising from the installation of export meters in advance of the roll-out of smart meters.

132. We therefore propose that, strictly as an interim measure, that at the very small scale, the amount of exports for the payment of export tariffs can be deemed, subject to the following conditions:

- these arrangements will only apply until the finalising of specifications for smart meters;
- the payment of export tariffs for deemed exports will be included in the levelisation process, but the total payments to and from suppliers will be adjusted to reflect the benefit that they receive from the spilling of these unmeasured exports onto distribution networks through GSP correction factors;
- these arrangements do not apply if export meters exist already, or are provided at the generator's expense.

133. We are currently working with suppliers to finalise the arrangements and procedures for deeming, including the threshold at which it will apply. It is our intention that it will apply at the very small scale, and the limit and technologies to which it applies will be decided on the basis of the economics of providing meters, and will be set at 30kW capacity or below.

### **Smart meters**

134. In October 2008 the Government announced its intention to mandate a roll out of electricity and gas smart meters to all homes in Great Britain with the aim of completing the roll out by the end 2020. The Government published a 'Consultation on Smart Metering for Electricity and Gas' on 11 May 2009.<sup>24</sup> This Consultation was aimed at confirming the shape and high-level requirements for the domestic roll-out. It also set out proposals to mandate a smart/advanced meter roll out for small and medium non-domestic sites. The Consultation closed on 3 August 2009. The Government published 'Towards a Smarter Future: Government Response To The Consultation on Electricity and Gas Metering' on 2 December 2009.<sup>25</sup>

135. The Smart Metering Government Response stated that the first phase in the Smart Meter Programme will be concerned with defining the scope and key principles of the smart metering solution. This phase is anticipated to be completed by the summer of 2010. The technical specifications for smart meters and the associated communication model will therefore not be in place before the introduction of FITs. However, small-scale generation has been and will continue to be considered in the broad functionality design of smart meters, so once rolled out they will support the metering requirements of FITs installations and the reporting of that data.

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<sup>24</sup> [http://www.decc.gov.uk/en/content/cms/consultations/smart\\_metering/smart\\_metering.aspx](http://www.decc.gov.uk/en/content/cms/consultations/smart_metering/smart_metering.aspx)

<sup>25</sup> [http://www.decc.gov.uk/en/content/cms/consultations/smart\\_metering/smart\\_metering.aspx](http://www.decc.gov.uk/en/content/cms/consultations/smart_metering/smart_metering.aspx)

## Disputes and rights

### *Consumer protection*

136. If FITs are to lead to greater participation in electricity generation by households, communities and other non-expert generators, the systems, as well as being simple, need to deliver confidence to generators that their rights in the market will be protected and they will not be subject to exploitation.
137. We believe that the interests of generators – especially households – will be protected by a range of arrangements. These include systems that are specific to FITs and energy markets, as well as general competition and consumer legislation.
138. In the case of installation, where available MCS will provide consumers with assurance about the quality of the product they are buying – that it will generate a certain amount under certain conditions and be operational for a certain length of time.
139. The proposed licence modifications impose on suppliers a non-discrimination obligation so that FITs generators are not treated unfairly in the supply of electricity.
140. Any disputes regarding the operation of the scheme by Ofgem, including administration of the Central FITs Register, will be subject to the existing Ofgem complaint procedures.
141. We intend to establish an arbitration system covering disputes in administration of the scheme between generators and suppliers. Details of this scheme are not yet finalised. We will ensure that arrangements are in place, if necessary on an interim basis, for the start of the scheme on 1 April 2010.

## 5. The scheme behind the scenes

### Suppliers

142. Suppliers will be the key players in the delivery of FITs, and in general will be required by the proposed licence modifications to offer FITs to their customers. However, given there are potential short term cash flow implications of paying FITs, we do not think it is appropriate that we mandate smaller licensed electricity suppliers to have to bear that potential burden. Therefore, we confirm that suppliers who have a minimum of 50,000<sup>26</sup> domestic customers will be obliged through their electricity supply licence to pay FITs (known as “mandatory suppliers”).

143. All licensed suppliers will be required to make their fair contribution to the cost of the scheme through participation in the levelisation process so that all electricity consumers can make a contribution to the development of small-scale low carbon electricity.

### Voluntary suppliers

144. Licensed electricity suppliers below the threshold who are not mandated to but choose to offer tariffs will be able to pay FITs, as we want to involve the widest range of suppliers in the scheme.. We recognise the potentially disproportionate effect of cash flow issues and the levelisation mechanism on small suppliers. Therefore, we have decided that small suppliers will have the right to decline to offer FITs to prospective generators over 50kW. These generators would have to approach a “mandatory supplier” to receive their FITs payments.

### The role of Ofgem

145. Because the FITs scheme is to be introduced through licence obligations on electricity suppliers, Ofgem will have the lead role in monitoring and enforcing the scheme. In addition, in accordance with the order, Ofgem will undertake the key central administrative functions for the scheme. These are:

- Accreditation of generators that do not have access to the MCS system (generally larger generators) through a system similar to that which applies within the RO;
- Administration of the Central FIT Register, which will help ensure compliance, mitigate fraud, find errors and facilitate switching;

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<sup>26</sup> This threshold is consistent with the Carbon Emissions Reduction Target (CERT) as stipulated in the Electricity and Gas (Carbon Emissions Reduction) Order 2008. Currently this will apply to the ‘Big 6’ electricity suppliers (Centrica, EdF, EON, RWE Npower, Scottish Power and Scottish and Southern)

- Administration of the levelisation process, including collecting information from suppliers, undertaking the necessary calculations and collecting and redistributing funds.

146. Ofgem will also have a public reporting function including the publication of statistics and Annual Report to the Secretary of State.

## Levelisation

147. As set out in the Summer 2009 consultation document, it is a basic principle of FITs that the cost of the scheme should be borne by all licensed suppliers in proportion to their share of the UK electricity supply market. That is that broadly speaking suppliers who pay out a large amount on FITs relative to their market share are recompensed for part of that expense by suppliers who spend relatively less on FITs payments.

148. The levelisation process will be undertaken by Ofgem as part of their duty to administer the scheme and will be set out in the Ofgem order. On an annual basis, suppliers will provide information to Ofgem on FITs payments they have made and other relevant information. Ofgem will use this and other sources to calculate the total cost of the scheme, and to divide that cost among all the suppliers according to their share of the electricity market (excluding any imports of green electricity from outside GB). Suppliers who have paid out less than their calculated share – including those that are not offering FITs – will need to pay into a fund administered by Ofgem. This will then be redistributed to those that have paid out more than their share.

149. In addition to this annual reconciliation there will be periodic redistributions within the year in order to minimise the financial exposure of suppliers – particularly small suppliers with large FIT contributions. At the start of the scheme, these periodic redistributions will be made quarterly and as soon as is practical, Ofgem will move to more frequent redistributions e.g. monthly.

## Suppliers' costs of providing FITs

150. In developing FITs we were mindful of the effects that they would have on the electricity supply market, both for suppliers participating in the scheme and for those below the threshold that choose not to participate.

151. The administration of FITs will impose certain direct costs on suppliers that issue them.

152. As foreshadowed in the Summer 2009 document, we will therefore intend to include some allowance for implementation costs for suppliers in the levelisation process to cover the unavoidable costs of administering FITs. The method for determining this amount will be set by the Secretary of State based on cost estimates provided by suppliers, and on the need to provide incentives to reduce costs to consumers. Discussions with suppliers are continuing on the level of the allowance and will be finalised before the start of the scheme.

153. FITs will include a requirement on suppliers to buy the electricity exported from FITs generators. Our analysis suggests that we have set the amount paid as an export tariff to reflect the value to suppliers of this electricity. We therefore expect that suppliers will be able to realise this value by selling on to other customers or in the wholesale market. There will therefore be no reason to include the cost of this electricity in the levelisation process. This will provide an incentive to suppliers to maximise the value of this electricity, and potentially derive an additional benefit. As set out in the Meters section on page 35, special arrangements will apply on an interim basis for deemed exports.

154. However we recognise in the future, additional costs or benefits may arise because of unforeseen and large differences between the export tariffs paid to generators and the market value of that generation. We therefore will put in place the power for the Secretary of State to allow for these differences in the levelisation process. This will be subject to regular review. It should be noted that these changes would not affect the level of payments to generators.

### **Auditing, assurance and enforcement**

155. In order to ensure that FITs deliver value for money and do not provide opportunities for fraud or other abuse, there need to be systems of audit, assurance and enforcement in place for the scheme. However it is important that, consistent with better regulation principles, that the systems do not create undue burdens on business – including both generators receiving FITs and electricity suppliers who pay them. Therefore, we will be encouraging a risk-based approach to audit and assurance where the procedures used are proportionate to the potential material impact of fraud and misinformation.

156. It is also important that we do not duplicate existing obligations that these organisations have through their participation in the energy and other markets. It will be necessary however to put in place systems to ensure powers and procedures in place provide the assurance that:

- Only eligible installations claim FITs;
- FITs installations only receive the tariff for which they are entitled;
- Information provided by generators is accurate and there are suitable checks in place to prevent fraud; and
- the levelisation process is based on accurate information and redistributes funds between suppliers based on their market share.

157. Within the FITs scheme, audit and assurance is a shared responsibility between Ofgem and suppliers. In their role as administrator of the scheme, Ofgem will be responsible for establishing and managing the Central FITs Register, which will be a key tool in ensuring the integrity of the scheme. On

a day to day basis, it will be the responsibility of suppliers to undertake checks to ensure that the payments they make are accurate and appropriate.

158. The proposed licence modifications establish a range of obligations on suppliers including to take all reasonable steps to ensure any FIT Payments reflect only that to which a generator is entitled and to reduce error and combat abuse of the Scheme. In order to achieve this the supplier (through the Statement of FIT terms) will inform generators of their obligations under the scheme and be able to require generators to provide information and evidence as necessary. Any breach of these obligations by generators may result in suspension or removal from the Central FITs Register. In addition, any generators will be subject to other potential legal sanctions, for example under the Fraud Act 2006.<sup>27</sup>
159. As administrators of the scheme and in order to assist suppliers, Ofgem will be responsible for developing and operating systems for auditing and enforcing the FITs scheme through the proposed licence modifications and providing guidance for suppliers on how to meet their obligations.
160. Because payment of FITs will be an obligation under electricity supply licences, which are established under the Electricity Act 1989 and administered by Ofgem, compliance and enforcement is a matter for Ofgem under that Act.

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<sup>27</sup> [http://www.opsi.gov.uk/Acts/acts2006/ukpga\\_20060035\\_en\\_1](http://www.opsi.gov.uk/Acts/acts2006/ukpga_20060035_en_1)

## 6. Other issues

### Reviews

161. An objective of FITs is to provide long-term certainty for investors but we recognise that it will be important to review and adapt it as circumstances change including technology costs and supply chains and other policy developments. Therefore, we will be putting in place a programme of reviews after which it will be possible to make changes to FITs.
162. We will undertake periodic reviews of FITs with their timing to coincide with the Renewables Obligation reviews. Therefore, any changes to the scheme resulting from the first major review of FITs would be implemented in 2013, alongside any changes required to the RO following the proposed RO banding review, with a set programme of reviews thereafter. In the interim, the degression rates that we have set from when the scheme is launched will apply as set out in the schedule.
163. If necessary, early reviews will be set up to consider any significant changes to the fundamentals affecting the operation of the scheme outside of the periodic review timetable. This approach is similar to the approach to early banding reviews under the RO.
164. All aspects of the FITs scheme will be subject to review including:
- tariff levels
  - degression rates and methods
  - eligible technologies
  - arrangements for exports
  - administrative and regulatory arrangements
  - interaction with other policies
  - accreditation and certification issues including the MCS.
165. Reviews will focus on whether the tariffs offered deliver the target returns, and whether those returns are appropriate in continuing to ensure a real contribution from small scale generation to our renewables and other targets, and that the scheme continues to deliver value for money.
166. In order to ensure that existing investors may proceed with certainty, any changes to future levels of support will apply only to investments following the review; generation tariffs the installations existing at the time of the review will be maintained. It is however our intention that the level of export tariff will be uniform across the scheme, it is therefore not possible to guarantee that the level of the export tariff will not change for individual installations.

## State aids

167. Under EU law the payment of FITs must comply with rules on the provision of State Aid. The objective of state aid control is to ensure that government interventions do not distort competition and intra community trade. We will therefore continue to monitor the operation of the FITs scheme to ensure that payments comply with state aid rules. This may affect the interaction between FITs and grant programmes. In some cases eligibility for FITs may be affected by the receipt of other public body grants. This will be monitored on a case-by-case basis.

## Interaction with other policies

168. In addition to FITs, various other policies provide direct or indirect incentives for small scale renewable technologies. FITs will not make any special provisions for such schemes. However limitations may be imposed through the other schemes.

169. As set out in the Summer 2009 consultation document, eligibility for exemption from the Climate Change Levy and for the issue of Renewable Energy and CHP Guarantees of Origin will not be affected by the receipt of FITs. The Government's policies on zero carbon new homes and new non-domestic buildings are another example of policies which will act as a significant driver to the deployment of on-site renewables. In the case of zero carbon homes, Government has confirmed that FITs and RHI will be available for on-site renewables, making these homes more attractive to occupants and potentially reducing the net costs faced by developers.<sup>28</sup>

170. This is also a relevant point for new non-domestic buildings policy, where the recent consultation on policy options indicated that the same principle of eligibility for FITs and RHI should apply, and also explained that this sector often has greater potential for on-site renewables (e.g. a hospital will have more roof space than a semi-detached house). Providing incentives such as access to FITs to include on-site technologies at the point of build would be more cost-effective than deploying on-site renewables as retrospective additions.

171. In addition, the Renewable Energy Strategy stated the Government's intention to ensure that the public sector leads by example, through tough low-carbon targets for government departments, robust assessment of renewable potential and, crucially, through increasing the incentives for renewable deployment on its own land. The public sector operates within a tight fiscal context where capturing future income streams is essential to viability and delivery of buildings and services. Therefore, FITs can be a major driver in leveraging the potential of on-site renewables in the public sector.

<sup>28</sup> <http://www.communities.gov.uk/statements/corporate/ecozerohomes>

172. Microgeneration products are eligible measures under the GB-wide Carbon Emissions Reduction Target and Community Energy Saving Programme. CERT (April 2008 – March 2011) is an obligation on energy suppliers to deliver household carbon emissions reduction targets through promoting energy efficiency and low carbon measures, whilst CESP (which will apply from 1 September 2009 – December 2012) is an obligation on energy suppliers and electricity generators to deliver energy saving measures to domestic consumers in specific low income areas. CESP has been designed to promote a 'whole house' approach and to treat as many properties as possible in defined areas.
173. To date, a very small number of FIT eligible microgeneration measures have been approved and promoted under CERT and none has been promoted under CESP. The schemes already approved by Ofgem under CERT will receive the agreed carbon saving score. However, any new FIT eligible schemes brought forward under CERT and CESP will be dealt with by Ofgem on a case by case basis. It is clear that there will now be more onus on suppliers to satisfy Ofgem that these measures pass the CERT requirement that any reduction in carbon emissions are over and above that which would have happened without CERT i.e. that there is 'additionality'.
174. The Government announced in the Low Carbon Transition Plan that it would extend CERT from April 2011 to December 2012. The consultation on the extension framework was published in December 2009<sup>29</sup>. The consultation proposes limiting FIT and RHI eligible micro-generation products to vulnerable Priority Group households. It also proposes setting an insulation minimum so as to guarantee a level of insulation. This means that other drivers, including FITs, would not offset the promotion of core energy efficiency products. The CERT extension proposals would be applicable as soon as the legislation is in force sometime in 2010, further restricting the potential for overlap between schemes.

### **FITs interaction with the Renewables Obligation (RO)**

175. The Government Response to the RO section of the Summer 2009 consultation, published on 11 December 2009,<sup>30</sup> set out our decisions in relation to those aspects of the transitional arrangements affecting the RO. This included the eligibility of different categories of generator to join either scheme based on their capacity and date of application for accreditation. Remaining decisions regarding the treatment of generators transferring to FITs – for example the technologies to be covered, tariff levels and duration of support – are detailed in the relevant section of this document.
176. This section brings together and summarises all arrangements concerning the interaction of the two schemes as it affects each category of generator.

<sup>29</sup> <http://www.decc.gov.uk/en/content/cms/consultations/open/open.aspx>

<sup>30</sup> Available at [http://decc.gov.uk/en/content/cms/consultations/elec\\_financial/elec\\_financial.aspx](http://decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx)

### Microgenerators (capacity of 50kW and below)

177. As of 1 April 2010, microgenerators in the following technologies to be covered by FITs will not be eligible for support under the RO:

- AD
- Hydro
- Solar PV
- Wind

178. Microgenerators in these technologies who have applied for accreditation under the RO on or before 31 March 2010 will have this accreditation transferred to the FITs scheme. In the case of wind, hydro and solar PV microgenerators transferring from the RO, they will not be required to meet the MCS accreditation requirements for new microgenerators in these technologies. **However, all microgenerators transferring from the RO will still need to find a supplier in order to access FITs.** Generators will need to find a supplier within 6 months of the start of the FITs scheme (i.e. before 1 October 2010) in order to avoid any interruption to their support.

179. Microgenerators that had applied for accreditation under the RO before 15 July 2009 (the publication date of the Renewable Energy Strategy and the Consultation on Renewable Electricity Financial Incentives 2009) will transfer to FITs at a generation tariff of 9p/kWh and will receive support until 2027. This is an equivalent level and duration of support to that such generators would have received had they remained in the RO. Microgenerators that commissioned and applied for accreditation under the RO on or after 15 July 2009 and before 1 April 2010 will transfer to FITs at the appropriate tariff level for their scale and technology, and will receive support for 20 years (25 years for solar PV).

180. In the Summer 2009 consultation, we proposed that the duration of support under FITs for these generators would be reduced, to reflect the fact that they would already have received support through the RO. We proposed to apply a standard six months' reduction, regardless of the actual period during which they had received support through the RO, in order to reduce the administrative burden. However, we recognise that many microgenerators may not have generated enough to reach the threshold for being issued ROCs during the time they were accredited under the RO. As such, we will not be reducing the duration of support they receive through FITs.

### Small generators (capacity above 50kW up to and including 5MW)

181. Small generators who had applied for accreditation under the RO before 15 July 2009 will remain in the RO and will not be eligible to transfer to FITs. Allowing these generators to transfer to FITs would impact on the ROC market and incur an additional cost.

182. Small generators that commissioned and applied for accreditation under the RO on or after 15 July 2009 and before 1 April 2010 will have a window of opportunity during which they can elect to transfer to FITs. If such generators wish to transfer to FITs with effect from 1 April 2010, they should notify Ofgem as soon as possible before this date, in order that the arrangements can be made in time. Generators wishing to transfer to FITs with effect from 1 April 2011 should provide Ofgem with written notification of their intention no later than 31 August 2010, in order that this can be taken into account in calculating the level of the Renewables Obligation for the 2011/12 obligation period. Unless small generators benefitting from this choice notify Ofgem of their intention to transfer to FITs, within the timescales stated above, they will remain in the RO.
183. All small generators transferring to FITs from the RO will need to find a supplier in order to be paid, as set out in the 'Finding a supplier' section above. They will need to do so within 6 months of the date they transfer to FITs in order to avoid any interruption to their support. They will receive the tariff level appropriate to their scale and technology, but the duration of their support will be reduced to reflect the support they will already have received under the RO. To reduce the administrative complexity, all small generators transferring to FITs with effect from 1 April 2010 will have a standard 6 months' reduction in support, and all small generators transferring to FITs with effect from 1 April 2011 will have a standard 18 months' reduction in support.
184. Small generators that commission on or after 15 July 2009 and who have not applied for accreditation under the RO before the FITs scheme comes into force will need to make a one-off choice as to which of the two schemes they join when applying for accreditation.
185. All small generators who elect to receive support through FITs, whether they transfer from the RO or join FITs directly, will not subsequently be able to receive support through the RO. The one exception to this will be where a generator ceases to be eligible for FITs having added additional capacity to exceed the 5MW maximum. In these circumstances the generator would be eligible to transfer to the RO for the remainder of their duration of support.
186. Any generating stations whose electricity is sold under a NFFO arrangement will not be eligible to join FITs, but will remain eligible to receive support through the RO.
187. Any microgenerators in a renewable technology not supported through FITs, and any renewable generators with a capacity over 5MW, will remain eligible to apply for support through the RO.

## Table of generation tariffs to 2020

Technology	Scale	Tariff level for new installations in period (p/kWh) [NB tariffs will be inflated annually]											Tariff lifetime (years)
		1 1/4/10 – 31/3/11	2 to 31/3/12	3 to 31/3/13	4 to 31/3/14	5 to 31/3/15	6 to 31/3/16	7 to 31/3/17	8 to 31/3/18	9 to 31/3/19	10 to 31/3/20	11 to 31/3/21	
Anaerobic digestion	≤500kW	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	20
Anaerobic digestion	>500kW	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	20
Hydro	≤15 kW	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	20
Hydro	>15-100 kW	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	20
Hydro	>100 kW-2 MW	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	20
Hydro	>2 MW – 5 MW	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	20
MicroCHP pilot*	≤2 kW*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10
PV	≤4 kW (new build**)	36.1	36.1	33.0	30.2	27.6	25.1	22.9	20.8	19.0	17.2	15.7	25
PV	≤4 kW (retrofit**)	41.3	41.3	37.8	34.6	31.6	28.8	26.2	23.8	21.7	19.7	18.0	25
PV	>4-10 kW	36.1	36.1	33.0	30.2	27.6	25.1	22.9	20.8	19.0	17.2	15.7	25
PV	>10-100 kW	31.4	31.4	28.7	26.3	24.0	21.9	19.9	18.1	16.5	15.0	13.6	25
PV	>100kW-5MW	29.3	29.3	26.8	24.5	22.4	20.4	18.6	16.9	15.4	14.0	12.7	25
PV	Stand alone system**	29.3	29.3	26.8	24.5	22.4	20.4	18.6	16.9	15.4	14.0	12.7	25
Wind	≤1.5kW	34.5	34.5	32.6	30.8	29.1	27.5	26.0	24.6	23.2	21.9	20.7	20
Wind	>1.5-15kW	26.7	26.7	25.5	24.3	23.2	22.2	21.2	20.2	19.3	18.4	17.6	20
Wind	>15-100kW	24.1	24.1	23.0	21.9	20.9	20.0	19.1	18.2	17.4	16.6	15.9	20
Wind	>100-500kW	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	20
Wind	>500kW-1.5MW	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	20
Wind	>1.5MW-5MW	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	20
Existing microgenerators transferred from the RO		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	to 2027

\* Note the microCHP pilot will support up to 30,000 installations with a review to start when the 12,000<sup>th</sup> installation has occurred

\*\* “Retrofit” means installed on a building which is already occupied ; “New Build” means where installed on a new building before first occupation ; “Stand-alone” means not attached to a building and not wired to provide electricity to an occupied building





**Department of Energy and Climate Change**

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