

## **Feed-in Tariffs Scheme**

# **Government response to Consultation on Comprehensive Review Phase 2A: Solar PV cost control**

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# Executive Summary

## Introduction

1. The market for solar photovoltaics (PV) has seen dramatic changes in recent years, with significant and swift reductions in the global costs of the technology. This is good news for the industry and good news for consumers, with lower costs making solar PV a more accessible option for local renewable electricity generation. The Government is giving careful consideration to these developments and what they could mean for the potential role of solar PV in meeting the UK's climate change and renewable energy challenges. The results of that consideration will be taken into account when it comes to updating the Renewable Energy Roadmap later this year.
2. The pace of change in the solar PV market has also exposed the limitations of the Feed-in Tariffs (FITs) scheme in its original form. In particular, it has highlighted the need to find a new way to enable solar PV tariffs to respond more nimbly to market developments. Last year, the tariffs available were providing returns higher than those originally intended, with no swift means of correcting tariffs downwards. As FITs are a subsidy determined by Government and funded by consumers through their energy bills, this left the Government with no choice but to act. The result was the changes to tariffs introduced in August 2011 for large scale solar PV and in March 2012 for smaller solar PV.
3. Since announcing the first comprehensive review of the FITs scheme in February 2011, the Government has consistently made clear its intention to use the review to put right these fundamental limitations of the scheme as well as addressing the immediate risks to the budget posed by the mismatch between tariffs and technology costs. Detailed proposals for how to achieve this aim in respect of solar PV were set out in a consultation published on 9 February 2012 as *Comprehensive Review Phase 2A: Solar PV cost control*. Specifically, the phase 2A consultation sought views on a new, more responsive mechanism for tariff depression. The proposed mechanism aimed to provide a reliable method of financial control while at the same time giving a good measure of certainty to the sector and to consumers about the future path of tariffs.
4. The consultation also sought views on a reduction to solar PV tariffs proposed to take effect from July, in the light of further evidence on falling costs, and on other aspects of tariff design relevant to any consideration of the support available for solar PV, including the export tariff, index-linking and tariff lifetime.
5. The consultation closed on 3 April 2012 and a total of 244 consultation responses were received, which we have analysed carefully. In the light of that analysis, together with the wider feedback received through the consultation process and updated evidence on the costs of solar PV, this document sets out the Government's response to the consultation.
6. A separate *Consultation on Comprehensive Review Phase 2B: Tariffs for non-PV technologies and scheme administration issues* was also published on 9 February 2012. This sought views on all other aspects of the FITs comprehensive review including tariffs for anaerobic digestion, hydro, microCHP and wind, as well as the treatment of community installations, preliminary accreditation and other administrative issues. Responses to that consultation, which closed on 26 April 2012, are currently being analysed and we are intending to announce the outcome in July.

## Overview of policy decisions

7. Consultation responses and stakeholder engagement during the phase 2A consultation process have been used to update the evidence base on solar PV costs, which was originally developed by the consultants Parsons Brinckerhoff (PB) and published on 8 February 2012. The updated report<sup>1</sup>, based on a large sample of direct quotes as well as extensive consultation with industry experts and specialist literature, confirms that the costs of small-scale solar PV have continued to fall since PB conducted their research in January, although their estimates for the costs of larger scale PV are higher. The updated report also showed that the differential in costs between single and multiple installations was narrower than previously estimated, with multiple installations costing around 90% of single installations.
8. In the light of this updated evidence base, and in view of a strong preference in consultation responses that any new tariffs introduced from July 2012 should be based on analysis of cost evidence rather than deployment in March and April (as was proposed), we have decided to proceed with a further tariff reduction based on the tariffs in Table 1 below, but to delay their introduction to 1 August 2012 in recognition of the low levels of deployment since 1 April. These tariffs are designed to provide a rate of return of 4.5 to 8% for a typical, well-sited installation. We have also decided to set the multi-installation tariff at 90% of the standard generation tariff, rather than 80% as at the moment, and to set the tariff for installations that do not meet the energy efficiency requirement to match the tariff for new stand-alone installations with the same eligibility date. Subject to the parliamentary process required by the Energy Act 2008, the licence modifications necessary to implement the new tariffs will come into force by 1 August 2012, and will apply the new tariffs to any new solar PV installation with an eligibility date on or after that date.

**Table 1: Generation tariffs for new solar PV installations from 1 August 2012**

| Band (kW)         | Standard generation tariff (p/kWh) | Multi-installation tariff (p/kWh) | Lower tariff (if energy efficiency requirement not met) (p/kWh) |
|-------------------|------------------------------------|-----------------------------------|---|
| • 4kW (new build) | 16.0                               | 14.4                              | 7.1   |
| • 4kW (retrofit)  | 16.0                               | 14.4                              | 7.1   |
| >4-10kW           | 14.5                               | 13.05                             | 7.1   |
| >10-50kW          | 13.5                               | 12.15                             | 7.1   |
| >50-100kW         | 11.5                               | 10.35                             | 7.1   |
| >100-150kW        | 11.5                               | 10.35                             | 7.1   |
| >150-250kW        | 11.0                               | 9.9                               | 7.1   |
| >250kW-5MW        | 7.1                                | N/A                               | N/A   |
| stand-alone       | 7.1                                | N/A                               | N/A   |

<sup>1</sup> Available at [http://www.decc.gov.uk/en/content/cms/consultations/fits\\_rev\\_ph2a/fits\\_rev\\_ph2a.aspx](http://www.decc.gov.uk/en/content/cms/consultations/fits_rev_ph2a/fits_rev_ph2a.aspx)

9. We have listened carefully to the feedback on the design of the proposed degression mechanism and have decided to make some adjustments to the consultation proposal accordingly. The key features of the new degression mechanism are:
- more frequent tariff changes at fixed dates (3-monthly instead of 6-monthly);
  - baseline degression of 3.5% every three months, with larger cuts (to a maximum of 28%) depending on the rate of deployment;
  - tariff cuts will be skipped (for a maximum of two successive degressions) if deployment is low;
  - three degression bands (domestic, small commercial and large commercial/utility), with deployment in each band determining the future tariff in that band.
10. Subject to the parliamentary process required by the Energy Act 2008, the new degression mechanism will be brought into effect via the licence modifications described in paragraph 8 above and associated amendments to the FITs Order, and will set the tariffs for new PV installations with eligibility dates on or after 1 November 2012. These licence modifications and amendments will also give effect to the other decisions on tariff design that have been considered through the phase 2A consultation, which are to:
- increase the export tariff to 4.5p/kWh for all new solar PV installations with an eligibility date on or after 1 August 2012;
  - retain the current position on indexation so that tariffs will continue to be index-linked based on the Retail Price Index; and
  - reduce the tariff period for solar PV from 25 to 20 years for all new solar PV installations with an eligibility date on or after 1 August 2012.
11. We have also decided to bring forward the decision on one issue raised in the Phase 2B consultation, namely to increase the threshold at which electricity suppliers become “mandatory FIT licensees” from 50,000 customers to 250,000. Subject to the parliamentary process required by the Energy Act 2008, this change will take effect from 1 August 2012. This will bring FITs into line with other environmental programmes, and bringing the decision forward will minimise any uncertainty for businesses and consumers affected by it.
12. We consider that, through these changes, the FITs scheme will continue to support sustainable growth in solar PV, helping to ensure that the scheme is accessible for the many and not the few in a way which provides value for money to bill payers.

## Overview of consultation response analysis

13. The consultation asked fifteen questions. Five questions related to proposals to change the tariff rates for solar PV from July 2012; five concerned the proposed new degression mechanism for solar PV; and the final five focused on the other aspects of tariff design. The full list of questions asked is at Annex A. We received 244 responses, of which about 40% (105 responses) were from private companies and industry, 16% (39 responses) were from community groups and individuals, and about 9% (21 responses) from local government. A full list of respondents is provided at Annex B.

14. 77% of respondents disagreed with the range of proposed new tariffs for solar PV installations from July 2012, and 70% of respondents disagreed that the decision on which tariff to adopt should be based on deployment in March and April 2012.
15. On the degression mechanism, there was some support for the overall approach, with 39% of respondents agreeing with the principles of the proposed approach described. There was less agreement on the detailed elements of the proposal. In particular, 83% of respondents disagreed that the baseline degression should be at the rate of 10% every 6 months. There was also a strong view that any contingent degression mechanism should also make provision to respond to under-deployment of solar PV as well as over-deployment. The idea of applying different deployment triggers to different tariff bands was largely supported.
16. A range of views was expressed on the questions relating to other elements of tariff design. In particular, 63% of respondents agreed that the current level of the export tariff does not fairly represent the value to suppliers of exports from FITs generation; 61% of respondents disagreed that the tariff lifetime for new entrants to the FITs scheme should be reduced from 25 to 20 years; and 84% of respondents considered that tariffs should continue to be index-linked, with 59% of respondents favouring retention of RPI as the appropriate index for the whole tariff lifetime.
17. A more detailed analysis of consultation responses is provided in Part 2 of this document.

## Part 1 | Policy Decisions

### Government decision on new solar PV tariffs

#### Consultation proposals

1. The consultation proposed further reductions to the tariffs for new solar PV installations from July 2012. This was in response to evidence suggesting that the costs of manufacturing and installing solar PV had come down even faster than anticipated in October 2011, when proposals for reducing the tariffs for solar PV were published in the consultation on phase 1 of the comprehensive review.
2. The phase 2A consultation also proposed that the July tariffs should be set at a level that would deliver returns broadly within the range of 4.5–8% rather than trying to target a more specific return of 4.5–5% as had been the case with previous tariff changes. The consultation suggested three possible tariff options, and proposed that the final decision about tariffs should be dependent on the levels of actual deployment in March and April 2011, i.e. the two months immediately following the introduction of the new tariffs on 3 March.
3. The consultation also sought views about how the July tariff changes and future tariff degression should apply in respect of the multi-installation tariff rates and energy efficiency requirement that came into effect from 1 April 2012. Specifically, it asked whether the multi-installation tariff rates should continue to be set at 80% of the standard tariffs and whether the default tariff for installations not meeting the energy efficiency requirement should be linked to the stand-alone tariff and reduce in line with that through the July tariff changes and subsequent degression.

#### Stakeholder feedback

4. A number of respondents raised concerns about the prospect of a tariff reduction in July, arguing that further tariff changes should be neither so swift nor so steep. On the detailed tariff proposals themselves, 70% of respondents disagreed that tariffs from July should depend on the volume of deployment in March and April. Some suggested that deployment from 1 April would be a fairer measure while others argued that tariffs should be based on cost data rather than deployment in a short space of time. 77% of respondents disagreed with the proposed new July tariffs and the associated deployment triggers although, of the three tariff scenarios proposed, comments suggested most support for the option C (highest) tariffs.
5. On the other questions asked, there was support for the proposal to move away from explicitly targeting an average rate of return of 4.5-5% in setting tariffs. Opinion was divided on the question of whether the multi-installation tariff rate should continue to be 80% of the relevant individual tariff, with 48% of respondents agreeing and 39% disagreeing. Opinion was less divided on the question of whether installations that do not meet the energy efficiency requirement should attract the stand-alone tariff, with 60% of respondents disagreeing (although comments provided indicated that the majority of respondents who answered this question focused on the principle of the energy efficiency requirement itself rather than whether or not it was appropriate for the default tariff applying to installations not meeting the energy efficiency requirement to be the stand-alone rate). More detailed analysis of responses to questions 1 to 5 from the consultation can be found in Part 2 of this document.

## Updated evidence

6. The Department commissioned Parsons Brinckerhoff (PB) to update their analysis of current solar PV installation costs and likely scenarios for future costs<sup>2</sup>, using information received through the consultation process as well as by directly obtaining quotes for installations of different sizes (120 data points from 26 companies), and consulting industry experts and specialist literature. The updated evidence shows that estimates of the capital costs of installing small-scale PV systems (up to 50kW) in April are 10-20% lower than the estimates for January installations in PB's February report, while the estimates of the capital costs of larger scale installations (over 50kW) in April are 10-30% higher. Estimates for future reductions in installation costs have also been revised down, with the latest report estimating that installation costs will reduce by 10% this year and next (compared with around 20-25% and 15% for 2012 and 2013 respectively in the earlier PB report).
7. The updated evidence also suggests that the capital costs for multiple installations ("aggregated") projects are about 10% lower than for individual installations, taking into account both the economies of scale experienced by such projects as well as additional costs incurred (such as legal costs for conveyancing, and long running administration costs for initialising and maintaining projects). This compares with the earlier estimate that such costs were 35% lower.

## Way forward

8. We have given careful consideration to the points made in consultation responses about the principle of introducing a further tariff reduction from July 2012, particularly the concern that this comes too soon after previous tariff reductions. However, we also need to take account of the updated evidence on trends in solar PV costs. This evidence means that, because of continuing reductions in the costs of installing solar PV, the current tariffs provide rates of return above the target range of 4.5–8%. In the light of this evidence we remain of the view that a tariff reduction is necessary to ensure that tariffs for solar PV properly reflect falling costs and do not result in overcompensation.
9. Concerns were raised in consultation responses that we should not base July tariffs on deployment in March and April. We recognise that this is not a typical period of deployment, with a spike in deployment in March ahead of the introduction of the energy efficiency requirement and multi-installation tariff on 1 April, and a drop in deployment in April following these changes. We have therefore **decided to set tariffs based on cost data rather than deployment**, targeting rates of return towards the upper end of the 4.5–8% range (see Table 2 below). This leads to tariffs close to those proposed under Option C in the consultation. In recognition of the low levels of deployment since 1 April, we have also **decided to delay the introduction of the new tariffs to 1 August 2012**, to allow the industry and consumers more time to adapt to the new requirements.
10. We are grateful to the range of stakeholders that provided evidence on the costs and benefits of multi-installation projects. This has illustrated the range of different business models and costs associated with such projects. It has also shown that the differential in installation costs between single and multiple installations is narrower than previously estimated. Reflecting this updated evidence, we have **decided to set the multi-installation tariff rates from 1 August**

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<sup>2</sup> Available at [http://www.decc.gov.uk/en/content/cms/consultations/fits\\_rev\\_ph2a/fits\\_rev\\_ph2a.aspx](http://www.decc.gov.uk/en/content/cms/consultations/fits_rev_ph2a/fits_rev_ph2a.aspx)



**2012 at 90% of the individual tariff rates**, rather than 80% at present. We will keep this under review in future, to ensure any cost differentials are fairly reflected in tariffs.

11. Responses to the phase 2A consultation highlight the division of opinion on the broader questions around how multi-installation tariffs should be applied, with many respondents pointing to the relevance of the issue of how community installations should be treated under FITs. These questions, and others such as preliminary accreditation for tariffs, will be considered further in our response to the phase 2B consultation.
12. On the default tariff for solar PV installations that do not meet the energy efficiency requirement that was introduced from 1 April 2012, we have **decided to proceed with the proposal that for solar PV installations with eligibility dates on or after 1 August 2012, the default tariff should match the tariff for new stand-alone installations** with the same eligibility date. This is to ensure that subsidies for solar PV continue to be targeted at those properties that are energy efficient. If the default tariff was not changed, the differential between the tariffs for installations that do and do not meet the energy efficiency requirement would be reduced as tariffs come down, reducing the incentive for energy efficiency improvements. This decision is consistent with the Government's broader emphasis on the importance of reducing demand for energy as one of the most cost-effective ways of reducing carbon dioxide emissions, which should be given a higher priority than installing microgeneration such as solar PV. We recognise that there remain concerns among some stakeholders about the energy efficiency requirement itself. As confirmed previously, we will keep the approach to energy efficiency within the FITs scheme under review, bearing in mind the opportunities that the Green Deal will offer in future. The application of energy efficiency requirements to technologies other than PV is considered in the phase 2B consultation.
13. Subject to the parliamentary process required by the Energy Act 2008, the licence modifications necessary to implement the new generation tariffs set out in Table 2 below will come into force on 1 August 2012, and will apply the new tariffs to any new solar PV installation with an eligibility date<sup>3</sup> on or after that date.

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<sup>3</sup> It is important to note that the eligibility date of a solar PV installation is likely to be after its installation date, since the installation must have been commissioned and an application for FITs must have been received by a FIT Licensee (or Ofgem, in the case of installations with a capacity greater than 50kW).

"Eligibility Date" is defined in Condition 33 of the Standard Conditions of Electricity Supply Licences as:  
"the date as regards a particular Eligible Installation from which eligibility for FIT Payments commences which shall be the later of the date:  
(a) as applicable, of  
(i) receipt by the Authority of a FIT Generator's written request for ROO-FIT Accreditation in a form acceptable to the Authority; or  
(ii) receipt by a FIT Licensee of a FIT Generator's written request for MCS-certified Registration;  
(b) on which the Eligible Installation is Commissioned; or  
(c) of Implementation".

**Table 2: Generation tariffs for new solar PV installations from 1 August 2012**

| Band (kW)         | Standard generation tariff (p/kWh) | Typical ROI <sup>1</sup> (%) | Multi-installation tariff (p/kWh) | Lower tariff (if energy efficiency requirement not met) (p/kWh) |
|-------------------|------------------------------------|------------------------------|-----------------------------------|---|
| • 4kW (new build) | 16.0                               | 6.3%                         | 14.4                              | 7.1   |
| • 4kW (retrofit)  | 16.0                               | 6.3%                         | 14.4                              | 7.1   |
| >4-10kW           | 14.5                               | 7.2%                         | 13.05 <sup>2</sup>                | 7.1   |
| >10-50kW          | 13.5                               | 7.2%                         | 12.15                             | 7.1   |
| >50-100kW         | 11.5                               | 6.8%                         | 10.35                             | 7.1   |
| >100-150kW        | 11.5                               | 6.8%                         | 10.35                             | 7.1   |
| >150-250kW        | 11.0                               | 7.4%                         | 9.9                               | 7.1   |
| >250kW-5MW        | 7.1                                | 7.9%                         | N/A                               | N/A   |
| stand-alone       | 7.1                                | 4.6%                         | N/A                               | N/A   |

- Notes:**
1. 'Typical ROI' is our estimate of the return on investment for a typical, well-sited installation in each band receiving the standard generation tariff, under central cost estimates. It includes the generation tariff for 20 years, plus payment for exports and the value of electricity bill savings over the whole technology lifetime (assumed to be 35 years). For more detail on how this is calculated, see the accompanying Impact Assessment available at [http://www.decc.gov.uk/en/content/cms/consultations/fits\\_rev\\_ph2a/fits\\_rev\\_ph2a.aspx](http://www.decc.gov.uk/en/content/cms/consultations/fits_rev_ph2a/fits_rev_ph2a.aspx).
  2. From 1 August, solar PV tariffs will be specified to two decimal places, to avoid the accumulation of errors over time as tariffs are changed through degression and indexing.

## Government decision on future tariff setting and cost control

### Consultation proposals

14. Since its announcement last year, the priority for the FITs review has been to ensure that the scheme remains affordable within the Levies Control Framework, and provides value for money to consumers. That is why the phase 2A consultation sought views on a new approach to cost control and future tariff setting which was intended to ensure that costs can be controlled through transparent and predictable changes to tariffs, avoiding the need for emergency reviews.
15. Specifically, the consultation sought views on a new cost control mechanism for changing tariffs after July 2012. The proposals consisted of the following principal features.
- (i) **Automatic baseline degression:** an automatic reduction in tariffs of 5 or 10% every 6 months, starting from October 2012.
  - (ii) **Contingent degression:** providing scope for degression steps to be brought forward (with two months notice before taking effect) if deployment exceeds pre-determined levels. The consultation proposed that the expected levels of deployment should be published in advance by DECC and the measure of actual deployment at any given point to be determined by Ofgem, based on their analysis of the central FIT register, the MCS database and other information they consider relevant, and published on a monthly basis.
  - (iii) An **annual review** to check that the system is working well.
16. The consultation also sought views on whether the approach to degression should change once the tariffs reached the financial equivalent of two Renewable Obligation Certificates (2 ROCs), the present rate of support for solar PV installations under the Renewables Obligation, and on whether deployment triggers for the contingent degression mechanism should be divided into bands (the consultation suggested a domestic band of up to 10kW, a small commercial band of 10-50kW, and a large commercial band of over 50kW and stand-alone).

### Stakeholder feedback

17. There was some support for the principles of the proposed cost control mechanism set out in the consultation, with 39% of respondents agreeing compared to 49% who disagreed. Both those who agreed and those who disagreed provided a range of thoughts on the detail of the proposed mechanism and made suggestions of possible improvements to it. A common theme emerging from responses was concern that the final approach should also include a mechanism to respond to under-deployment of solar PV, as well as over-deployment. Some respondents suggested that this should be a mechanism to freeze tariffs at a particular level, while others suggested that there should also be scope to increase tariffs in the event of low deployment.
18. Responses to the consultation question on the frequency and rate of baseline degression, tended to focus on the proposed rate of 10%, which many considered was too steep. The most common alternative suggested was for degression to occur less frequently, on an annual basis, with suggested rates of degression of between 5 and 10%. However, there were also

suggestions for degression at lower rates to occur on a more frequent basis, potentially monthly or quarterly, to provide a smoother pathway for tariff reductions.

19. Views were fairly evenly divided on the proposal that the contingent degression triggers should be based on 125% of expected deployment, and that actual deployment should be measured and published by Ofgem, with 38% of respondents expressing support for the proposal compared to 46% who disagreed. The majority of respondents were also in favour of dividing any deployment trigger into bands, and a number of these expressed support for the bands proposed in the consultation.
20. On the question of whether the degression mechanism should change once tariffs reach the equivalent of 2 ROCs, 46% of respondents agreed while 29% disagreed. More detailed analysis of responses to questions 6 to 10 from the consultation are in Part 2 of this document.

## Way forward

21. In the light of consultation feedback, we have decided to proceed with the introduction of a cost control mechanism but with a number of changes to the detailed design as set out below. Subject to the parliamentary process required by the Energy Act 2008, the licence modifications necessary to implement the cost control mechanism will come into force by 1 August 2012, with the tariffs for new solar PV installations with eligibility dates on or after 1 November 2012 and thereafter being set according to the process described below.

## Timing and frequency of degression

22. In order to smooth out deployment across the year and to provide greater budgetary control, we have decided to increase the frequency of degression from every six months to **every three months**. The first degression would take effect from 1 November 2012 for solar PV installations eligible from that date, with subsequent degenerations every three months thereafter (i.e. 1 February, 1 May, 1 August, 1 November).
23. We have also decided that rather than moving the date of degression if deployment exceeds a specified amount, **degression will take place on a fixed date but the amount of degression will depend on deployment** (as set out in paragraph 35 and Table 3 below).
24. Both of these changes are in line with the views expressed in some responses to the consultation, and other representations received from the solar PV industry during the consultation period, that more frequent, smaller degression at known dates was preferable to larger degression at variable dates. We believe that more frequent degression will lead to smaller tariff changes, enabling tariffs to track changes in installation costs more closely and reducing the magnitude of any surges in deployment ahead of tariff degenerations. Degression on fixed dates will also provide more confidence to installers and potential generators, as they will know in advance when tariffs will change.
25. Tariffs will be published by Ofgem **at least two months before the degression date**, and will be **based on deployment in the previous three-month period**. For example, the tariffs for PV installations in February–April 2013 will be announced by the end of November 2012, and will be determined by PV deployment in August–October 2012. Potential generators will therefore have at least two months notice of any tariff changes, and up to five months notice if they install at the end of a three-month period.

## Degression bands

26. As proposed in the consultation, and consistent with views expressed in the majority of consultation responses, we have decided to have **three separate bands in which degression will operate independently**: (i) a ‘domestic’ band covering installations in the 0–4kW and 4–10kW tariff bands, with degression determined by the total deployment of installations up to 10kW; (ii) a ‘small commercial’ band covering installations in the 10–50kW tariff band, with degression determined by total deployment of installations between 10 and 50kW; and (iii) a ‘large commercial’ band for installations in the 50–100kW, 100–150kW, 150–250kW, 250kW–5MW, and stand-alone tariff bands, with degression determined by total deployment of installations larger than 50kW. We believe these bands represent distinct market segments and installations within each band are likely to experience similar trends in installation costs, so it is appropriate to have separate degression mechanisms for each band.
27. The **degression mechanism will operate independently for each degression band**, with separate deployment thresholds. This means tariffs can degress at different rates for different installation sizes, with the constraint that the tariffs for larger installations cannot be higher than the tariffs for smaller installations – i.e. the tariffs for the larger installations will be pegged to those for smaller installations in this case. Independent degression bands will minimise any negative impact from a surge of installations in one particular market segment.

## Degression amounts

28. The majority of consultation responses argued that degression of 10% every 6 months was too steep, as installation costs are not expected to fall that rapidly. Our updated evidence on installation costs supports this view, estimating that costs will fall by 10% per year over the next two years, although with considerable uncertainty around this figure (estimates range from 0 to 20% per annum cost reductions over the next two years).
29. We have therefore decided to set the **baseline degression rate to 3.5% every three months**, equivalent to 13.3% on an annual basis. This is slightly faster than the central estimate of 10% per annum reduction over the next two years, because tariffs need to reduce faster than costs in order to keep return on investment roughly constant (since bill savings and export payments are expected to remain constant, or to increase, and will make up a greater proportion of the revenue stream as tariffs come down).
30. We have also decided to **include an under-deployment mechanism**, which will allow for degression to be skipped in the event that deployment is lower than a specified floor threshold. Degression can only be skipped for two successive degenerations, so there will be a minimum of 3.5% degression every 9 months to incentivise ongoing reductions in installation costs.
31. The **baseline degression rate will be doubled each time deployment exceeds a specified threshold**, up to a maximum of 28% at a single degeneration. This is to ensure that tariffs can respond rapidly to surges in deployment, protecting the FITs budget and minimising the impact on consumers’ electricity bills of a sudden increase in deployment. This is similar in principle to the proposal in the consultation document that would have allowed the contingent degeneration trigger to be pulled several times during the course of a year, potentially leading to several 10% degenerations within the space of a few months. However, we have decided to limit the maximum single degeneration to 28% to mitigate the risk of over-correction of tariffs.

## Deployment thresholds

32. The consultation proposed that the scheduled depression would be brought forward if deployment reached 125% of the expected deployment level for that month. Respondents to the consultation were fairly evenly divided on this proposal, with suggestions for both higher and lower thresholds.
33. Our new proposals for depression of variable amounts at fixed points in time mean that it is not possible to directly compare deployment thresholds with the consultation proposals. However, in general our proposed deployment thresholds would allow more total deployment to come forward for any given level of depression than would have been possible under the consultation proposals.
34. We have set deployment thresholds based on modelling the level of deployment that we expect to come forward given assumed reductions in installation costs. The thresholds have been set such that under central assumptions, modelled deployment would not lead to any depression for any depression band of greater than 3.5% before November 2014, and even under the high scenario there are no contingent depressions at 28% before August 2014. Had this depression mechanism been in place since the start of the FITs scheme, there would have been one depression of 28% for installations within the 0-10kW depression band following the surge in installations in the last three months of last year, and no other depressions of greater than 7%.
35. These thresholds are as follows (and are set out in Table 3 below).
- For the 0–10kW depression band, there will be no depression if the total deployment of 0–10kW installations in the relevant three-month period is less than 100MW; generation tariffs for the 0-4kW and 4-10kW tariff bands will be reduced by 3.5% if total deployment of 0-10kW installations is between 100 and 200MW, and the depression amount will double for each additional 50MW of deployment, up to a maximum of 28% depression if deployment in one three-month period is over 300MW.
  - For the >10–50kW and >50kW and stand-alone depression bands, there will be no depression if the total capacity installed in that depression band in the relevant three-month period is less than 50MW; generation tariffs will be reduced by 3.5% for all tariff bands within the depression band if total deployment in that depression band is between 50 and 100MW, and the depression amount will double for every additional 50MW of deployment up to a maximum of 28% depression if deployment in one three-month period is over 200MW.

**Table 3: Deployment thresholds and depression of generation tariffs**

| Tariff point   | Max deployment in 3-month period (MW) |           |                       | Depression (%) |
|----------------|---------------------------------------|-----------|-----------------------|----------------|
|                | 0-10kW                                | 10 – 50kW | >50kW and stand-alone |                |
| <b>point 1</b> | 100                                   | 50        | 50                    | 0%             |
| <b>point 2</b> | 200                                   | 100       | 100                   | 3.5%           |
| <b>point 3</b> | 250                                   | 150       | 150                   | 7%             |
| <b>point 4</b> | 300                                   | 200       | 200                   | 14%            |
| <b>point 5</b> | >300                                  | >200      | >200                  | 28%            |

## Degression when tariffs reach the equivalent of 2 ROCs

36. Although the majority of respondents to the consultation indicated a preference for the approach to degression to change once tariffs reach the financial equivalent of two Renewable Obligation Certificates (2 ROCs; currently approximately 9p/kWh), our updated analysis of PV installation costs suggests that a rate of return of nearly 8% can be achieved for large scale (>250kW) PV installations for a tariff considerably lower than 2 ROCs. There would be a significant risk of overcompensating investors if tariffs were not reduced below the two ROC level, potentially leading to very large amounts of deployment at a disproportionate cost to consumers.
37. We have therefore decided that **the degression mechanism should continue to operate when tariffs reach the equivalent of 2 ROCs**, to minimise the risk of investor overcompensation and to limit the total cost of FITs support. However, as described in paragraphs 42 to 44, we will regularly review both the deployment thresholds and degression amounts in consultation with the PV industry, and will consider the role that solar PV has to play in meeting the 2020 renewables target when the Renewables Roadmap is updated later this year, taking into account the recent dramatic fall in costs and potential for future cost reductions, as well as the pressures on the Levy Control Framework cap. This document only covers support for solar PV under FITs; we will provide further details for support under the Renewables Obligation (RO)) in the response to the RO banding review, which we plan to publish shortly.

## Measurement and publication of deployment statistics

38. Solar PV installations are confirmed as accredited for FITs when they are registered onto the Ofgem Central FITs Register (CFR). However, it can be several weeks or even months after a system is installed before it is confirmed on the CFR. This lag means that if degression was based on installations confirmed on the CFR, the degression mechanism would not be able to respond rapidly to changes in deployment.
39. We have therefore decided that for the purposes of the degression mechanism, deployment will be measured using data from the Microgeneration Certification Scheme (MCS) database and from Ofgem's Renewables and CHP database of installations which it has determined meet the requirements for ROO-FIT accreditation. For the 0–10kW and >10–50kW degression bands, deployment statistics will be based on the aggregate Declared Net Capacity<sup>4</sup> of 0–10kW and 10–50kW installations (respectively) registered on the MCS database in the relevant three-month period (including extensions to existing installations). For the >50kW and stand-alone degression band, deployment statistics will be based on the aggregate Total Installed Capacity of installations over 50kW that were determined by Ofgem to meet the requirements for ROO-FIT accreditation during the relevant period (including extensions to existing installations).
40. These data sources provide a more up-to-date measure of the level of deployment activity, and therefore how much capacity is likely to become eligible for FITs. However, it should be noted

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<sup>4</sup> Eligibility for generation tariff bands is determined by Total Installed Capacity (TIC), but the MCS database only records Declared Net Capacity (DNC). For the purposes of the degression mechanism, DNC is therefore being used in determining the aggregate capacity of installations deployed in the 0-10kW and 10-50kW bands. In determining the aggregate capacity of installations deployed in the 50kW-5MW band, TIC is being used since the necessary data is available.

that the data will represent an approximation rather than an exact measure of the total capacity of installations that will become accredited under the FIT scheme, because not all installations that are registered on the MCS database necessarily apply for or are eligible for FITs. In addition, the eligibility dates for installations on the MCS or ROO-FIT databases will not necessarily fall within the relevant period. The consultation on Phase 2B of the comprehensive review is considering preliminary accreditation for FITs installations, and will also set out how any decision on preliminary accreditation for solar PV will be factored into the measurement of deployment for the contingent degression mechanism.

41. Deployment statistics will be **published on a monthly basis on the DECC website**, with the first publication being on 24 July 2012; new **tariffs will be published by the end of the first month of each three-month period by Ofgem**, based on the deployment statistics published in that month for installations in the previous three months.

### Annual reviews of the degression mechanism

42. There was little comment in consultation responses on the role of annual reviews of the degression mechanism. A number of respondents felt that annual reviews would be an important safeguard; some suggested they should be light touch and potentially undertaken independently of Government; and others felt that reviews should be as infrequent as possible.
43. We believe it is important to keep the degression mechanism under review, given the uncertainty over future trends in PV costs or how the market will develop under the new mechanism. However, a formal annual review process may not be sufficiently responsive to changes in the market, and could potentially lead to greater uncertainty amongst the industry while it was under way.
44. We have therefore **decided not to have formal annual reviews**, but will regularly scrutinise deployment, installation costs, and the degression mechanism, in close engagement with representatives from the PV industry and consumers. If this highlights that the mechanism is not working appropriately, or that the PV market has changed significantly in a way that merits a change to the degression mechanism, we will consider launching a formal consultation process and potentially altering the deployment thresholds, degression amounts, or other elements of the degression mechanism through further amendments to the Standard Conditions of Electricity Supply Licences.



## Box 1: How the degression mechanism will operate

- a. Degression will take place **every three months** starting on 1 November 2012, with generation tariffs changing on the first day of the first month of the period for new installations eligible from that date (i.e. 1 November, 1 February, 1 May, 1 August).
- b. Tariffs will be published **at least two months before the degression date**, and will be **based on deployment in the three-month period before publication**.
- c. There will be **three bands with separate degression mechanisms**: (i) for installations in the 0–4 and >4–10kW tariff bands; (ii) for installations in the >10–50kW tariff band; and (iii) for installations tariff bands larger than 50kW and in the stand-alone tariff band.
- d. The **degression mechanism will operate independently for each degression band**, with separate deployment thresholds (but no larger tariff band will ever get a higher tariff than a smaller tariff band).
- e. The **baseline degression rate will be 3.5% every three months**.
- f. **Degression will be skipped if deployment is below a floor threshold** (for a maximum of two successive degenerations – so there will be a minimum of 3.5% degression every 9 months).
- g. The **baseline degression rate for a degression band will be doubled each time deployment within that band exceeds a threshold**, up to a maximum of 28%.
- h. **Deployment statistics will be published on a monthly basis by DECC**, and new tariffs will be published by the end of the first month of each three-month period by Ofgem, based on the deployment statistics.
- i. Deployment will be assessed based on the **capacity of installations registered on the MCS database** (for installations up to 50kW) **or determined to meet the requirements for ROO-FIT accreditation** (for installations over 50kW) in the relevant period.

## Box 2: Example depression on 1 February 2013

The following example illustrates how the depression mechanism might operate for a hypothetical set of deployment figures:

- In November 2012, DECC publishes deployment statistics showing that between 1 August and 31 October 2012, there was 210MW of 0-10kW PV capacity and 45MW of 10–50kW PV capacity registered on the MCS database, and 60MW of over 50kW PV capacity determined to meet the criteria for ROO-FIT accreditation.
- New tariffs would be calculated from these statistics, as illustrated in Table 4 below. Ofgem would publish the new tariff table by the end of November 2012 for new PV installations with eligibility dates between 1 February and 31 March 2013.

**Table 4: Example depression based on hypothetical August–October deployment**

| <b>Degression band</b> | <b>Tariff band</b> | <b>Generation tariff from November (p/kWh)</b> | <b>Hypothetical deployment</b> | <b>Degression amount</b> | <b>Generation tariff from February (p/kWh)</b> |
|------------------------|--------------------|--|--------------------------------|--------------------------|--|
| 0–10kW                 | •4kW               | 16   | 210MW                          | 7%                       | 14.88  |
|                        | >4-10kW            | 14.5   |                                | 7%                       | 13.49  |
| >10–50kW               | >10-50kW           | 13.5   | 45MW                           | 0%                       | 13.49 <sup>1</sup>                             |
| >50kW and stand-alone  | >50-100kW          | 11.5   | 60MW                           | 3.5%                     | 11.10  |
|                        | >100-150kW         | 11.5   |                                | 3.5%                     | 11.10  |
|                        | >150-250kW         | 11   |                                | 3.5%                     | 10.62  |
|                        | >250kW-5MW         | 7.1  |                                | 3.5%                     | 6.85   |
|                        | stand-alone        | 7.1  |                                | 3.5%                     | 6.85   |

Note: the deployment figures in the table above are purely hypothetical, to illustrate how the depression mechanism operates, and are not projections for deployment in the period or for what generation tariffs might be from 1 February 2013. In this example, the November generation tariffs are the same as the generation tariffs from 1 August – 31 October, which would be the case if deployment in May – July was beneath the thresholds for baseline depression in all depression bands (i.e. the 1 November depression was 0% for all depression bands).

## Government decision on tariff lifetime

### Consultation proposals

45. The consultation noted that when the FITs scheme was introduced, PV tariffs had a 25-year lifetime while most other technologies were set at 20 years. The consultation questioned whether this discrepancy remained appropriate and proposed reducing the tariff lifetime for new PV entrants to the FITs scheme from 25 to 20 years.

### Stakeholder feedback

46. 61% of respondents disagreed that the tariff lifetime for new solar PV installations should be reduced from 25 to 20 years, compared to 30% who agreed. A common concern among those disagreeing was that changing the tariff lifetime would deter investment in solar PV. Equally though, of those agreeing with the proposal, some felt that the difference between a 20 and 25 year lifetime would not mean much to many of those considering investing in solar PV. Further detail of this analysis can be found in Part 2 of this document.

### Way forward

47. While recognising that opinion was divided on this proposal, we continue to believe that, on balance, there is a case for reducing the tariff lifetime for new PV installations to reduce the long-term impact on consumer bills and to better align it with other technologies eligible for FITs as well as the Renewables Obligation. As set out in the consultation, at any given tariff rate, while a shorter tariff lifetime would reduce implicit rates of return, this would not be to a great extent since investors typically discount the last 5 years of revenue significantly. For a sub-4kW installation, shortening the tariff lifetime to 20 years would be equivalent to a 0.7% reduction in the return on investment (ROI). Therefore, it is unlikely to have a significant impact on peoples' investment decisions. We have taken into account the impact on ROI when setting the new generation tariffs in Table 2.

48. We have therefore **decided to reduce to 20 years the generation and export tariff lifetime for new PV installations**. Subject to the parliamentary process required by the Energy Act 2008, the licence modifications necessary to reduce the generation and export tariff lifetime to 20 years will come into force by 1 August 2012, affecting new PV installations (including extensions to existing installations) with eligibility dates on or after that date.

## Government decision on export tariffs

### Consultation proposals

49. The consultation confirmed that the review of FITs has been seeking to establish whether the level of export tariff continues to reflect the real value of FITs exports, and to consider the way in which exports are treated in the levelisation process, in order to ensure that electricity suppliers are neither under- nor over-compensated.
50. The consultation highlighted the fact that preliminary analysis of the key data on which these estimates are based suggested that the underlying value of electricity either to suppliers or as spill is greater than that implied by the current export tariff (now 3.2p/kWh following indexation for 2012/13). In the light of this, views were sought on whether the current level of the export tariffs fairly represents the value to suppliers of exports from FITs generation. The consultation also proposed that any change to the export tariff would apply only to new entrants to the FITs scheme, and asked for views on this and on whether a change in the export tariff should result in compensating changes to generation tariffs, in order to broadly maintain the rate of return.

### Stakeholder feedback

51. 63% of respondents felt that the current level of the export tariff did not fairly represent the value to suppliers of exports from FITs generation. Some of those arguing for a higher export tariff suggested different approaches to setting the export tariff, while others suggested alternatives ranging from an increase to around 4p/kWh up to 8p/kWh. The most common suggestion was for the export tariff to be increased to 5p/kWh or 6p/kWh.
52. 61% of respondents considered that any changes to the export tariff should apply to new entrants to the FITs scheme, while 24% felt that any changes to the export tariff should apply equally to new installations and existing installations. Further detail of this analysis can be found in Part 2 of this document.

### Way forward

53. Based on further analysis and consultation feedback, we continue to believe that the current export tariff does not reflect the value of FITs exported electricity. We have therefore **decided to increase the export tariff to 4.5p/kWh** and to review on an annual basis the level of the export tariff for new entrants to the FITs scheme.
54. Further analysis by DECC has shown that the majority of larger installations, especially for technologies other than solar PV, have opted out of the export tariffs, reflecting an active market for the exports from these generators via power purchase agreements. Exports from installations with a total installed capacity of 30kW or less are generally not metered but are deemed to be 50% of electricity generated. The level of the export tariff is therefore most relevant to these small installations, which include the majority of PV installations.
55. The “system sell price” (the price paid by the system operator for generation spilled onto the system) represents the best estimate for the value of deemed electricity exports. In 2011, the average system sell price was 4.1p/kWh, and this has been increasing in recent years in line with wholesale electricity prices. We therefore believe that 4.5p/kWh represents a fair value for such deemed exports. This will be subject to future RPI increases, but reviewed annually for

new entrants to the FITs scheme to ensure that it continues to reflect the real value of FITs exports. In the longer term, a number of factors will affect the role of the export tariff and the market for microgeneration, in particular the roll-out of smart meters. The Secretary of State will continue to determine on an annual basis the arrangements for deeming, and for how exports are considered in the levelisation process.

56. Feedback from the consultation has reinforced our concern that applying an increase in the export tariff to both existing and new generators could result in a windfall gain being delivered to existing generators who are already benefiting from high generation tariffs. Therefore, while we recognise the arguments in favour of having a single export tariff, we do not feel that this can be justified and have therefore decided that **the new export tariff should apply only to new PV generators with an eligibility date on or after 1 August 2012.**

57. As in the past, the new export tariff has been applied in calculating the new generation tariffs for solar PV, as it is relevant to determining what tariff is necessary to provide a particular rate of return (taking into consideration the evidence that the majority of larger installations opt out of the export tariff). For installations up to 4kW, the increase in the export tariff is equivalent to an increase in the ROI of 0.3%.

58. Subject to the parliamentary process required by the Energy Act 2008, the licence modifications necessary to implement the new export tariff will come into force by 1 August 2012, and will apply to any new solar PV installation (including extensions to existing installations) with an eligibility date on or after that date. The new export tariff will be applied to technologies other than PV as part of the implementation of Phase 2B. Further details of these changes will be set out in the response to phase 2B consultation.

## Government decision on indexation of tariffs

### Consultation proposals

59. The consultation sought views on whether it would be appropriate to move from real (i.e. index-linked) tariffs to nominal (i.e. flat tariffs) for individual installations. It also sought views on whether, if some form of index-linking were maintained, it would be appropriate to modify the way in which index-linking is done. Two suggestions of possible modifications were made: moving from using the Retail Price Index (RPI) to using the Consumer Price Index (CPI) as a basis for calculations (mirroring recent similar moves made by schemes such as pensions); and limiting the index-linking of tariffs to a certain number of years after the accreditation of an installation.

### Stakeholder feedback

60. 84% of respondents felt that that tariff should continue to be index-linked. The most commonly cited reason was the role of indexation in incentivising investment in solar PV. There was less strength of opinion on whether or not indexation should be based on CPI or RPI, and a number of respondents commented that the most important feature was the principle of index-linking applying for the lifetime of the tariff, confirming that they were either agnostic or less concerned about whether that indexation should be based on CPI or RPI. Nonetheless, the broadest support was for retaining RPI as the model for index linking for the whole tariff lifetime, with 59% of respondents favouring this approach. Further detail of this analysis can be found in Part 2 of this document.

### Way forward

61. Given the evidence regarding the importance of index-linking in incentivising investment, and the relatively small savings that would be realised by switching to CPI as the basis for indexation, we have **decided not to make any changes to the approach to indexation**. This means that the generation<sup>5</sup> tariff an installation receives will continue to be adjusted annually<sup>6</sup> based on RPI and will deliver real returns. The new solar PV tariffs referred to earlier in this document have been set on this basis.

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<sup>5</sup> See paragraphs 53 to 58 for a description of how the export tariffs for new entrants to the FITs scheme will be adjusted each year.

<sup>6</sup> Following the introduction of the contingent degression mechanism, the tariffs for new installations between May – July and August – October will be increased by RPI from the following April (i.e. the tariffs for installations between 1 April and 31 October 2012 will be increased by RPI from 1 April 2013). The tariffs for new installations in November – January and February – April will be increased by RPI from 1 April the year after (i.e. the tariffs for installations in November 2012 – January 2013 and February – April 2013 will be increased by RPI from 1 April 2014).

## Government decision on the threshold to become a mandatory licensee

### Consultation proposals

62. **Note: This section deals with an issue that was raised in the Phase 2B consultation.** That consultation asked whether the threshold at which suppliers become mandatory FITs licensees should increase from 50,000 domestic customers to 250,000 to bring it broadly into line with other environmental programmes, CESP and CERT, whose thresholds were increased in 2010.

### Stakeholder feedback

63. Very few responses to the consultation commented on this issue. Responses were generally supportive of the change. Of those who agreed, the majority of the respondents believed that it would bring the thresholds in line across the board. A few respondents stated that the proposal would encourage competition and would help the smaller suppliers grow within the energy market.

64. The majority of the respondents who disagreed argued that this would not encourage competition in the electricity supply market. A few respondents argued that many small suppliers are voluntarily becoming FIT licensees therefore the threshold should not be increased. It was stated that other models should be considered e.g. tapering or buy-out provisions.

### Way forward

65. We consider that the impact of the threshold within FITs is minimal because the obligation to contribute to costs applies to all electricity suppliers in proportion to the number of customers, whether they participate in the scheme or not, and there is the option for small suppliers to join the scheme. However we note that there are particular impacts and risks imposed on small suppliers by a requirement to take on larger FITs generators. In order to avoid placing unnecessary burdens on new entrant suppliers, **we have decided to make this change**. We wish to minimise the uncertainty and disruption for businesses and consumers who are directly affected by this change. We therefore intend to bring forward the this change so that it is implemented alongside the Phase 2A changes proposed in this document, rather than later in the year. Subject to the parliamentary process required by the Energy Act 2008, the threshold at which suppliers become mandatory FITs licensees will increase from 50,000 to 250,000 customers with effect 1 August 2012.

## Part 2 | Detailed Analysis of Consultation Responses

### Questions on proposed tariff changes

#### **Q.1 Do you agree that in setting tariffs we should move away from explicitly targeting an average rate of return of 4.5–5%?**

52% of respondents agreed that in setting tariffs there should be a move away from explicitly targeting an average rate of return of 4.5–5%. 38% disagreed and 10% did not answer the question.

The majority of those agreeing did so on the basis that they considered that (for differing reasons) 4.5–5% was not a sufficiently high target rate of return. Some argued that there was reducing consumer appetite for solar PV, meaning that higher returns were now needed to attract investment. A common suggestion was that investors and homeowners would be looking for returns of at least 6–8%. A number of respondents also highlighted the fact that commercial projects, local authority projects and aggregated projects would need higher returns than domestic installations.

A smaller number of respondents commented on the principle of targeting a particular rate of return. Some noted that this approach was unreliable and impracticable given the variety of returns that would result in practice from a single tariff because of differences in product costs and locational factors. There was some appetite for the approach described in the consultation based on clearly defined deployment projections or targets, with associated depression. In this context, a few respondents observed that they did not consider that PV costs would continue to fall as they have done in recent years, with one or two arguing that further analysis on costs was needed.

#### **Q.2 Do you agree that the tariff table from 1 July 2012 should depend on the volume of deployment in the first two months of the post-3 March tariff tables?**

70% of respondents disagreed that tariffs from 1 July should depend on the volume of deployment in the two months following the 3 March tariff changes, compared to 23% who agreed. The remaining 7% of respondents did not answer this question.

The majority of those who disagreed did so because they considered it inappropriate to use deployment in the proposed two month window as the basis for decisions on tariffs. The main reason cited was a concern that deployment in this period would be erratic and uncharacteristically high, particularly as generators installed ahead of the introduction of the new energy efficiency requirements and multi-installations tariff rates from 1 April. Some suggested that deployment from 1 April would be a fairer measure. There were also arguments that tariff changes should be based only on cost data.

A number of responses raised concerns about the proposed tariffs themselves and the prospect of their introduction from July, arguing that the tariff changes should not be so swift or so steep. The speed of the proposed tariff changes was cited as particularly problematic for projects with long lead times, including commercial projects and social housing schemes. Others remarked more generally on July being too soon after the March changes to tariffs, and argued that there should be no further tariff changes until October.



A number of respondents supported the proposed approach, including one or two who identified falling tariffs as a good thing that would drive prices down and get PV more swiftly to the point where no subsidy was needed. Some of those who agreed with the approach highlighted the importance of providing maximum notice of tariff changes and of making the deployment information that would be the basis for tariff decisions as transparent as possible.

Comments were also provided on the principle of volume-based degression itself. A common concern raised was that the approach would create new uncertainty for the industry and consumers. Views were also expressed that an approach based on deployment effectively penalised uptake, which should be encouraged.

**Q.3 Do you agree that the ranges of tariffs displayed in options A, B and C are broadly appropriate, and that the proposed triggers for the choice between these two options are the correct ones?**

77% of respondents disagreed with the proposed new tariffs for solar PV and the associated deployment triggers, compared to 10% who agreed. 13% of respondents did not answer this question.

The majority of those disagreeing with the proposed July tariffs did so on the basis that they considered that all the proposed tariffs were too low. A variety of supporting reasons were provided, including concerns about the impact that low tariffs would have on the quality of installations and concerns that the assumed cost reductions on which the proposed tariffs were based, were incorrect. There were a number of other comments on the evidence base supporting the proposed tariffs, with some respondents expressing concern that the installation costs were higher than assumed (particularly for smaller companies which are unable to benefit from economies of scale). Others questioned the sufficiency of the data on large installations and challenged the assumption that the falling costs seen to date would continue. Some also challenged the fact that additional costs associated with community and social housing projects were not reflected, with accompanying suggestions for different tariffs for different types of installations.

Of the three proposed tariffs, option C attracted most support in the comments provided (including by those disagreeing with the broad proposal), largely on the basis that this was considered to be the lowest tariff possible for a sustainable industry. Some respondents argued that option A was too low, while others said that options A and B were both too low.

Several respondents felt that the proposed deployment triggers were too low. Others argued that it was wrong to base tariff reductions on deployment, and that it would be better to base them on technology costs instead. Some respondents, including those agreeing with the overall approach, argued that there should also be scope for pausing tariffs at 3 March levels if deployment was low.

**Q.4 Do you agree that tariffs for multiple installations (over 25 installations) should continue to be 80% of the relevant individual tariff, and do you have any cost information to support your response?**

There was a broad range of responses to this question. 48% of respondents agreed that the multi-installation tariff rates should continue to be 80% of the relevant individual tariff. Some went further and argued that the multi-installation tariff rates should be even less than 80% of the standard tariff (suggestions for alternatives ranged from 50% to 70%).

On the other hand, 39% of respondents disagreed with the principle and supporting evidence for multi-installation tariff rates, with a number arguing that aggregated schemes incur additional costs such as legal costs, due diligence costs and long term project management costs, that had not been fully reflected. Additionally, some respondents noted that aggregated schemes missed out on the bill saving benefits associated with individual projects. Some respondents commented that a further reduction to the aggregated tariff would render social housing projects unviable.

An area of broad consensus in a number of responses was the suggestion that social housing/local authority/community aggregated schemes should be exempt from the aggregated tariff on the basis that they had broader societal benefits.

**Q.5 Do you agree that installations that do not meet the energy efficiency requirement should attract the “stand-alone rate”?**

60% of respondents disagreed that installations that do not meet the energy efficiency requirement should attract the “stand-alone rate”, compared to 29% who agreed. 11% of respondents did not respond to this question. The majority of respondents who answered this question, both those agreeing and those disagreeing, did so in terms of commenting on the principle of the energy efficiency requirement itself rather than whether or not it was appropriate for the default tariff applying to installations not meeting the energy efficiency requirement to be the “stand-alone rate”.

A large number of respondents disagreed with the principle of the recently introduced energy efficiency requirement. Others commented on other aspects of the requirement, for example suggesting that the definition of the requirement be changed so that it only applies to buildings that are required to have an energy performance certificate (EPC) on sale or rental under the Energy Performance of Buildings Directive. Another common comment was the suggestion that there should be exemptions from the requirement, for example, for community buildings, commercial buildings, agricultural buildings and hard to treat buildings. Others suggested that the timing of the introduction of the energy efficiency requirement should be revisited to tie in with the introduction of the Green Deal.

A few respondents did comment on whether the appropriate default tariff for not meeting the energy efficiency requirement should be the stand-alone tariff. Those disagreeing did so on the basis that the stand-alone tariff was too low. Three alternatives were suggested: making the default tariff a percentage reduction on the standard tariff for a particular size of installation; making the default tariff the next lowest tariff from the relevant standard tariff (for example, for a <4kW installation, applying the 4kW to 10kW tariff); and making the default tariff the same as the multi-installation tariff rate. Others agreed that the stand-alone tariff was appropriate as the default rate.

A common recurring comment was that there should be scope for an installation in receipt of the default tariff to have their tariff increased to the standard tariff if the generator subsequently undertook the relevant energy efficiency measures.

## Questions on future tariff-setting and cost control

### **Q.6 Do you agree with the principles of tariff degression described above, using baseline degression and a deployment-related contingent mechanism, supplemented with annual reviews to check that the system is working as planned?**

A range of responses were provided to this question. 39% of respondents agreed with the principles of the approach described, acknowledging this as a way of providing certainty and stability and removing the need for emergency reviews, particularly in the context of a finite spending envelope for FITs. 49% of respondents disagreed, with a small number of these focusing their disagreement on the principle of degression and the proposed mechanism, and others expressing broader concerns about the impact that this would have on certainty and the ability of consumers to invest.

In many instances, those expressing support for the proposal caveated or accompanied this support with views on the detail of how the degression mechanism should work in practice. The most common suggestion was that the final approach should also include a mechanism to respond to under-deployment of solar PV, as well as over-deployment, whether by pausing degression or increasing tariffs. This was particularly in response to the baseline degression element of the proposal.

Some respondents felt that the degression mechanism should involve baseline degression only, on the basis that this would provide maximum certainty to generators and investors, and enable industry to plan effectively. However, a similar number of respondents felt that the degression mechanism should be solely a deployment based mechanism, with no baseline degression. This was on the basis that contingent degression provided the best mechanism for responding to market developments and ensuring that any decreases in tariffs matched the real world. More generally, there were several respondents who commented on the importance of an approach to tariffs that tracked installation costs. On that theme, some suggested that future cost reductions would be much lower than in recent years.

A number of respondents commented that clear communication and clearly available deployment data would be key to the successful operation of the degression mechanism, and to ensuring that consumers would be able to invest with certainty.

There was a small number of suggestions for alternative approaches to degression based on the FITs budget, electricity prices and specific to different tariff bands.

There was less comment on the role of reviews. A number of respondents felt that annual reviews would be an important safeguard, although this was caveated at times by concerns to ensure that reviews didn't undermine certainty. Some suggested that reviews should be light touch and potentially undertaken independently of Government. Others felt that reviews should be as infrequent as possible.

### **Q.7 Do you agree that the baseline degression steps should be at the rate of 10% every 6 months?**

The majority of respondents to this question, and the majority of those disagreeing with the proposal, focused on the rate of degression proposed rather than the frequency. 83% of respondents disagreed that the baseline degression steps should be at the rate of 10% every six

months, compared to only 6% who agreed. The predominant concern cited by those disagreeing was that this level of depression would be too steep. A large number of respondents argued that future installation costs would not fall at a similar rate.

A number of alternatives were suggested. The most common was for the rate to be 5% depression every six months. One or two respondents noted that the inclusion of a contingent depression mechanism as well would help to mitigate the risk of a lower baseline depression rate, as it would allow for corrections. Several respondents who felt that the rate was too steep stressed that this concern would be amplified if there was no scope to pause depression in the event of low deployment. A couple of community groups expressed particular concern about the impact of the proposed rate of depression on community projects.

Only a few respondents felt that 10% depression every six months was reasonable, with one noting that a higher baseline rate would reduce the likelihood of the contingent depression mechanism needing to be used, which would be better for planning.

A number of respondents disagreed with the proposed frequency of depression. One or two respondents highlighted the particular difficulty of six-monthly changes in tariffs for community projects, although others commented elsewhere that this could be rectified if there was scope to pre-register for FITs. One or two respondents also argued that if contingent depression were included, any resulting tariff changes should occur to the same timetable as the baseline depression, to maximise certainty.

The most common alternative suggested was for depression to occur less frequently, on an annual basis, with suggested rates of depression of between 5 and 10% mentioned. However, there were also suggestions for more frequent depression to provide a smoother pathway for tariff reductions, with quarterly depression of 2.5 – 3% and monthly depression of 1% also suggested as alternatives.

Some respondents reiterated their objections to any depression as well as concerns about the impact of depression on consumer certainty and quality of installations, and their preference for a depression mechanism based on tracking of installed costs or triggered by deployment, rather than baseline depression. Others also caveated their responses by expressing concern about the July tariffs being used as the starting point (i.e. arguing that they would have more support for the proposed approach to depression if the starting point for 10%, six-monthly depression was the current tariffs).

**Q. 8 Do you agree that the contingent depression triggers should be based on 125% of expected deployment, and that actual deployment should be measured and published by Ofgem in the manner described?**

38% of respondents expressed support for the proposal compared to 46% who disagreed. Those disagreeing expressed concern about the uncertainty that a contingent depression mechanism could create, and suggested it would cause confusion for consumers.

There were a number of suggestions made for additions or changes to the proposed mechanism. The most common suggestion was for an under-deployment trigger to prompt a pause in depression or increase in tariffs. Some suggested that such a trigger could be if deployment was 75% to 90% of expectations.

A few respondents felt that using 125% of expected deployment as the trigger for a tariff reduction was too low. Some suggested that 150% would be more appropriate, and one respondent suggested 250%.

A number of respondents commented on the notice period between the triggering and coming into effect of a tariff depression. The majority of those commenting on this felt that two months was not a long enough notice period. Alternatives suggested ranged from three to six months.

Other comments included: disagreement with 200MW of deployment as the benchmark (with 300MW suggested as the alternative); general opposition to any tariff depression; a feeling that more budget should be made available to match deployment; and a suggestion of more deployment triggers so that decreases or increases in tariffs would be proportionate to the level of under- or over-deployment.

There was general support for the publication by Ofgem of information on deployment. A number of respondents highlighted that clarity and transparency on how deployment would be calculated, and readily accessible and up to date deployment information, would be key to the success of the depression mechanism. Different thoughts were provided on how frequently information should be published. A number of respondents suggested monthly publications, although there were also some who suggested weekly or even daily data publications. One or two respondents also suggested that installation costs should be recorded and made publicly available as well.

#### **Q.9 Do you consider that the baseline depression and/or the contingent deployment triggers should change once the 2ROCs rate has been reached?**

75% of respondents answered this question and of these, a large number did not provide any comments to support their answers. 46% of respondents agreed that the approach to depression should change once a level equivalent to two Renewable Obligation Certificates (2 ROCs) is reached, compared to 29% who disagreed. A number of respondents stated explicitly that the 2ROC equivalent level should be considered as a floor for PV tariffs, with others arguing that tariffs for PV should not drop below those available for offshore wind. Others suggested that when tariffs reached this level, the scheme should be reviewed. One or two respondents argued that tariffs for smaller solar PV installations should always be higher than 2 ROCs.

Other respondents agreed that it was appropriate for tariffs to be lower than the equivalent of 2 ROCs if the evidence on costs and deployment supported this. One or two said that the aim should be to reach grid parity and remove the need for any subsidy.

Some comments on this question focused on the separate proposals for tariffs for large scale solar PV installations from July 2012 set out elsewhere in the consultation document, while others commented more generally on the relationship with the Renewables Obligation (RO) and their views on the proposals for RO support for PV in the RO Banding Review consultation.

#### **Q.10 Do you have views on whether deployment triggers should be divided into bands, and if so whether the bands described above are the appropriate ones?**

The majority of responses to this question were in favour of dividing any deployment triggers into bands. The key reason cited was that it would ensure a fairer approach that would prevent one market segment from dominating or having a negative impact on another sector. The main concern was that, in the absence of band-based deployment triggers, tariffs for domestic installations could depress rapidly because of uptake in larger commercial schemes. A number of

those supporting the idea also commented that it would allow for a more nuanced approach that would ensure that depression reflects cost reductions which might occur at different rates in different market sectors.

Of those agreeing with the principle of dividing deployment triggers into bands, a number agreed with the bands proposed in the consultation, while others suggested alternative bands (for example <250kW and >250kW), and using the same bands as in the table of tariffs. A number suggested that there should be differentiation by sector rather than band: for example, having different depression triggers for private residential, social housing and private rent a roof, or for domestic, community, agricultural, commercial and industrial. One respondent also suggested regional bands.

Of those disagreeing with the idea of deployment triggers being divided into bands, a common reason cited was a concern that this would add further complexity to the FITs scheme which could in turn exacerbate investor uncertainty and affect the confidence of consumers and community groups considering solar PV. A number of respondents taking this view suggested that, if anomalies did emerge in terms of costs falling more rapidly in particular parts of the market, these would be better addressed through annual reviews rather than different depression triggers.

#### **Q.11 Do you consider that we should reduce the tariff lifetime for new entrants to the FITs scheme, from 25 to 20 years?**

61% of respondents disagreed that the tariff lifetime for new entrants to the FITs scheme should be reduced from 25 to 20 years, compared to 30% who agreed. A common concern among those disagreeing was that changing the tariff lifetime would deter investment in PV. Some responses, particularly from local authorities, expressed concern that the impact would be felt most strongly by community/social housing/local authority projects. One respondent suggested an exemption for community projects which enabled them to receive support for 25 years, while the tariff lifetime was reduced to 20 years for all other types of scheme.

Concerns were also expressed about the need to change marketing material if there was a change in the tariff lifetime, and the impact on consumer confidence of another change in the FITs scheme. In contrast some who agreed with the proposal did so on the basis that whether the tariff lifetime was 20 or 25 years would make little difference to most consumers.

Of those keen to retain a 25 year lifetime, several suggested that this was appropriate as it was also the standard warranty period for solar PV, while others raised concerns about the perverse consequences of shortening the tariff lifetime e.g. incentivising householders to remove panels from their rooftops and encouraging low-quality equipment.

Of those agreeing, several commented on the value of aligning the tariff lifetime for solar PV with that for other technologies and support under the RO while others suggested that most of those considering installing solar PV have a shorter investment horizon than 25 years so are unlikely to be deterred by a change in the tariff lifetime along the lines of that proposed.

Many respondents suggested there was a key link between decisions on tariff lifetime and tariff levels. Both those who agreed and disagreed with the proposal indicated that it would be acceptable if the tariffs were set at the right level to provide a consistent rate of return.

A small number of respondents suggested alternatives both of increasing the tariff lifetime, and reducing the tariff, and vice versa (with those in the latter category suggesting a tariff lifetime of 5

or 10 years). One reason given for reducing the tariff lifetime further was to reduce the lifetime costs of the FITs scheme to consumers.

One or two respondents expressed concern about changes being applied retrospectively to existing solar PV installations supported under FITs.

**Q.12 Do you consider that the current level of the export tariff fairly represents the value to suppliers of exports from FITs generation? Please provide evidence to support your answer.**

63% of respondents disagreed, arguing that the current level of the export tariff does not fairly represent the value to suppliers of exports from FITs generation, while 18% agreed. A common argument was that a higher export tariff would incentivise generators to consume less electricity on site and export more, and that this should be encouraged. Conversely, other respondents (including those who felt that the export tariff should be increased) cautioned against an export tariff that was too high and would discourage on-site consumption.

Some of those arguing for a higher export tariff made suggestions as to what the tariff should be. A number of alternatives were suggested, ranging from an increase to around 4p/kWh up to 8p/kWh. The most common suggestion was for the export tariff to be increased to 5p/kWh or 6p/kWh.

Other respondents suggested approaches to setting the export tariff rather than suggesting a tariff level per se. For example, several suggested that the export tariff should be linked to the retail or wholesale price of electricity, while others suggested that wider grid benefits of microgeneration should be valued and then reflected in the export tariff.

A small number of respondents agreed that the current export tariff was acceptable, with some arguing that this was only the case if the generation tariff was not reduced, and one suggesting that there was already scope to seek a higher export tariff on the market. Some of those who thought the export tariff should increase suggested that this did not need to happen immediately. For example, some suggested that it should happen once smart meters were in place, while others recommended more detailed analysis being undertaken before making any change. One respondent suggested that one benefit of increasing the export tariff would be to add extra incentive for generators to install export meters, with associated benefits in terms of improved understanding and awareness of energy usage.

One electricity supplier commented that there could be administrative complexities in having different export tariffs for different installations.

**Q. 13 Should any changes to export tariffs apply to all generators or only to new entrants to the scheme, and should there be compensating changes to generation tariffs?**

The majority of responses to this question focused on the first part, i.e. whether or not changes to the export tariff should apply to all generators or only new entrants to the scheme. 61% of respondents considered that any changes to the export tariff should only apply to new entrants to the scheme (with a few suggesting that this should mean new entrants post 3 March 2012).

The most common reason for this was that it would be consistent with the principle of not making retrospective changes (with some respondents noting that this principle should be adhered to in the case of tariff increases as well as decreases). Others noted that existing generators had made



investment decisions based on the tariffs available in the past, and that benefiting from a subsequent increase would simply provide them with a windfall. Some installers also suggested that limiting an increased export tariff to new generators would help to incentivise new deployment.

24% of respondents argued that any changes to the export tariff should apply equally to new installations and existing installations. The main reason cited was that the export tariff should reflect the true value of electricity exported and therefore it shouldn't matter when the system was installed. One respondent suggested making the higher export tariff available to existing generators if they install a smart meter. A few respondents raised concerns about the complexity of administering different export tariffs for different installations.

There was less comment on whether any changes to the export tariff should result in compensating changes to generation tariffs. Of those who responded to this part of the question, views were evenly divided between those who agreed, on the basis that this would ensure a consistent rate of return, and those who disagreed, on the basis that the export tariff and generation tariff were different things, and only the former should be factored into the rate of return calculation.

#### **Q.14 Do you think tariffs should be index-linked?**

84% of respondents to this question took the view that tariffs should continue to be index-linked. The most commonly cited reason was the role of indexation in incentivising investment in solar PV. Several respondents commented that indexation was a key part of the investment decision for homeowners, particularly to distinguish FITs from other possible avenues for capital such as savings. Others commented that index-linking was a feature of the FITs scheme that allowed non-energy professionals to invest with confidence, distinguishing FITs for non-energy professionals from the Renewables Obligation.

Some respondents also highlighted the importance of index-linking for other types of FITs generators, including community projects, social housing schemes and larger projects (including those looking to pension funds as possible sources of finance).

A few respondents noted that index-linking was most important during the initial payback period, with the potential to limit it to the first 5 to 10 years of the FITs eligibility period. Others argued that there was stronger justification for index linking the export tariff than the generation tariff.

Only 6% of respondents felt that tariffs should not be index-linked. Reasons given for this view included the suggestion that indexing is less important for solar PV than other technologies (due to lower operating and maintenance costs) and the fact that generators will benefit from rising electricity prices in future would counteract a reducing value of tariff payments. In contrast, some of those who agreed with index linking argued that it should be directly linked to the retail price of electricity rather than either RPI or CPI.

#### **Q.15 If index-linking is maintained what would be the best model? (i) CPI for whole life, (ii) RPI for whole life, or (iii) index-linking (either RPI or CPI) for the first x number of years?**

76% of respondents answered this question, providing a range of responses. 59% favoured retaining RPI as the model for index linking for the whole tariff lifetime. A common reason cited for this view was the appeal of avoiding further changes to the FITs scheme and retaining a feature of the system that was familiar to consumers and investors. A number of those favouring retaining RPI suggested that it was a more appropriate and relevant model for FITs, because of its link to

the cost of living and its inclusion of energy prices. Others argued that moving away from RPI would make FITs inconsistent with other similar schemes such as the RHI and RO.

Few detailed reasons were provided by the 10% of respondents who supported a move to CPI. Those made included the fact that CPI is well understood and is used in relation to other Government policies/measures. Some respondents suggested that an index linked solely to energy prices would be more appropriate than either RPI or CPI.

A significant number of respondents commented that the most important feature was the principle of index-linking applying for the lifetime of the tariff, and that they were either agnostic or less concerned about whether that indexation should be based on either CPI or RPI.

7% of respondents expressed support for the idea of limiting index linking to a shorter period of time. From these responses, the most common suggestion was for index-linking to apply in the first 10 years of the tariff lifetime. six years and 20 years were other suggestions provided.

## Annex A | Question List

1. Do you agree that in setting tariffs we should move away from explicitly targeting an average rate of return of 4.5-5%?
2. Do you agree that the tariff table from 1 July should depend on the volume of deployment in the first two months of the post-3 March tariff tables?
3. Do you agree that the ranges of tariffs displayed in Options A, B and C are broadly appropriate, and that the proposed deployment triggers for the choice between these options are the correct ones?
4. Do you agree that tariffs for multiple installations (over 25 installations) should continue to be 80% of the relevant individual tariff, and do you have any cost information to support your response?
5. Do you agree that installations that do not meet the energy efficiency requirement should attract the “stand alone rate”?
6. Do you agree with the principles of tariff degression described above, using baseline degression and a deployment-related contingent mechanism, supplemented with annual reviews to check that the system is working as planned?
7. Do you agree that the baseline degression steps should be at the rate of 10% every 6 months?
8. Do you agree that the contingent degression triggers should be based on 125% of expected deployment, and that actual deployment should be measured and published by Ofgem in the manner described?
9. Do you consider that the baseline degression and/or the contingent deployment triggers should change once the 2 ROCs rate has been reached?
10. Do you have views on whether deployment triggers should be divided into bands, and if so whether the bands described above are the appropriate ones?
11. Do you consider that we should reduce the tariff lifetime for new entrants to the FITs scheme, from 25 to 20 years?
12. Do you consider that the current level of the export tariffs fairly represents the value to suppliers of exports from FITs generation? Please provide evidence to support your answer.
13. Should any changes to export tariffs apply to all generators or only to new entrants to the scheme, and should there be compensating changes to generation tariffs?
14. Do you think tariffs should be index-linked?
15. If index-linking is maintained what would be the best model? (i) CPI for whole life, (ii) RPI for whole life, or (iii) index-linking (either RPI or CPI) for the first x number of years?

## Annex B | List of Respondents to the Consultation

The following table lists all non confidential companies and organisations which have responded to the consultation.

|    |  |
|----|--|
| 1  | 247 Power Ltd  |
| 2  | A Shade Greener  |
| 3  | AC Environmental Consulting LTD                              |
| 4  | Active Renewables  |
| 5  | AEE Renewables plc   |
| 6  | AES Ltd  |
| 7  | Affinitus Renewable Energy Ltd                               |
| 8  | Agreenergy Ltd   |
| 9  | Low Carbon Hub   |
| 10 | Alternergy Ltd   |
| 11 | Ascertiva Group Limited                                      |
| 12 | Bexhill Energy   |
| 13 | Bittern Community Interest Company                           |
| 14 | Bright & Associates  |
| 15 | Bristol City Council   |
| 16 | Bristol Solar Group  |
| 17 | British Gas  |
| 18 | British Photovoltaic Association (BPVA)                      |
| 19 | British Property Federation                                  |
| 20 | C Changes Ltd  |
| 21 | Caer Delyn   |
| 22 | Caplor Energy  |
| 23 | Caretech Systems Ltd   |
| 24 | Carillion Energy Services                                    |
| 25 | Ceramic Fuel Cells Limited                                   |
| 26 | Ceres Power Limited  |
| 27 | Chartered Institute of Housing                               |
| 28 | Chelsfield Solar Ltd   |
| 29 | Chesterfield Borough Council                                 |
| 30 | Church of England Diocese of London                          |
| 31 | Climate Friendly Bradford on Avon Community Interest Company |
| 32 | Combined Heat and Power Association                          |
| 33 | Community Energy Scotland                                    |
| 34 | Community Energy Warwickshire                                |
| 35 | Community Housing Cymru                                      |
| 36 | Comtech Green Energy   |

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| 37 | Consumer Focus                             |
| 38 | Cornwall Council                           |
| 39 | Cornwall Solar Panels                      |
| 40 | Crystal Windows and Doors Ltd              |
| 41 | CubeRoot-Energy Ltd                        |
| 42 | Devon Micro Power Generation               |
| 43 | Dorset County Council                      |
| 44 | Dulas Ltd                                  |
| 45 | E3 Foundation                              |
| 46 | Earth Solar Limited                        |
| 47 | East Green Energy Ltd                      |
| 48 | East Lindsey District Council              |
| 49 | Eco2 Solar Ltd                             |
| 50 | Ecocetera Limited                          |
| 51 | Ecoliving                                  |
| 52 | Ecotricity                                 |
| 53 | Ecoup Ltd                                  |
| 54 | Ecovision Systems Ltd                      |
| 55 | EDF Energy                                 |
| 56 | Edmundson Electrical                       |
| 57 | Electrical Contractors' Association        |
| 58 | Empower Community Management LLP           |
| 59 | Enact Energy                               |
| 60 | Energy Friend                              |
| 61 | Energy On The House                        |
| 62 | Energy Recycle                             |
| 63 | Engensa Ltd                                |
| 64 | Envirolink Solar PV Special Interest Group |
| 65 | EON UK                                     |
| 66 | Eos Solar                                  |
| 67 | Farsight GreenTec Ltd                      |
| 68 | First:utility                              |
| 69 | Freesource energy ltd                      |
| 70 | Friends of the Earth                       |
| 71 | Futurewise-renewables                      |
| 72 | Genelex Limited                            |
| 73 | Geo green power ltd                        |
| 74 | Good Energy                                |
| 75 | Green Light Energy Solutions               |
| 76 | H2ecO Limited                              |
| 77 | Haven Power                                |

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| 78  | Health Facilities Scotland (on behalf of NHS Scotland Boards) |
| 79  | Heatshine Ltd   |
| 80  | HomeSun   |
| 81  | Inazin  |
| 82  | iPower  |
| 83  | It Won't Cost The Earth Ltd                                   |
| 84  | JHS Solar Solutions   |
| 85  | Juwi Renewable Energies Limited                               |
| 86  | JV Electronics  |
| 87  | Leeds City Council  |
| 88  | Leeds Solar   |
| 89  | Leicestershire County Council                                 |
| 90  | Lightgen Ltd  |
| 91  | Link Solar Ltd  |
| 92  | Liverpool Chamber Of Commerce                                 |
| 93  | London Borough of Islington                                   |
| 94  | London Borough of Merton                                      |
| 95  | Longhurst Housing Group                                       |
| 96  | Low Carbon Chilterns Cooperative                              |
| 97  | Mack Construction   |
| 98  | Medoria Solar   |
| 99  | Micropower council  |
| 100 | Midori Solar & Electrical Solutions Ltd                       |
| 101 | Midsummer Energy  |
| 102 | Moolands Ltd T/A Renewable Energy Control                     |
| 103 | Morgan Lighting of Chorley                                    |
| 104 | Myriad CEG Limited  |
| 105 | NAPIT Group Ltd   |
| 106 | National Housing Federation                                   |
| 107 | Northumberland County Council                                 |
| 108 | Npower  |
| 109 | NRG Renewables  |
| 110 | Oxford City Council   |
| 111 | Oxfordshire County Council                                    |
| 112 | P.C.E Installations Ltd                                       |
| 113 | Payback Energy Ltd  |
| 114 | PETERBOROUGH CITY COUNCIL                                     |
| 115 | Photon Energy Ltd   |
| 116 | PLUG INTO THE SUN   |
| 117 | Powersun Ltd  |
| 118 | REA   |
| 119 | Redcar & Cleveland Borough                                    |

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|     | Council   |
| 120 | Redmile Energy  |
| 121 | Regen SW  |
| 122 | RenEnergy Ltd   |
| 123 | RES Group   |
| 124 | Retrofit for Housing                                  |
| 125 | Rexel Renewable Energy                                |
| 126 | RGV Engineering Limited                               |
| 127 | SAT Sun and Alternative Energy                        |
| 128 | SCHOTT UK Ltd   |
| 129 | Scottish Federation of Housing Associations Ltd       |
| 130 | Scottish renewables                                   |
| 131 | ScrewFast Foundations Limited                         |
| 132 | Sharp Solar   |
| 133 | SmartestEnergy Limited                                |
| 134 | Solar Energy Alliance Ltd                             |
| 135 | Solar Kingdom Ltd                                     |
| 136 | Solar Powered Services                                |
| 137 | Solar Renewable Energy Ltd                            |
| 138 | Solar Securities LTD                                  |
| 139 | Solar Technology International Ltd                    |
| 140 | Solar Trade Association                               |
| 141 | Solarcentury  |
| 142 | SolarfitPV  |
| 143 | Solarlec PV Solutions Ltd                             |
| 144 | SolarMac4   |
| 145 | SolarRae Ltd  |
| 146 | Solarsense UK Ltd                                     |
| 147 | SolarUK LTD   |
| 148 | Solway Renewable Energy Ltd                           |
| 149 | Somerset Solar Electric                               |
| 150 | Sourcesolar (UK) Ltd                                  |
| 151 | South Somerset District Council                       |
| 152 | Southampton City Council                              |
| 153 | Southern Solar Ltd                                    |
| 154 | Scottish and Southern Energy (SSE)                    |
| 155 | Stretton Climate Care                                 |
| 156 | Strutt and Parker                                     |
| 157 | Suntech Power International                           |
| 158 | Surrey County Council                                 |
| 159 | TDFM Solar Ltd  |
| 160 | Techfor Energy Ltd                                    |
| 161 | TectonicPV Limited                                    |
| 162 | The Anaerobic Digestion and Biogas Association (ADBA) |
| 163 | The City of Edinburgh Council -                       |

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|     | Services for Communities       |
| 164 | The Renewable Power Exchange   |
| 165 | The Riverside Group Ltd.       |
| 166 | The Solar Building Company Ltd |
| 167 | TM Services                    |
| 168 | Transition Town Letchworth     |
| 169 | Urban Solar                    |
| 170 | Use The Sun Ltd                |
| 171 | V P Designs                    |
| 172 | Wadsworth Jones Consulting     |

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|     | Ltd  |
| 173 | Warrington Borough Council                   |
| 174 | Welsh Government                             |
| 175 | West Lothian Council                         |
| 176 | West of England Local Enterprise Partnership |
| 177 | Wey Valley Solar Schools Energy Co-operative |
| 178 | Which? Ltd                                   |
| 179 | Williams Renewables                          |
| 180 | WWF-UK                                       |



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