EMR Technical Update - FAQs

Why are you publishing a Technical Update?

In the Electricity Market Reform White Paper we committed to providing further details about the Capacity Mechanism and Institutional arrangements for the delivery of the EMR package. The Technical Update at a high level sets out the:

- Government's choice of model for the Capacity Mechanism; and
- Institutional Framework for delivering the EMR package.

Institutional Framework:

1. **Why have you chosen the System Operator (National Grid) as the delivery organisation for Electricity Market Reform?**

Our view is that the System Operator best meets the criteria set out in the White Paper: accountability, independence, value for money, credit-worthiness, technical expertise, and financial and commercial skills. As a private body it is independent of Government, providing investors with confidence that the schemes will operate transparently and predictably. However, this independence will be balanced through structures to ensure clear accountability, such as final sign-off of plans by Government and regular reporting by the SO to Government. Ofgem will continue to regulate the market to protect the interests of consumers.

2. **How will the performance of the delivery organisation be monitored?**

The System Operator will report regularly to Government on delivery against its objectives and the delivery plan. Ofgem will continue to regulate the market to protect the interests of consumers.

3. **What role will Government play?**

The Government set out the policy framework and objectives for the delivery organisation. As part of this, it will make key decisions on rules and parameters, based on advice from the System Operator and wider expert advice as appropriate.

4. **What is the delivery plan?**

The delivery plan(s) will form part of the accountability framework between Government and the delivery organisation. The plans, supporting the legislative framework, will provide clarity and certainty for industry on the key rules and parameters on which that the SO will deliver the EMR policies over the following period and the basis from which periodic revisions can take place. It is a vehicle whereby the Government can, within the legislative framework, set out the key rules and parameters to deliver the Feed-in Tariff with Contracts for Difference and Capacity Mechanism based on expert advice from the delivery body. The System Operator will report to Government annually on its performance against the delivery plan.

5. **Will the delivery body have an explicit decarbonisation target?**

Government will set the high-level objectives, for example contributing to Carbon budgets or renewable energy targets. The System Operator will advise on the key rules and parameters to achieve these objectives, working within the policy framework set by Government. The Government will set out these key rules and parameters as part of the

legislative framework and will publish a delivery plan. The System Operator will report to Government annually on its performance against the delivery plan.

6. Why is the payment model not described in the Technical Update? Are there going to be Government-backed contracts?

The design of the payment models for both the Capacity Mechanism and FiT CfD are integral to the design of those policies. Therefore more detail on the payment model for the FiT CfD will be set out in the technical update being published in Q1 2012 and for the Capacity Mechanism detail will be set out in the design phase later in 2012.

Government will provide a robust and stable framework against which investments can be made. In relation to the FiT CfD these will include adherence to the following principles:

- there should be no unilateral changes made to FiT CfD contractual terms once signed;
- payments will flow from counterparties to generators (or vice versa) as defined in the contract; and
- the system will limit exposure to default, through amongst other things an efficient and effective settlement mechanism.

The framework for the Capacity Mechanism will adhere to similar principles.

7. How will the legislative framework and delivery plan be transparent and take account of the views of industry/ investors/ consumers?

The development of the legislative framework and delivery plan will involve engagement by National Grid and Government with stakeholders such as industry and technical experts. This will ensure that Government takes decisions based on the best available advice on technical parameters and clarity on the implications for investment in low-carbon generation and security of supply. We are also considering the use of further independent advice, where appropriate.

Capacity Mechanism:

8. What is a capacity mechanism?

A policy instrument to help ensure security of supply by providing more capacity than that which would be provided by the market without intervention. A capacity mechanism is intended to address resource adequacy, that is to ensure sufficient reliable and diverse capacity to meet demand, for example during periods where demand is high and wind generation is low.

9. Why do we need a capacity mechanism?

There is a risk to security of electricity supplies in the medium-term, as over a fifth of existing capacity is expected to close over the next decade and more generation which is intermittent (wind) or less flexible (nuclear) generation is built to replace it.

The changing nature of our market creates an investment challenge, in particular as the increased unpredictability of the market – for example as a result of volatility of electricity wholesale electricity prices and concern about regulatory intervention – potentially makes investment in flexible capacity more difficult. This increases the risk that there will not be sufficient capacity available to meet demand, particularly in periods of low wind and high demand.

The Government is taking action now to address this risk by legislating to introduce a capacity mechanism in the form of a Capacity Market.

10. How big is the security of supply problem?

We model the future security of our electricity supply by projecting the future capacity margin (the gap between peak demand and the total amount of capacity), and estimate what this is likely to mean in terms of failure to deliver energy – potentially leading to voltage reductions[1] and power cuts.

In our central scenario, the security of supply outlook remains broadly healthy until the 2020s, but margins become tighter in that decade. We have also modelled a plausible 'stress test' which sees the capacity margin becoming tight in the second half of this decade.

It is not possible to say with certainty the scale or timing of any capacity shortage. But the potential for a capacity shortfall means that we are taking clear action to ensure the GB market can continue to deliver high levels of security of supply by legislating to introduce a Capacity Market.

[1] In voltage reduction, the system voltage is reduced by a few %, and so performance of heaters, lights etc. diminish a little. This has no significant impact on customers, but after a while systems start to compensate e.g. a heater may run longer, a consumer may turn more lights on.

11. Why have you chosen a Capacity Market over other options?

The major reason the market may not provide security of supply is because the investment case for flexible plant is made more risky by the increased unpredictability of the electricity market, for example as a result of the increased proportion of intermittent plant on the electricity system. This makes flexible plant increasingly reliant on high prices in short periods to make money.

A Capacity Market offers the surest way to ensure security of supply against a range of potential scenarios, because it addresses this investment problem at source. Under a Capacity Market, providers of reliable capacity exchange volatile revenues in the electricity market for a steady, predictable revenue flow.

A Capacity Market also helps to reduce the likelihood of wholesale electricity prices rising to very high levels as a result of scarcity, and can provide support to non-generation technologies such as demand side response and storage.

12. How does a Capacity Market work?

A Capacity Market aims to ensure that there is enough reliable capacity to meet demand – reducing the likelihood of costly power cuts.

A Capacity Market puts in place contracts to provide reliable capacity, up to the total volume required in GB to cover periods of high demand. The Capacity Market operates alongside the electricity market – it does not replace it.

Providers of capacity – including existing and new plant, and potentially non-generation technologies such as demand side response and storage – enter into an auction to secure contracts for providing capacity.

If providers of capacity are successful in the auction, they receive, in the delivery year, a payment to provide reliable capacity when needed, and are penalised if they fail to deliver.

The costs of capacity will be shared among suppliers, but suppliers will benefit from lower and less volatile electricity prices because the Capacity Market ensures adequate capacity is brought forward to avoid the high-demand conditions that lead to high prices in short term markets.

Our modelling indicates that the introduction of a Capacity Market should have a limited impact on average electricity bills and could lead to a small reduction as a result of avoiding very high prices in scarcity periods.

13. When will you be providing more detail on the design of the Capacity Market?

The Technical Update sets out high-level decisions on the design of the Capacity Market.

A Capacity Market is a major intervention, and we need to design the mechanism in a way that ensures it works well. We will be undertaking detailed design in the next phase, working closely with stakeholders, to provide more certainty on how the Capacity Market will work and minimise impacts on future investment decisions.

14. When could the first Capacity Market auctions be run?

Ministers will decide when to run the first auction process based on future estimates of security of supply from the System Operator and possibly other technical experts (including Ofgem).

The Capacity Market will be fully designed and implemented through primary and secondary legislation and changes to codes and licenses between 2012 – 2014, with the first auction process being ready to run in 2015, if needed.

15. Why don't you just extend STOR?

Short Term Operating Reserve (STOR) is one of the tools that the System Operator uses to ensure operational security. It provides a fast response to deal with sudden, short term shortages in generation. STOR will continue to play this role.

The Capacity Mechanism will ensure we have enough capacity on the system to keep the lights on for a period where demand is high and wind low for a number of days – a different problem to that addressed by STOR.

We will be carefully considering interactions between the Capacity Market and STOR as part of the detailed design phase.

16. How long is the gap between the first capacity auction and delivery of capacity?

From the decision that a Capacity Market is needed we should be able to notify the market of the date for the first auction within months, and run the auction within a year.

We intend that auctions will be run around 4 years ahead of the delivery year to maximise the range of participants in the auction.

This lead time could be compressed if necessary to ensure security of supply. A capacity auction process with a shorter lead time could stop existing plants closing, incentivise

mothballed plants to re-enter the market, or encourage additional demand side response or other non-generation solutions.

17. How will non-generation technologies and approaches be treated in the Capacity Market?

The Government is keen for non-generation technologies and approaches to form a central element of delivering security of supply and play a fair and equivalent role in a capacity mechanism.

We will develop our approach to non-generation technologies in the detailed design phase.

18. What did stakeholders say in response to the consultation?

The Electricity Market Reform White Paper consulted on the type of capacity mechanism we should introduce, focusing on two design types – a Strategic Reserve (targeted mechanism) and a Capacity Market (market-wide mechanism).

A total of 74 responses were received. Overall, 35% of respondents preferred some form of market-wide mechanism. 25% of respondents preferred a Strategic Reserve, and 25% of respondents did not express a preference on the type of mechanism. 20% of respondents did not feel a mechanism was needed.[2]

A clear message from the consultation was that some respondents found it difficult to engage in discussion of the detail without high-level decisions having been taken. We are also very aware of the potential scale of intervention that a capacity mechanism represents.

For those reasons, the Technical Update sets out the key high-level decisions for our proposed design of capacity mechanism, enabling us to rapidly move forward with detailed design in the next phase of the work, working with stakeholders to ensure we design a mechanism with the best possible fit for the GB market.

All non-confidential responses are published on our website at http://www.decc.gov.uk/en/content/cms/consultations/cap_mech/cap_mech.aspx

19. What will be the impact of introducing this mechanism on the wholesale market?

The Capacity Market works alongside the electricity market – it does not replace it.

The Capacity Market pays all providers of reliable capacity a stable revenue that is intended to replace revenues from high prices that would otherwise be earned by market participants at times when capacity is scarce. So introducing the capacity mechanism should reduce

[2] Note numbers rounded to nearest 5%

wholesale electricity prices at times of scarcity (in comparison with a scenario where the Capacity Market is not introduced).

Contract for Difference (CfD)

20. Why are there no details about the CfD in the Technical Update?

The White Paper promised further details around the capacity mechanism and institutional arrangements in the Technical Update.

The White Paper set out the Government's high level plans for Feed-In Tariff with Contracts for Difference. We have since been developing the details of the design with input from a range of industry stakeholders.

21. When should we expect to see further details on the CfD?

It is our aim to publish further details of the expected terms and conditions for the contract and the price discovery and allocation processes in Quarter 1 2012.

22. What is the timetable for the CfD beyond that?

We will continue to work closely with a wide range of stakeholders as we further develop the policy through 2012.

We aim to introduce legislation in 2012 with a view to projects moving forward with CfDs in 2014, subject to Parliamentary time and approval.

Further details of the CfD terms and conditions will be shared with stakeholders in parallel with the passage of primary legislation. We intend to give industry reasonable visibility of strike prices in advance of the first contracts being let.

23. Why are we moving to the CfD over other alternatives?

The White Paper set out our conclusions that the CfDs will provide the most efficient long term support for all forms of low carbon generation. The CfD controls costs for consumers, provides stable returns for investors, and maintains the market incentives to generate when electricity demand is high. We believe this will enable more investment to come forward sooner at a lower cost of capital - allowing us to meet our decarbonisation goals whilst reducing rises in consumer bills in the medium and longer term.

24. What is different about the support under CfDs compared to the RO?

The CfD stabilises revenue streams by providing a fixed strike price. This means that investors in low carbon plant are protected from wholesale price volatility and should therefore reduce the cost of capital. By fixing the support level and providing a mechanism whereby when the wholesale electricity prices are higher than the strike price the developer pays the difference back, costs to consumers are capped. Reducing the cost of investment and in turn the costs to consumers is a key objective of Electricity Market Reform.

The RO, in comparison, acts as a premium on top of the wholesale electricity price. Therefore investors are not protected against wholesale price volatility, e.g. when electricity prices drop, and as it is not capped consumers continue to pay even when electricity prices rise to a level where generators' costs are covered.

25. When will a CfD be signed and how is it better than the RO?

More information will be included in the CfD Design paper in the New Year and we will continue to engage with stakeholders in order to inform our approach.

26. When will CfD strike prices be published?

We recognise industry's desire for clarity on available support levels as soon as possible. We are working to ensure we are able to give this clarity as soon as possible. We expect to be able to give strong indications of the strike prices for individual technologies in good time for developers to make decisions for the start of the CfD scheme in 2014.

27. When will renewable generators be able to compare and make a choice between the RO and CfD tariffs?

We are currently consulting on RO Tariff levels for 2013-17, (2014-17 for offshore wind) via the Renewables Obligation banding review Consultation. Generators will be able to choose between the RO and CfD for projects coming forward between 2014 and 2017.

28. What is the process and timetable for moving to auctions?

As set out in the Electricity Market Reform White Paper it is our intention to move to a competitive price setting process as soon as reasonably practicable. However, we envisage that the price setting process will need to be an administrative process initially, moving to a more competitive procedure for some technologies, potentially from 2017.

We have set out a number of factors that will affect the decision to introduce auctions or tenders and these include:

- having confidence that there are enough potential participants in the auction or tender for there to be competitive tension;
- knowing that the development capacity of the potential participants exceeds the volume of new development sought by the delivery body in a given time period or tendering round; and
- knowing that the projects or technologies eligible for the tender or auction are comparable so that the strike price is a meaningful way to discriminate between them.

More detail will be included in the CfD update which will be published in Quarter 1 2012.

29. Will the banding review for the RO be used to set CfD tariffs?

We are currently looking at what method to use for administrative price setting. As part of this work we are considering whether we should use a process similar to that used for the RO Banding Process, and how we might improve on that process.

30. When will a windfarm be paid under CfD?

Under the FiT CfD, wind farms will be paid on the basis of the amount of electricity they produce each day. We plan to provide further information on how often wind farms accrued CfD revenues will be paid to generators as part of our update in Quarter 1 2012.

31. How will wind farms gain CfD support on days that the wind does not blow?

The CfD will reward wind for generating electricity. In periods where there is no wind they will be unable to generate and so won't earn money either from selling electricity or from the CfD.

The CfD design incentivises developers to choose windier locations and improve the quality of their wind forecasting so that they can maximise revenues. The Electricity Market Reform White Paper also set out how we will seek to reduce the risk that developers are unable to achieve the reference price against which the CfD strike price is set by using a day ahead electricity price.

32. How does the work on liquidity that Ofgem is doing tie in with the CfD?

Ofgem are actively pursuing measures to improve liquidity and we expect them to reach decisions shortly. Ofgem and DECC will work to ensure that EMR outcomes and the measures taken on liquidity are compatible and taken together deliver a coherent market framework that supports effective competition and investment and enables the CfD to function effectively.

33. What are the interactions between the CfD and the Capacity Market?

The CfD will bring on new low-carbon capacity while the Capacity Market will incentivise the appropriate level of flexible capacity and ensure that this capacity has appropriate incentives to be available at times of scarcity.

We are considering options for resolving how plants receiving support through the FiT CfD and Renewables Obligation (RO) interact with a Capacity Market, and we will take decisions on this in the detailed design phase. We will avoid overpaying low-carbon plant for capacity and ensure that there are appropriate incentives to be available.

Subject to further work in the detailed design phase, we are currently minded to exempt FiT CfD plant from non-availability penalties under the Capacity Market and that this plant should not receive payment.

If plants receiving support through the CfD are excluded from the Capacity Market, the reliable capacity they are expected to provide will be deducted from the total volume of capacity contracted for.

Carbon Price Floor (CPF)

34. What changes to the Carbon Price Floor (CPF) will be introduced in Finance Bill 2012?

Following the announcement at Budget 2011 that a carbon price floor (CPF) would be introduced on 1 April 2013, most of the primary legislative provisions were included in Finance Act 2011. Legislation in Finance Bill 2012 will introduce the following four additional provisions, the first two of which were announced at Budget 2011:

- lower Carbon Price Support (CPS) rates of climate change levy (CCL) and fuel duty for supplies of fossil fuels to good-quality combined heat and power (CHP) stations that are intended to be used to generate electricity. The levels of the lower rates will be announced at Budget 2012;
- abated CPS rates of CCL for supplies of fossil fuels to generation stations fitted with carbon capture and storage (CCS) technology;
- clarification over which person will be responsible for charging and accounting for the CPS rates of CCL; and
- changes to the taxation under the carbon price floor of solid fuels from weight (i.e. kilogram) to heat / calorific value (i.e. joule).

The draft legislation also includes provisions for setting the CPS rates of CCL for the year 2014-15, details of which will be announced at Budget 2012. A number of more detailed provisions are also included in the draft primary legislation.

The reliefs outlined above also require secondary legislation, which will also set out the detailed administrative provisions to enable HMRC to administer the CPS rates of CCL. Other secondary legislation will also provide that oils used in electricity generation will no longer be fully relieved of fuel duty, which will, in effect, make such oils subject to CPS rates of fuel duty, with an effective lower rate applying to oils used in CHP stations. All these changes take effect from 1 April 2013.

35. How will the CPS rates for 2014-15 be set?

The rate for 2014-15 will be announced at Budget 2012. For a detailed explanation of how CPS rates are set, please see the Government's response to the CPF consultation (http://www.hm-treasury.gov.uk/d/carbon_price_floor_consultation_govt_response.pdf).

36. Who will be responsible for accounting for CPS rates of CCL, and why are changes being made?

HM Treasury and HMRC consulted business about the implementation of the CPS rates. In direct response to business representations, the Government has decided to require generators with a generating capacity of 50 megawatts per hour or more, whose primarily

purpose is to generate electricity for sale to third parties, to self-account for the CPS rates of CCL. This will simplify the operation of the tax for both businesses and HMRC.

37. Why has Government decided to change the basis for taxation for solid fuels from weight to heat/calorific value, and what will the impacts be?

The Government decided to change the basis for taxation for solid fuels as a result of representations from UK coal mining businesses and a range of electricity generators.

It will also lower the tax payable on “inferior coal” (coal that contains a high proportion of incombustible material) also known as “coal slurry”. This type of coal has an energy content of between 8 and 15 GJ per tonne. A substantial proportion of this coal is located on waste heaps in the UK and can be used, when mixed with regular coal, for electricity generation. The decision to tax heat rather than weight will reduce the cost of this “inferior coal” and by doing so should support the continued reclamation of UK colliery sites currently being undertaken by UK businesses.

Geographically, these changes will benefit the UK regions with lower energy coal and reserves of “inferior coal”, especially Wales and the North East of England.

Emissions Performance Standard (EPS)

38. What level will the EPS be set at?

The EPS will be set as an annual limit, equivalent to 450g/kWh at baseload.

39. Who will the EPS apply to?

The EPS will be applicable to new fossil fuel power stations.

40. What is 'grandfathering'?

Grandfathering" refers to the Government's policy of limiting the impact that possible future changes to the level of the EPS could have on plants that are subject to EPS when they are consented consistent with our decarbonisation objectives. Without this, investors in new plant may not have sufficient certainty about the operation of EPS. The EMR White Paper stated that the Government was minded that "grandfathering" should apply for a clear and pre-determined period. This is one of a number of key design details on which we have been engaging with stakeholders.

41. How will the EPS affect plant with Carbon Capture and Storage (CCS)?

Plant in the CCS Programme will be given exemptions to the EPS. We have been engaging with stakeholders on a number of key design details, including the operation of exemptions for projects within the CCS Programme.

42. How will biomass be treated under the EPS?

Biomass will be zero rated under the EPS, consistent with its treatment under the European Union Emissions Trading System (EU-ETS).

43. Who will be responsible for administering the EPS?

The EPS will be administered by the Environmental Regulator.

44. When will further details be set out on EPS?

We plan to provide further technical details on the EPS early next year.

45. When do you plan to introduce the EPS?

We intend to introduce legislation as soon as parliamentary time allows.

Enabling investment decisions for early projects

46. When should a developer approach DECC on this matter?

The Technical Update provides a timeframe of up to June 2013 for developers to submit an expression of interest to DECC. This date may be subject to review.

47. How many projects do you expect to apply?

It is difficult to say at this early stage of inviting expressions of interest. We will carry out an ongoing assessment of projects and volume.

48. What if projects come forward to start discussions only to be told later that they do not qualify for the CfD?

We do not expect any form of enabling product to be provided where a project does not meet the eventual eligibility criteria for the CfD. The Technical Update alerts developers to this possibility by explaining that the continuation of any discussions with a developer about a project will be conditional on the project meeting published FiT CfD eligibility criteria.

49. Why doesn't the Technical Update at give some indication of the types of products that might be offered to particular developers?

Options are still under review for the from that any enabling products or arrangements may take and their refinement depends in part on the discussion process set out in the Technical Update. A further update will be published in the spring.