FEED-IN-TARIFF SCHEME
OCTOBER 2007 – OCTOBER 2011

LESSONS FOR THE FUTURE

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EXECUTIVE SUMMARY

1. The Great Britain feed-in-tariffs (FITs) scheme is a financial incentive to drive investment in renewable electricity. Generators of renewable electricity are paid a fixed tariff over a number of years to make the up-front costs of installation worthwhile. The FITs scheme was launched in April 2010 and covered renewable installations up to 5MW with tariffs designed to deliver a known rate of return.

2. In 2011 there was an unforeseen rapid take up of the FITs scheme for solar PV installations. This led to a budget over-run which required accelerated action to control costs.

3. This situation and remedial action were damaging for the Department of Energy and Climate Change (DECC) and the Government's energy and climate change agenda. The budget allocation for the policy up to 2015 was committed by the end of 2011. The Department's action to control costs was challenged and led to a Judicial Review and defeat for the Government in the High Court and the Court of Appeal. In February 2012 the Government stated its intention to take the case to the Supreme Court.

4. In December 2011 I was asked by the Permanent Secretary of DECC to lead an exercise to establish what lessons for the future could be taken from the FITs policy development and implementation. The exercise was a broad review of the scheme rather than a detailed audit of any single aspect. It focussed on the areas where the Department could improve so as to avoid the problems associated with FITs being repeated.

5. The team found no evidence that a single individual, team or aspect of the scheme was at fault, rather a combination of circumstances, events and decisions. The FITs scheme is not unique. The same combination of factors could have been damaging for any given policy, albeit in different ways.

6. This report offers detailed recommendations in a number of areas which would put the Department on a much stronger footing to avoid similar problems in the future.

7. I am grateful for all the support and co-operation my team has received from the people in the Department and others outside. I should also record that, throughout the review, we have consistently been made aware of the dedication of those involved with FITs, often working under considerable pressure with limited resources.

8. The key recommendations are:

   i. Governance and accountability: The Department should have effective governance structures and processes which are clearly defined and communicated. Reporting lines and accountability should be clear and visible throughout the management chain. Responsibilities and accountabilities should be clearly defined between organisations where delivery partners are involved.

   ii. Resourcing and skills: The Department should assess and make available the resources (in terms of numbers and expertise) it needs to develop and implement its policies.

   iii. Commercial intelligence: Officials should engage with the market(s)/ industry(ies) relevant to their work; critically assess their input; and know where to seek further commercial/market intelligence if needed.

   iv. Project and programme management: Proportionate project and programme management (PPM) discipline should be embedded into policy development and implementation.

   v. Evidence and analysis: Advice on policy development and implementation should be based on robust evidence and analysis. Analysis should be developed and challenged through multi-disciplinary working and stress-tested with input from stakeholders where appropriate. Assumptions should be stress-tested and monitored. The Department should be willing to recognise, and be open about, uncertainty.

   vi. Working effectively under time pressure: When the Department is asked to design or implement policy rapidly there should be constructive but frank conversations about the risks of doing so. Robust project and programme management including resource allocation should be given increased emphasis under pressure.

   vii. Financial control and value for money: Across the Department there should be a clear understanding of the cost implications of policies. There should also be robust budget management of levies. Cost benefit analysis should be comprehensive (for example stress-testing non-monetised benefits). The net present value of policies should be clear and be succinctly justified in Impact Assessments.

   viii. Monitoring and evaluation: There should be effective monitoring and evaluation of the impact, outcomes, costs and benefits of policies.

   ix. Cultural considerations: The Department should foster a culture which encourages challenge at all levels and embeds project and programme management in all policy fields.

   x. Machinery of government changes: The impact on policies of significant machinery of Government changes should not be underestimated and Whitehall should ensure that resources are in place from the outset.

INTRODUCTION

9. In December 2011 I was asked by the Permanent Secretary of the Department of Energy and Climate Change (DECC) to lead an exercise to establish what lessons for the future could be taken from the feed-in-tariffs (FITs) policy development and implementation.

10. In 2011 there was an unforeseen rapid take up of the FITs scheme for solar PV installations. This led to a budget over-run which required accelerated action to control costs. It is not exceptional for the result of policies to diverge from projections or for the Government to review a policy during implementation. However, the implications of the exponential take up of the FITs scheme have been serious for DECC; for its Ministers and officials; and for the credibility of the Government's wider work on energy and climate change.

11. DECC Ministers and senior officials recognised the need to learn lessons from FITs to protect against similar unintended consequences of Departmental policies in future.

12. This exercise has covered policy development and implementation from October 2007 to October 2011. More recent events serve to underline the seriousness of the impact – notably the defeat for the Government in the High Court and the Court of Appeal on the steps to reduce costs.

Terms of reference:

13. The terms of reference for the exercise were to cover:
    - Initial policy development and legislation
    - Implementation including programme, risk and budget management and change management
    - Use of evidence and analysis including market information
    - Skills and capability
    - Governance and systems of control

14. The exercise has been a review of all aspects of the scheme rather than a detailed audit of any single aspect.

Team and methodology:

15. I was supported by an internal auditor from the Department for Business, Innovation and Skills (BIS); a review secretary (a DECC policy official who was not involved in the FITs policy); and a personal assistant.

16. The team undertook desk research based on papers provided by the Permanent Secretary's office, policy and finance teams, and further papers referred to in

interviews or secured by the team in the course of research. The team interviewed: DECC Ministers; the Permanent Secretary ; Directors General; Directors involved with the scheme at all stages; key FITs policy officials from early development to current team; finance officials; economists; statisticians; the Treasury; Ofgem EServe; Gemserv; Pcubed (interim Programme Management Office for the FITs team); and officials involved with the spending review (2010).

17. The team and I are very grateful for the input and cooperation of all those who contributed to the exercise from across and outside the Department. We are also very grateful to officials who supported our work on technical aspects of the review.

THE FITS STORY – WHAT IS FITS AND WHAT HAPPENED?

18. The Great Britain feed-in-tariffs (FITs) scheme is a financial incentive to drive investment in renewable electricity. Those who generate electricity, for example through installing solar panels or wind turbines, are paid a tariff to provide a known rate of return over a number of years for all the electricity they generate (including that which they use) and an 'export' tariff (for electricity they do not use that is fed into the national grid).

19. The 2008 Energy Act gave enabling powers to create a FITs scheme in Great Britain. This had cross party support. The scheme focussed on small scale renewable energy up to 5MW. The Renewables Obligation was available to support the larger scale generation (such as onshore and offshore windfarms) by experienced market players.

20. The Energy Bill started before the creation of DECC, led by the then Department for Business Enterprise and Regulatory Reform (BERR). DECC was created in October 2008 and DECC Ministers finalised the Bill's passage through Parliament. The Bill was given Royal Assent in November 2008.

21. The Act specified:
    a) that the scheme would include generation up to 5MW; and,
    b) that modifications to the scheme once established would be subject to consultation and Parliamentary approval.
    In addition, the Secretary of State made a commitment in the House of Commons to launch the scheme by April 2010.

22. The details of the scheme, including the tariff levels were agreed, through a process of policy development and consultation during 2009. This was informed by:
    - the constraints already set out by Parliament;
    - in-house policy development which included some consideration of schemes that had been running in other countries;
    - economic modelling which was a combination of in-house work and consultancy;
    - considerable interest from industry; and
    - growing cross party support for sufficiently high tariffs to ensure widespread deployment.

23. The policy team in DECC during the development of FITs policy, averaged fewer than three staff working under great pressure. The policy team was under similar pressure through the implementation phase, although resourcing did improve towards the end of 2011.

24. The FITs scheme was set up in the early days of DECC, before the establishment of the business case, project management and approval disciplines that were brought in from 2010. The FITs policy was first presented to the Department's Approvals Committee in August 2011 and first went through an external (OGC Gateway) review later that Autumn.

25. In the Autumn of 2009 Ofgem was asked to undertake a feasibility study on managing the operation of the scheme. DECC agreed to proceed with Ofgem as the delivery partner on the basis of the approach proposed in that study.

26. The FITs scheme was launched in April 2010. To secure investment, tariffs were set to offer a guaranteed rate of return over 25 years for solar PV. (The lifetime varies with technology). The tariff for domestic scale solar PV (less than 4kw) was set at 41.3p/kWh, broadly in line with other countries at the time, and to reflect the costs and returns for small scale generators. Returns were tax-free and index-linked. On the projection that costs to installers and generators would decline each year, annual 'degression' (reduction in tariffs) was built in so that later installers (who would incur lower costs) would receive a lower tariff. In response to input from industry a 'degression holiday' was agreed which delayed degression until 2013.

27. The published Impact Assessment said that the policy had a negative net present value of £8.2bn over 20 years (i.e. a cost to the economy of £8.2bn over that period). This was justified on the basis of non-monetised benefits including greater consumer engagement; diversifying the energy mix; and potential reductions in technology costs as a result of roll-out. The policy was to be funded from energy bills and was not subject to public expenditure control at the time.

28. Degression rates were initially set annually to 2020, based on information at the time. The Department stated that regular reviews would be held to allow for adjustments. The intention was that these would be in line with the existing Renewables Obligation reviews but with flexibility to bring them forward if necessary.

29. Ofgem accredits the larger scale installations between 50kw and 5MW. It also maintains the Central FIT Register for all installations.

30. For micro-scale generation up to 50kw the Department agreed that the accreditation process would be through the (already-established) Microgeneration Certification Scheme (MCS), run by Gemserv (formerly MRA). Those accredited through the MCS are able, but not obliged, to register with the Central FIT register to receive the FIT tariff.

31. For the early part of the scheme uptake of solar PV more or less tracked modelled projections. The Spending Review announcement in Autumn 2010 brought the FITs scheme within the newly introduced levy control framework, which meant that the costs of the scheme would be treated as Departmental expenditure and required a 10 per cent cut in projected spend by the end of 2015.

32. Around the same time, the Department obtained evidence that the potential for take up of larger scale solar FITs (for example solar farms) significantly exceeded the projections. A trigger mechanism for budget control was considered by the Department but rejected following discussion with stakeholders. The Department instead brought forward the first comprehensive review to February 2011 but gave priority, as a first stage, to a ‘fast track’ review of the larger scale installations. This resulted in a reduction of the tariffs for solar PV over 50kw with effect from August 2011. Measures also had to be introduced to prevent existing installations being extended to subvert this control.

33. In the late summer of 2011, during later stages of the comprehensive review, the Department obtained evidence of further pressure on the budget as a result of rapid take up of FITs in relation to the domestic scale solar PV. The costs of solar PV had fallen dramatically and rates of return were well above what was intended when the original tariff level was set. On examination, it emerged that the management information that DECC and Ofgem were monitoring lagged deployment and a budget over-run was inevitable.

34. During the passage of the Bill through Parliament, in order to offer security for investors, legislation was framed to ensure that changes required consultation and parliamentary approval. The comprehensive review Phase 1 consultation on solar PV was launched on 31 October 2011. The Department consulted on steps to reduce tariffs more quickly and steeply than most stakeholders had expected – moving from 43p/kwh to 21p/kwh for domestic installations (under 4kw) for example. Deployment rose even faster in the run up to the proposed cut-off date (12 December 2011 - the ‘reference date’) for the original tariff and fell back subsequently.

35. There was widespread public and parliamentary complaint, partly in relation to the use of a reference date which fell within the consultation period. The implications of the tariff changes were criticised by the Department’s Parliamentary Select Committee in their December 2011 report.

36. At the time of writing (20 March 2012) the Department’s action to control costs had been challenged and led to a Judicial Review and defeat for the Government in the High Court and the Court of Appeal. The Government had stated its intention to take the case to the Supreme Court.

37. As a result of the explosion in solar PV, committed expenditure on FITs by the end of 2011 exceeded the allocation for the four year Spending Review to 2015. This overspend will be have to be met by underspends on other levy programmes.

FINDINGS

38. This exercise has focussed on the areas where the Department can improve its procedures to ensure that the problems associated with FITs are not repeated. I should like to record, however, that throughout the review we have been consistently made aware of the dedication of those involved with FITs often working under considerable pressure and with limited resources.

39. Two main aspects of FITs caused concern: firstly how value for money was addressed in relation to the scheme overall from its inception to more recent debates; and secondly, the rapid take-up of FITs in relation to solar PV which was unforeseen and not detected until it was at crisis point. There are a number of common themes between these two aspects in terms of lessons for the future and this report addresses the two together.

40. The review team found no evidence that a single individual or team or aspect of the scheme was at fault, rather a combination of circumstances, events and decisions. The FITs scheme is not unique. The same combination of factors could have been damaging for any given policy, albeit in different ways. The same risks could apply to DECC's wider portfolio.

41. This report offers detailed recommendations in a number of areas which would put the Department on a much stronger footing to avoid similar problems in the future.

42. Many of the recommendations seem obvious. I recognise that some of the research we have undertaken refers to events a number of years ago. The Department has already addressed some of the lessons identified, for example, many interviewees cited the Approvals Committee as an improvement that may have mitigated some of the consequences. I have not edited the lessons to reflect such recent developments in the Department's processes.

43. Many of the lessons are about culture and embedding process change. I would suggest some candid internal discussion as to how far for example the Approvals Committee, and other processes, have solved the issues raised in the recommendations.

LESSONS FOR THE FUTURE – RECOMMENDATIONS

i. **<u>Governance and accountability:</u> The Department should have effective governance structures and processes which are clearly defined and communicated. Reporting lines and accountability should be clear and visible throughout the management chain. Responsibilities and accountabilities should be clearly defined between organisations where delivery partners are involved.**

1. Governance processes, in particular accountability within the reporting line, should be clearly defined and observed at all levels of the organisation.

2. Senior officials including Directors General and Senior Responsible Officers (SROs) should remain accountable for delegated work and budgets, knowing when to get involved. It should be clear to all officials when and how to escalate issues including concerns over questionable value for money.

3. Advice on policy development and implementation should reflect a multi-disciplinary consensus (including but not limited to input from finance officials and economists). Where consensus is not reached the different arguments should be set out clearly in a single piece of advice written by the SRO.

4. The Department should have documented agreements with those commissioned to deliver on its behalf, with responsibilities clearly stated and communicated.

5. There should be clear communication across the Department to ensure critical information is shared between teams.

ii. **<u>Resourcing and skills:</u> The Department should assess and make available the resources (in terms of numbers and expertise) it needs to develop and implement its policies.**

6. The Department should ensure its resource and work programme are compatible.

7. The Department should ensure: it has the right combination of skills across the Department and within teams; and individuals have the right skill set for the work they are undertaking.

8. The Department should ensure that it resources (not exclusively but in particular) the implementation phase of policy work effectively. Managers should plan for resource needs. Teams should have the right skills recognising that policy development skills differ from policy implementation skills (this does not preclude the same people doing both).

9. Given that policy requires input from many parties (including specialists within the Department and delivery partners), the role, reporting structure and resource needs of all parties should be identified; tested; and clear.

10. The Department should ensure teams are sufficiently resourced, for example to allow officials to engage with industry or other stakeholders; or to stress–test analysis and feasibility studies produced by third parties.

11. Officials should be empowered to challenge when more resource is needed in a particular area. Lack of resource may be a widespread issue, nevertheless efforts should be made to flag particular risks.

12. DECC accommodation, equipment and facilities should be conducive to effective working; practical problems (over room bookings or places for private discussions) should be the exception and not the rule.

iii. <u>Commercial intelligence:</u> Officials should engage with the market(s)/ industry(ies) relevant to their work; critically assess their input; and know where to seek further commercial/market intelligence if needed.

13. The Department should be equipped to evaluate the input from industry to policy making and implementation.

14. Private sector ingenuity should never be underestimated for example to overcome supply constraints quickly, to reduce hassle costs, or to develop innovative physical and financial products.

15. The Department should find ways to provide sufficient investor certainty to secure the necessary investment without putting programmes and budgets at risk.

16. The Department should use market intelligence to help stress-test for unintended consequences; and for movement in costs and factors that influence cost.

17. The Department should be an intelligent customer in procuring external input (for example modelling or other consultancy work).

18. Officials should be credited for developing effective market intelligence in their area. They should know how to engage the Commercial Team if necessary but should not expect to outsource their industry intelligence work to a central function.

iv. <u>Project and programme management:</u> Proportionate project and programme management (PPM) discipline should be embedded into policy development and implementation.

19. Policies should be developed and implemented as projects/programmes with proportionate PPM processes clearly understood and embedded (for example the active management of a risk register and stakeholder plan).

20. Policy development and implementation should always comply with Departmental processes as set out in Delivery Unit guidance. This includes the Approvals Committee processes for major projects but also establishing good practice and appropriate governance locally.

21. The Department should review established processes to ensure that the first challenge happens before a lot of work has been undertaken on options.

22. Policies should be stress-tested at a senior level at the early stages of policy development as well as at key decision points.

23. The Department should develop a more sophisticated approach to risk management; for example including a clear assessment of the amount of risk it is willing to tolerate (as a department and for each policy); and how to ensure the low-probability high-impact risks get the attention they warrant.

24. Objectives for all policies should be clearly defined and communicated. This is particularly important where policies could be interpreted as being at odds with established strategy.

v. <u>Evidence and analysis:</u> Advice on policy development and implementation should be based on robust evidence and analysis. Analysis should be developed and challenged through multi-disciplinary working and stress-tested with input from stakeholders where appropriate. Assumptions should be stress-tested and monitored. The Department should be willing to recognise, and be open about, uncertainty.

25. Advice to senior officials and Ministers should be based on comprehensive analysis; including cost/benefit. Write rounds and other external statements should be evidence based. (See also 34 below).

26. The Department should find effective and timely ways of engaging Ministers with the analysis and evidence.

27. Key assumptions (particularly those used in models) on which policy decisions are made and budgets are set must be: stress-tested at the outset; well understood; documented; well communicated; and monitored during development and implementation stages.

28. Multi-disciplinary approaches, including commercial expertise, financial economics and customer insight, are needed to ensure investment decisions and supply side response are well understood and better reflected in models

29. Uncertainty analysis, including sensitivity and 'Monte Carlo' analysis and best/worst case scenarios, should be used to inform policy design, rather than over-reliance on a central case.

30. Policies should have independent challenge from an early stage of development and throughout implementation; from within DECC or externally as appropriate.

31. The Department should seek international comparisons – and take the time to fully interpret and apply learning.

vi. <u>Working effectively under time pressure:</u> When the Department is asked to design or implement policy rapidly there should be constructive but frank conversations about the risks of doing so. Robust project and programme management including resource allocation should be given increased emphasis under pressure.

32. Consideration should be given to securing resource for preparatory work on potential significant changes to policy, or new policies, that might be put in place at speed (for example through likely amendments during the passage of a Bill). This work should always be proportionate.

33. The Department should test any policy changes (for example during the passage of a Bill) to assess impact on the assumptions in the original analysis.

34. Rapidly developed advice when requested at any stage should make clear where analysis is incomplete; be open about the time it will take to secure the full analysis; and be clear about the risks (including 'unknown unknowns') of making decisions in the absence of the full analysis.

vii. <u>Financial control and value for money</u>: Across the Department there should be a clear understanding of the cost implications of policies. There

should also be robust budget management of levies. Cost benefit analysis should be comprehensive (for example stress-testing non-monetised benefits). The net present value of policies should be clear and be succinctly justified in Impact Assessments.

35. The Department should know and take into account the total cost of its policies to the economy, including where programmes are levies.

36. Impact Assessments should never be presented without clearly quantified costs and benefits.

37. Non-monetised benefits should be scrutinised, monitored and evaluated.

38. Impact Assessments should make clear the costs and benefits and the net present value of a policy, for example by moving it to the first page (which is signed), and including a summary paragraph. If there is a significant negative net present value the impact assessment should be explicit on why it is justified.

39. The Senior Responsible Officer should be responsible for value for money and should take responsibility for the impact assessment and sign it. It should be clear to all officials when and how to escalate concerns over value for money.

40. The Impact Assessment should identify clearly the key assumptions on which the policy is based, and include a sensitivity analysis of those assumptions.

41. The Department should consider introducing a summary version of an Impact Assessment to ensure that the headline data is available during the early stages of a project.

42. Where there is a cost to the economy of a policy (including levies), senior managers should always delegate a (real or notional) budget and policy teams should actively manage that budget. (See also 45 below).

43. DECC should ensure that policy officials understand the cost to the economy of their policy.

viii. <u>Monitoring and evaluation:</u> There should be effective monitoring and evaluation of the impact, outcomes, costs and benefits of policies.

44. The policy team should establish robust monitoring and evaluation processes with key performance indicators; including a requirement to include market

intelligence and lead indicators to predict and to track the market response to policy.

45. Senior officials delegating the budget should ensure that an annual spend profile is set and financial performance monitored on a monthly basis. Policy teams must manage a (real or notional) budget with trigger points to monitor performance against it, including for policies based on levies.

46. As part of any agreement with delivery partners, there should be a requirement for partners to clearly document and communicate to the Senior Responsible Officer any significant risks to the policy that they perceive or identify.

47. The Department should build into legislation mechanisms which allow a flexible response to the implementation of the policy if it turns out to be significantly different from what was expected.

ix. **<u>Cultural considerations:</u> The Department should foster a culture which encourages challenge at all levels and embeds project and programme management in all policy fields.**

48. The Department should be (and be seen to be) a place where officials can challenge senior officials and Ministers, with appropriate mechanisms for having and resolving difficult discussions early, openly and without fear or favour.

49. Officials should feel empowered to offer timely, informal and constructive challenge to colleagues across the Department; and should be open to receiving it.

50. The Department should ensure that implementation jobs are given equal value to policy development jobs.

51. The Department needs a consistent understanding of what project and programme management (PPM) means and the risks of not using it. Officials should expect to be rewarded for getting PPM right.

52. The Approvals Committee should be seen as a constructive and welcome challenge.

x. **<u>Machinery of government changes:</u> The impact on policies of significant machinery of Government changes should not be underestimated and Whitehall should ensure that resources are in place from the outset.**

53. Departments that are created or significantly changed as a result of machinery of government changes must be given an effective, complete interim senior management team.

54. Where a Department is new it should be set up in a way that ensures that the proper systems and procedures are implemented from the outset.

Caroline Mawhood
20 March 2012