



Department for  
Business, Energy  
& Industrial Strategy

# MANAGEMENT OF THE LEVY CONTROL FRAMEWORK: LESSONS LEARNED REPORT (2015)

November 2016

## **Management of the Levy Control Framework: Lessons Learned Report (2015)**

### **Foreword**

In April of this year the Department of Energy and Climate Change discovered that the projected spend on its Levy Control Framework, designed to cap the additional cost of subsidising renewable energy for consumers, was forecast to be a total of about £1bn over-budget in 2020/21, out of a budget of £7.6bn.

In May, in my role as a Non-Executive Director on the Departmental Board I was asked to carry out a "lessons learned" exercise into this projected over-spend. This is the resulting report.

In carrying out that exercise I was very clear as to what it was I was trying to do, but equally what I was not doing. This is not a detailed examination of what decisions were made by whom and when, or whether, with the dubious benefit of hindsight, those decisions could and should have been different at any particular point. Rather it is an attempt to ask whether there are systemic issues which led the department to under-estimate the individual and collective cost pressures involved and to fail to recognise the emerging compound risk.

In asking those questions I have been all too aware both of the huge complexity of the issues involved and of my own lack of expertise in this area, but I have come to a very firm view about the underlying problem. That is a failure to match the inevitable uncertainties involved in making policy in such a complex environment with an adequate process of continuous assessment of the original assumptions made to form policy. That represents, to varying degrees, weaknesses in the original governance arrangements that were not rectified over time, a lack of transparency and a tendency to group think.

That said I do believe the department has made, and is genuinely committed to making, real progress on each of those subjects. This report, therefore, needs to be seen, and used, against that context. It is meant as a prompt for continuing internal and external debate, not an indictment of all that has happened before or a doctrinaire prescription for the future. I hope it is taken in that spirit.

In reaching my assessment I have been helped by the candour and open-minded approach of all I have talked to.

Needless to say, of course, the judgments are mine, and mine alone.

Tom Kelly  
Non-Executive Director  
Department of Energy and Climate Change

## **The Issue**

In November 2012 the Quad agreed the terms of the Low Carbon Levy Control Framework (LCF), the mechanism to agree the limit on how much consumers would have to pay towards the cost of subsidising renewable energy generation. That limit was set for each year to 2020/2021, rising to £7.6bn in 2021. It was also agreed that there would be a 20% buffer each year which DECC could avail of to take account of temporary factors that increase spend, such as fluctuations in wholesale prices.

At the time the anticipated breakdown of expenditure in 2020/2021 (£bn 2012 prices) by scheme was:

<b>Renewables Obligation</b>	<b>Feed-in-Tariffs</b>	<b>Contracts For Difference</b>	<b>Total</b>
<b>3.48</b>	<b>1.21</b>	<b>2.87</b>	<b>7.57</b>

In April of this year a revised breakdown showed central scenario anticipated expenditure to be:

<b>Renewables Obligation</b>	<b>Feed-in-Tariffs</b>	<b>Contracts For Difference</b>	<b>Total</b>
<b>4.39</b>	<b>1.60</b>	<b>2.64</b>	<b>8.63</b>

This represents an increase in projected costs for 2020/21 from November 2012 to April 2015 of 26% for RO; 32% for FIT, and a decrease of 8% for CfD. Overall LCF projected spend has increased by 14%.

Additionally, these figures do not take into account the planned £600m “buffer zone” with projected spend planned to £7bn rather than £7.6bn, to allow for contingency for wholesale prices, load factors and cost uncertainty. This remained at £500m in January 2015.

The result of the increased April 2015 forecast is that the LCF is projected to breach the limit agreed by the Quad in each year and in 2020/21 the scheme is projected to be £1bn over-budget. This overspend is due, largely, to three factors:

- A fundamental fall in the price of wholesale electricity following the drop in the global price of fossil fuels which began last summer.
- A surge in demand for both the RO and FIT.
- Technological advances leading to a step change in the load factors for both existing and new offshore wind turbines enabling those generators to be eligible to collect more financial support, a technical gain that has worked to the advantage of the producers, without that advantage being passed through to consumers.

Whilst the drop in the wholesale electricity price means that consumers, on April 2015 assumptions, are likely to see a reduction in their bills of £147 per annum (2014 prices) by 2020/21, they will also have to pay £12 extra towards the cost of supporting renewables. Against that, again under present assumptions, the amount of our energy sourced from renewables will be 35%, three percent more than the original forecast.

At a more strategic level, however, another consequence will be that, because the current LCF limits have been breached, any new low carbon initiatives will be impacted before 2021. This is likely to have a particular effect on the Contracts for Difference scheme, seen as the long-term support mechanism for renewable energy in this country.

The problems associated with demand led schemes such as RO and FIT was appreciated as early as the autumn of 2013, with action taken aimed at reducing spending from the end of 2013 onwards; that of the shift in wholesale prices began to be discussed in the autumn of 2014, although the decision to move away from the central set of assumptions was not taken until April 2015; and the emergence of the unexpected sharp rise in load factors did not come on the agenda until the start of that year.

With the benefit of hindsight it is possible to see how and when each of those issues, and the compound risk they posed, might have been appreciated earlier, but the more interesting, and useful, question is what factors mitigated against that, and what lessons can be learnt as a result. It is on that that the rest of this report focuses.

## The Lessons

The Levy Control Framework is an attempt to achieve a strategic national objective, but to do so within a defined and limited cost to the consumer.

The objective was to achieve a re-ordering of the UK electricity mix, with a forecast of 32% coming from renewables by 2020, to make this country more sustainable.

The limit in the cost to the consumer was agreed in November 2012 as no more than £7.6bn with a temporary buffer of 20% for movements in the wholesale price.

For the reasons set out in pages 2-3 of this report, the projected spend now predicts an overspend for each year from now to 2020 rising to over £1bn in 2020/21, although it remains within the agreed buffer. Given the uncertainties and policy choices between now and 2020, it is not inevitable that this overspend will materialise, but I do not feel this detracts from the lessons described.

That discrepancy between the planned and the now projected cost is the reason for this report: why did it happen and what are the lessons to be drawn from it, not only for the operation of the LCF, but for DECC as a whole.

In one sense it is easy to state what went wrong. The projected overspend is due to the combination of three disparate factors set out earlier:

- The impact of the unexpected drop in the wholesale price of electricity resulting from the global fall in fossil fuel prices;
- A larger than anticipated surge in demand for both the RO and FIT schemes; and
- A rapid and substantial increase in the load factors raising both the output of offshore wind turbines and the guaranteed financial support they receive.

Underneath the detail, however, of what went wrong with each individual element is a more fundamental problem and set of issues which, I believe, the department needs to reflect on if it is to address the wider concerns the experience of LCF raises.

At the core of these is a tension which goes to the heart of the debate around the future of infrastructure in this country: how do we, on the one hand, give investors sufficient clarity and certainty to back long-term strategic projects such as supported under the LCF, whilst, on the other, retaining sufficient flexibility to respond to changes in assumptions about both the market and the pace of technological innovation in order to protect the interests of the consumer.

In short, how do we simultaneously incentivise investors to help deliver a strategic goal, whilst making sure consumers only pay a fair and affordable price. That is the tension at the heart of the LCF experience.

The budget resulting from the November 2012 Quad agreement referred to on page 2 of this report was an attempt to strike a balance between these two often competing demands. Whether it was the right balance is beyond the remit of this report, but what is clear is that the balance has not been achieved – in that the

budget is forecast to overspend - and that was not foreseen or responded to in a fully coordinated manner until relatively late in the day. It should also be noted that the time period concerned was one of delivering a huge delivery challenge in Electricity Market Reform, an incredibly complex task that successfully delivered the CFD mechanism, as well as developing reforms to both the FIT and RO, that included cost control measures.

At least in broad terms, the main risks were identified at a reasonably early stage. They were, again in broad terms: a drop in wholesale prices; a surge in demand for RO and FITs; significantly higher load factors; and the legal costs of any attempt to change schemes. The match is not precise, but those elements are at the heart of the reasons behind the LCF projected over-spend when eventually revealed in April 2015. So the simple question is: why the time lag? Given these were, correctly, identified in September '13 as critical issues why wasn't the discrepancy between the assumptions made and how they were playing out spotted sooner, both as individual elements and collectively as they increased the compound risk of the scheme as a whole?

The root cause, in my view, is the relative weight the department places on the assumptions that underpin its central forecasts - and on those forecasts in shaping both policy and the legal frameworks that give that policy practical expression.

In contrast, the process of monitoring and responding to how those assumptions play out in reality seems to lack sufficient focus. There seems to be an incomplete feedback loop between the theory of policy formulation and the monitoring of reality. The result is a failure to identify developing risk in both individual elements of a complex programme such as LCF and particularly in the accumulation of compound risk in the programme as a whole.

This mismatch between the weight given to certainty around forecasts and an insufficient monitoring of, and response to, developing reality is due to a number of factors each of which is understandable on its own, but which together have a ratcheting effect which makes it likely that problems will arise.

In my view the elements that make up that ratcheting effect are:

- Assumptions around forecasts are made by analysts, technology and commercial experts at a relatively junior level and the dynamics underlying those assumptions are not sufficiently understood and internalised at a senior level by those accountable for the oversight of the programme as a whole. The result is that they are not sufficiently sensitised either to the developing risk in each individual area, or the compound risk that may be accumulating. Furthermore, intelligence received at senior levels is not always passed to those making assumptions, meaning assumptions are not always based on best departmental evidence.
- In order to give certainty to investors and reduce the capital costs of projects the legal framework as expressed in contracts leaves little room to adjust in the light of changing circumstances without the real possibility of legal challenge, which can also act as a disincentive to gathering more information, which would be disclosable.

- That is reinforced by what is perceived as a political unwillingness to withdraw popular schemes even when, as has happened with RO and FIT, a surge in demand is threatening the overall budget.
- That is further re-enforced by what I detect, at least in the past, is an unwillingness to focus on the inevitable uncertainty around policy making in this area. That unwillingness is driven in part by a fear that to do so would be to undermine other policy objectives of the department.
- It is also partly driven by a view that success is judged by delivery of each section's individual goals. That appears to have been heightened in the case of LCF by historical concerns of under-delivery; a belief that there was a danger that the department would fail to achieve the 32% target and that would be the subject of political criticism. On the positive side there was also the desire to put in place the critical mass of projects that would allow a self-sustaining renewable industry to take root. This resulted in an approach which focused on achieving short-term goals rather than spotting strategic step-changes in either the market or technology. The assumptions on load factors, for instance, were based on a 2011 assessment. This was further consulted on and assessed, but not changed, in autumn 2013 but then not re-assessed until early 2015. That was partly because the focus was on the successful delivery of EMR under significant time pressure and partly because there was a view that constant re-assessments would make implementation of the scheme more difficult.
- That is heightened by a tendency to rely on the same group of external consultants which, whilst appreciating the field is narrow, carries a risk of mutually reinforcing group think.
- This also leads to a tendency not to ask the essential "what if" questions and, whilst high, medium and low forecasts are set out, there is an inclination to focus on the central assumption. It took several months to recognise that the shift in wholesale electricity prices as a result of the dropping fossil fuel price wasn't just a temporary blip, and the implications of that. The department was not alone in that, either in this country or elsewhere.
- Finally, the department did not foresee the pace of technical change in the renewable sector and the impact that would have on the cumulative cost to the consumer. Of the three factors that have led to the projected over-spend - the drop in wholesale prices, the surge in demand for RO and FIT, and the rise in load factors for wind turbines and, therefore, the cost of subsidising them - it is the inability to detect, predict and respond earlier to the latter that is the most puzzling and raises questions of whether there was sufficient focus on commercial and industry developments.

Each of those factors on their own contributed to the problem. Collectively, they suggest the department, in an admittedly horrendously complex and volatile environment, focuses too narrowly on central assumptions and forecasts - and then does not place enough significance on the need to continuously monitor the developing reality and retain the flexibility and agility to respond accordingly.

It is that perception that has driven my recommendations.

There's was one final factor I took into account. In March 2012 Caroline Mawhood produced a lessons learned report into an in-year overspend on Solar PV. Much of her analysis and recommendations, which I attach, will seem familiar. Those I interviewed for this report were familiar with its contents, but the impression I gained was that it was not embedded or internalised outside LCF policy, and particularly FITs, and, therefore, had limited impact in the wider department. There was no detailed implementation plan, or formal review process, which is unfortunate.

It is in that light that I make my recommendations.

### **Recommendations**

1. That the department be much more explicit internally and externally about the tension between the need to give investors certainty and the volatile market and technology assumptions on which policy is inevitably based and assess the balance between these objectives as low carbon sectors mature.
2. To consider whether one person should be responsible for controlling the LCF to ensure that all aspects are considered as a whole - including continuously monitoring and improving the assumptions on which the policy is based, the budget and progress against the strategic goal. Each of those elements should be carried out across the project as a whole rather than belonging to the individual schemes and each element should have the same right and responsibility to have their voice heard.
3. That the responsible person produces a quarterly report to the Secretary of State, Permanent Secretary and the department's Executive Committee, which highlights changes in the rate of spend, demand, technological developments and progress against the target and any pressures which result from those changes. The report should also explicitly set out options to deal with those pressures, and the response of ministers should be explicitly recorded.
4. That the quarterly report should be the result of monthly review meetings at which all aspects of the programme and the budget are represented including those responsible for the original forecasts as well as technical, commercial, and scientific experts, who consistently look to apply changes in assumptions as soon as possible. It should be appropriately resourced and the responsibility of all those who attend the meeting to understand the assumptions behind the original forecasts and to identify any discrepancy emerging in their specialist area. Assumptions should be logged in an accessible manner, ranked by materiality. This log should be reviewed formally at each meeting.
5. That the department regularly publishes the assumptions on which it makes its forecasts and on which policy is based - and the source of those assumptions - so as to encourage not just transparency, but also internal and external challenge - and that it widens the pool of external advice it draws on.
6. That a further investigation be carried out into whether it is possible to introduce a change control mechanism into the legal framework of complex projects such as LCF without adding disproportionate capital cost to create a



better understanding of the balance of risk involved. In particular it should re-consider whether it is possible to devise a mechanism which would incentivise the industry to innovate whilst also returning a share of the benefits of that innovation to consumers who have, in effect, under-written it. This is now being done through competition under the CFD, and it should also be evaluated whether this fully reflects the benefits gained by the industry.

7. That the department holds regular scenario planning sessions involving Ministers to work through the implications of any changes to the underlying assumptions on which policy is currently based, and in particular the impact on compound risk. The aim should be to understand better the changing dynamics within the programme and the possible trade-offs that may be necessary - and to get a clear sense of Minister's priorities in different circumstances. As part of that process, the Department should ensure that analysts have the necessary resource and time to think long-term, rather than be constantly pushed by short-term pressures. The Department should also ensure that it has the requisite analytical, commercial, technical and strategic skills to do scenario planning.
8. That policies such as LCF be explicitly placed in the context of the overall aims and goals of the department so as the industry and other stakeholders can get a clear sense of direction.
9. That the findings of this report and 2012 Caroline Mawhood report be reviewed and incorporated in the wider change programme already under way in the department and that a clear implementation plan be produced and presented to the Department's Audit and Risk Committee.

## **Attachment**

### **Lessons Learned Report - Feed In Tariff Scheme – Lessons for the Future, March 2012<sup>1</sup>**

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<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48487/6124-feedin-tariffs-lessons-for-the-future-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48487/6124-feedin-tariffs-lessons-for-the-future-report.pdf)