



Annex A: Developing the Modelling and Analysis for the Draft Delivery Plan

Providing Ministers with evidence to inform their decisions

July 2013

1. The System Operator (National Grid), in its role as the delivery body for Electricity Market Reform (EMR), was appointed to produce analysis and evidence for the Government to inform decisions on Contracts for Difference (CfD) strike prices for renewables and the Capacity Market reliability standard.
2. These policy proposals are set out in the draft Delivery Plan for consultation. In reaching these draft decisions Ministers have been informed by analysis from the System Operator as well as from a range of other sources.
3. The Government commissioned the System Operator in November 2012 to undertake the analysis for the Delivery Plan. Government also set up an independent Panel of Technical Experts to scrutinise the analysis from the System Operator.
4. The process for producing the analysis and feeding this into decision making can be divided into three stages (as shown below).

Figure 1: Process for producing the first EMR delivery plan

Stage	1: Evidence gathering and commissioning	2: Development of analysis	3: Decision-making and publication
Timings	May – December 2012	January 2013 – Spring 2013	Spring 2013 – December 2013
What's included	<ul style="list-style-type: none"> • Capability building by the System Operator • Data sharing between Government and the System Operator • Call for evidence by the System Operator • Commission from Government to the System Operator 	<ul style="list-style-type: none"> • Development of analysis; assumptions, models and scenarios • Scrutiny by the Panel of Technical Experts • Ongoing consultation on CfDs with the Devolved Administrations • Reporting by the System Operator and Panel of Technical Experts to Government 	<ul style="list-style-type: none"> • Ongoing analytical work (iterations and verification) and scrutiny by the Panel of Technical Experts • Structured consultation on CfDs with the Devolved Administrations • Public consultation on the draft delivery plan by Government (<i>mid 2013</i>) • Publication of final delivery plan by Government (<i>end 2013</i>)

5. **In the first stage (May-December 2012) the System Operator gathered evidence on generation costs through a call for evidence, and the Government published its commission to the System Operator.**

- a. In November 2012, the Government published its Commission to the System Operator, in its role as the EMR delivery body, to carry out analysis for the first EMR delivery plan¹.
 - b. The Commission set out clearly the required analysis to inform the draft Delivery Plan and the process that the System Operator should follow to produce it. It also set out how the System Operator should work with the Government and others, including the Panel of Technical Experts and Devolved Administrations.
 - c. The Government's EMR Devolved Administration Consultation Group was set up to share and discuss analysis underpinning the CfD strike prices.
 - d. A senior Analytical Steering Group was set up, jointly chaired by DECC and the System Operator, and attended by Ofgem. This was supported by a number of working-level Analytical Working Groups.
6. **In the second stage (Jan 2013 – Spring 2013) the System Operator put together a suite of modelling tools (including the Dynamic Dispatch Model (DDM) from DECC) and gathered from DECC the full range of assumptions needed for the analysis. The Government selected an independent Panel of Technical Experts who began their work of scrutinising the analysis that informed this draft delivery plan. The Devolved Administrations Consultation Group continued to meet to discuss assumptions and modelling approach.**
- a. The Government and the System Operator worked jointly to ensure that the modelling tools were adequate for the task of producing the analysis for the Delivery Plan. The System Operator was able to add valuable further functionality to the Dynamic Dispatch Model enabling it to show network, balancing and inertia costs.
 - b. The Government finalised its suite of assumptions – including by establishing a Levelised Cost Board to approve cost assumptions. The assumptions provided to National Grid include levelised cost assumptions, which are described further in the publication 'Electricity Generation Costs 2013'.² Further information on assumptions is provided in the report from the System Operator at Annex E to the draft Delivery Plan.
 - c. The input assumptions were scrutinised by an Analytical Steering Group jointly chaired by DECC and the System Operator and attended by Ofgem, as well as by the Panel of Technical Experts.
 - d. The Panel of Technical Experts informally reported to the Analytical Steering Group, making some suggestions for The Government and the System Operator to consider.

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65639/7081-electricity-market-reform-annex-e.pdf

² <https://www.gov.uk/government/publications/electricity-generation-costs>

7. **In the third stage (Spring 2013 – due for completion in December 2013) the System Operator delivered analysis and a final report to the Government. The System Operator Northern Ireland (SONI) provided additional analysis for Northern Ireland. The Panel of Technical Experts also delivered their final report to the Government and discussions continued with the Devolved Administrations Consultation Group.**
- a. The Government received final analysis from the System Operator, and provided guidance on the scenarios that would best illustrate the choices for Ministers.
 - b. The modelling from the System Operator covered both:
 - i. The policy choices Ministers could make. For example, the three core scenarios in the System Operator’s report demonstrate the policy choices Ministers could make on setting CfD strike prices. Further scenarios show the impacts of the choices of higher or lower reliability standard; and,
 - ii. The impact of real world uncertainty (e.g. technology costs, fossil fuel prices) on the Government’s objectives. The sections on sensitivity analysis in the System Operator’s report show the results of the modelling on this. With a given set of policy choices this analysis shows the uncertainty around e.g. deployment and cost.
 - c. Detailed discussions continued with the Devolved Administrations Consultation Group about the methodology for setting strike prices, and underpinning analysis.
 - d. Having scrutinised the analysis by the System Operator, the reliability standard methodology and other inputs (such as levelised cost assumptions), the Panel of Technical Experts submitted their final report to The Government. This Report is provided at Annex F to the draft EMR Delivery Plan.
 - e. The third stage of analysis will continue beyond the publication of the draft EMR Delivery Plan for consultation, and will include any further analysis undertaken by the System Operator and scrutinised by the Panel of Technical Experts, to inform the setting of final strike prices in the final version of the first EMR Delivery Plan.

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