

Consultation on fast-track review of Feed-in Tariffs for small scale low carbon electricity

March 2011

Contents

Executive summary:	3
Fast-track consideration of solar PV greater than 50kW	8
Study in the uptake of FITs for farm-scale anaerobic digestion (AD)	17
The Comprehensive Review of FITs 2011-12	22
Annex A – List of Questions	25

Executive summary and how to respond:

1. The Coalition is determined to drive a step change in ambition for the deployment of decentralised renewables and clean microgeneration technologies. As part of this, we are fully committed to Feed-in Tariffs (FITs) for small-scale low-carbon electricity generation. The first anniversary of the FITs scheme is now fast approaching and we have been pleased with the success of the scheme to date which has seen over 25,000¹ installations registered for FITs.
2. When the FITs scheme was introduced by the previous administration it was made clear that all aspects of the scheme, including tariff levels, would be subject to periodic reviews and that, if necessary, early reviews could take place. *Feed-in tariffs: Government's Response to the Summer 2009 Consultation*² made this clear and also provided examples of what reviews would consider.
3. The context for the first review of FITs was set by last year's Spending Review. Firstly, because the Spending Review committed to improving the efficiency of FITs through the first scheme review, to deliver £40 million of savings, around 10%, in the 2014/15 financial year. Secondly, because the Spending Review made clear that there are clear spending parameters within which the FITs scheme must operate. Put simply, there is not a blank cheque for FITs. And, particularly in the current climate, it is crucial that we take a more responsible and efficient approach to public subsidy to ensure that consumers receive value for money and new investors are not overly rewarded with public subsidy.
4. At the time of the Spending Review, we said that the first review of FITs would take place as planned in 2012, taking effect in April 2013, unless higher than expected deployment triggered an early review. However, since then, we have become increasingly concerned about the risk that larger scale solar PV, unforeseen by the modelling undertaken prior to the start of the FITs scheme, could lead to long term pressure on FITs costs. This risk provides a trigger consistent with the statements made at the time of the Spending Review.
5. Therefore, last month, the Secretary of State announced the start of the first comprehensive review of FITs. As well as allowing the concerns above to be addressed, bringing forward the review of FITs also allows for industry to be provided with certainty sooner rather than later about how the savings

¹ Information extracted from Ofgem's FITs Installations Statistical Report (available from <https://www.renewablesandchp.ofgem.gov.uk/Default.aspx>) on 28th February

² Available from www.decc.gov.uk/FITS

committed to as part of the Spending Review will be delivered. This is what many in industry have been pressing for.

6. Through the first scheme review, we want to secure the continued success of FITs through sustainable growth rather than boom and bust. This means enabling industry to grow smoothly within the spending parameters confirmed by the Spending Review. Starting the review now provides us with a better chance of delivering this aim than allowing unsustainable growth which might then have to be reined in dramatically in future. Further, by fast tracking consideration of PV larger than 50kW, and farm-scale AD, we can address urgent concerns that have arisen.
7. We are already aware of evidence suggesting that there is a real risk that uptake of FITs could soon exceed expectations. In particular there is the prospect of larger scale solar photovoltaic (PV) projects, the deployment of which were not fully anticipated at the outset of the FITs scheme until 2013. This could push FITs uptake considerably above trajectory, make the Spending Review savings difficult to achieve, and substantially reduce the amount of money available to smaller solar PV installations and other FIT technologies. The unanticipated prospect of larger-scale solar seems to have been driven by the costs of solar PV falling much faster than anticipated. Global investment in production has significantly reduced costs, with emerging evidence suggesting that PV system costs are now approximately 30% lower than assumed in the original FITs modelling undertaken prior to scheme launch.
8. Because of these concerns and industry developments, last month's announcement confirmed that the review would include fast-track consideration of FITs for solar PV above the microgeneration threshold of 50kW. Solar PV microgeneration of up to and including 50kW is not within the scope of the fast track review and is therefore not being considered by this consultation. Alongside all other aspects of the FITs scheme, it will be considered as part of the comprehensive review. The principal purpose of this consultation is taking the fast-track review forwards.
9. Specifically, this consultation (see Chapter 1) seeks views on proposed reductions to the tariffs for solar PV above 50 kW. This is in line with changes being made to FITs for PV elsewhere in Europe. As well as addressing the concerns described above, the proposed reductions are also intended to ensure that the tariffs for non-microgen solar better reflect evidence of significant reductions in the costs of PV since the FITs modelling was undertaken. The proposed new tariffs for solar PV installations are:

>50kW – ≤ 150kW TIC:	19.0p/kWh
>150kW – ≤ 250kW TIC:	15.0p/kWh
>250kW - ≤ 5MW and stand-alone installations:	8.5p/kWh
10. Subject to the responses received to this consultation we aim to introduce these changes by amending the FIT Payment rate table in Annex 2 to Condition 33 of the Standard Conditions of Electricity Supply Licenses. Subject to consultation and the Parliamentary process set out in the Energy

Act 2008, and state aid approval from the European Commission, our intention is that these changes will be made in July 2011 before the House rises for summer recess, and take effect from 1st August 2011.

11. As the coalition has repeatedly stressed, the Government will not act retrospectively and any changes to generation tariffs implemented as a result of the fast-track review will only affect new entrants into the FITs scheme. Installations which are already accredited for FITs at the time the changes come into force will not be affected.
12. The coalition is also disappointed by the apparent under-performance of FITs for farm-scale AD, where take up has been below expectation. Given that the coalition is specifically committed to a “huge increase in energy from waste through anaerobic digestion”, last month’s announcement also confirmed that alongside the fast-track review of solar PV greater than 50 kW, a short study would look into the take-up of FITs for farm-scale AD plants.
13. This consultation document (see Chapter 2) takes this commitment forward by setting out our interim findings on the performance of FITs for farm-scale AD (of up to 500kW) and seeking views on proposals to adjust these tariffs. The proposed new tariffs for farm-scale AD are:

≤ 250kW TIC:	14.0p/kWh
>250kW – ≤ 500 kW TIC:	13.0p/kWh

14. Subject to the responses received to this consultation we are aiming to introduce these changes as soon as possible by amending the FIT Payment rate table in Annex 2 to Condition 33 of the Standard Conditions of Electricity Supply Licenses. This is subject to consultation, state aid approval from the European Commission and the Parliamentary process set out in the Energy Act 2008.
15. Responses to the proposals on solar PV above 50kW and AD are invited by Friday 6 May 2011.
16. Finally, this consultation document (see Chapter 3) is also being used to issue a call for evidence on the comprehensive review of FITs that was also announced last month. We have already invited comments on the broad terms of reference for the review, and views about specific issues that could be considered as part of that review. There is still chance to feed in thoughts and evidence on this, although we would be grateful if you could do so by Tuesday 12 April 2011. There will of course be more formal consultation and our current aim is for this to take place over the summer. We have said that any changes resulting from the comprehensive review won’t take effect until April 2012 unless the review reveals a need for greater urgency.
17. FITs is a Great Britain scheme so any changes following this consultation will apply in England, Scotland and Wales.

How to respond

The closing date for responses is Friday 6 May 2011.

The consultation period (seven weeks) is shorter than that recommended in the Code of Practice on Consultation because our provisional view is that changes to tariffs are urgently needed to mitigate the risk the FITs scheme failing to deliver the savings committed to as part of the 2010 Spending Review and operate within the spending constraints that the Spending Review confirmed.

Online responses are preferred and can be submitted at the following link:

https://econsultation.decc.gov.uk/decc-policy/fits_fast-track_review/

If you are unable to submit your response online please submit this in an email to: rfi@decc.gsi.gov.uk. Please use the template provided to record your response, which can be found at:

<http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=Consultations/fits-review/1429-response-template-fasttrack-review-fits.doc&filetype=4&minwidth=true>

Alternatively, hard copy replies should be sent to:

RFI Team, Renewables Directorate,
Department of Energy and Climate Change,
4th Floor, Area A/B,
3 – 8 Whitehall Place,
London, SW1A 2AW.

Additional copies

You may make copies of this document without seeking permission. Further printed copies of the consultation document can be obtained from:

RFI Team, Renewables Directorate,
Department of Energy and Climate Change,
4th Floor, Area A/B,
3 – 8 Whitehall Place,
London, SW1A 2AW.
Telephone: 0300 068 6174

An electronic version can be found at:

http://www.decc.gov.uk/en/content/cms/consultations/fit_review/fit_review.aspx

Other versions of the document are available on request. This includes a Welsh version.

Confidentiality and Data Protection

When this consultation ends, members of the public may ask for a copy of responses under freedom of information legislation. If you do not want your response, including

your name, contact details and any other personal information, to be publicly available, please say so clearly in writing when you send your response to the consultation. Please note, if your computer automatically includes a confidentiality disclaimer, that will not count as a confidentiality request.

Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential.

We will summarise all responses and place this summary on our website at http://www.decc.gov.uk/en/content/cms/consultations/fit_review/fit_review.aspx. This summary will include a list of names of organisations that responded but not people's personal names, addresses or other contact details.

[Help with queries](#)

Please direct any queries about this consultation to our dedicated e-mail address:

rfi@decc.gsi.gov.uk,

or in writing to:

RFI Team, Renewables Directorate,
Department of Energy and Climate Change,
4th Floor, Area A/B,
3 – 8 Whitehall Place,
London, SW1A 2AW
Telephone: 0300 068 6174

If you have any comments or complaints about the consultation process, please address them to:

DECC Consultation Coordinator
Area 6A
3 Whitehall Place
London, SW1A 2AW
Email: Consultation.coordinator@decc.gsi.gov.uk

A copy of the Code of practice on Consultations can be found at:
<http://www.bis.gov.uk/files/file47158.pdf>

Chapter 1. Fast-track consideration of solar PV greater than 50kW

Summary

- The risk of rapid and unforeseen expansion of larger scale solar PV poses a threat to the ability of the FITs scheme to keep within the budget for the Spending Review period to 2014/15.
- Large scale solar PV could potentially divert funding away from community and domestic installations that better meet the objectives of the FITs scheme, which are to drive uptake of a range of small-scale low carbon electricity technologies by non-energy professionals in order to deliver a higher rate of deployment; and to pursue broader aims of engaging the general public in a decentralised low carbon energy economy.
- Subject to the outcome of this consultation and the process of Parliamentary scrutiny as required by the Energy Act 2008, we propose to reduce the level of support for all PV installations above the statutory definition of microgeneration (50kW) and stand-alone installations.
- We propose to confirm the focus of the scheme by differentiating between different sizes of non-microgen solar PV installations by creating three new tariff bands and associated tariffs:-
 - 19p/kWh for >50kW to ≤150kW;
 - 15p/kWh for >150kW to ≤250kW and
 - 8.5p/kWh for >250kW to ≤5MW and stand-alone installations.
- We propose that, subject to the outcome of this consultation and the process of Parliamentary scrutiny as required by the Energy Act 2008, the revised tariffs for solar PV will take effect from 1 August 2011 to apply to all installations commissioned from that date.
- We are seeking views on these proposals and alternative suggestions by Friday 6 May 2011.

Issue

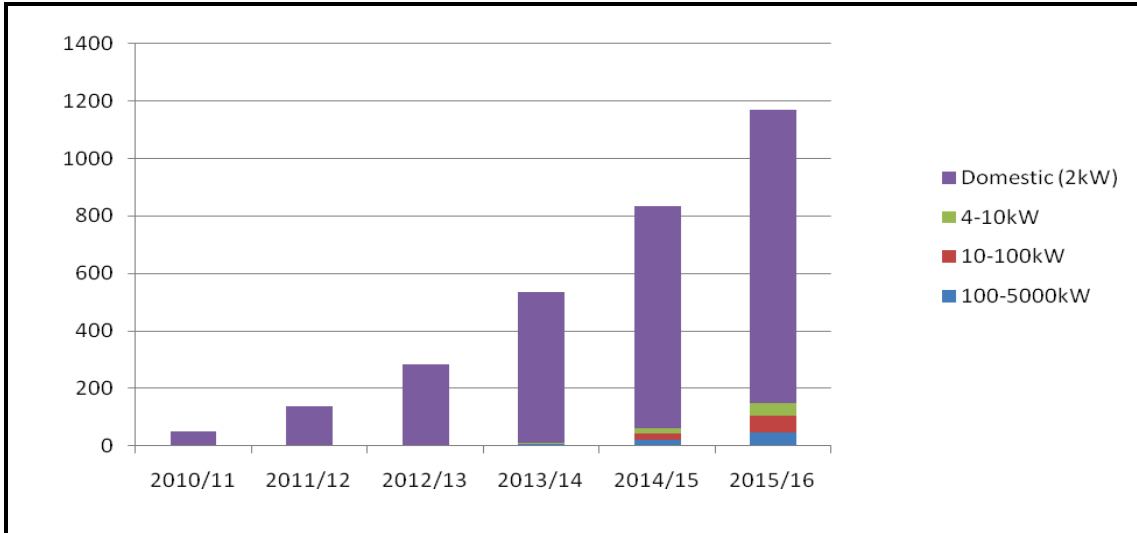
18. The risk of a rapid expansion of larger scale solar PV over the next few years could have a significant impact on whether the FITs scheme as a whole is able to deliver the savings committed to as part of the 2010 Spending Review and operate within the spending constraints that the Spending Review confirmed. This trend could potentially draw funding from other technologies and scales of generation, and undermine the value for money of the scheme as a whole.

Background

FITs and PV

19. From its establishment in April 2010, the FITs scheme was intended to encourage deployment of additional small scale low carbon electricity generation, particularly by individuals, householders, organisations, businesses and communities who have not traditionally participated in the electricity market. For these investors, delivering a mechanism which is easier to understand and more predictable than the Renewables Obligation (RO), 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.
20. In choosing the range of technologies supported by FITs, the focus was on small-scale low-carbon electricity with the primary intention of supporting the widespread deployment of proven technologies now and up to 2020, rather than to support development of unproven technologies. Solar PV was seen as a well developed technology that could be deployed at scale in domestic, community and small business settings. While it is a relatively high cost technology, it has broad public acceptance, can be easily incorporated into the built environment and generally does not require expensive grid connection or reinforcement costs. Solar PV was also seen as having the potential for significant cost reductions in the future, something that has already proved to be the case since the start of the FITs scheme.
21. The expected rates of return for the tariffs were set with all of these factors in mind. The tariffs for solar PV were set to provide a 5% rate of return on capital, which would be expected to provide reasonable returns to householders and small businesses who were interested in generating their own electricity, but not to provide high enough returns for large-scale financial investors. The analysis undertaken prior to the start of the FITs scheme projected that the vast majority of PV incentivised by FITs would be at the domestic or small scale and did not predict any solar PV above 10kW in the early years of the scheme and failed to take account of the impact on returns of debt finance available to sophisticated investors. Projected uptake at the start of the scheme is shown in Figure 1 below.

Figure 1: Cumulative MW uptake of solar PV (as projected prior to start of FITs)



22. In the first nine months of the scheme, uptake was broadly in line with the modelling undertaken prior to the start of the FITs scheme for solar PV installations that are under 4kW. This is shown in Table 1 below.

Table 1: Number of Solar PV FIT installations as at 31 December 2010^[1]

PV capacity	Projected	Actual
New build (sub 4kW)	135	225
Retrofit (sub 4kW)	15,096	14,132
4-10kW	0	208
10-100kW [Of which 50-100kW]	0	51 2
100kW-5MW	0	0
Stand alone	0	28
Total	15,231	14,644

Future deployment of larger scale solar PV

23. Although the deployment of solar PV is generally within expectations there is already significant evidence of installations which were not foreseen by the DECC modelling undertaken before the start of the scheme. As the table above shows, these include two solar PV installations which are larger than 50kW [Note: there is also one further 50kW installation which was commissioned before the start of the FITs scheme and transferred from the Renewables Obligations]. There is, however, evidence of many more larger

^[1] Installations transferred from the RO onto the Exgen (9p/kWh) tariff are excluded. Projections were made on a financial year basis. To compare the projected uptake with actual uptake for the first 9 months of the scheme (i.e. to end December 2010) the projected figures for the first year were multiplied by 0.75. This is approximate as uptake maybe skewed towards the end of the year.

scale installations in the pipeline, which paints a picture of solar PV uptake under FITs that could rapidly exceed expectations.

24. Therefore, last month's announcement confirmed that all solar PV larger than 50kW was in the scope of the fast-track review. 50kW is the threshold used in the statutory definition of microgeneration³. It is also the threshold for Permitted Development Rights for domestic solar PV i.e. domestic PV installations above 50kW will need to apply for planning permission.
25. We recognise that a variety of types of installation will be within the 50kW to 5MW range. At the smaller end of this scale, installations could include those on large community buildings such as schools or hospitals. These would still be relatively large installations, bearing in mind that the average domestic installation is approximately 2.5kW. A 100kW scheme for example would be equivalent to 40 domestic installations and would cover an area the size of more than three tennis courts. It is also important to note that installations on community buildings do not have to be above 50kW. As case studies show, many community buildings such as village halls, churches and schools already have PV installations of less than 50kW⁴.
26. There is a need to make a distinction between the potential impact on the scheme of large community roof-mounted installations just over 50kW, and that of large solar developments of anything from 250kW up to 5MW, (a 1MW installation would cover a similar area to a football pitch), whether ground-mounted or on factory or warehouse roofs. Indeed, it was the unanticipated developer interest in large solar farms that prompted Ministers to express concerns last autumn about the risks that such unforeseen developments could pose to the FITs scheme:-

"We are absolutely committed to solar PV and to the widest range of domestic and community-scale renewables, but the fact is that we inherited a system that simply failed to anticipate industrial-scale, stand-alone, greenfield solar, and, although we will not act retrospectively, large field-based developments should not be allowed to distort the available funding for roof-based PV, other PV and other types of renewables."

Greg Barker MP, Oral Parliamentary Questions, 11 November 2010.

27. Evidence from the planning system underpins these concerns about larger scale solar PV. Data obtained from various local planning authority databases suggests that between the launch of the FITs scheme in April 2010 and the announcement of the FITs review (7 February 2011), proposals for at least 10 solar PV farms (between 250kW and 5MW) had received planning permission. The total capacity of those with planning permission is around 27MW including six in Cornwall. We are also aware that a 2.5MW solar farm has also received planning permission in Cornwall since the FITs review was announced on 7 February.

³ See Section 82 of the Energy Act 2004

⁴ See for example http://www.solarpowerportal.co.uk/case_studies/list/category/community/.

28. In addition to the proposals with planning permission, at the time of the FITs review announcement, at least 31 planning applications for solar farms (between 250kW and 5MW) had been made and were under consideration. Of these applications, 24 were for proposed schemes at the maximum capacity of 5MW. We are also aware that, since the FITs review was announced, a planning application has been made for at least one further scheme⁵.
29. As well as evidence from the planning system, a range of industry sources have provided details of what they consider to be credible projections of industry interest in PV development over the next few years, including considerable interest in large scale PV. Table 2 below provides an overview of our analysis. It sets out projected uptake of large scale⁶ solar PV at the time of the establishment of the FITs scheme. It also shows estimates provided by the industry based on a range of sources, which approximates to REA estimates provided to DECC in December 2010, and revised projections prepared by DECC which take into account emerging evidence of a steep drop in PV capital costs of around 30% from levels assumed in the original FITs modelling (February 2010), based on both industry sources and preliminary research undertaken by the consultancy Mott Macdonald.

Table 2: Projected cumulative MW uptake of large scale PV

	2011	2012	2013	2014
DECC analysis (February 2010)	0	0	5	40
Industry estimate <i>Large scale PV (Buildings, Fields)</i>	230	620	1,115	1,470
Revised DECC projections	110 to 155	235 to 325	445 to 610	815 to 1,095

Note 1: Figures in the table are rounded.

Note 2: Industry figures have been provided to 2013 and an indicative figure for 2020 also provided. DECC has interpolated these figures to estimate annual uptake.

30. Because the industry information has been compiled from individuals and groups based on confidential and published sources, it is a proxy and accuracy is not guaranteed i.e. it may represent intentions and aspirations of market participants rather than actual out-turn. There is considerable uncertainty as to the number of proposed schemes that would ultimately obtain financing, as well as planning and grid connection. Given the need for the FITs scheme to operate within a spending envelope and to avoid boom-bust scenarios for the industry, it is important that we have a good understanding of what is in the pipeline. We would therefore welcome views on the projections set out above.

⁵ These figures reflect our understanding of the situation as at 21 February 2011.

⁶ To note that the estimates in the table do not precisely represent solar PV above 50kW, but represent solar PV on buildings and fields in the industry data and solar PV above 10kW in the DECC projections (the FITs model does not have a banding threshold at 50kW).

31. While it is difficult to be very precise about the number of installations currently in the pipeline, even the existence of the expectations summarised above, together with the evidence from the planning system, points to a market that is at considerable risk of overheating and exceeding the spending envelope for FITs. This in turn suggests that there may be a number of factors that have changed since the original DECC modelling undertaken prior to the start of the FITs scheme. These may include:-
- technology costs that are lower, or that are reducing significantly more quickly than modelled;
 - economies of scale for larger installations that are greater than modelled;
 - lower hurdle rates of return for large scale FITs development than modelled, e.g. driven by financing strategies; and/or
 - changes in economic circumstances that may favour the security of FITs investment over alternatives.
32. It is likely that all of these factors may be relevant. Indeed, factors such as falling technology costs appear to have prompted the widely reported reductions in tariffs for solar PV elsewhere in Europe. For example, Germany, France, Spain, Italy and Belgium have all announced reductions in tariffs for solar PV in the last year.⁷
33. We will consider all these issues in more detail through the comprehensive review. In the meantime, we consider that the potential impact of a rapid expansion of large scale solar justifies more urgent attention.

Impact of rapid expansion of large scale solar PV

34. The uncertainty about actual deployment of large scale solar PV that might be expected in the next few years makes it difficult to predict the potential cost impact of maintaining tariffs at the current rate. However, solar PV is on average the most expensive technology per kilowatt hour supported by the FITs scheme, and is expected to make up the largest share of total FITs expenditure over the lifetime of the scheme. Projections undertaken prior to the start of the FITs scheme suggested that, up to 2020, solar PV (all scales) would account for over 90% of all installations under FITs; around 70% of FITs costs to consumers; and 60% of total electricity output under FITs. Therefore, it is clear that PV tariffs are critical to the overall spending position of the scheme as a whole.
35. Currently solar PV installations of more than 100kW and stand alone installations receive a generation tariff of 29.3p/kWh in FITs year 1 (to 31

⁷ See for example, p.319 of the International Energy Agency's "World Energy Outlook 2010" which is available from www.iea.org

March 2011), increasing thereafter by RPI. The Year 2 generation tariff for installations made in Year 1 or Year 2 will be 30.7p/kWh. At this rate it would be expected that each additional megawatt of capacity installed in Year 2 would add around £260,000 per year to the FITs budget for 25 years (in 2011 values) in generation tariff payments⁸. For large scale PV in the range of 50 - 100 kW, which currently benefit from the 50- 100 kW tariff (31.4p/kWh to 31 March 2011, 32.9p/kWh in 2011/12), each megawatt would add around £280,000 per year.

36. By way of illustration, the £40 million annual savings that the FITs scheme is required to deliver as a result of the 2010 Spending Review, would be cancelled out by around 150MW of large scale solar PV or only around 30 installations at the maximum capacity of 5MW. There is already 169MW in the planning system (i.e. schemes which have applied for planning permission, and those which have received planning permission).
37. It should also be noted that the cost of providing FITs generation tariffs to a single 5MW installation could provide for over 1400 domestic scale (2.5kW) installations (at current i.e. unchanged tariff levels).

Pros and cons of large scale FITs

38. In view of the high potential cost impact of large-scale solar PV and the associated risk that this could absorb a high proportion of funding from the FITs scheme as a whole, it is important to consider whether there is a wider policy justification for including support for these installations in the FITs scheme.
39. As noted above, the primary focus of the FITs scheme is on non-energy professionals, especially householders and communities. This was reflected in the Impact Assessment supporting the introduction of FITs scheme which described the objectives of the scheme as being to “drive uptake of a range of small-scale low carbon electricity technologies by a range of target groups in order to deliver a higher rate of deployment; and to pursue broader aims of engaging the general public in low carbon electricity generation. This will enable broad participation of individuals and communities, as well as energy professionals, in the big energy shift to a low carbon economy.”
40. As noted above, solar PV is one of the most costly technologies supported by FITs. Consequently, the broader engagement aims described above are particularly important in justifying support for PV under FITs in the first place. These benefits are most evident at the domestic and community scale and generally become less discernible as installations become larger, more commercial and more remote from individuals and communities.
41. Additionally, at the non-microgeneration scale, the other benefits of FITs such as simple deployment without the need for expensive grid connection costs, are less apparent. Therefore, even though it is true that larger scale

⁸ Based on expected production of 850 kWh/year for each kW of installed capacity

PV can offer economies of scale over solar PV at the microgeneration scale, it is considerably more expensive than other community-scale technologies such as wind and hydro.

42. Another range of advantages cited for FITs include the technology and cost-reduction effects of deploying at scale, and the associated opportunities for jobs in manufacturing and installation. It can be argued that the demand for panels and installation expertise for large scale installations will lead to enhanced industrial capacity in the UK, a more mature market for imports, and lower costs. Developers at all scales would benefit from these. We consider however, that the industry expansion that would flow from domestic and community scale alone would deliver these benefits. There is also a limit to the range of skills that could be transferred from the large industrial-scale installations to the domestic scale where the individual installations are smaller by a factor of 2000 or more. It is also important to bear in mind that there is a global market for solar PV which drives the costs of the materials i.e. panels and inverters. The UK is only a small proportion of this global market which limits the scope for developments here to influence wider technology costs.
43. All in all, while supporting large scale solar PV through FITs does have benefits, these benefits would be lessened if delivering them meant distorting funding away from microgeneration solar PV, which is better placed to deliver the broader aims of FITs; and other FIT technologies which can produce renewable electricity more cost effectively.

Proposal

44. In order to address the risk that a rapid unforeseen expansion of large scale solar PV could breach our Spending Review commitments with knock-on effects for other FIT technologies and smaller scale PV, we propose reducing the level of support for all new PV installations larger than microgeneration size (50 kW) and stand-alone installations.
45. Specifically, we propose that all solar PV installations above 250kW and stand-alone installations should receive a tariff which is broadly equivalent, in terms of financial support per unit energy output, to the level allocated to what is currently considered to be the marginal cost effective technology required to deliver the UK's 15% renewable target, offshore wind. This results in a support level of around 8.5p/kWh.
46. While we consider that there is a case for reducing the level of support for all new solar PV installations above 50kW, we recognise that there is a distinction to be made between very large industrial scale solar developments and larger building-integrated systems that could for example be installed on schools and hospitals. Therefore, we propose introducing two new further tariff bands for PV installations between 50kW and 150kW; and 150kW and 250kW. The proposed tariffs for these bands are 19p/kWh and 15p/kWh respectively. These proposed tariffs have been set by adjusting the original FITs modelling in the light of evidence of falling costs of solar PV.

47. This approach should mean that community-based schemes, or those undertaken by businesses as part of their corporate social responsibility may still proceed and benefit from FITs, but at a lower rate and, in the case of installations above 250kW, at the same rate as more cost-effective renewable technologies such as offshore wind.
48. Subject to the outcome of this consultation and Parliamentary scrutiny, we intend to act as quickly as possible on these proposals and propose that the change in tariffs will be made on 1 August 2011 and will apply to all installations commissioned from that date.
49. We propose to implement the new tariffs by modifying the FIT payment rate table in Annex 2 to Condition 33 of the Standard Conditions of electricity supply licenses. This consultation incorporates the statutory consultation on that proposed licence modification required by section 42 of the Energy Act 2008.
50. It is important to note that, as announced, all aspects of the scheme are subject to the comprehensive review, which will proceed over the coming months and be implemented from April 2012 (unless the review reveals a need for greater urgency).

Questions	
1.	Do you agree or disagree that there is a need to limit access to FITs for large scale solar PV installations in order to meet spending review targets or should we limit access for other technologies to meet spending review targets? Please give reasons for your answer.
2.	Do you agree or disagree with the proposed new tariff bands and the accompanying proposed reduction of tariffs for solar PV installations in these bands? Please give reasons for your answer. If you disagree, please provide evidence to support an alternative.
3.	Do you agree or disagree with the proposed timing of the change in tariffs including the implementation date of 1 August 2011 and that the tariff change will apply to all installations accredited from that date? Please give reasons for your answer. If you disagree, please provide evidence to support an alternative.
4.	Can you provide any further information or evidence on predicted uptake of installations or other insights that you think DECC should be aware of about how the market for solar PV is evolving in the light of FITs?

Chapter 2. Study in the uptake of FITs for farm-scale anaerobic digestion (AD)

Summary

- Alongside the fast-track consideration of support for large-scale solar PV, a short study has been undertaken into the lack of uptake of FITs for farm-scale AD to date.
- This study suggests that the tariff for farm-scale AD is not high enough to make such schemes worthwhile. While the comprehensive review of FITs provides an opportunity to better understand the reasons for this, the evidence of limited uptake to date suggests that more urgent action is needed.
- In addition, there are a number of non-financial barriers to the large scale uptake of AD in the UK. Most of these issues arise from the complexity of the technology - unlike other types of renewable generation, AD is not a “fit and forget” technology but requires maintenance to ensure performance, a long term supply of feedstock and a procedure for dealing with the digestate.
- To address these non finance issues, we are committed to publishing a joint industry and Government AD strategy in May 2011.
- Subject to the outcome of this consultation, the process of Parliamentary scrutiny as required by the Energy Act 2008, and state aid approval, we propose introducing the following new, higher tariffs for farm-scale AD. This is with a view to the revised tariffs for farm-scale AD taking effect from 1 August 2011 to apply to all installations commissioned from that date:-
 - 13p/kWh for >250–≤500kW
 - 14p/kWh for ≤250kW
- We are seeking views on these proposals and alternative suggestions by Friday 6 May 2011.

Issue

51. To date, only two AD plants have been accredited for FITs and only one of these is less than 500kW.

Background

52. The Coalition is committed to delivering a zero waste to landfill society, one in which we reduce the amount of waste that we produce and reuse, recycle and produce energy from as much as possible. AD can play a key part in that strategy. Its ability to process wastes such as those from food production, animal husbandry and sewage treatment means that it can be used to deal with local and community waste management problems as well as producing renewable energy for local and community use. In addition, AD can bring further climate change benefits by capturing the methane normally produced when these wastes decay.
53. Use of AD on-farm also delivers further benefits: The digestate produced as a by-product of the process, can provide a direct replacement to fertilisers, so helping to conserve critical resources such as phosphorus as well as reducing reliance on fertilisers requiring fossil fuels for their production. This brings benefits in terms of manure management, reducing emissions of N₂O (another greenhouse gas) to the atmosphere and the control of diffuse water pollution. Compared to the raw slurry or manure, the AD process also reduces bacterial (including pathogen) numbers in the digestate.
54. In rural areas it may not be economic, even with subsidy, to clean up the biogas to produce biomethane for injection to the gas grid because either the amount of biogas produced is too small or the distance to the gas grid too great; smaller AD plant of the size suitable for the majority of UK farms come with a combined heat and power (CHP) engine, so using the electricity and finding local uses for the heat will be more important considerations.
55. The current FITs for AD are 11.5p/kWh for installations with an installed capacity of up to 500kW, often described as “farm-scale” AD, and 9p/kWh for installations between 500kW and 5MW which would be expected to include larger, food waste based plant. The higher tariff for farm-scale AD was intended to reflect the higher costs that would be incurred by these generators.
56. The tariffs for AD were intended to deliver returns at the top end of the 5-8% return envisaged for FITs. This reflected the higher assumed hurdle rates for investors in AD arising, for example, from the long lead-in times, requirements for planning permission and grid connection. This is in contrast to the relative simplicity of deploying other FIT technologies such as solar PV.
57. Government is working closely with a wide range of interested parties to produce a joint programme of work which sets out the key issues that we believe must be addressed to deliver an increase in energy from waste through anaerobic digestion in the UK. Our intention is to agree and publish a joint industry and Government AD strategy in May 2011.

Study into uptake of FITs for farm-scale AD

58. The Coalition has been disappointed by the relatively slow uptake of farm-scale AD under FITs to date. When the announcement on the start of the FITs review was made, only 2 AD installations were accredited for FITs. While we understand that both of these installations were on farms, only one of them was under 500kW (the current tariff band designed specifically with farm-based AD installations in mind). As shown by table 3 below, this was contrary to what the modelling undertaken prior to the start of the FITs scheme expected.

Table 3: Projected uptake of farm-scale AD (up to 500kW)⁹

"Additional to baseline" uptake											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Installations											
Annual	5	5	10	15	20	25	30	25	25	20	20
Cumulative	5	15	25	40	60	85	115	140	165	185	205
MW capacity											
Annual	<5	<5	5	5	5	5	5	5	5	5	5
Cumulative	<5	5	5	10	15	20	30	35	40	45	50
"Inclusive of baseline" uptake											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Installations											
Annual	10	10	15	15	20	30	35	30	30	30	30
Cumulative	10	20	30	50	70	100	135	165	195	225	255
MW capacity											
Annual	<5	5	5	5	5	5	10	10	10	5	5
Cumulative	<5	5	10	10	20	25	35	40	50	55	65

Note: Figures in the table are rounded.

⁹ Projections are based on a model produced by Element Energy and Poyry Consulting and consistent with data used for the Impact Assessment on FITs published in February 2010. In modelling FITs, two situations are assessed: 1) The baseline/business-as-usual, which illustrates costs, uptake etc of small-scale installations in the absence of FITs (essentially reflecting uptake that would anyhow be expected to occur under the Renewables Obligation (RO)); and 2) additional impacts brought on by the introduction of FITs, which illustrates costs, uptake etc over and above the baseline impacts. Data in this table is provided for both a) additional-to-baseline impacts only (reflecting 2) above) and b) impacts inclusive of the baseline (reflecting 1) + 2) above). In reality, anywhere between zero and all of the baseline uptake could occur under FITs rather than the RO, depending on how potential investors view the two schemes. Therefore in practice, the impacts that can be fully attributed to the FITs scheme will lie somewhere between a) and b). However, it should be noted that the additional payments out by suppliers to generators as a result of the FITs scheme, is given by the "additional to baseline" data. This is because the baseline level of payments would anyhow have had to be paid out under the RO in the counterfactual state of the world. Assumptions on costs, investor behaviour etc can be found in the Element Energy and Poyry Consulting reports at: http://www.decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx Years in the table are financial years.

59. Consequently, in his statement of 7 February 2011, the Secretary of State confirmed that alongside the fast track review of large scale solar PV, a short study would be undertaken into the take-up of FITs for farm-sale Anaerobic Digestion plants to see if the tariff rates are enough to make such schemes worthwhile.
60. The key questions that this short study has been considering are:-
- Is the current tariff for farm-scale AD delivering the expected 8% return?
 - If not, why not? What changes/corrections to assumptions need to be made in order for an 8% return to be delivered?
 - If an 8% is being delivered, why is uptake not as projected?
61. Research commissioned from consultants NNFCC (to be published shortly) provided a starting point for considering these questions. We have also been exploring these issues with industry experts and are grateful for the input received.

Proposals

62. The research referred to above does not provide conclusive evidence about the reasons for the apparent underperformance of FITs for farm-scale AD. However, it does consistently suggest that the current tariffs are not enough to make farm-scale AD worthwhile, particularly at the smaller scale. This view is reinforced by the low uptake of farm-scale AD under FITs to date. While we are aware that Ofgem have recently received applications for FITs accreditation from a few farm-scale AD plant, the picture of uptake continues to be one of underperformance under FITs.
63. Therefore, as an interim step we are proposing to introduce further bands for farm-scale AD to better reflect the cost differentiation between installations of different sizes under the 500kW threshold. The proposed new tariffs are 14p/kWh for installations with a total installed capacity of up to 250kW; and 13p/kWh for installations with a total installed capacity of between 250kW and 500kW. We consider that this adjustment is justified on the basis of the evidence that we have seen to date and in the light of the wider need for a responsible approach to public subsidy as described above. We will continue to monitor take-up of AD and will use the comprehensive review of FITs to explore further any other reasons for the apparent underperformance of farm-scale AD to date.
64. We propose to implement the new tariffs by modifying the FIT payment rate table in Annex 2 to Condition 33 of the Standard Conditions of electricity supply licenses. This consultation incorporates the statutory consultation on that proposed licence modification required by section 42 of the Energy Act 2008.

65. Government policy is specifically to deliver an increase in energy from waste through AD. We recognise that, at farm scale, some energy crops may be required in combination with slurries and that such crops can be grown as part of the normal agricultural rotation. Furthermore, there is land available which is not suitable for the production of food crops but which may, therefore, be used to supply energy-crop only AD plants. It is not our policy, however, to encourage energy crop-based AD, particularly where these are grown to the exclusion of food producing crops.
66. We note concerns that an increase in FIT tariffs for farm-scale AD would lead to wholesale expansion of the diversion of land and food to energy crops. This is not the intention of the proposed tariff changes and the Government will ensure that any necessary controls are put in place to ensure that this does not happen. We are talking to Defra and others about the best way to implement these controls and these will be elaborated in the comprehensive FITs review.

Questions	
5.	Do you agree or disagree with the proposed new tariff bands and tariffs for farm-scale AD? Please provide evidence to support your view. We would be particularly interested in quantitative evidence of the capital and operating costs of farm-scale AD schemes.
6.	Do you have any other views and associated evidence on the slow uptake of farm-scale AD under FITs to date?
7.	Do you consider that controls are necessary to prevent the wholesale expansion of energy crops for AD? If so what do you consider to be the best way to implement these controls to be considered in the comprehensive FITs review?

Chapter 3. The Comprehensive Review of FITs 2011-12

Summary

- The first comprehensive review of FITs is now underway. When the start of the review was announced, we invited comments on the broad terms of reference. We have received some views on this but there is still chance to shape the review's scope.
- A priority for the review will be delivering the savings committed to as part of the Spending Review. A related objective will be providing industry with transparency, longevity and certainty, to enable sustainable growth.
- Views on the scope of the comprehensive review are invited by Tuesday 12 April 2011.

Issue

67. Finalising the terms of reference and shaping the scope of the comprehensive review of FITs.

Background

Terms of reference for the comprehensive review

68. The following broad terms of reference for the comprehensive review were published on the department's website last month:-

“As confirmed at the Spending Review, the review will determine how the efficiency of FITs will be improved to deliver £40 million of savings, around 10%, in 2014/15.

The review will be comprehensive and, as set out when the FITs scheme started, will consider all aspects of the scheme including:

- Tariff levels
- Degression rates and methods
- Eligible technologies
- Arrangements for exports
- Administrative and regulatory arrangements

- Interaction with other policies
- Accreditation and certification issues”

69. This list is not exhaustive but provides the starting point for the review. Comments are invited on this.

Scope of the comprehensive review

70. As set out above, the overriding priority for the review is determining how the efficiency of FITs will be improved to deliver £40 million of savings, around 10%, in 2014/15. Alongside this, another key objective is ensuring that this is done in a way which enables FITs to continue to bring benefits in terms of growth, innovation, job creation and cutting greenhouse gas emissions.

71. The coalition recognises that the right conditions are needed for this to happen. Importantly, the industry needs transparency, longevity and certainty. Central to achieving this is a review process which is compatible with both this need and the commitment to fiscal responsibility. Therefore, a key challenge for the comprehensive review is to develop a mechanism which enables tariffs to be adjusted on a rolling basis rather than having to wait for periodic reviews.

72. As we approach the first anniversary of the FITs scheme, the comprehensive review also provides an opportunity to reflect on how the scheme has worked to date and whether any changes are needed. We are bringing forward a FITs Amendment Order to address some early teething issues and make some housekeeping changes that we already knew were necessary. For example, providing an accreditation route for those micro-hydro schemes which were commissioned after the start of the FITs scheme but before the adoption of MCS micro-hydro standards.

73. There could though be other issues that need to be addressed. We want to understand peoples’ experiences of the scheme and are open to suggestions about any areas of improvement and we invite your input.

Next steps

74. As last month’s announcement made clear, the intention is that the review will be completed by the end of the year, with tariffs remaining unchanged until April 2012 (unless the review reveals a need for greater urgency). Therefore, we are intending to consult on more detailed proposals over the summer with a view to confirming the outcome of the review by the end of this year.

75. As the coalition has repeatedly stressed, we will not act retrospectively and any changes to generation tariffs implemented as a result of the review will only affect new entrants into the FITs scheme. Installations which are already accredited for FITs at the time will not be affected.

Questions

- | | |
|----|--|
| 8. | Do you have any suggestions or thoughts on the scope of the comprehensive FITs review (by Tuesday 12 April 2011)? |
|----|--|

Annex A – List of Questions

Questions	
1.	Do you agree or disagree that there is a need to limit access to FITs for large scale solar PV installations in order to meet spending review targets? Please give reasons for your answer. If you agree, what do you think is the best way of doing this?
2.	Do you agree or disagree with the proposed new tariff bands and the accompanying proposed reduction of tariffs for PV installations in these bands? Please give reasons for your answer. If you disagree, please provide evidence to support an alternative.
3.	Do you agree or disagree with the proposed timing of the change in tariffs including the implementation date of 1 August 2011 and that the tariff change will apply to all installations accredited from that date? Please give reasons for your answer. If you disagree, please provide evidence to support an alternative.
4.	Can you provide any further information or evidence on predicted uptake of installations or other insights that you think DECC should be aware of about how the market for PV is evolving in the light of FITs?
5.	Do you agree or disagree with the proposed new tariff bands and tariffs for farm-scale AD? Please provide evidence to support your view. We would be particularly interested in quantitative evidence of the capital and operating costs of farm-scale AD schemes.
6.	Do you have any other views and associated evidence on the slow uptake of farm-scale AD under FITs to date?
7.	Do you consider that controls are necessary to prevent the wholesale expansion of energy crops for AD? If so what do you consider to be the best way to implement these controls to be considered in the comprehensive FITs review?
8.	Do you have any suggestions or thoughts on the scope of the comprehensive FITs review (by Tuesday 12 April 2011)?

© Crown copyright 2011

Department of Energy & Climate Change
3 Whitehall Place
London SW1A 2AW
www.decc.gov.uk

URN 11D/0038